



**COMPREHENSIVE DEVELOPMENT FRAMEWORK
REPORT OF UNION TERRITORY OF ANDAMAN
AND NICOBAR ISLANDS**

YOUTH PEACE AND DEVELOPMENT FORUM

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FOREWORD

The Union Territory of Andaman and Nicobar Islands occupies a unique and vital position within the broader narrative of Indian civilizational progress and Indo-Pacific maritime strategy. Endowed with profound natural wealth, pristine marine and terrestrial ecosystems, and a rich cultural heritage, the territory is currently navigating a critical transition. It is moving steadily toward a modernized, sustainable, and diversified blue economy. The Comprehensive Development Framework Report of the Union Territory of Andaman and Nicobar Islands captures the essence of this historical juncture. It maps a future where the ecological, geographical, and strategic strengths of the archipelago are harmonized with the modern imperatives of proactive governance, climate-resilient infrastructure development, and comprehensive digital connectivity.

When we examine the evolution of statecraft and regional development, it becomes increasingly clear that effective policymaking requires far more than basic macroeconomic forecasting. True governance demands a nuanced understanding of social behavior, community incentives, and the historical and ecological continuities that shape island life.

Traditional rational choice models often fail to account for the complex realities of human decision-making at the grassroots level. This framework succeeds precisely because it aligns structural economic models with the lived, everyday realities of the islanders. By focusing on equitable resource distribution, institutional capacity building, and targeted socio-economic upliftment, the report offers a detailed blueprint. It bridges the critical gap between aggregate economic growth and genuine human flourishing.

At the Youth Peace and Development Forum (YPD FORUM), our core conviction is that sustainable development cannot be achieved without social cohesion and the active, structural engagement of the next generation. Peace and development are inherently mutually reinforcing concepts. Neither can endure if a society fails to integrate its youngest members into its socio-political fabric.

The Andaman and Nicobar Islands stand on the cusp of a significant demographic and economic shift, with a dynamic working-age population poised to drive sustainable maritime commerce, eco-tourism, green shipping, and high-value marine bio-resources. This presents a narrow but immensely powerful window of opportunity. The true test of any development framework will be its ability to translate physical infrastructure, renewable energy expansion, and maritime corridors into tangible, accessible opportunities for the youth, empowering them as the primary stakeholders in the future of the Union Territory.

The Comprehensive Development Framework Report acknowledges these shifting dynamics by prioritizing human capital and environmental stewardship. It recognizes that the true wealth of the archipelago lies not only in its strategic sea lanes and natural reserves, but in the latent potential and resilience of its people. The policies outlined herein reflect a deep

understanding of behavioral economics, recognizing that citizens are not merely passive recipients of administrative initiatives but active participants whose choices must be nurtured through sound policy architecture. By mitigating economic risks for local enterprises, incentivizing scientific and vocational education, and ensuring that development reaches the most remote island habitations, the framework creates a foundation for sustainable, long-term stability.

A crucial component of this vision is the integration of the territory's indigenous and local island populations into the mainstream economic narrative while strictly safeguarding their unique socio-cultural identities, sacred traditions, and fragile habitats. The cultural and ecological ethos of the Andaman and Nicobar Islands must remain an unwavering guiding force as the territory modernizes. The preservation of local heritage and sensitive biodiversity alongside the adoption of cutting-edge, eco-friendly industrial practices is not a contradiction, but an essential synthesis.

Development policies must respect the distinct geographic vulnerabilities, disaster management needs, and historical context of island communities, ensuring that progress feels organic, resilient, and inclusive rather than disruptive. The framework thoughtfully addresses this delicate balance, proposing actionable strategies that elevate grassroots communities while connecting them seamlessly to national and global supply chains.

Furthermore, we must recognize that true peace is not merely the absence of conflict, but the presence of justice, equity, and sustainable opportunity. In island territories that face unique logistical constraints and geographical isolation, building physical and digital connectivity must be accompanied by the building of enduring trust in public institutions. This report outlines actionable methodologies to enhance administrative transparency, digital governance, and institutional accountability. When citizens experience an equitable distribution of resources and opportunities, the foundations of lasting social peace are reinforced.

I commend the extensive research, interdisciplinary collaboration, and visionary effort that have gone into the creation of this document. It is my sincere hope that it will not remain a mere theoretical exercise, but will serve as a definitive, actionable guide for administrators and community leaders alike. The path ahead requires unwavering commitment, but with the right policy architecture in place, we can build a resilient, prosperous, carbon-neutral, and fundamentally inclusive Andaman and Nicobar Islands for generations to come.

Dheeraj G. N.
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The Youth Peace and Development Forum (YPD Forum) expresses its sincere gratitude to all individuals whose dedication, expertise, and commitment made the preparation of The Comprehensive Development Framework Report for Union Territories possible.

This report forms part of a larger national initiative undertaken through the Council for Comprehensive Development Frameworks (CDF Council), constituted by the YPD Forum to facilitate the fast-track preparation of comprehensive development frameworks for all 28 States of India and 8 Union Territories of India. The Council represents the Forum's commitment to promoting evidence-based policymaking, strategic planning, and long-term developmental thinking across the nation.

The Forum places on record its deep appreciation to **Dheeraj GN**, Chairman of the Youth Peace and Development Forum, for his vision, leadership, and initiative in conceptualizing and guiding this ambitious project. The Forum also extends its heartfelt thanks to **Aravind Saj**, Vice Chairman of the Youth Peace and Development Forum, for his constant support and encouragement throughout the execution of this initiative.

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The Forum acknowledges the commitment, intellectual curiosity, and sense of responsibility demonstrated by each member of the Council. Through research, analysis, discussion, drafting, review, and continuous engagement with developmental issues, these members contributed significantly to the realization of the Council's objectives. Their willingness to dedicate their time and talents to a national developmental initiative reflects a commendable spirit of public service and constructive citizenship.

The Forum also recognizes that the preparation of a comprehensive development framework requires engagement with a wide range of ideas, perspectives, and sources of knowledge. Accordingly, sincere appreciation is extended to all researchers, academicians, policy experts,

development practitioners, government publications, statistical agencies, think tanks, and public institutions whose work provided valuable insights and reference material for this report. Their contributions to the broader body of knowledge on governance, economics, social development, environmental sustainability, infrastructure, education, healthcare, and public policy have enriched the quality and depth of this framework.

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The Forum further extends its appreciation to all well-wishers, supporters, advisors, and stakeholders who encouraged this initiative and contributed to its successful completion. Whether through guidance, feedback, consultation, or moral support, their contributions helped strengthen the quality and relevance of this work.

This report represents more than a policy document; it reflects a collective effort to envision a better future. It is the product of shared aspirations, collaborative research, and a common belief that informed planning and constructive dialogue can contribute to meaningful social, economic, and institutional progress. While the recommendations contained herein are intended to support the development of Nagaland, they also form part of a broader national effort to strengthen the foundations of a developed, inclusive, sustainable, and prosperous India.

As India advances towards the centenary of its independence in 2047, the Youth Peace and Development Forum remains committed to fostering research, dialogue, and innovation in support of national development. It is hoped that this report will serve as a useful resource for policymakers, administrators, researchers, civil society organizations, industry leaders, and citizens, and that it will contribute meaningfully to the ongoing pursuit of inclusive growth, good governance, and sustainable development.

With gratitude to all who contributed to this endeavour, the Youth Peace and Development Forum proudly presents this report as a modest contribution towards the shared vision of a stronger Nagaland and a developed India.

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PREFACE

The Andaman and Nicobar Islands occupy a unique and strategically vital position within the Republic of India. Celebrated globally for their pristine ecological environments, their unparalleled marine biodiversity, and their immense strategic significance, the islands serve as a beacon of natural conservation and maritime security. Every milestone achieved in the Andaman and Nicobar Islands sets a benchmark that influences national maritime policies and India's standing in ecological preservation metrics. As India progresses towards becoming a developed nation by 2047, the transformation of this union territory into a globally competitive, ecologically resilient, and strategically secure region is not merely a regional aspiration. It is a national imperative.

Having experienced the socio-cultural and geographic fabric of the Andaman and Nicobar Islands closely, researchers and policymakers have witnessed both extraordinary strengths and emerging vulnerabilities. The territory possesses world-class marine ecosystems, a rich cultural heritage encompassing protected indigenous tribal communities, an increasingly capable youth demographic, and an incredibly dynamic strategic location in the Bay of Bengal. At the same time, the territory continues to grapple with complex developmental challenges such as severe geographic isolation, environmental fragility, climate change-induced extreme weather events, limited industrial diversification, and the urgent need for next-generation resilient infrastructure. These challenges require long-term thinking, institutional agility, and evidence-based policymaking rather than incremental interventions.

The Youth Policy Development Forum believes that India's youth have an important role to play in shaping the future of public policy. Across the world, innovative policy ideas increasingly emerge through collaboration between governments, academic institutions, research organisations, industry experts, and young professionals. Inspired by this approach, we have undertaken the preparation of this document titled "Comprehensive Development Framework Report of the Union Territory of Andaman and Nicobar Islands." This report reflects our collective aspiration to contribute constructively to the development of the islands through practical, research-driven, and future-oriented policy recommendations.

This document has been prepared through collaborative efforts of researchers, policy analysts, economists, environmental scientists, engineers, students, and professionals. The recommendations are based on comparative studies of successful global island economies, examination of international best practices, analysis of existing territorial policies, and a deep understanding of the unique ecological and socio-economic realities of the Andaman and Nicobar Islands. Throughout this exercise, our objective has remained simple. We have sought to identify reforms that are ambitious in vision, realistic in implementation, and capable of generating measurable improvements in economic growth and quality of life.

The strategic frameworks presented in this report cover the most critical dimensions of territorial development. They include governance reforms to improve maritime connectivity, investments in climate-resilient infrastructure, transitioning to a sustainable blue economy, revamping higher education and skill development, harnessing the potential of eco-tourism,

advancing high-tech tropical agriculture, modernising coastal economies, and a long-term economic strategy aimed at making the islands a premier destination for sustainable investments. Together, these recommendations constitute an integrated roadmap for building a union territory that is economically vibrant, technologically advanced, environmentally secure, and strategically robust.

One of the central ideas underlying this report is that the Andaman and Nicobar Islands should not merely rely on traditional mainland development models. The territory must evolve into a leading global hub for sustainable island living and maritime innovation. International archipelagos demonstrate how social equity, environmental stewardship, world-class human capital, and sustainable economic growth can create societies that drive prosperity while providing an exceptional quality of life for their residents. The Andaman and Nicobar Islands possess similar potential. With visionary leadership, coordinated governance, and sustained public-private investment, the territory can emerge as a global centre for marine biology research, sustainable tourism, strategic logistics, and green energy.

This Comprehensive Development Framework is not intended to replace existing government initiatives. Rather, it is offered as a constructive policy resource that can complement ongoing programmes and support future planning for the islands. We hope that policymakers, legislators, administrators, urban planners, academic institutions, civil society organisations, and citizens will find value in the ideas presented here. Many of these recommendations can be adapted, refined, and implemented through collaborative efforts between different levels of government and relevant stakeholders.

As India approaches the centenary of Independence in 2047, the Andaman and Nicobar Islands have an extraordinary opportunity to redefine themselves for the twenty-first century. The territory can become a model that combines robust maritime security with entrepreneurial innovation, high economic growth with strict ecological sustainability, and global excellence with deep-rooted social inclusion. It is my sincere hope that this document will encourage meaningful discussion, inspire progressive policymaking, and contribute in some measure to the creation of a thriving, resilient, and prosperous union territory for generations to come.

Kasinath Rajagopal

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EXECUTIVE SUMMARY

The Union Territory of the Andaman and Nicobar Islands stands at a pivotal juncture in its developmental journey. Recognized globally for its exceptional biodiversity and strategic maritime location, the territory has historically prioritized environmental conservation, indigenous protection, and military security. However, the contemporary global economic landscape demands a strategic pivot. The Comprehensive Development Framework Report outlines a blueprint to transition the territory into a vibrant, sustainable, and strategically integrated island economy by 2047.

This report identifies several critical challenges that currently hinder sustainable growth. These include severe logistical bottlenecks due to geographic isolation, sluggish industrial growth, acute climate vulnerabilities including sea-level rise, and a dependency on mainland financial transfers. To address these systemic issues, the framework proposes a comprehensive strategy focusing on economic modernization, environmental resilience, and institutional reform.

Core Strategic Pillars

- **Transitioning to a Sustainable Blue Economy:** The Andaman and Nicobar Islands must capitalize on their vast Exclusive Economic Zone by accelerating growth in advanced marine sectors. This includes sustainable deep-sea fishing, marine biotechnology, and ocean-based renewable energy generation. The establishment of dedicated marine research clusters will play a vital role in retaining local talent and securing international academic partnerships (Ministry of Earth Sciences, 2026).
- **Climate Resilient Rapid Infrastructure:** The increasing frequency of extreme weather events in the Bay of Bengal demands a complete overhaul of both urban and rural infrastructure. Strategic investments must prioritize resilient port facilities, sustainable drainage networks, stringent green building codes tailored for tropical climates, and robust coastal protection mechanisms. The ongoing mega-infrastructure projects, particularly the Great Nicobar development, must strictly adhere to the highest ecological standards (NITI Aayog, 2026).
- **High-Value Eco-Tourism Ecosystem:** To build an economy of scale without degrading the natural environment, aligning tourism development with global sustainability standards is essential. The territory possesses a unique opportunity to pioneer high-end, low-impact eco-tourism. This involves developing premium sustainable resorts, promoting heritage and tribal tourism in a strictly regulated and respectful manner, and positioning the islands as a premier global destination for scuba diving and marine exploration (Ministry of Tourism, 2026).
- **Strategic Logistics and Maritime Hub:** Given its proximity to the Strait of Malacca, the territory is perfectly positioned to serve as a major transshipment and logistics hub. Developing state-of-the-art port infrastructure and bunkering facilities will unlock immense economic potential and solidify India's strategic presence in the Indian Ocean Region (Ministry of Ports, Shipping and Waterways, 2026).

- **Modernizing Tropical Agriculture and Fisheries:** Promoting precision farming and enhancing value addition in traditional cash crops like coconut, arecanut, and spices are critical for long-term food security and import substitution. Furthermore, integrating advanced deep-sea fishing technologies will significantly improve the livelihoods and economic stability of primary sector workers while ensuring sustainable yield management (Department of Agriculture, 2026).

The successful implementation of these pillars requires robust institutional coordination. The framework emphasizes the need for regulatory simplification to improve the ease of doing business, thereby attracting both domestic and foreign direct investment that aligns with the territory's ecological carrying capacity.

For decades, the development model of the Andaman and Nicobar Islands has been a subject of intense administrative balancing. By maintaining high forest cover and protecting vulnerable indigenous tribes despite growing population pressures, the territory challenged traditional growth-centric economic theories. This success was built on a foundation of strict environmental regulations and robust public investment in basic services. The administrative ethos embedded in the governance structure ensured that the delicate ecological balance was largely maintained.

However, the limitations of this model have become increasingly apparent over the last two decades. A heavy reliance on central government subsidies and a public-sector-driven economic base have created structural vulnerabilities. The lack of a strong private manufacturing sector and the slow growth of modern digital services have led to a paradoxical situation where the territory produces qualified graduates who are forced to migrate to the mainland for suitable employment opportunities.

The twenty-first century presents a completely different set of challenges and opportunities. The onset of the Fourth Industrial Revolution, the existential threat of climate change, and shifts in global maritime supply chains require agile and forward-looking governance. The Andaman and Nicobar Islands can no longer afford to rest on their isolation. The territory must proactively build an ecosystem that rewards innovation, encourages sustainable entrepreneurship, and attracts patient capital.

This Comprehensive Development Framework has been developed to bridge the gap between the current reality of the islands and their future potential. The primary objective is to formulate actionable policies that will catalyze a structural transformation in the territorial economy. We envision an island chain that ranks among the top destinations globally for sustainable living, advanced marine research, and equitable wealth creation.

The report is structured into detailed chapters that address specific sectors of the economy. Each chapter diagnoses the current bottlenecks, sets clear medium-term and long-term objectives, and outlines specific policy interventions required to achieve those goals. We have paid special attention to ensuring that all economic recommendations are thoroughly aligned with the principles of strict ecological sustainability and indigenous rights protection.

As India marches towards its centennial year of independence, island development strategies will play a critical role in shaping the national maritime trajectory. The Andaman and Nicobar Islands have the natural capital, the strategic location, and the potential human resources required to become a model island territory for the twenty-first century. This report serves as a guiding document for that journey. It is a call to action for all stakeholders to collaborate, innovate, and work towards the realization of a prosperous, secure, and resilient future for the Andaman and Nicobar Islands.

CHAPTER 1: State Profile Geography, Demography and Society

1.1 Geographic and Ecological Characteristics of the state

The Union Territory of the Andaman and Nicobar Islands constitutes one of the most geographically unique and ecologically vital regions within the Republic of India. Situated strategically in the Bay of Bengal and the Andaman Sea, this expansive archipelago lies between the latitudes of 6 degrees and 14 degrees North and the longitudes of 92 degrees and 94 degrees East. The territory is located approximately 1,200 kilometres from the eastern coast of the Indian mainland, acting as a crucial maritime outpost that physically extends India's strategic reach towards Southeast Asia. The archipelago is composed of exactly 572 distinct islands, islets, and rocky outcrops, stretching over a total length of more than 700 kilometres from north to south. Despite covering a relatively modest total geographical land area of 8,249 square kilometres, this island chain grants the Indian nation exclusive rights over an immense Exclusive Economic Zone that covers approximately 600,000 square kilometres of the surrounding ocean (Ministry of Earth Sciences, 2026). This vast maritime zone is central to the territory's economic and strategic future.

The topography of the Andaman and Nicobar Islands is structurally characterized by undulating terrain, heavily forested hills, and narrow, ecologically sensitive coastal plains. Geologically, the islands are essentially the submerged peaks of a continuous submarine mountain range that extends from the Arakan Yoma mountain system in Myanmar down towards the Indonesian archipelago. The territory is broadly divided into two major island groups, which are separated by the Ten Degree Channel. This channel is a deep body of water that is approximately 150 kilometres wide and serves as a major navigational route for international shipping. The northern group is the Andaman Islands, where the highest point is Saddle Peak in North Andaman, reaching a maximum elevation of 732 metres above sea level. The southern group is the Nicobar Islands, where the highest peak is Mount Thullier on Great Nicobar Island, rising to an elevation of 642 metres. The archipelago also hosts India's only active volcano, located on Barren Island, and a dormant volcanic formation on Narcondam Island, both of which add to the complex geological profile of the region (Geological Survey of India, 2026).

The geographical isolation of the islands over millions of years has fostered an extraordinary level of evolutionary endemism. The flora and fauna have evolved independently from the mainland, resulting in a vast array of species that are found nowhere else on earth. The ecological diversity of the Andaman and Nicobar Islands is staggering and serves as one of the most critical environmental assets of the nation. The territory encompasses a wide variety of forest types, including tropical wet evergreen forests, tropical semi-evergreen forests, moist deciduous forests, littoral forests, and extensive mangrove ecosystems that line the intricate creeks and bays. According to the most recent environmental surveys, recorded forest cover constitutes an overwhelming 81.74 per cent of the total geographical area, making it one of the most densely forested administrative units in the country (Forest Survey of India, 2026). These forests are home to iconic timber species such as the Andaman Padauk and Dipterocarpus, as well as a rich undergrowth of canes and bamboos.

The faunal diversity is equally spectacular. The islands support numerous endemic bird species, such as the Narcondam Hornbill and the Andaman Wood Pigeon. The terrestrial mammalian fauna includes the endemic Andaman Wild Pig and various species of shrews and bats. However, the true ecological wealth of the territory lies in its marine environments. The coastal waters are home to endangered marine mammals like the Dugong, which is the state animal, as well as significant populations of saltwater crocodiles and nesting sites for globally threatened marine turtles, including the Leatherback, Green, and Hawksbill turtles (Wildlife Institute of India, 2026). The complex coral reef formations surrounding the islands, primarily fringing reefs, are among the most pristine and biodiverse in the entire Indian Ocean. These reefs provide critical habitats for thousands of marine species and act as natural barriers protecting the coastlines from oceanic swells.

The territory is uniquely and heavily dependent on the tropical monsoon climate system. The islands experience a hot and humid tropical climate with relatively uniform temperatures ranging between 23 degrees Celsius and 31 degrees Celsius throughout the entire year. They receive substantial rainfall from both the South-West Monsoon and the North-East Monsoon, resulting in an average annual precipitation that consistently exceeds 3,000 millimetres. Despite this apparent abundance of annual rainfall, the undulating topography and the highly porous nature of the underlying soil ensure that rainwater rapidly runs off into the sea. This rapid surface runoff leads to acute drinking water scarcity during the dry summer months of February to May, a paradoxical situation that highlights the fragile hydrological balance of the region (Central Water Commission, 2026).

Furthermore, the ecological fragility of the Andaman and Nicobar Islands has been a subject of intense policy debate and scientific scrutiny. The region is highly vulnerable to tectonic activities and seismic events, as evidenced by the catastrophic impacts of the 2004 Indian Ocean earthquake and subsequent tsunami, which permanently altered the coastal geography, caused significant land subsidence in the Nicobar group, and exposed the limits of human intervention in these coastal zones. In 2026, the escalating threats from global climate change, particularly ocean acidification, rising sea surface temperatures, and increasing frequencies of extreme cyclonic events, pose severe existential risks to both the coral reef ecosystems and the low-lying coastal settlements. This complex interplay of geographic isolation, extraordinary biodiversity, and acute environmental vulnerability defines the fundamental baseline for any developmental framework applied to the territory.

1.2 Administrative Divisions: Districts, Divisions and Sub-State Units

The modern administrative structure of the Union Territory of the Andaman and Nicobar Islands is meticulously designed to manage the immense logistical and governance complexities of a highly dispersed archipelago. Unlike full-fledged states within the Indian Union, the territory is administered directly by the Government of India. This administration is executed through a Lieutenant Governor, who is appointed by and represents the President of India, functioning as the chief executive of the territory. The administrative evolution of the islands has transitioned from a highly centralized penal colony management system under

British colonial rule to a modern, multi-tiered governance architecture that seeks to deliver welfare and developmental programs to remote island communities.

For revenue, planning, and general administration purposes, the territory was historically managed as a single district. However, to improve administrative efficiency and decentralize governance, the territory is currently organized into three distinct and separate districts. These are the South Andaman district, the North and Middle Andaman district, and the Nicobar district. Each of these three districts presents unique demographic, economic, and administrative challenges that require tailored governance approaches.

The South Andaman district is by far the most populous, urbanized, and economically developed region within the territory. It encompasses the capital city of Port Blair, which serves as the administrative, commercial, military, and logistical nerve centre of the entire archipelago. The vast majority of government directorates, tertiary healthcare facilities, higher educational institutions, and private commercial enterprises are concentrated in this district. For localized administration, the South Andaman district is subdivided into three distinct tehsils: Port Blair tehsil, Ferrargunj tehsil, and the geographically separate Little Andaman tehsil. The concentration of power and resources in Port Blair creates a distinct core-periphery dynamic within the territory.

The North and Middle Andaman district is characterized by its extensive forest cover, widespread agricultural settlements, and a much more dispersed population profile. This district is connected to South Andaman by the Andaman Trunk Road, which involves complex ferry crossings and strict transit regulations through protected tribal reserves. The administrative headquarters of this district is located at Mayabunder. To manage the vast geographical spread of this region, the district is divided into three tehsils: Diglipur tehsil in the extreme north, Mayabunder tehsil in the central region, and Rangat tehsil in the south. The primary administrative challenges in this district revolve around maintaining long-distance transport infrastructure, supporting the agricultural economy, and ensuring primary healthcare delivery to remote rural settlements (Ministry of Home Affairs, 2026).

The Nicobar district, which is separated from the Andaman group by the formidable Ten Degree Channel, is uniquely designated entirely as a tribal reserve area. This designation demands a highly specialized, culturally sensitive, and strictly regulated administrative approach. The district headquarters is situated at Car Nicobar. The district is subdivided into three tehsils: Car Nicobar tehsil, Nancowry tehsil, and Great Nicobar tehsil. The administrative framework here is heavily focused on tribal welfare, disaster resilience, and increasingly, national strategic infrastructure management, particularly on Great Nicobar Island.

Below the district tier, the territory operates a robust decentralized governance architecture, albeit one that is carefully adapted to its unique demographic realities and historical treaties. In the Andaman group of islands, the standard Panchayati Raj system is implemented across all rural areas, in accordance with the 73rd Constitutional Amendment. This system consists of Gram Panchayats at the foundational village level, Panchayat Samitis at the intermediate block level, and a Zilla Parishad at the apex district level. In the urbanized area of Port Blair,

municipal responsibilities, including solid waste management, urban sanitation, and local infrastructure maintenance, are handled by the Port Blair Municipal Council. This decentralized structure empowers local settler communities to formulate localized development plans and manage grassroots administrative functions.

However, the administrative structure in the Nicobar district is fundamentally different and legally distinct. Recognizing the unique cultural systems, traditional land ownership patterns, and social hierarchies of the indigenous tribal populations, particularly the Nicobarese people, the traditional system of tribal councils is legally recognized and fully integrated into the modern governance framework. The territory operates under the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation of 1956, which provides legal backing to these traditional structures. The village councils, led by traditional village captains, and the overarching island-level tribal councils exercise significant legal and social authority over local matters, land disputes, community welfare distribution, and the regulation of outsiders visiting their islands. This dual system, comprising modern Panchayati Raj institutions in the Andamans and traditional tribal councils in the Nicobars, reflects a highly nuanced administrative strategy. It seeks to balance the imperatives of modern democratic decentralization with the absolute necessity of protecting indigenous administrative traditions and sovereignty over their ancestral lands (Ministry of Tribal Affairs, 2026).

Despite this multi-tiered decentralized framework, the overarching administrative authority remains highly centralized in the office of the Lieutenant Governor and the territorial secretariat located in Port Blair. The Island Development Agency (IDA), chaired by the Union Home Minister, also plays a crucial role in directing macro-level policy and approving mega-infrastructure projects for the territory. The immense geographic dispersal of the islands poses profound logistical challenges for everyday administration. Delivering basic government services, maintaining law and order, conducting electoral processes, and executing infrastructure projects require long, expensive sea voyages and complex maritime supply chains. This structural reality means that administrative efficiency and state capacity in the Andaman and Nicobar Islands are intrinsically and permanently linked to the quality, frequency, and reliability of inter-island maritime and aerial connectivity.

1.3 Demographic Structure: Population, Density, Growth and Composition

The demographic profile of the Andaman and Nicobar Islands is a highly complex and fascinating tapestry woven from historical colonial migrations, penal settlement legacies, post-independence resettlement programs, and the enduring presence of ancient indigenous populations. According to the most recent demographic projections generated for the year 2026, the total population of the Union Territory stands at approximately 435,000 persons (Directorate of Economics and Statistics, 2026). This figure represents a very modest and controlled increase from the 2011 Census baseline figure of 380,581, reflecting a definitive stabilization in the population growth rate over the past decade and a half.

One of the most defining and problematic demographic characteristics of the territory is its highly uneven spatial population distribution. The overwhelming majority of the total population, estimated at over sixty-five per cent, is concentrated exclusively within the South

Andaman district, and more specifically, in and immediately around the capital city of Port Blair and its contiguous peri-urban zones. This massive demographic concentration is a direct result of historical colonial settlement patterns, the overwhelming availability of administrative and government jobs in the capital, and the presence of the territory's only tertiary healthcare facilities and higher educational institutions. In stark contrast, vast tracts of the North and Middle Andaman district and almost the entirety of the Nicobar district remain very sparsely populated. The overall aggregate population density of the territory is relatively low compared to the dense mainland states, standing at approximately 53 persons per square kilometre in 2026 (Directorate of Economics and Statistics, 2026). However, this aggregate territorial figure completely masks the acute urban congestion, housing shortages, and infrastructure stress experienced daily in the Port Blair municipal area.

The decadal population growth rate of the territory has witnessed a significant and intentional deceleration over the past two decades. This rapid deceleration reflects an advanced stage of demographic transition that is characterized by declining birth rates, improved maternal education, and widespread access to family planning services across the settled islands. Furthermore, the administration has historically maintained policies that actively discourage large-scale, unregulated inward migration from the Indian mainland, recognizing the strict ecological limits and limited carrying capacity of the fragile island ecosystems. Strict regulations governing land ownership, which restrict the purchase of revenue land by non-islanders, and the absolute requirement for Inner Line Permits and tribal passes to enter vast restricted areas, have functioned effectively to restrict unbridled demographic expansion and prevent the demographic swamping of the local populations.

The sex ratio in the Andaman and Nicobar Islands has a unique historical trajectory. It has historically been heavily skewed towards males, a direct demographic legacy of the early British penal settlement days when the population was predominantly composed of male convicts and military personnel, and subsequent waves of male-dominated migrant labour. However, consistent and measurable improvements have been recorded over the last three decades as migrant populations settled permanently and family structures normalized. Current 2026 estimates place the sex ratio at approximately 905 females per 1,000 males (Directorate of Economics and Statistics, 2026). While this figure still remains below the ideal national average, it represents a steady demographic normalization and a significant improvement from the historical baselines.

The age composition of the territory is also undergoing a structural shift. The child population share has been declining steadily for several years, closely mirroring the demographic trends seen in advanced mainland states like Kerala and Tamil Nadu. This shrinking base of the population pyramid signals a gradual transition towards an aging population structure. The proportion of the elderly population is rising, a phenomenon that will pose significant new policy challenges for geriatric healthcare provision, pension financing, and social security frameworks in the coming decades. Simultaneously, the working-age population remains substantial, presenting a demographic dividend that is currently frustrated by the lack of private-sector employment opportunities, leading to the out-migration of educated youth.

Urbanisation in the territory presents a highly distinctive and problematic spatial form. It is characterized by intense, singular concentration rather than the diffusion of multiple urban centres. Port Blair functions as the only major urban agglomeration in the entire archipelago, and it absorbs the vast majority of rural-to-urban migration originating from the outer islands. The urban population share of the territory is estimated to be over forty-two per cent in 2026, almost all of which is concentrated in the South Andaman urban continuum (Ministry of Housing and Urban Affairs, 2026). This intense population concentration in a single urban core severely complicates the cost-effective provision of trunk infrastructure, potable water supply, sustainable solid waste management, and centralized urban services. The lack of secondary towns and developed urban centres in the northern or southern islands forces residents from remote locations to travel to Port Blair for advanced medical care, higher education, and all significant commercial and administrative transactions.

The demographic composition of the islands is uniquely and critically complicated by the presence of Particularly Vulnerable Tribal Groups (PVTGs). These indigenous groups, which include the Great Andamanese, the Onge, the Jarawa, the Sentinelese, and the Shompen, have microscopic population sizes, some numbering only in the dozens or low hundreds. The Sentinelese, famously and uniquely, remain in voluntary and absolute isolation from the outside world on North Sentinel Island. The demographic survival, health security, and cultural preservation of these groups are matters of paramount national priority and intense international anthropological concern. The Government of India maintains a strict "eyes-on, hands-off" policy of non-interference and absolute protection regarding these specific communities. This creates a highly complex demographic reality where tiny, highly vulnerable indigenous populations with ancient lineages coexist within the same broader territorial boundaries as a rapidly modernizing, digitally connected settler population of hundreds of thousands.

1.4 Linguistic, Ethnic, Religious and Cultural Profile

The cultural, linguistic, and ethnic identity of the Union Territory of the Andaman and Nicobar Islands is extraordinarily diverse, complex, and pluralistic. It is frequently and accurately described by sociologists and administrators as a true "Mini India." Unlike the political boundaries of the states on the Indian mainland, which were predominantly organized and drawn along strict linguistic lines during the states reorganization process, the Andaman and Nicobar Islands host a heterogeneous settler population that represents almost every major linguistic, ethnic, and cultural group of the Indian subcontinent. This extreme diversity is not indigenous but is the direct result of successive, managed waves of migration and settlement. This process started from the brutal establishment of the penal colony by the British Empire in the nineteenth century, followed by the systematic resettlement of refugees from East Pakistan post-partition, the subsequent influx of labourers for large-scale infrastructure and forestry projects, and the continuous migration of government servants, military personnel, and business communities from all corners of India.

Bengali is the most widely spoken language in the territory today. This demographic reality reflects the large-scale, government-sponsored resettlement of East Bengali refugees in the

decades immediately following Indian independence, particularly in the agricultural settlements established throughout the North and Middle Andaman district, and in specific pockets like Little Andaman. Tamil, Telugu, and Malayalam also have very substantial numbers of native speakers across the islands. This is a direct legacy of continuous migration from the southern Indian states, originally driven by the demand for manual labour in forestry operations, rubber and coconut plantations, commercial fisheries, and lower-level public administration roles. Hindi is widely spoken and understood by almost all settler communities and serves as the vital, unifying lingua franca that binds the diverse linguistic groups together in daily commerce and administration. English functions extensively as the primary language of official territorial administration, high court judiciary proceedings, and all higher educational institutions.

Furthermore, the indigenous tribal populations speak their own entirely distinct and ancient languages. These indigenous languages belong to the Andamanese language family (spoken by the Great Andamanese, Onge, Jarawa, and Sentinelese) and the Austroasiatic language family (spoken by the Nicobarese and Shompen). These languages are linguistically isolated from the mainland language families and are considered critically endangered by global linguistic monitoring bodies, requiring intensive documentation and preservation efforts (Anthropological Survey of India, 2026).

Religiously, the territory stands as a remarkable model of pluralism, tolerance, and peaceful coexistence. According to recent demographic assessments and projections for 2026, Hindus constitute the absolute majority of the total population, reflecting the religious composition of the mainland migrant communities. Christians make up a highly significant and visible minority, comprising over twenty-one per cent of the total population. This high percentage is largely due to the Nicobarese tribal community, who predominantly converted to and currently follow Christianity following extensive and sustained missionary work in the Nicobar archipelago during the twentieth century, alongside Christian migrants from southern India. Muslims also form a substantial and historically deep-rooted community, particularly in the South Andaman region, living alongside smaller but economically active populations of Sikhs, Buddhists, and Jains. This profound religious diversity is woven seamlessly into the social fabric of island life, and the territory is widely celebrated nationally for its enduring communal harmony and the absolute historical absence of systemic sectarian or religious violence.

The cultural fabric of the settler communities in the Andaman and Nicobar Islands is characterized by a remarkable degree of syncretism and shared participation. Festivals from all major Indian cultural and religious traditions are celebrated publicly and with equal fervour by members of different communities. Major festivals such as Durga Puja, Pongal, Panguni Uthiram, Onam, Diwali, Eid al-Fitr, and Christmas are observed across community lines, acting as powerful unifying cultural markers that foster a shared "Islander" identity superseding regional mainland origins. The culinary landscape of the islands is equally diverse and syncretic, featuring a rich blend of Bengali fish preparations, spicy South Indian curries, and coastal mainland cuisines, all heavily reliant on the abundant, high-quality local seafood harvested from the surrounding pristine waters.

However, a sharp and profound cultural distinction exists between the migrant settler populations of the Andaman Islands and the indigenous populations of the Nicobar Islands. The Nicobarese people possess a rich, distinct, and vibrant cultural heritage deeply tied to their marine and tropical island environment. Their culture is characterized by traditional outrigger canoe building, unique stilted architectural styles designed for tropical climates, complex matrilineal kinship systems, and vibrant traditional festivals such as the Ossuary Feast, which honours ancestral spirits. The preservation of this unique Nicobarese cultural heritage, alongside the absolute, stringent protection of the isolated PVTGs like the Sentinelese and Jarawas from any cultural assimilation or forced modernization, represents a fundamental and non-negotiable pillar of the territory's cultural and administrative policy. The ongoing and highly delicate challenge for policymakers in 2026 is to foster necessary economic development, digital integration, and national security objectives without eroding, compromising, or destroying the unique cultural identities, traditional ecological knowledge systems, and social cohesion of these indigenous communities.

1.5 Human Development Index: State Ranking and Trend Analysis

In the complex realm of development economics and public policy evaluation, the Union Territory of the Andaman and Nicobar Islands presents a fascinating and instructive case study. The territory consistently performs well above the national average on several critical components of the composite Human Development Index (HDI). This notable achievement demonstrates unequivocally that significant improvements in material quality of life, public health outcomes, and universal primary education can be achieved even in extremely remote, geographically isolated, and logistically challenged archipelagic regions, provided there is a strong, sustained, and well-funded commitment to public welfare provisioning by the central administration (Ministry of Statistics and Programme Implementation, 2026).

This highly positive HDI position is built principally and historically on the territory's strong performance in foundational literacy and basic health indicators. The effective literacy rate in the Andaman and Nicobar Islands is exceptionally high. Based on historical trends and current projections, the literacy rate is estimated to comfortably exceed 89 per cent in 2026, standing vastly above the national average literacy rate. This remarkable achievement is the direct result of decades of continuous, heavily subsidized state policy that rigorously prioritized the establishment of primary, middle, and secondary schools across even the most remote and sparsely populated inhabited islands. The territorial administration has executed highly successful universal enrolment campaigns and provides immense logistical and financial support to ensure that qualified teachers are present in far-flung island schools, often providing hardship allowances and dedicated government accommodation. Furthermore, the gender disparity in foundational literacy and school enrolment is remarkably low compared to many major mainland states, reflecting a structurally egalitarian approach to education access among the islander population.

In the crucial health sector, the territory's outcomes are similarly commendable and contribute heavily to its HDI ranking. Life expectancy at birth is high, currently estimated at over 73 years, and the Infant Mortality Rate (IMR) stands significantly lower than the national average, projected at approximately 10 deaths per 1,000 live births in 2026 (Ministry of

Health and Family Welfare, 2026). These highly positive outcomes are heavily driven by a robust, extensive, and almost entirely public-funded healthcare delivery system. The administration operates a comprehensive network of Primary Health Centres (PHCs), Community Health Centres (CHCs), and a main, well-equipped tertiary referral hospital (the G.B. Pant Hospital) located in Port Blair. The provision of entirely free healthcare services to all residents, combined with comprehensive universal immunization programs, robust malaria eradication initiatives, and strong maternal health interventions, has yielded these positive results. The administration even operates specialized hospital ships and employs helicopter medical evacuation services to provide critical medical care to isolated tribal communities and remote settler populations spread across the vast oceanic distances.

However, these historic and commendable human development outcomes present a modern, structural analytical tension that must be addressed. The central challenge identified for this report is that the territory's highly favourable HDI indicators are almost entirely dependent on massive, continuous financial subsidies and grant-in-aid transfers from the central government in New Delhi. The local island economy simply does not generate sufficient tax or non-tax revenue to sustain this high level of expensive social infrastructure independently. Furthermore, the territory suffers acutely from a phenomenon of "educated unemployment." The education system produces highly qualified graduates who are unable to find suitable, well-paying professional jobs within the islands' extremely limited and structurally stunted private sector. The government remains the only significant formal employer, and saturation in public sector hiring has led to massive frustration and forced out-migration of the brightest youth to mainland metropolitan cities like Chennai, Bengaluru, and Kolkata. The glaring divergence between high human capital formation (education and health) and abysmal domestic economic absorption (lack of industry and private enterprise) motivates much of the structural economic reform agenda discussed in the subsequent chapters of this report. The ultimate long-term challenge for the territory is to transition from an entirely subsidy-dependent, artificial welfare model to a self-sustaining, economically vibrant society that generates its own wealth, without compromising the high human development outcomes it has already successfully achieved.

1.6 Poverty, Inequality and Multidimensional Deprivation Indices

The Andaman and Nicobar Islands have achieved notable and historically significant success in mitigating extreme, survival-level poverty. When measured by traditional economic metrics, the territory's headcount poverty ratio based on daily consumption expenditure is consistently among the absolute lowest in the Republic of India. According to the NITI Aayog's comprehensive Multidimensional Poverty Index (MPI) assessments and projections for 2026, the territory registers exceptionally low levels of multidimensional poverty compared to the national average, with only a negligible fraction of the population classified as multidimensionally poor (NITI Aayog, 2026). This virtual elimination of extreme absolute poverty reflects decades of highly effective, centrally funded welfare architecture. This includes a comprehensive and highly subsidized Public Distribution System (PDS) that ensures absolute food security regardless of mainland supply chain disruptions, heavily

subsidized inter-island and mainland maritime transport, and the overwhelming dominance of stable, well-paying government employment and pensions in the local cash economy.

Despite these highly impressive aggregate territorial statistics, multidimensional deprivation and economic vulnerability are not uniformly absent across the vast archipelago. Pockets of severe deprivation, infrastructural neglect, and structural vulnerability persist stubbornly. These vulnerabilities are predominantly concentrated among specific geographic regions and marginalized demographic groups. The settler communities residing in the most remote agricultural islands of the North and Middle Andaman district face significant, ongoing challenges regarding access to advanced specialized healthcare, quality higher education, and reliable, profitable markets for their agricultural and fisheries produce. The extremely high cost and unreliability of inter-island transport acts as a severe economic friction, effectively and substantially lowering the real purchasing power and quality of life of residents in distant islands compared to those living in the administrative hub of Port Blair.

Furthermore, while traditional consumption poverty is statistically low, structural economic vulnerabilities are exceptionally high. The local economy is inherently fragile, overly dependent on imported goods, and highly susceptible to external shocks such as mainland supply chain disruptions or global fuel price fluctuations. The indigenous tribal communities, particularly the Nicobarese who suffered catastrophic, generation-altering losses of life, property, and traditional plantation assets during the 2004 tsunami, continue to require targeted, sensitive socio-economic support to rebuild their traditional livelihoods and adapt to rapidly changing economic realities without losing their cultural moorings. The PVTGs, while intentionally insulated from the mainstream cash economy by state policy, remain acutely vulnerable to external diseases for which they lack immunity, and any illegal encroachment on their protected forest habitats by poachers or settlers.

Income and asset inequality are also rapidly emerging as severe social concerns in 2026. The extreme concentration of economic activity, tourism infrastructure investment, government spending, and administrative power in Port Blair has created a massive and growing wealth gap between the capital and the outer islands. Real estate and land values in the South Andaman district have appreciated exponentially over the last decade, benefiting legacy property owners and mainland investors, but creating severe housing affordability challenges for new local entrants, the younger generation, and the working class. The planned economic transition towards a high-end, capital-intensive tourism economy risks severely exacerbating this divide if local island communities are not deliberately integrated into the value chain as active stakeholders, equity owners, and entrepreneurs, rather than being relegated merely to low-wage service sector employees. This fundamental, growing tension between aggregate territorial welfare statistics and emerging, acute spatial and asset inequality requires highly targeted, localized policy interventions that prioritize equitable wealth distribution across the archipelago.

1.7 Intra-State Disparities: Aspirational Districts and Backward Region Identification

A recurring and deeply problematic challenge in effective policymaking for the Andaman and Nicobar Islands is the consistent masking of severe localized developmental deficits by the

relatively prosperous statistical averages driven entirely by the South Andaman district, and specifically Port Blair. When developmental data is disaggregated to the district and tehsil levels, it consistently reveals persistent, structural internal disparities that demand urgent, targeted geographic interventions. The spatial inequality within the territory is arguably more pronounced, rigid, and difficult to overcome than in many mainland states due to the absolute, unyielding physical barriers created by the ocean and the sheer distances involved in inter-island travel.

The most pronounced and economically crippling disparities exist between the South Andaman district and the North and Middle Andaman district. While residents of Port Blair benefit from daily international and domestic air connectivity, specialized tertiary healthcare facilities, multiple higher educational institutions, and a functioning digital economy backed by reliable internet, the northern islands struggle with fundamental, basic connectivity issues. Residents of North Andaman face arduous, unpredictable journeys involving long, poorly maintained road trips on the Andaman Trunk Road and multiple, time-consuming vehicle ferry crossings just to reach the capital for basic administrative or medical needs. This physical isolation translates directly and inevitably into profound economic stagnation. The agricultural produce (such as copra and arecanut) and the rich fisheries catch of the northern islands cannot efficiently or cheaply reach the primary lucrative markets in Port Blair or the mainland export hubs, leading to significantly lower income realizations for primary producers and a structural disincentive for agricultural modernization.

The Nicobar District presents a completely different, highly complex set of developmental variables and disparities. Designated entirely as a protected tribal reserve, the economic paradigm here is not, and legally cannot be, based on conventional industrialization, land speculation, or mass tourism. Instead, it relies on supporting the traditional coconut and arecanut plantation economy and the subsistence fisheries of the Nicobarese people. However, the region suffers from severe, systemic deficits in physical connectivity and access to specialized government services. The islands of the Nicobar group are spread over a vast, tempestuous expanse of the ocean, making administrative delivery, disaster relief, and infrastructure maintenance incredibly complex and prohibitively expensive.

Furthermore, the territory is currently grappling with the profound implications of the Great Nicobar Holistic Development Project (GNHDP), a mega-infrastructure initiative spearheaded by the NITI Aayog in 2026. This multi-billion-dollar project involves the construction of an international transshipment terminal, a greenfield international airport, a power plant, and a massive new township on Great Nicobar Island (Ministry of Ports, Shipping and Waterways, 2026). While positioned as a strategic and economic game-changer for the nation, this project stands at a critical crossroads. It threatens to drastically and permanently alter the local socio-economic fabric, potentially marginalize the indigenous Shompen and Nicobarese populations, and irreversibly impact the pristine ecological landscape of the island. The immense scale of investment directed solely at Great Nicobar threatens to create a massive new disparity within the Nicobar district itself, enriching a small strategic node while leaving the rest of the tribal archipelago in continued isolation.

These persistent and deepening intra-territorial disparities heavily underline the absolute, fundamental limits of relying on territory-level statistical averages alone in policy design and resource allocation. A generic, "one size fits all" governance approach completely fails to address the unique logistical bottlenecks of the remote northern agricultural settlements, the specific cultural and developmental needs of the Nicobar tribal communities, or the complex ecological-strategic balancing act required in Great Nicobar. This absolute necessity for spatially targeted, island-specific micro-planning is a central, recurring theme that must guide all future developmental frameworks for the territory. Future infrastructure investments and policy interventions must be rigorously prioritized to bridge these specific maritime connectivity gaps, ensuring that the benefits of the proposed sustainable blue economy and eco-tourism initiatives are distributed equitably across the entire archipelago, rather than remaining exclusively concentrated in the southern administrative hub.

1.8 State's Position in National Rankings Across Key Development Indicators

The Union Territory of the Andaman and Nicobar Islands occupies a deeply paradoxical and highly complex position in various national rankings, presenting a dualistic development profile that forms the core diagnostic problem statement of this entire document. On one side of the ledger, the territory consistently and proudly ranks at or near the absolute top on all major environmental, social, and human capital indicators. In the NITI Aayog's comprehensive Sustainable Development Goals (SDG) India Index reports evaluated for 2026, the islands frequently secure top-tier, leading scores, driven entirely by their unparalleled and stringent performance in environmental conservation (specifically SDG 14: Life Below Water, and SDG 15: Life on Land), providing quality basic education, ensuring good health and well-being, and providing widespread access to clean water and sanitation (NITI Aayog, 2026). The territory's official statistics regarding forest cover preservation, extremely low violent crime rates, robust maternal health outcomes, and enduring communal harmony are viewed as aspirational benchmarks for the rest of the Indian union.

However, this triumphant and celebrated narrative in social and environmental metrics is sharply, problematically contrasted by the territory's dismal performance on macroeconomic, fiscal, and industrial indicators. The territory performs considerably weaker, often ranking near the bottom nationally, on indicators of own-tax revenue capacity, fiscal prudence, and economic self-sufficiency. The territorial administration is overwhelmingly, unsustainably dependent on continuous grant-in-aid financial transfers from the Ministry of Home Affairs to fund not only its capital infrastructure expenditures but also its basic day-to-day operational administrative costs. A massive, disproportionate portion of the annual budget is consumed entirely by committed non-developmental expenditures, primarily the salaries and pensions of a highly bloated government workforce. This structural fiscal imbalance leaves minimal financial space for independent, locally directed capital infrastructure development or economic stimulus.

Furthermore, the territory has historically struggled significantly with its "Ease of Doing Business" rankings, consistently lagging behind mainland states. The business environment is plagued by exceptionally complex, multi-layered environmental clearance procedures

mandated by Coastal Regulation Zone (CRZ) rules and Island Protection Zone (IPZ) notifications, severe logistical bottlenecks regarding the import of raw materials, unpredictable power supply relying heavily on expensive diesel generation, and a historical lack of reliable high-speed digital connectivity (a factor only recently beginning to improve with the operationalization of the Chennai-Andaman and Nicobar Islands submarine optical fibre cable). The prevailing perception of the territory among mainland corporate entities as a difficult, hyper-regulated, and logistically expensive place for private capital investment remains a massive structural hurdle to economic diversification. Most critically and dangerously for its future, the territory exhibits a severe, persistent weakness in net new formal employment generation within the private sector relative to its growing, highly educated youth population.

This specific, contradictory combination, accurately characterized as a "high human development, high environmental quality, critically low economic dynamism" profile, is structurally and financially unsustainable in the long term. As the aspirations of the digitally connected island youth grow rapidly, and the maintenance costs of operating remote, dispersed infrastructure escalate exponentially, the territory must urgently and decisively expand its domestic economic revenue base. Overcoming this deep-seated development paradox requires executing a highly complex transition: moving from a subsidy-dependent, consumption-oriented administrative economy to a sustainable, ocean-based, ecologically conscious productive economy. This is the exact, fundamental challenge that the strategic frameworks, policy recommendations, and developmental roadmaps detailed in the subsequent chapters of this Comprehensive Development Framework report are fundamentally designed to address and resolve by the target year of 2047.

Chapter 2: Fiscal Architecture of the Union Territory

2.1 Revenue Framework: Own Tax Revenue, Non-Tax Revenue and Devolution

The revenue framework of the Andaman and Nicobar Islands is structurally constrained by the territory's narrow economic base, strict ecological regulations, and small population size. Because the islands are a Union Territory without a legislature, the local administration does not pass a separate state budget. Instead, its receipts and expenditures form a part of the Union Budget of India. The territory's own revenue generation is broadly categorized into own tax revenue and non-tax revenue, both of which remain drastically insufficient to cover the escalating administrative and developmental costs of the archipelago (Ministry of Home Affairs, 2026).

The own tax revenue of the territory is primarily driven by the collection of the Union Territory Goods and Services Tax (UTGST), state excise duties levied predominantly on the sale of alcohol, taxes on vehicles, and stamp duties on property transactions. For the financial year 2025 to 2026, the total own tax revenue collections have shown a marginal upward trajectory, largely propelled by the post-pandemic resurgence in domestic tourism. The tourism sector acts as the primary engine for indirect tax collections, as the influx of mainland and international visitors drives consumption in the hospitality, transport, and retail sectors. However, the UTGST collections remain highly vulnerable to seasonal fluctuations in tourist footfall. During the monsoon months, when tourism activity plummets, tax collections experience a corresponding and severe contraction. Furthermore, the absence of a large-scale manufacturing sector means that the territory acts almost exclusively as a consuming region. While this consumption-heavy profile generates steady UTGST on imported goods, it fails to create a self-sustaining cycle of value addition and corporate tax generation within the islands (Directorate of Economics and Statistics, 2026).

State excise duty on alcohol remains one of the most lucrative and reliable sources of own tax revenue for the administration. The Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO) holds the exclusive monopoly over the wholesale and retail distribution of Indian Made Foreign Liquor (IMFL) across the territory. The pricing strategy for alcohol is deliberately maintained at high levels to maximize revenue extraction while simultaneously attempting to curb excessive consumption among the local population. Despite high taxation, inelastic demand ensures that excise revenues form a disproportionately large pillar of the local exchequer. However, relying so heavily on alcohol sales for public revenue presents significant moral and public health dilemmas, particularly given the rising costs of healthcare required to treat alcohol-related non-communicable diseases in the territory (Ministry of Health and Family Welfare, 2026).

Non-tax revenue in the Andaman and Nicobar Islands is generated through administrative fees, user charges for public utilities, forestry receipts, and dividends from public sector enterprises like ANIIDCO. Historically, forestry was a massive contributor to the local treasury, driven by the commercial extraction of high-value timber such as Andaman Padauk. However, following landmark interventions by the Supreme Court of India designed to

protect the fragile island ecosystems, commercial logging was strictly curtailed. While this was a monumental victory for environmental conservation, it permanently erased the territory's largest source of non-tax revenue (Ministry of Environment, Forest and Climate Change, 2026). Today, non-tax revenue is primarily sourced from user charges for electricity and inter-island shipping. Yet, these user charges are heavily subsidized. The tariffs collected from citizens for electricity and ferry tickets cover only a small fraction of the actual operational and maintenance costs, resulting in a negative net contribution to the exchequer.

Because the own tax and non-tax revenues are so structurally limited, the territory relies overwhelmingly on financial devolution and direct funding from the central government. Unlike states that receive a constitutionally mandated share of central taxes determined by the Finance Commission, the Andaman and Nicobar Islands receive their funding through direct budgetary allocations from the Ministry of Home Affairs. This mechanism ensures that the territory does not face sovereign default, but it also fundamentally disincentivizes aggressive local revenue mobilization. The administration operates under a soft budget constraint, knowing that revenue shortfalls will ultimately be absorbed by the central government. To transition towards a more sustainable fiscal architecture, the territory must urgently diversify its revenue base. This includes implementing premium ecological tourism levies, introducing progressive property taxation in the rapidly urbanizing South Andaman district, and monetizing high-value marine resources through regulated, sustainable blue economy initiatives.

2.2 Expenditure Profile: Composition, Quality and Efficiency

The expenditure profile of the Andaman and Nicobar Islands is the most critical area of concern for fiscal policymakers in 2026. The structure of public spending in the territory is heavily skewed towards non-productive revenue expenditure, leaving inadequate resources for vital capital asset creation. The total expenditure of the territory is characterized by massive commitments to salaries, pensions, administrative overheads, and sprawling public subsidies. This rigid expenditure structure limits the financial agility of the administration and severely hampers its ability to respond to emerging economic or environmental crises (Ministry of Finance, 2026).

The single largest component of revenue expenditure is the salary and pension bill of the government workforce. In the absence of a thriving private sector, the territorial administration has historically functioned as the employer of first and last resort. The government sector is vastly overstaffed relative to the total population size. Consequently, a disproportionate share of the annual budget is consumed simply by maintaining this massive administrative apparatus. The financial burden of providing central government pay scales, alongside specialized island hardship allowances and subsidized housing for civil servants, creates a recurring fiscal drain that compounds year after year. While public sector employment provides necessary social stability and income security for thousands of island families, it does not generate the multiplier effects necessary for dynamic economic expansion.

The second major structural drain on the expenditure profile is the absolute necessity of maintaining lifeline logistical subsidies. The Directorate of Shipping Services (DSS) operates a vast fleet of passenger and cargo vessels that connect the remote islands of the Nicobar group and the North and Middle Andaman district to the capital city of Port Blair. Because the population densities in these remote islands are too low to make commercial shipping viable, the government must heavily subsidize these maritime operations to ensure the survival and connectivity of these communities. The cost of fuel, vessel maintenance, and crew salaries far exceeds the revenue generated from subsidized passenger tickets and freight charges (Directorate of Shipping Services, 2026). While this expenditure is a non-negotiable social imperative, the operational inefficiencies, aging vessel fleets, and poor inventory management within the shipping sector lead to significant financial leakages that degrade the overall quality of public spending.

Similarly, the energy sector represents a massive and inefficient expenditure commitment. The Andaman and Nicobar Islands are not connected to the national power grid. Historically, the territory has relied almost exclusively on decentralized diesel generator sets to provide electricity to its scattered settlements. The logistical cost of importing high-speed diesel from the mainland, storing it in coastal depots, and transporting it to remote islands makes the per-unit cost of electricity generation in the territory among the highest in the entire country. To shield consumers and local businesses from these exorbitant costs, the administration provides steep electricity subsidies. This creates a dual negative impact. It places a crushing burden on the revenue budget, and it artificially suppresses the price of electricity, thereby disincentivizing energy conservation and efficiency among end-users (Ministry of Power, 2026).

The quality and efficiency of public expenditure in the territory are further compromised by the unique logistical hurdles associated with public procurement. Government departments frequently struggle to execute allocated budgets within the financial year due to severe delays in transporting construction materials and specialized equipment from the mainland. The monsoon season, which lasts for nearly six months, halts all major civil construction works. This leads to a rushed expenditure pattern in the final quarter of the financial year, often resulting in compromised project quality and suboptimal resource utilization. To improve the efficiency of public spending, the administration must aggressively transition away from diesel-based power generation towards solar and liquified natural gas (LNG) alternatives, corporatize the shipping sector to introduce commercial discipline, and implement stringent human resource rationalization to slowly reduce the bloated public sector wage bill over the coming decades.

2.3 Capital Expenditure: Infrastructure Investment and Asset Creation

Capital expenditure is the fundamental prerequisite for long-term economic growth, particularly in an isolated maritime territory where the deficit in foundational infrastructure acts as the primary bottleneck to private sector investment. Historically, capital expenditure in the Andaman and Nicobar Islands was severely constrained by the overarching pressures of the revenue budget. However, the strategic calculus of the Government of India has shifted

dramatically in recent years. Recognizing the vital geopolitical importance of the archipelago in the Indo-Pacific region, the central government has initiated a paradigm shift, directing unprecedented levels of capital investment into the territory to build strategic and civilian assets (NITI Aayog, 2026).

The centerpiece of this renewed capital expenditure push is the Great Nicobar Holistic Development Project. This mega-infrastructure initiative, piloted by the NITI Aayog with an estimated capital outlay exceeding ₹72,000 crore, represents the largest single infrastructure investment in the history of the islands. The project involves the creation of an International Container Transshipment Terminal at Galathea Bay, a greenfield international airport capable of handling dual-use military and civilian aircraft, a massive gas and solar-based power plant, and a comprehensively planned coastal township. This project is specifically designed to leverage the territory's proximity to the globally vital Malacca Strait, aiming to capture a significant share of international maritime trade that currently bypasses India for ports in Sri Lanka and Singapore (Ministry of Ports, Shipping and Waterways, 2026). The execution of this project is fundamentally transforming the capital expenditure profile of the territory, shifting the focus from minor local civil works to globally significant strategic assets.

Beyond the Great Nicobar project, capital expenditure is being heavily directed towards improving digital and physical connectivity. The successful laying and operationalization of the Chennai-Andaman and Nicobar Islands (CANI) submarine optical fibre cable was a landmark capital asset creation project. By providing high-speed, reliable broadband connectivity to Port Blair and several outer islands, this investment has laid the foundational infrastructure necessary for the emergence of a modern digital economy, telemedicine, and e-governance capabilities. In the aviation sector, substantial capital funds have been utilized for the expansion and modernization of the Veer Savarkar International Airport in Port Blair, including the construction of a new integrated terminal building designed to handle a massively increased volume of domestic and international tourists (Ministry of Civil Aviation, 2026).

Despite these massive capital infusions from the central government, the territorial administration's own capacity to execute smaller, localized capital projects remains highly constrained. The public works departments in the islands suffer from severe shortages of technical manpower, specialized engineering expertise, and modern construction equipment. The reliance on mainland contractors for even medium-sized projects often leads to severe cost overruns and multi-year project delays. The challenging tropical climate, characterized by torrential rains and high humidity, significantly accelerates the depreciation of physical assets, requiring capital replacement cycles that are much shorter than those in mainland India.

To maximize the economic multiplier effects of these capital investments, the administration must ensure that infrastructure creation is tightly aligned with ecological sustainability. Given the extreme environmental fragility of the islands, capital projects must adhere to stringent green building codes and incorporate climate-resilient engineering practices. Furthermore, the administration needs to establish dedicated special purpose vehicles (SPVs) staffed with specialized project management professionals to oversee the execution of complex

infrastructure projects, thereby bypassing the traditional, sluggish bureaucratic procurement channels. Only through efficient, timely, and ecologically sensitive capital asset creation can the Andaman and Nicobar Islands build the physical foundation required for a prosperous economy by 2047.

2.4 Fiscal Deficit, Primary Deficit and Debt Sustainability

Analyzing the fiscal deficit, primary deficit, and overall debt sustainability of the Andaman and Nicobar Islands requires a nuanced understanding of its constitutional status. As a Union Territory without a legislature, the islands do not have the statutory authority to independently issue sovereign bonds, float market loans, or directly borrow from multilateral financial institutions like the World Bank or the Asian Development Bank. Consequently, the traditional macroeconomic metrics used to evaluate the fiscal health of full-fledged Indian states do not apply in the conventional sense. The fiscal deficit of the territory is, in practical terms, fully absorbed and monetized by the Consolidated Fund of India through the Ministry of Home Affairs (Ministry of Finance, 2026).

However, if one were to construct an implicit fiscal profile by treating the territory as an independent economic unit, the resulting deficit figures would be staggering. The gap between the total expenditure required to run the islands and the total own revenue generated locally constitutes a massive implicit fiscal deficit. This gap has widened consistently over the past two decades. The rising costs of administrative salaries, the exponential increase in the cost of imported diesel for power generation, and the escalating subsidies required to keep the inter-island shipping network afloat have vastly outpaced the sluggish growth in UTGST and excise collections.

The primary deficit, which excludes interest payments, is equally substantial in this implicit calculation. Because the central government provides the capital required for infrastructure projects as direct grants rather than loans, the territory does not carry a massive historical interest payment burden on its own books. Yet, the primary deficit highlights the fundamental reality that the territory's day-to-day operations and basic service delivery are inherently loss-making. The island economy currently lacks the productive capacity, the industrial base, and the export orientation necessary to generate sufficient wealth to cover its own consumption and maintenance costs.

Debt sustainability, in the traditional sense, is not an immediate crisis for the local administration because the sovereign guarantee of the Republic of India underwrites its entire financial existence. However, this absolute dependence poses a long-term strategic and fiscal risk to the national exchequer. As the central government embarks on massive, multi-billion-dollar infrastructure projects like the Great Nicobar development, the implicit debt incurred by the Union on behalf of the territory is ballooning. If these mega-projects fail to generate the projected commercial returns, fail to attract international shipping lines, or suffer from severe cost overruns due to logistical bottlenecks, the financial burden will fall squarely on the central government taxpayers.

To address this implicit fiscal imbalance, a long-term structural transformation is mandatory. The administration cannot continue to operate indefinitely under a soft budget constraint without consequence. The territory must implement a strict expenditure rationalization program, targeting the reduction of non-merit subsidies and the gradual phasing out of diesel subsidies in favour of renewable energy alternatives. Simultaneously, the territory must focus intensely on enhancing the ease of doing business to attract private capital. By fostering a high-value, low-volume economic model centred around premium eco-tourism, sustainable deep-sea fishing, and strategic logistics, the islands can begin to close the massive gap between their revenue generation and their expenditure commitments, gradually moving towards a more sustainable economic equilibrium.

2.5 State's Borrowings, Guarantees and Off-Budget Liabilities

While the Union Territory administration itself is constitutionally restricted from direct market borrowing, the fiscal architecture of the Andaman and Nicobar Islands includes significant financial complexities through the operations of state-owned enterprises, special purpose vehicles, and off-budget liabilities. The most prominent entity in this space is the Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO). As the primary commercial arm of the administration, ANIIDCO is involved in a wide array of activities, including the procurement and distribution of petroleum products, the management of the liquor monopoly, the operation of government-owned hotels, and the supply of industrial raw materials (ANIIDCO, 2026).

ANIIDCO operates on commercial principles and has the capacity to secure credit facilities and working capital loans from commercial banks to manage its extensive supply chain operations. While ANIIDCO has historically remained profitable, largely due to its absolute monopoly over liquor sales, its expanding operational footprint exposes the territorial administration to contingent liabilities. If the corporation were to undertake highly ambitious, capital-intensive projects in the tourism or industrial sectors that subsequently failed, the financial fallout would inevitably require administrative intervention and potential bailouts using public funds.

Furthermore, the push towards modern urban infrastructure has led to the creation of new institutional structures that carry their own financial risks. The Port Blair Smart Projects Limited, a Special Purpose Vehicle (SPV) created under the national Smart Cities Mission, was designed to execute specific urban modernization projects. While the initial capital for these projects was provided as grants by the central and territorial governments, the long-term operations and maintenance costs of these new smart assets, such as digital traffic management systems and modernized solid waste facilities, create continuing off-budget liabilities. The Port Blair Municipal Council, which ultimately inherits these assets, possesses a notoriously weak revenue base heavily dependent on inadequate property tax collections. This structural weakness threatens the financial sustainability of the smart city investments, risking premature asset degradation due to unfunded maintenance mandates (Ministry of Housing and Urban Affairs, 2026).

Another critical area of off-budget liability lies within the power sector. The Electricity Department of the Andaman and Nicobar Administration purchases a significant portion of its power from Independent Power Producers (IPPs) that operate private diesel generation plants on the islands. The administration enters into long-term Power Purchase Agreements (PPAs) with these private entities. Given the extreme volatility of global petroleum prices and the high logistical costs of transporting fuel to the islands, these PPAs represent a massive, fluctuating, and largely unavoidable financial commitment. Any delays in subsidy disbursements from the central government or fluctuations in fuel pricing can severely strain the liquidity of the Electricity Department, creating a cascade of payment delays and mounting contingent liabilities that are not always transparently reflected in the primary budgetary documents.

To mitigate the risks associated with these borrowings, guarantees, and off-budget liabilities, the administration must institute rigorous financial oversight mechanisms. There is an urgent need for consolidated financial reporting that explicitly details the contingent liabilities generated by ANIIDCO, the power purchase commitments of the Electricity Department, and the maintenance deficits of the municipal bodies. Furthermore, the administration must strictly limit the issuance of government guarantees to private or semi-private entities unless backed by robust, independent commercial viability assessments. Enhancing the transparency and accountability of these parastatal organizations is absolutely essential for maintaining the overall fiscal integrity of the territory.

2.6 Finance Commission Awards: Allocation and Utilisation

The role of the Finance Commission in the fiscal architecture of the Andaman and Nicobar Islands differs significantly from its role in mainland states. Because the territory does not possess a state legislature and its finances are integrated into the Union Budget, it does not receive a direct share of the divisible pool of central taxes as determined by the Finance Commission's vertical devolution formula. However, the recommendations of the Finance Commission remain critically important for the territory, specifically regarding the provision of grants-in-aid to local self-government institutions, namely the Panchayati Raj Institutions (PRIs) in the rural areas and the Port Blair Municipal Council (PBMC) in the urban zone (Ministry of Finance, 2026).

The Fifteenth and Sixteenth Finance Commissions have placed significant emphasis on empowering local bodies to deliver basic civic services, improve sanitation, and manage solid waste. The central government routes these recommended funds to the local bodies in the Andaman and Nicobar Islands through the territorial administration. These tied and untied grants represent a vital source of capital for the gram panchayats and the municipal council, which otherwise suffer from chronically poor own-source revenue generation. The funds are primarily earmarked for the maintenance of rural roads, the provision of clean drinking water, the implementation of sustainable solid and liquid waste management systems, and the upgrading of local community assets.

Despite the critical importance of these Finance Commission awards, the utilization of these funds in the Andaman and Nicobar Islands frequently faces severe institutional bottlenecks.

The local bodies, particularly the rural panchayats spread across the remote islands of the North and Middle Andaman district, suffer from acute capacity deficits. They lack trained accounting personnel, technical engineering staff required to prepare detailed project reports, and the administrative expertise necessary to navigate complex procurement regulations. Consequently, there is often a significant time lag between the allocation of funds by the central government and their actual utilization on the ground. Unspent balances frequently accumulate at the end of the financial year, leading to delayed project execution and compromised civic service delivery (Ministry of Panchayati Raj, 2026).

Furthermore, the rigid guidelines that often accompany tied grants can create frictions when applied to the unique geographical and ecological realities of the islands. For example, sanitation projects designed for mainland plains may not be structurally feasible or ecologically appropriate for the fragile coastal topographies or the heavy rainfall patterns of the archipelago. Local bodies often struggle to adapt mainland-centric project guidelines to island realities, leading to stalled initiatives and underutilization of allocated resources.

To maximize the impact of Finance Commission awards, the territorial administration must urgently prioritize capacity building at the grassroots level. This involves deploying dedicated technical support units to assist local bodies in project planning, financial management, and procurement processes. Furthermore, the administration must advocate strongly with the central ministries to allow for greater flexibility in the utilization of tied grants, ensuring that local bodies have the autonomy to design and implement infrastructure projects that are uniquely suited to the specific ecological and logistical constraints of their respective islands. Empowering these local institutions financially and technically is an absolute prerequisite for achieving equitable and sustainable development across the widely dispersed archipelago.

2.7 GST Implementation: Revenue Impact and Compensation Status

The implementation of the Goods and Services Tax (GST) regime represented a monumental shift in the indirect tax architecture of India, and its application in the Andaman and Nicobar Islands has yielded distinct revenue impacts shaped by the territory's specific economic structure. Operating under the Union Territory Goods and Services Tax (UTGST) framework, the islands have generally experienced a positive trajectory in indirect tax collections since the inception of the regime. This positive outcome is primarily driven by the territory's status as a massive net consumer of goods and a burgeoning hub for service-oriented tourism (Ministry of Finance, 2026).

Because the Andaman and Nicobar Islands lack a substantial manufacturing base, almost all manufactured consumer goods, construction materials, packaged foods, and electronic items are imported from the Indian mainland. Under the destination-based principle of the GST regime, the tax revenue accrues to the jurisdiction where the final consumption occurs. Consequently, the territory benefits significantly from the Integrated Goods and Services Tax (IGST) settlements on these massive inbound shipments. Furthermore, the rapid post-pandemic recovery and subsequent expansion of the hospitality and tourism sectors have provided a robust boost to tax collections on services. The proliferation of luxury resorts,

scuba diving operations, and private ferry services generates substantial tax revenue that forms the backbone of the territory's own tax mobilization efforts.

However, the GST architecture in the islands is not without its significant challenges and structural vulnerabilities. The narrowness of the local tax base remains a critical concern. Because revenue is so heavily dependent on the tourism sector, the territory's fiscal health is dangerously exposed to external shocks. Any disruption to travel, whether caused by extreme weather events, mainland economic downturns, or global health crises, results in an immediate and severe contraction in UTGST collections. Furthermore, the high logistical costs of transporting goods to the islands mean that the final retail prices of commodities are inherently high. While this inflates the nominal value of the tax collected on an ad valorem basis, it severely depresses the real purchasing power of the local population, leading to widespread dissatisfaction regarding the cost of living.

Compliance and administrative enforcement also present unique logistical hurdles in the archipelagic context. While the GST network (GSTN) has digitized tax filing, the physical auditing, anti-evasion enforcement, and verification of high-value transactions are profoundly difficult when businesses are scattered across remote islands separated by rough seas. The administration relies heavily on maritime checkpoints at the main ports in Port Blair to monitor the inflow of goods, but policing internal trade between islands remains administratively challenging.

The cessation of the GST compensation cess mechanism, which was designed to protect states and territories from revenue shortfalls during the initial transition period, has forced the local administration to focus more aggressively on plugging revenue leakages. To sustain and enhance UTGST collections, the territory must invest in advanced data analytics and artificial intelligence tools to identify patterns of tax evasion, particularly in the unorganized retail and hospitality sectors. More importantly, the administration must urgently pursue policies that promote value addition and light, ecologically sustainable manufacturing within the islands, such as high-value seafood processing and coconut-based industries, to broaden the tax base and reduce the perilous over-reliance on the volatile tourism sector.

2.8 Public Financial Management Reforms and Audit Compliance

The integrity, transparency, and efficiency of public financial management are fundamental requirements for effective governance, particularly in a territory heavily dependent on external financial infusions. In recent years, the Andaman and Nicobar Administration has undertaken significant efforts to align its financial operations with national digital standards. The implementation of the Public Financial Management System (PFMS) has been a critical reform. By digitizing the flow of funds, the PFMS has significantly enhanced the visibility of government expenditure, enabling real-time tracking of allocations from the central ministries down to the specific implementing departments in the islands. This digital architecture has been instrumental in minimizing the idle parking of funds in local bank accounts and expediting the transfer of resources (Ministry of Finance, 2026).

Furthermore, the territory has successfully integrated the Direct Benefit Transfer (DBT) mechanism across various social welfare schemes. Subsidies, pensions for the elderly and disabled, and financial assistance for students are now transferred directly into the authenticated Aadhaar-linked bank accounts of the beneficiaries. This reform has drastically reduced the scope for bureaucratic rent-seeking, eliminated ghost beneficiaries from the welfare rolls, and ensured that the financial support intended for vulnerable islanders reaches them without delay. The expansion of the banking network and the improvement in digital connectivity facilitated by the submarine cable have been critical enablers for the successful rollout of DBT across the archipelago.

Despite these vital systemic upgrades, audit compliance and the resolution of financial irregularities remain areas of persistent concern. The reports generated by the Comptroller and Auditor General (CAG) of India frequently highlight recurrent systemic flaws in the territory's financial execution. One of the most consistently flagged issues is the severe delay in the execution of major capital infrastructure projects. These delays, often attributed to a combination of slow environmental clearances, logistical failures in material procurement, and contract mismanagement, result in massive cost overruns that degrade the efficiency of capital expenditure.

The CAG audits also frequently point to significant financial leakages and operational inefficiencies within the Directorate of Shipping Services and the Electricity Department. The management of fuel inventories, the procurement of spare parts for aging vessels and diesel generators, and the inadequate collection of user charges are repeatedly cited as areas requiring urgent administrative intervention (Comptroller and Auditor General of India, 2026). Furthermore, the complex and remote geography of the islands makes physical verification of government assets and auditing of localized expenditures profoundly difficult, requiring audit teams to undertake extensive and costly maritime travel.

To fundamentally strengthen public financial management, the administration must move beyond simply adopting digital platforms and focus heavily on systemic capacity building. This requires the establishment of rigorous internal audit mechanisms within every major department to identify and rectify financial irregularities before they escalate. Contract management protocols must be overhauled to penalize unjustified delays by private contractors strictly. Moreover, the administration must foster a culture of absolute financial accountability, ensuring that the observations and recommendations made by the CAG are not merely recorded but are aggressively acted upon to close loopholes and optimize the utilization of the scarce public resources allocated to the territory.

2.9 Centre-State fiscal relations: Trends and themes

The fiscal relationship between the Union Territory of the Andaman and Nicobar Islands and the central government in New Delhi is currently undergoing a profound and historic structural evolution. For decades following Indian independence, the islands were viewed primarily through the lens of a distant administrative outpost and a protected ecological reserve. Consequently, the fiscal relationship was defined by a paternalistic dynamic. The central government provided the necessary financial subsidies to maintain basic

administrative control, support the settler populations, and protect the indigenous tribes, but there was minimal focus on integrating the territory into the broader macroeconomic growth story of the nation. The islands were, in essence, a strategic liability maintained through continuous financial life support.

However, the geopolitical realities of 2026 have fundamentally shattered this historical paradigm. The rise of competing maritime powers in the Indo-Pacific and the increasing importance of the sea lanes of communication that pass through the Malacca Strait have repositioned the Andaman and Nicobar Islands as a critical strategic asset for the Republic of India. This dramatic strategic pivot has directly catalyzed a transformation in fiscal relations. The central government is no longer merely subsidizing a remote outpost; it is aggressively investing in a forward operating base and a future maritime economic hub (NITI Aayog, 2026).

This shifting theme is clearly evidenced by the unprecedented flow of capital expenditure directed towards mega-projects like the Great Nicobar Holistic Development Project, the expansion of military and dual-use airfields, and the upgrading of naval berthing facilities across the archipelago. The central government is demonstrating a willingness to bear immense upfront capital costs to secure long-term strategic and economic dividends. However, this influx of central capital also brings heightened scrutiny and tighter control over local planning processes. The territorial administration must now navigate complex multi-ministerial approvals involving the Ministry of Defence, the Ministry of Environment, Forest and Climate Change, and the NITI Aayog for any significant developmental initiative.

A dominant emerging theme in this evolving fiscal relationship is the central government's push for the territory to enhance its own financial sustainability. While strategic investments are fully funded by New Delhi, there is increasing pressure on the local administration to rationalize its massive revenue expenditures, particularly the bloated public sector wage bill and the inefficient shipping and power subsidies. The central government expects the territory to leverage the newly created infrastructure—such as the international airport and high-speed internet—to aggressively court private investment, boost high-end tourism, and generate substantial local revenues that can eventually offset the territory's operational dependencies.

Looking toward the horizon of 2047, the fiscal relationship must mature into a partnership based on sustainable blue economic growth. The territory must argue for a bespoke fiscal framework that recognizes the permanent and unavoidable costs imposed by its archipelagic geography, ensuring that essential logistical subsidies are maintained but delivered with maximum efficiency. Simultaneously, the territory must demonstrate absolute commitment to ecological preservation, ensuring that the central government's strategic and economic investments do not destroy the very environmental assets that make the islands globally unique. Balancing these immense strategic imperatives with fragile ecological realities and the socio-economic aspirations of the islanders will remain the defining challenge of the fiscal relationship between Port Blair and New Delhi for the coming decade

Chapter 3: Economic Structure, Growth and Sectoral Performance

3.1 Gross State Domestic Product: Trends, Growth Rate and Sectoral Share

The Gross State Domestic Product (GSDP) of the Andaman and Nicobar Islands provides a macro-level snapshot of an economy that is structurally skewed and heavily reliant on external financial infusions. According to the most recent projections for the financial year 2025 to 2026, the GSDP of the territory at constant prices stands at approximately 12,450 crore Indian Rupees (Ministry of Statistics and Programme Implementation, 2026). While this figure represents a steady, incremental increase from previous years, the overall absolute size of the island economy remains microscopic when compared to mainland states. The growth rate of the GSDP has historically hovered between five and seven per cent, demonstrating a stable but largely uninspiring economic trajectory. This growth is predominantly fueled not by endogenous industrial expansion or massive private sector investment, but rather by the continuous, reliable flow of central government grants and the subsequent consumption expenditure generated by the public sector workforce.

The sectoral share of the GSDP in the Andaman and Nicobar Islands is overwhelmingly dominated by the tertiary sector, which accounts for more than sixty-five per cent of the total economic output in 2026 (Directorate of Economics and Statistics, 2026). This massive tertiary dominance is primarily driven by two sub-sectors: public administration and tourism. Because the government is the largest employer and the primary provider of all essential services, including healthcare, education, and inter-island transport, the public administration component artificially inflates the services sector. Tourism, encompassing hospitality, transport, and recreational services, forms the only significant private-sector contributor to the tertiary economy. The heavy reliance on these service sectors makes the GSDP extremely vulnerable to external shocks, such as travel disruptions, global pandemics, or mainland economic downturns that affect tourist discretionary spending.

The primary sector, which includes agriculture, forestry, animal husbandry, and fisheries, contributes a comparatively modest share of approximately eighteen per cent to the territory's GSDP (Ministry of Agriculture and Farmers Welfare, 2026). Despite the islands being surrounded by an immense Exclusive Economic Zone covering 600,000 square kilometres, the contribution of the fisheries sub-sector remains shockingly below its actual potential. Agriculture is severely limited by the lack of arable land, as over eighty-one per cent of the territory is legally locked under strict forest conservation laws. The contribution of forestry, which was historically a major revenue generator before the Supreme Court of India banned commercial logging in the early 2000s, has now shrunk to a negligible fraction, focused only on non-timber forest products and strict conservation management.

The secondary sector, comprising manufacturing, industry, and mining, is the weakest link in the economic structure, accounting for less than seventeen per cent of the GSDP (Ministry of Micro, Small and Medium Enterprises, 2026). The manufacturing base is almost entirely non-existent, restricted to a few small-scale units producing coir products, handicrafts, and basic construction materials. The establishment of large-scale, polluting industries is strictly

prohibited to protect the fragile island ecology. Furthermore, the prohibitive cost of importing raw materials from the mainland, combined with highly expensive and unreliable diesel-generated electricity, destroys any comparative advantage for local manufacturing. Consequently, the secondary sector's contribution is largely derived from the construction sub-sector, which is itself driven by government infrastructure projects rather than private real estate or industrial development. This skewed sectoral share highlights the urgent need to diversify the economy, particularly by modernizing the primary sector through high-value fisheries and establishing a clean, sustainable, and technologically advanced secondary sector.

3.2 Per Capita Income and Purchasing Power Analysis

The per capita income of the Andaman and Nicobar Islands presents one of the most misleading economic indicators when evaluated in isolation from the territory's unique geographic and logistical realities. On paper, the per capita Net State Domestic Product (NSDP) of the territory consistently ranks higher than the national average. For the year 2026, the estimated per capita income at current prices is projected to be robust, giving the illusion of widespread economic prosperity and high living standards (Directorate of Economics and Statistics, 2026). This statistically high per capita income is mathematically driven by the very small population denominator combined with a massive influx of central government funds that pay for the salaries, allowances, and pensions of a highly bloated bureaucratic and administrative workforce.

However, a rigorous analysis of the real purchasing power of the islanders tells a drastically different and much more challenging story. The Andaman and Nicobar Islands function under a severe "island premium" regarding the cost of living. Because the territory has virtually no local manufacturing and very limited agricultural output, almost every single commodity required for daily life must be imported from the Indian mainland. Construction materials like cement and steel, essential food items like rice, wheat, and vegetables, consumer durables, and refined petroleum products are all transported across the Bay of Bengal via expensive maritime shipping routes. This complex logistical chain adds a significant premium of twenty to thirty per cent to the retail prices of goods compared to their mainland equivalents (Ministry of Consumer Affairs, Food and Public Distribution, 2026).

Consequently, the high nominal per capita income is rapidly eroded by the exorbitant cost of living. The real purchasing power of the average islander is often significantly lower than that of a citizen earning a lower nominal wage in a mainland state like Tamil Nadu or Andhra Pradesh. This dynamic creates acute financial stress, particularly for the youth working in the unorganized private sector, small-scale vendors, and traditional fishermen, whose incomes do not match the inflation-adjusted salaries of government employees. The Public Distribution System does provide a critical safety net by supplying heavily subsidized basic food grains, but for any discretionary spending, consumer goods, or specialized healthcare required from the mainland, the financial burden is exceptionally high.

Furthermore, there is a severe spatial disparity in per capita income and purchasing power across the archipelago. The economic benefits, government salaries, and tourism revenues are overwhelmingly concentrated in the South Andaman district, particularly within the Port Blair municipal limits. Residents of the remote North and Middle Andaman district, who rely heavily on subsistence agriculture and small-scale fishing, exhibit a much lower per capita income. The purchasing power in these northern islands is even further depressed by the additional logistical costs required to transport goods from Port Blair up the Andaman Trunk Road or via infrequent inter-island ferries. In the tribal reserve of the Nicobar district, the conventional metrics of per capita income are less applicable due to the reliance on traditional barter systems and subsistence plantation economies, though their integration into the cash economy is increasing. Addressing this disparity requires policies that actively lower the logistical costs of importing goods while simultaneously boosting local income generation through decentralized, island-specific economic activities.

3.3 Primary Sector: Agriculture, Horticulture, Animal Husbandry and Fisheries

The primary sector in the Andaman and Nicobar Islands is defined by a constant tension between the need for local food security and the absolute imperative of ecological conservation. Agriculture, horticulture, animal husbandry, and fisheries form the traditional backbone of rural livelihoods, particularly in the North and Middle Andaman district and the Nicobar group. However, the sector operates under severe geographical and legal constraints. The total geographical area of the territory is 8,249 square kilometres, but out of this, a staggering 81.74 per cent is officially classified as recorded forest area (Forest Survey of India, 2026). When accounting for tribal reserves, national parks, and wildlife sanctuaries, the net sown area available for agricultural cultivation is restricted to a mere fifty thousand hectares, representing roughly six per cent of the total landmass.

Agriculture in the territory is fundamentally plantation-oriented. The undulating topography and heavy tropical rainfall make the land largely unsuitable for extensive cereal cultivation. While paddy is grown in the low-lying valley areas during the monsoon, the total production falls drastically short of the territory's consumption needs, necessitating massive imports of rice and wheat from the mainland via the Food Corporation of India. The agricultural economy is instead dominated by traditional cash crops, primarily coconut and arecanut. Coconut plantations are ubiquitous across the islands and form the absolute core of the traditional economy in the Nicobar district. Arecanut is highly lucrative and is extensively cultivated in South Andaman and the northern and middle islands. However, the productivity of these plantations suffers from aging palm populations, a lack of scientific crop management, and inadequate value-addition infrastructure. The majority of the coconut harvest is exported as raw copra to the mainland, meaning the territory loses out on the lucrative margins of processed coconut oil, desiccated coconut, and coir products (Department of Agriculture, 2026).

Horticulture holds significant, yet largely untapped, potential. The tropical climate is ideal for cultivating a wide variety of fruits, including bananas, papayas, mangoes, pineapples, and

exotic spices such as black pepper, cloves, and cinnamon. The administration has recently initiated campaigns to promote high-density, multi-tier cropping systems that maximize yield per hectare without requiring additional land clearance. Organic farming is also being aggressively promoted, leveraging the default low-chemical usage historically present in the islands. By officially branding and certifying Andaman spices and fruits as premium organic products, local farmers can command significantly higher prices in mainland and international niche markets. Animal husbandry remains a supplementary activity, constrained by the lack of grazing land and the high cost of importing livestock feed. Poultry and goat rearing are common, but the territory remains heavily dependent on the mainland for its supply of eggs, dairy, and meat products (Ministry of Fisheries, Animal Husbandry and Dairying, 2026).

Fisheries represent the single most important and drastically underutilized economic opportunity for the Andaman and Nicobar Islands. The territory is endowed with a coastline of 1,912 kilometres and an Exclusive Economic Zone of roughly 600,000 square kilometres, accounting for nearly thirty per cent of India's total maritime zone. The estimated potential yield of marine fisheries in these waters is incredibly high, rich in commercially valuable species like tuna, marlin, and seer fish. Yet, current exploitation levels hover at a mere fraction of the sustainable potential. The local fishing industry is heavily dominated by traditional, artisanal fishermen operating small, non-motorized or low-powered craft in shallow coastal waters. Deep-sea fishing is virtually non-existent among the local population due to a severe lack of capital investment, the absence of modern deep-sea trawlers, and a critical lack of supporting infrastructure such as large-scale cold storage facilities, modern fish processing plants, and reliable export logistics (Department of Fisheries, 2026). Transforming this sector requires a massive infusion of private capital to establish sustainable deep-sea fishing fleets, coupled with strict regulatory frameworks to prevent over-exploitation by foreign vessels and ensure that the economic benefits remain with the island communities.

3.4 Secondary Sector: Industry, Manufacturing and Mining

The secondary sector in the Andaman and Nicobar Islands is characterized by profound structural weakness, historical disruption, and severe environmental limitations. Industry, manufacturing, and mining contribute the lowest share to the territory's Gross State Domestic Product. This stunted industrial landscape is not an accident but a direct result of deliberate ecological policy and the prohibitive economics of island logistics. For any industrial framework designed in 2026, the fundamental baseline is that large-scale, heavy, or polluting manufacturing can never be permitted in this ecologically fragile archipelago. The industrial policy of the territory must necessarily be restricted to clean, sustainable, and highly specialized micro, small, and medium enterprises (MSMEs).

Historically, the secondary sector experienced a massive shock in the early 2000s. For decades, the timber industry was the undisputed heavyweight of the local economy. Large-scale government and private sawmills processed valuable timber extracted from the

island forests, supporting a significant workforce. However, in a landmark judgment recognizing the devastating impact of commercial logging on the fragile island ecosystem, the Supreme Court of India banned all commercial timber extraction. This necessary environmental intervention resulted in the sudden closure of the major wood-based industries, causing severe economic dislocation and the loss of thousands of industrial jobs (Ministry of Environment, Forest and Climate Change, 2026). The territory has never fully recovered its industrial capacity since this transition, and the focus has entirely shifted away from resource extraction.

In 2026, the manufacturing sector is microscopic. It is predominantly composed of unregistered and small-scale units focusing on local consumption and the tourism market. The primary activities include small-scale coir processing, the manufacturing of local handicrafts using legally procured wood and sea shells, basic food processing, and small-scale boat building and repair facilities required to service the local fishing and tourism fleets. The growth of even these light industries is severely constrained by a toxic combination of exorbitant logistical costs and infrastructural deficits. Every piece of industrial machinery, every spare part, and nearly all raw materials must be imported from the mainland. Once the goods are manufactured, exporting them back to the mainland or to international markets incurs the same heavy shipping costs, completely destroying any price competitiveness the island products might possess (Ministry of Micro, Small and Medium Enterprises, 2026).

Furthermore, the territory suffers from a chronic deficit in reliable and affordable industrial power. Because the islands rely heavily on imported diesel for electricity generation, the commercial power tariffs are astronomically high. This high energy cost acts as an insurmountable barrier for any energy-intensive manufacturing process. Mining is virtually non-existent and legally restricted. The extraction of construction materials, such as sand and stone aggregate, is tightly controlled by the administration and the Coastal Regulation Zone (CRZ) rules to prevent coastal erosion and habitat destruction. Consequently, the construction industry relies heavily on importing sand and stone from the mainland or neighbouring countries, further driving up the cost of infrastructure development.

The future of the secondary sector in the Andaman and Nicobar Islands must pivot entirely towards highly specialized, zero-pollution, and knowledge-based manufacturing. The focus must be on high-value, low-volume goods. This includes establishing state-of-the-art marine processing units that add significant value to locally caught tuna before export, the development of marine biotechnology industries that leverage the unique genetic resources of the coral reefs for pharmaceutical research, and the assembly of sustainable technologies such as solar panels and small-scale wind turbines tailored for tropical island conditions. The administration must provide heavily subsidized, reliable renewable energy specifically for these targeted green industries to offset the logistical penalties inherent to island manufacturing.

3.5 Tertiary Sector: Trade, Finance, Real Estate and Services

The tertiary sector constitutes the absolute backbone of the economy in the Andaman and Nicobar Islands. Generating over sixty-five per cent of the territory's economic output, the services sector is the primary driver of modernization, urbanization, and cash circulation within the archipelago. However, this sector is defined by a stark duality: the overwhelming, stable dominance of public administration on one hand, and the dynamic, highly volatile growth of the tourism and hospitality industry on the other. Ensuring the resilience and diversification of this sector is paramount for the economic security of the territory as it approaches the middle of the twenty-first century.

Tourism is the most visible and economically vital private-sector activity in the islands. The territory's pristine beaches, world-class coral reefs, and unique historical sites like the Cellular Jail draw hundreds of thousands of domestic and international tourists annually. In 2026, tourism acts as the primary engine for job creation in the private sector, supporting a vast ecosystem of hotels, luxury resorts, restaurants, scuba diving centres, tour operators, and private ferry services connecting the popular tourist nodes of Port Blair, Swaraj Dweep (Havelock Island), and Shaheed Dweep (Neil Island). However, the tourism sector exhibits severe structural vulnerabilities. It is highly seasonal, peaking during the winter months and crashing during the extended monsoon season, leading to cyclical unemployment and cash flow crises for small businesses. Furthermore, it is intensely concentrated in the South Andaman district, creating massive infrastructure stress and carrying-capacity issues in a few localized areas, while the northern and southern islands reap almost zero economic benefits from the influx of visitors (Ministry of Tourism, 2026).

Trade and commerce in the territory are entirely structured around the import of goods from the mainland to satisfy local consumption and the demands of the tourism industry. The retail sector in Port Blair is vibrant, but it is heavily dependent on the reliability of the maritime supply chain. Any disruption at the mainland ports of Chennai or Kolkata, or any delay in the schedule of cargo vessels, immediately results in the scarcity of essential goods and sudden spikes in retail prices. The wholesale and retail trade is predominantly controlled by a small number of established merchant families and logistics operators, which limits market competition and contributes to the high "island premium" on consumer goods.

The financial services sector has experienced a profound transformation in recent years, primarily driven by the operationalization of the Chennai-Andaman and Nicobar Islands (CANI) submarine optical fibre cable. Prior to this, the islands suffered from chronic digital isolation, relying on severely limited and highly expensive satellite bandwidth that crippled digital banking, online commerce, and digital governance. With the advent of reliable, high-speed broadband, the banking network has expanded its digital footprint, enabling seamless electronic transactions, point-of-sale operations for the tourism sector, and the implementation of direct benefit transfers for social welfare schemes. However, credit off-take remains stubbornly low. While banks enthusiastically collect deposits from the salaried government workforce, they are highly hesitant to disburse commercial loans due to the lack of industrial activity, the complex land tenure system that makes offering collateral difficult, and the perceived high risks associated with island logistics. This reluctance to lend

severely stifles local entrepreneurship and forces small businesses to rely on informal, high-interest credit networks (Reserve Bank of India, 2026).

The real estate sector, particularly in Port Blair and the rapidly developing tourist hubs of Swaraj Dweep, is experiencing a massive boom. Driven by the influx of tourism capital, speculative investments from the mainland, and the demand for commercial space, land values have skyrocketed over the last decade. This real estate escalation generates significant revenue for the local administration through stamp duties and registration fees. However, it has precipitated a severe housing affordability crisis for the local working-class population and the younger generation. The scarcity of non-forest revenue land, combined with complex land conversion regulations, means that the supply of affordable housing cannot match the demand. The tertiary sector must evolve by moving beyond low-end mass tourism towards premium eco-tourism, expanding digital IT-enabled services (ITES) that are not hindered by physical logistical costs, and implementing strict zoning laws to ensure that real estate development does not destroy the environmental assets that attract visitors in the first place.

3.6 Informal Economy: Size, Significance and Integration Challenges

The informal economy in the Andaman and Nicobar Islands represents a vast, dynamic, and highly vulnerable segment of the territory's economic landscape. While official macroeconomic statistics heavily focus on the organized public sector and the registered hospitality industry, a massive portion of the island population relies entirely on the unorganized sector for daily survival. This informal economy is deeply intertwined with the primary and tertiary sectors, providing the essential, flexible labour that keeps the tourism engine running and supplies the local markets with fresh produce. Understanding and formally integrating this sector is a critical policy challenge for the administration in 2026.

The size and significance of the informal economy are most visible within the tourism ecosystem. Surrounding the luxury resorts and registered tour operators is a sprawling network of informal economic actors. This includes unregistered local guides, small-scale food vendors, independent taxi and auto-rickshaw drivers, boat operators providing short island-hopping trips, and local artisans selling unregulated souvenirs. These individuals absorb the overflow of tourist demand and provide vital, low-cost services. However, because they operate outside the formal regulatory framework, they do not benefit from minimum wage protections, social security nets, or workplace safety regulations. During the off-season monsoon months, when tourist footfall evaporates, these informal workers face acute financial destitution, as they lack the financial buffers and formal credit access that registered businesses possess (Ministry of Labour and Employment, 2026).

The informal sector is equally dominant in the traditional primary economy. The vast majority of the fisheries catch that supplies the local markets is brought in by artisanal fishermen operating small, unregistered dinghies. These fishermen operate at the very margins of profitability, heavily exploited by informal middlemen who control the local wholesale markets and dictate prices. Similarly, agricultural labourers working on small, fragmented coconut and arecanut plantations operate without formal employment contracts,

rendering them highly vulnerable to exploitation and sudden loss of livelihood due to crop failures or extreme weather events. The construction sector, which is the only significant component of the secondary economy, also relies almost exclusively on informal, daily-wage migrant labour brought in from mainland states like Jharkhand, Bihar, and West Bengal. These migrant workers live in precarious conditions on the fringes of Port Blair, often lacking access to adequate sanitation, healthcare, and formal legal recourse in cases of wage theft.

The integration challenges facing the administration are multi-faceted. The primary obstacle to formalizing the informal economy is the heavy regulatory burden and bureaucratic red tape associated with business registration, obtaining environmental clearances, and complying with complex tax codes. For a small-scale vendor or an artisanal fisherman, the cost of compliance far outweighs the perceived benefits of entering the formal system. Furthermore, the lack of digital literacy among older, informal workers hinders their ability to access formal banking channels, register for government support schemes, or utilize digital payment platforms, despite the improvements in internet connectivity.

To address these challenges, the territory must adopt a highly proactive and supportive approach to integration. This involves drastically simplifying the registration process for micro-enterprises and providing single-window clearance systems specifically tailored for small-scale local vendors. The administration must aggressively expand the coverage of national social security schemes, such as the e-Shram portal, to ensure that informal workers in the islands have access to basic health insurance, accident cover, and old-age pensions. Empowering informal primary producers, such as fishermen and small farmers, through the creation of robust, legally recognized cooperative societies is crucial. By pooling their resources, these cooperatives can negotiate better prices, access formal credit, and invest in shared infrastructure like cold storage, thereby gradually pulling the informal workforce into a secure, regulated, and profitable formal economic structure.

3.7 Labour Market: Employment, Unemployment and Workforce Quality

The labour market in the Andaman and Nicobar Islands presents one of the most acute and complex socio-economic challenges for the territorial administration. The territory suffers from a deeply entrenched structural imbalance characterized by the paradox of "educated unemployment." This phenomenon occurs when a region boasts high levels of human capital formation—evidenced by the territory's impressive literacy rates and high enrolment in secondary and tertiary education—but utterly fails to generate the corresponding formal, private-sector employment opportunities required to absorb these qualified graduates. In 2026, this structural mismatch threatens to squander the territory's demographic dividend and create widespread social frustration among the island youth.

Historically, the territorial government and its associated parastatal organizations have functioned as the primary, and often the only, source of formal employment in the islands. A culture of deep reliance on government jobs has permeated the local society, with generations of islanders viewing a secure position in the public administration, the police force, or the education department as the ultimate career objective. However, the capacity of the public

sector to absorb new entrants has reached absolute saturation. The government machinery is already considered bloated and financially unsustainable, severely restricting new recruitment drives. Consequently, thousands of educated young men and women enter a labour market that has virtually no capacity to hire them, leading to soaring rates of youth unemployment (Ministry of Skill Development and Entrepreneurship, 2026).

The private sector, which should ideally function as the engine of job creation, is stunted by the geographical and logistical constraints discussed throughout this chapter. The absence of a manufacturing sector means there are zero opportunities for industrial employment or engineering roles. While the tourism and hospitality sector is expanding rapidly, the jobs it creates are predominantly low-wage, seasonal, and highly vulnerable to external shocks. Furthermore, there is a significant expectation mismatch. The highly educated local youth aspire to secure stable, white-collar desk jobs or technology-driven roles, and are generally reluctant to accept the demanding, service-oriented positions available in the hospitality sector, or the physically arduous labour required in the construction and fisheries sectors. As a result, these lower-tier jobs are frequently filled by migrant labourers from the mainland, exacerbating local resentment and distorting the demographic balance.

The quality of the workforce also presents critical challenges regarding skills alignment. The educational institutions in the territory have historically focused on providing generic degrees in arts, sciences, and commerce, which prepare students well for bureaucratic exams but leave them entirely unequipped for the specialized demands of a modern blue economy. There is a desperate, unmet need for highly specialized vocational training. The territory requires marine biologists, deep-sea navigation experts, sustainable aquaculture technicians, high-end hospitality managers, and renewable energy engineers. Yet, the local training infrastructure for these specific, high-potential sectors remains woefully inadequate.

To resolve this labour market crisis by 2047, the administration must execute a radical overhaul of its skill development strategy. The focus must shift decisively away from generic degree programs towards highly specialized, industry-aligned vocational training centres. Partnering with national and international maritime institutes to establish world-class training facilities in Port Blair is essential to prepare the youth for careers in global shipping, marine logistics, and advanced fisheries. Furthermore, the administration must foster a culture of entrepreneurship, providing targeted financial grants, mentorship, and incubation facilities to young islanders willing to launch startups in eco-tourism, digital services, and sustainable agriculture. Only by aggressively aligning the skills of the workforce with the specific needs of a modern, ocean-based economy can the territory eliminate the scourge of educated unemployment and retain its brightest talent.

3.8 Inflation, Price Stability and Consumer Welfare

Maintaining price stability and safeguarding consumer welfare in the Andaman and Nicobar Islands is a perpetual administrative struggle dictated by the tyranny of distance and the fragility of maritime supply chains. The territory operates under a permanent structural disadvantage regarding inflation, commonly referred to as the "island premium." Because the

archipelago possesses virtually no manufacturing capacity and only limited agricultural output, the overwhelming majority of essential commodities, construction materials, consumer durables, and petroleum products must be imported from the Indian mainland, primarily via the ports of Chennai and Kolkata. This absolute reliance on long-distance maritime logistics introduces massive transportation costs, handling fees, and storage expenses that are inevitably passed on to the local consumer, resulting in a retail price baseline that is significantly higher than the national average.

In 2026, the vulnerability of the island economy to external inflationary shocks remains severe. Any fluctuation in global crude oil prices immediately impacts the cost of inter-island and mainland shipping, triggering a cascading inflationary effect across all sectors of the local economy. Furthermore, the supply chain is highly susceptible to disruption by extreme weather events. During the intense monsoon months, rough seas frequently delay cargo vessels for weeks. This unreliability forces local merchants to maintain massive, expensive inventories, the costs of which are embedded in the final retail prices. When ships are delayed, acute artificial scarcities of perishable goods like fresh vegetables, dairy products, and specialized medicines occur almost instantly, leading to sudden, severe price gouging in the unorganized retail markets (Ministry of Consumer Affairs, Food and Public Distribution, 2026).

To mitigate these severe inflationary pressures and ensure basic survival, the territorial administration relies heavily on a massive, highly subsidized Public Distribution System (PDS). The PDS functions as the absolute lifeline for consumer welfare in the islands, providing essential food grains like rice and wheat, alongside cooking fuel, at strictly controlled, heavily subsidized prices to the vast majority of the population. Without the intervention of the PDS and the Food Corporation of India, the basic cost of caloric survival in the territory would be unaffordable for the working-class population. Furthermore, the administration heavily subsidizes passenger ferry tickets, helicopter transport for medical emergencies, and domestic electricity tariffs to shield citizens from the true, exorbitant costs of island logistics.

However, while the PDS secures basic food security, it does nothing to control the inflation of discretionary items, specialized healthcare, quality education, or modern consumer goods. The middle class and the youth feel the sting of the "island premium" most acutely when attempting to maintain a standard of living comparable to their mainland counterparts. The high cost of internet connectivity, electronic devices, and mainland travel significantly depresses the real purchasing power and overall quality of life. Improving consumer welfare in the long term requires structural interventions to reduce logistical friction. This includes upgrading port handling infrastructure to reduce vessel turnaround times, incentivizing the use of larger, more fuel-efficient cargo ships, and aggressively promoting the local cultivation of vegetables, poultry, and dairy to reduce the volume of perishable imports. Strengthening the legal enforcement of the Essential Commodities Act during monsoon disruptions is also vital to prevent opportunistic price gouging and protect vulnerable consumers.

3.9 Growth Corridors: engines of economic expansion

As the Andaman and Nicobar Islands pivot towards a future defined by sustainable economic self-reliance and strategic maritime integration, the administration has identified and is aggressively developing specific geographical "Growth Corridors." These corridors are designated zones where infrastructure investment, regulatory simplification, and targeted private capital are concentrated to act as the primary engines of economic expansion for the entire territory leading up to 2047. Rather than attempting a diluted, territory-wide industrialization that would spread resources too thin and risk widespread ecological damage, this nodal strategy focuses on leveraging the unique geographical and strategic advantages of specific island groups.

The most monumental and strategically vital growth corridor is located in the extreme south of the archipelago: The Great Nicobar Holistic Development Project (GNHDP). Piloted directly by the NITI Aayog with massive central government backing, this mega-project aims to transform Great Nicobar Island into a premier global maritime hub. The corridor is anchored by the proposed International Container Transshipment Terminal at Galathea Bay, designed to capture the immense volume of international shipping traffic passing through the adjacent Malacca Strait. Coupled with a greenfield international airport, a massive power plant, and a comprehensively planned coastal city, this corridor is explicitly designed to be the primary economic engine for the territory, generating unprecedented revenue through port logistics, bunkering services, and strategic military-civilian integration (NITI Aayog, 2026). The success of this southern corridor will dictate the economic trajectory of the entire territory, though it must be managed with extreme caution to mitigate the severe ecological and tribal displacement risks associated with such massive infrastructure.

The second major growth corridor is the Port Blair - Swaraj Dweep (Havelock) - Shaheed Dweep (Neil) Tourism Circuit in the South Andaman district. This corridor is already the established economic heart of the territory, but it is undergoing a deliberate upgrade from mass, low-value tourism to premium, high-yield eco-tourism. Investments in this corridor are focused on expanding the capacity of the Veer Savarkar International Airport, developing world-class marine marinas, establishing luxury, zero-emission resorts under strict environmental guidelines, and upgrading the inter-island ferry fleet to international cruise standards. This corridor aims to maximize the revenue extracted per tourist while actively limiting the total number of physical footfalls to ensure the long-term preservation of the carrying capacity of the fragile coral reefs and beaches.

Finally, the administration is focusing on developing a Northern Fisheries and Agricultural Corridor anchored around Diglipur and Mayabunder in the North and Middle Andaman district. Historically neglected, this corridor is being designed to finally unlock the massive potential of the primary sector. Investments are being directed towards establishing modern, deep-water fishing harbours, large-scale cold chain logistics, and state-of-the-art seafood processing plants capable of meeting European and Japanese export standards. Simultaneously, this corridor will focus on the organic certification and value addition of traditional crops like coconut and spices. By connecting this northern corridor to the export

logistics available in Port Blair via upgraded maritime transport, the administration aims to economically empower the remote rural settlements and structurally diversify the territory's economy away from its dangerous over-reliance on the volatile tourism sector and government subsidies.

Chapter 4: Investment, Industry and Private Sector Development

4.1 Investment Climate Assessment and Ease of Doing Business

The investment climate in the Union Territory of the Andaman and Nicobar Islands is currently undergoing a structural metamorphosis. Historically, the territory was never positioned or governed as a destination for private capital. For the first six decades following Indian independence, the overarching administrative philosophy was one of strict ecological preservation, indigenous population protection, and military security. Consequently, the regulatory environment was inherently designed to restrict, rather than facilitate, large-scale commercial enterprise. However, as the geopolitical significance of the Indo-Pacific region has escalated, the Government of India has fundamentally recalibrated its approach in 2026. The new strategic directive explicitly seeks to transform the archipelago into a vibrant, economically self-sustaining maritime hub. Achieving this transformation requires a massive overhaul of the investment climate and a radical improvement in the ease of doing business, which currently remains hindered by a complex web of geographical and bureaucratic constraints.

A rigorous assessment of the current investment climate reveals that the territory faces unique, systemic frictions that do not exist in mainland Indian states. The most formidable barrier to private investment is the exceptionally complex environmental regulatory framework. Because over eighty-one per cent of the territory is legally classified as recorded forest area, and the coastlines are protected by stringent Coastal Regulation Zone and Island Protection Zone notifications, obtaining the necessary clearances for land acquisition and commercial development is a profoundly arduous process. Investors frequently report that the timeline for securing environmental, forest, and tribal welfare clearances can extend over several years, introducing unacceptable levels of project risk and capital lock-in (Ministry of Commerce and Industry, 2026). The administration must balance the absolute necessity of preserving the fragile island ecology with the urgent need to create a predictable, time-bound regulatory environment for investors.

Beyond regulatory bottlenecks, the ease of doing business is severely compromised by the exorbitant logistical premiums associated with island operations. The absolute reliance on maritime shipping for importing raw materials, construction equipment, and consumer goods adds a massive cost burden to any commercial venture. The turnaround time at the Port Blair port, while improving, still suffers from periodic congestion and inefficiencies in cargo handling. Furthermore, the cost of commercial power is astronomically high. Because the territory relies heavily on imported high-speed diesel for electricity generation, industrial tariffs are among the most expensive in the country. This energy cost completely destroys the commercial viability of any energy-intensive manufacturing process, forcing potential investors to reconsider their capital deployments (Ministry of Power, 2026).

To address these systemic deficiencies, the territorial administration has initiated several vital reforms under the Ease of Doing Business framework in 2026. The most significant administrative intervention has been the operationalization of a truly integrated digital

single-window clearance mechanism. This portal is designed to consolidate applications for trade licenses, pollution control board consents, and basic municipal approvals into a unified, transparent digital interface. While the integration of central environmental clearances remains a work in progress due to overlapping ministerial jurisdictions, the digitization of localized permits has measurably reduced bureaucratic rent-seeking and application processing times.

The operationalization of the Chennai-Andaman and Nicobar Islands submarine optical fibre cable has also fundamentally improved the investment climate. Prior to this infrastructure upgrade, the territory suffered from chronic digital isolation, which effectively precluded investments in modern information technology, financial services, and high-end hospitality that require reliable, high-speed internet. The newfound digital connectivity has allowed the administration to digitize land records, facilitate online tax payments, and provide investors with reliable communication channels, thereby removing one of the most frequently cited historical grievances of the private sector (Department of Telecommunications, 2026).

However, significant challenges remain in the realm of contract enforcement and commercial dispute resolution. The judicial infrastructure in the islands is limited, and complex commercial litigation often requires transferring cases to the Calcutta High Court, which holds jurisdiction over the territory. This geographical distance adds immense legal costs and delays for businesses seeking to enforce contracts or resolve disputes. To cultivate a truly investor-friendly climate, the administration must advocate for the establishment of specialized commercial courts within Port Blair and promote alternative dispute resolution mechanisms tailored to the needs of the local business community. Ultimately, improving the ease of doing business in the Andaman and Nicobar Islands requires acknowledging that standard mainland economic models cannot be directly imported. The regulatory framework must be entirely bespoke, designed to facilitate high-value, low-impact enterprises that align with the severe ecological and logistical constraints of the archipelago.

4.2 Industrial Policy Framework and MSME Development

The industrial policy framework of the Andaman and Nicobar Islands is defined by absolute ecological constraints that strictly prohibit the establishment of large-scale, heavy, or polluting manufacturing industries. Recognizing the immense fragility of the coral reefs, the endemic biodiversity of the tropical forests, and the limited carrying capacity of the landmass, the territorial administration has explicitly restricted industrial development to the Micro, Small and Medium Enterprises sector. The strategic vision for 2026 and beyond dictates that the secondary sector must be entirely composed of clean, sustainable, and highly specialized "white" and "green" industries. This policy framework aims to maximize local employment generation and value addition without compromising the environmental integrity that forms the bedrock of the islands' long-term survival.

Micro, Small and Medium Enterprises represent the only viable pathway for domestic industrialization in the territory. However, the current MSME ecosystem remains severely stunted and structurally weak. The vast majority of registered units are micro-enterprises

engaged in basic retail, small-scale vehicle repair, generic food processing for local consumption, and localized construction materials production. The sector contributes a minimal fraction to the Gross State Domestic Product and struggles to compete even within the local market against cheaper imported goods from the Indian mainland. The primary obstacles stifling MSME growth are the prohibitive costs of imported raw materials, the lack of reliable industrial-grade power, and a critical deficit in advanced manufacturing skills among the local workforce (Ministry of Micro, Small and Medium Enterprises, 2026).

To revitalize this sector, the administration has pivoted its industrial policy towards promoting resource-based industries that leverage the specific agricultural and marine assets of the islands. The coconut and arecanut value chains present massive, untapped potential. Currently, the majority of the coconut harvest from the Nicobar and Andaman districts is exported to the mainland as low-value raw copra. The new industrial policy provides aggressive capital subsidies and technical assistance for MSMEs willing to establish processing units for virgin coconut oil, desiccated coconut, coconut water packaging, and coir-based geo-textiles. By processing these raw materials locally, the territory can capture the highly lucrative downstream profit margins, create sustainable rural employment, and significantly reduce the volume of bulk agricultural exports.

Similarly, the seafood processing sector is a primary focus for MSME development. Despite possessing a vast Exclusive Economic Zone, the territory severely lacks modern cold storage facilities, ice plants, and processing units capable of meeting international export standards. The administration is currently rolling out targeted schemes to incentivize private entrepreneurs to establish hygienic fish processing units, specialized packaging facilities for export-grade tuna, and small-scale marine biotechnology laboratories. These MSMEs are intended to act as the crucial middle layer between the artisanal fishing communities and the lucrative export markets in Southeast Asia and Japan (Department of Fisheries, 2026).

Access to affordable credit remains a crippling bottleneck for MSME development in the archipelago. Commercial banks operating in the territory are notoriously risk-averse, frequently demanding excessive collateral that local entrepreneurs, who often face complex land tenure restrictions, simply cannot provide. To bridge this financing gap, the territorial administration must establish a dedicated Island Enterprise Development Fund. This specialized financial institution would provide collateral-free working capital loans, venture debt for innovative green startups, and interest subvention schemes tailored specifically to the cash-flow cycles of island businesses. Furthermore, the administration must aggressively promote the integration of local MSMEs into the public procurement process, ensuring that government departments prioritize sourcing from island-based manufacturers to provide a guaranteed baseline market.

The capacity building of local entrepreneurs is another critical pillar of the industrial policy framework. The territory currently lacks specialized industrial training institutes capable of producing technicians skilled in marine engine repair, food processing quality control, and modern hospitality management. The administration must collaborate with national industry bodies to establish decentralized incubation centres across the three districts. These centres

must provide not only physical workspace and reliable internet but also intensive mentorship in business planning, regulatory compliance, and digital marketing. By focusing exclusively on high-value, sustainable micro-enterprises and actively removing the barriers to credit and skills, the Andaman and Nicobar Islands can gradually build a resilient, locally anchored industrial base that complements its broader strategic and tourism objectives.

4.3 Large and Anchor Industries: Sectoral Analysis

While the broader industrial policy strictly limits heavy manufacturing, the economic roadmap for the Andaman and Nicobar Islands relies heavily on the development of a select few "anchor industries." These large-scale, highly strategic sectors are intended to act as the primary engines of macroeconomic growth, generating the necessary revenue to offset the territory's massive administrative subsidies and creating widespread positive multiplier effects across the local MSME ecosystem. In 2026, the territorial administration and the central government have unequivocally identified three specific anchor industries that align with both the ecological constraints of the archipelago and the strategic imperatives of the nation. These are strategic maritime transshipment and logistics, premium high-value eco-tourism, and sustainable commercial deep-sea fishing.

The most transformative and geopolitically significant anchor industry currently under development is the strategic maritime transshipment and logistics sector, physically concentrated in the Great Nicobar Holistic Development Project. The Andaman and Nicobar archipelago sits directly adjacent to the Malacca Strait, one of the busiest and most critical maritime choke points in the global trading system. For decades, India failed to leverage this geographical advantage, allowing international shipping traffic to bypass its territory in favor of established hubs in Singapore and Colombo. The proposed International Container Transshipment Terminal at Galathea Bay on Great Nicobar Island is designed to radically alter this dynamic. By offering deep-water drafts capable of accommodating the largest ultra-large container vessels and providing state-of-the-art automated cargo handling facilities, this mega-project aims to position the territory as a premier global logistics node (Ministry of Ports, Shipping and Waterways, 2026).

The economic implications of this transshipment anchor are staggering. The terminal is projected to generate massive direct revenues through port handling fees, bunkering services, and ship repair facilities. More importantly, it will catalyze the development of a massive ancillary logistics industry, creating thousands of specialized jobs in supply chain management, customs brokerage, and maritime law. However, the success of this anchor industry depends entirely on flawless execution, maintaining cost competitiveness against established regional rivals, and navigating the profound ecological sensitivities of the Great Nicobar biosphere. The administration must ensure that the environmental mitigation strategies mandated for this project are executed with absolute transparency and scientific rigor.

The second anchor industry is premium, high-value eco-tourism. The territory has long been a popular destination for domestic tourists, but the historical model relied on high-volume,

low-margin mass tourism that severely stressed local infrastructure and generated significant solid waste management crises. The strategic vision for 2026 explicitly rejects this mass-market approach. The administration is now aggressively pivoting the tourism sector towards a low-volume, high-yield model targeting international luxury travellers and high-net-worth domestic individuals. This involves auctioning prime coastal land to global luxury hospitality chains under strict mandates to construct zero-emission, ecologically integrated resorts.

This premium eco-tourism anchor industry requires massive private capital investment to upgrade the existing hospitality infrastructure to global standards. It also demands a fundamental shift in destination marketing, positioning the Andaman and Nicobar Islands as a pristine, exclusive, and highly regulated ecological sanctuary comparable to the Maldives or the Seychelles. The administration is facilitating this transition by opening up previously restricted islands for specialized activities such as deep-water scuba diving, sport fishing, and high-end yachting, while simultaneously enforcing rigorous carrying-capacity limits to prevent environmental degradation. The revenue generated from this premium tourism model will be substantially higher per visitor, allowing the territory to maximize economic benefits while actively minimizing the physical footprint of the industry (Ministry of Tourism, 2026).

The third anchor industry is sustainable commercial deep-sea fishing and marine biotechnology. The territory's Exclusive Economic Zone contains incredibly rich, largely unexploited stocks of high-value pelagic fish, particularly yellowfin and skipjack tuna. Currently, these resources are frequently exploited by illegal foreign fishing vessels due to the lack of a robust domestic deep-sea fleet. The administration is actively courting large-scale domestic and international seafood conglomerates to establish base operations in the islands. This requires substantial anchor investments in modern, mechanized deep-sea trawlers, industrial-scale blast freezers, and export-certified processing facilities. Furthermore, the territory is laying the groundwork for a nascent marine biotechnology sector, seeking investments in research and development facilities to explore the pharmaceutical and industrial applications of unique marine organisms found in the local coral reefs. By anchoring the economy on these three specialized, globally integrated sectors, the Andaman and Nicobar Islands can achieve unprecedented economic self-reliance while fulfilling their strategic role in the Indo-Pacific.

4.4 Special Economic Zones, Industrial Corridors and Clusters

To effectively channel private investment, concentrate scarce infrastructure resources, and mitigate the immense logistical challenges of the archipelago, the territorial administration has adopted a highly targeted spatial development strategy. This strategy relies on the establishment of clearly demarcated Special Economic Zones, specialized industrial corridors, and localized economic clusters. By abandoning the impractical approach of uniform, territory-wide industrialization, the government can provide world-class, "plug and play" infrastructure precisely where it will generate the highest economic returns. In 2026, the spatial economic architecture of the Andaman and Nicobar Islands is being organized

around three distinct geographical nodes, each tailored to a specific anchor industry and operating under specialized regulatory frameworks.

The most critical and heavily capitalized spatial initiative is the proposed Free Trade Zone and Special Economic Zone located on Great Nicobar Island, forming the commercial backbone of the Great Nicobar Holistic Development Project. This zone is explicitly designed to function as an autonomous, globally competitive logistics and manufacturing hub, legally separated from the standard domestic tariff area of India. The SEZ is intended to attract multinational corporations operating in maritime logistics, global supply chain management, and light assembly manufacturing. To achieve this, the SEZ will offer aggressive fiscal incentives, including prolonged corporate tax holidays, complete exemption from import duties on capital goods and raw materials, and streamlined, single-window customs clearances.

The physical infrastructure within the Great Nicobar SEZ is being planned to unparalleled standards. It will feature dedicated, captive green power generation using a combination of liquefied natural gas and massive solar arrays, ensuring that industrial operations are not crippled by the frequent power outages that plague the rest of the territory. The zone will also include dedicated water desalination plants, high-capacity wastewater treatment facilities, and direct, unhindered access to the new international transshipment terminal and the dual-use airport. By creating a frictionless, highly efficient enclave, the administration aims to counteract the geographical disadvantages of the island and actively poach maritime business from established hubs in Southeast Asia (Department of Commerce, 2026).

The second major spatial concentration is the South Andaman Premium Tourism and Technology Cluster, encompassing Port Blair, Swaraj Dweep (Havelock), and Shaheed Dweep (Neil). Unlike the logistics-focused Great Nicobar SEZ, this cluster is designed to optimize the territory's existing strengths in hospitality and capitalize on the newly established high-speed digital infrastructure. The administration is systematically upgrading the physical connectivity within this cluster, investing heavily in modern, air-conditioned Roll-On/Roll-Off (Ro-Ro) passenger ferries to seamlessly link the airport in Port Blair with the luxury resorts on the outer islands. Furthermore, specific zones within Port Blair are being designated for the development of Information Technology Parks and Global Capability Centres. These tech parks are designed to attract companies operating in software development, data analytics, and digital services, sectors that are completely immune to the high costs of physical shipping and rely solely on the bandwidth provided by the submarine optical fibre cable.

The third spatial initiative is the North and Middle Andaman Marine and Agricultural Processing Corridor. This corridor is designed to address the severe economic stagnation of the northern settlements and integrate the rural population into the formal economy. The focus here is entirely on primary sector value addition. The administration is establishing specialized, mini-industrial estates in Diglipur and Mayabunder, equipped with shared, heavily subsidized cold-storage facilities, modern fish landing centres, and agricultural testing laboratories. These estates are designed to cluster local MSMEs engaged in seafood

processing, coconut oil extraction, and spice packaging. By providing shared infrastructure, the government dramatically lowers the capital barriers to entry for local entrepreneurs. The success of this northern corridor depends entirely on the completion of the ongoing upgrades to the Andaman Trunk Road and the introduction of reliable, refrigerated coastal shipping services to transport the processed goods from the northern estates to the export hubs in Port Blair. This targeted, cluster-based approach ensures that economic development is spatially rational, ecologically contained, and economically viable.

4.5 Foreign Direct Investment: Inflows, Sectoral Distribution and Policy

The policy governing Foreign Direct Investment in the Union Territory of the Andaman and Nicobar Islands has historically been the most restrictive in the entire Republic of India. For decades, the paramount concerns of national security, military secrecy, and the protection of vulnerable indigenous tribes dictated that foreign capital, foreign nationals, and international corporate entities were systematically excluded from the archipelago. The territory was treated as a sensitive frontier zone where economic openness was viewed as a direct threat to strategic stability. However, the geopolitical paradigm of 2026 requires a highly calibrated and sophisticated opening of the local economy. The central government has recognized that achieving its ambitious vision for a world-class maritime hub and a premium eco-tourism destination requires capital, technological expertise, and global market linkages that domestic investors alone cannot provide. Consequently, the FDI policy for the islands is undergoing a cautious, highly regulated, but undeniable liberalization.

The approach to Foreign Direct Investment in the Andaman and Nicobar Islands is fundamentally distinct from the broad, sector-agnostic liberalization seen in mainland states. The territory operates under a "positive list" approach, where FDI is actively solicited and permitted only in highly specific, strategically aligned sectors, while absolute prohibitions remain firmly in place for vast areas of the economy. The most significant opening has occurred in the maritime infrastructure and logistics sector. To ensure the commercial success of the Great Nicobar Transshipment Terminal, the government has permitted up to one hundred per cent FDI through the automatic route for the construction, operation, and maintenance of ports and harbours. The administration is actively courting major global terminal operators from Japan, Singapore, and European maritime nations, seeking not just their capital, but their established relationships with major global shipping lines and their expertise in operating highly automated cargo handling systems (Department for Promotion of Industry and Internal Trade, 2026).

The premium hospitality and eco-tourism sector has also been systematically opened to foreign capital. Recognizing that elevating the tourism industry requires global brand standards, international marketing networks, and expertise in sustainable resort management, the government is permitting substantial FDI in hotel and tourism development projects. However, this investment is subjected to rigorous, multi-layered scrutiny. Foreign hospitality corporations seeking to invest in the islands must commit to stringent, binding environmental impact mitigation plans, agree to mandate local employment quotas, and pass comprehensive

security clearances conducted by the Ministry of Home Affairs. The targeted investors in this sector are predominantly luxury hospitality chains headquartered in Southeast Asia and Europe, entities that possess a proven track record of operating high-end, ecologically sensitive island resorts in comparable tropical environments.

Furthermore, the renewable energy sector has been identified as a critical priority for foreign investment. The territory's desperate need to transition away from expensive, polluting diesel power generation requires massive capital deployment in complex solar-wind hybrid systems and advanced battery storage technologies. The government is actively inviting FDI from international energy firms possessing specialized expertise in establishing stable, utility-scale micro-grids in isolated, cyclonic-prone maritime environments. This sector is particularly attractive to foreign investors due to the guaranteed power purchase agreements offered by the territorial administration, which mitigate commercial risk.

Despite this targeted liberalization, severe constraints and security safeguards remain an integral part of the FDI framework. Investments originating from nations sharing land borders with India, or from entities deemed strategically hostile, are subject to absolute prohibitions or excruciatingly stringent prior approval processes. Furthermore, foreign ownership of land outside the clearly demarcated Special Economic Zones remains strictly prohibited to prevent speculative land grabs and protect the demographic balance of the islands. The foreign direct investment policy of the Andaman and Nicobar Islands in 2026 is therefore a delicate balancing act. It seeks to inject vital global capital and operational expertise into specific anchor industries while maintaining an iron grip on national security and ecological preservation, ensuring that foreign investment serves the strategic interests of the Republic of India rather than compromising them.

4.6 Public Sector Undertakings: Performance and Reform Agenda

The economic landscape of the Andaman and Nicobar Islands is profoundly dominated by Public Sector Undertakings and government-run departmental enterprises. In the historical absence of a dynamic private sector, the territorial administration assumed direct responsibility for providing nearly all essential commercial and logistical services. While this state-led model was necessary for the early survival and stabilization of the settler communities, it has resulted in a legacy of deeply entrenched monopolies, severe operational inefficiencies, and a massive, recurring drain on the public exchequer. In 2026, reforming the performance of these public entities is not merely an administrative goal; it is an absolute fiscal imperative required to free up capital for productive infrastructure investments and to create space for private sector participation.

The most prominent and commercially diverse entity in the territory is the Andaman and Nicobar Islands Integrated Development Corporation. ANIIDCO operates as a sprawling conglomerate, managing a bewildering array of activities that range from operating government hotels and running the sole dairy processing plant, to managing aviation fuel facilities and holding an absolute, highly lucrative monopoly over the wholesale and retail distribution of liquor. Financially, ANIIDCO presents a complex picture. The corporation

consistently reports an overall profit, but this profitability is almost entirely derived from its monopolistic control over the liquor trade, which subsidizes its heavily loss-making operations in the tourism and dairy sectors (ANIIDCO, 2026). The operational performance of ANIIDCO's hospitality wing is consistently poor, characterized by decaying infrastructure, abysmal customer service, and an inability to compete with even mid-tier private hotels. The reform agenda for ANIIDCO mandates a ruthless focus on core competencies. The administration must corporatize and eventually privatize the loss-making hotel assets, allowing the corporation to focus exclusively on strategic supply chain logistics, petroleum distribution, and managing the liquor monopoly to maximize public revenue while minimizing operational bloat.

The Directorate of Shipping Services represents the most critical, yet financially disastrous, public sector operation in the archipelago. The DSS is responsible for maintaining the lifeline inter-island shipping network that connects the remote northern and southern islands to the capital in Port Blair. While acknowledging that these routes are inherently non-commercial and must be subsidized as a social obligation, the operational inefficiencies of the DSS are staggering. The directorate is plagued by an aging, frequently broken-down fleet of vessels, chronic mismanagement of spare parts inventory, and a highly unionized workforce that severely resists modernization efforts. The financial losses incurred by the DSS require massive, continuous bailouts from the central government. The urgent reform agenda here requires splitting the DSS into two distinct entities: a regulatory authority responsible for maritime safety, and a corporatized operational entity. The administration must aggressively pursue the privatization of profitable shipping routes, particularly those serving the high-traffic tourism nodes, while utilizing targeted viability gap funding to support private operators on the remote, non-commercial tribal routes.

The Electricity Department of the Andaman and Nicobar Administration presents another critical area requiring immediate, radical reform. The department operates essentially as a vertically integrated monopoly, managing generation, transmission, and distribution across the islands. The financial performance is disastrous, driven by the exorbitant cost of importing high-speed diesel, extraordinarily high technical and commercial transmission losses due to aging grid infrastructure, and heavily subsidized consumer tariffs that do not reflect the true cost of generation. The department consistently fails to collect dues efficiently, further straining its liquidity. The reform agenda necessitates a complete structural unbundling of the department. The generation of power must be aggressively opened to private Independent Power Producers specializing in renewable energy, while the transmission and distribution networks should ideally be handed over to a specialized, professionally managed corporate entity under a franchise model.

The overarching theme for reforming Public Sector Undertakings in the territory is the systematic withdrawal of the government from non-strategic commercial operations. The administration must recognize that it lacks the managerial expertise and the capital agility to operate hotels, manage complex shipping fleets, or run dairy plants efficiently. By corporatizing, unbundling, and selectively privatizing these entities, the administration can

eliminate massive financial leakages, improve the quality of services delivered to the islanders, and focus its limited administrative bandwidth on its core responsibilities: governance, security, and ecological regulation (Comptroller and Auditor General of India, 2026).

4.7 Public-Private Partnership Framework and Pipeline

The capital requirements to execute the ambitious 2047 vision for the Andaman and Nicobar Islands vastly exceed the fiscal capacity of the territorial administration and test the limits of even the central government's budgetary allocations. Transforming the territory into a global maritime hub, establishing premium eco-tourism infrastructure, and transitioning the energy grid away from diesel require tens of thousands of crores in upfront capital investment. To bridge this monumental funding gap, the Government of India has placed the Public-Private Partnership model at the absolute centre of its economic strategy for the archipelago. The PPP framework is designed to leverage private sector capital, operational efficiency, and technological innovation, while allowing the government to retain ownership of strategic assets and ensure that essential public services remain accessible.

Developing a functional PPP framework in a remote, ecologically sensitive island territory is inherently more complex than executing similar projects on the mainland. Private investors are acutely aware of the amplified risks associated with island logistics, the potential for multi-year delays in environmental clearances, and the uncertainty of future policy shifts regarding tribal reserves. Therefore, the PPP framework in 2026 is meticulously structured to provide unprecedented levels of risk mitigation and financial security to private partners. The core mechanism supporting this pipeline is the extensive use of Viability Gap Funding. Because many essential infrastructure projects in the islands—such as inter-island Ro-Ro ferry terminals or solar-wind hybrid micro-grids—may not be financially viable on a pure commercial basis due to the small user population, the government provides substantial upfront capital grants to make these projects bankable for private developers (Ministry of Finance, 2026).

The most visible and heavily capitalized project in the current PPP pipeline is the development of the International Container Transshipment Terminal at Galathea Bay. The government has adopted the Landlord Port model for this mega-project. Under this structure, the government assumes the responsibility for the most complex and risky elements: acquiring the land, securing the overarching environmental and forest clearances, and constructing the basic breakwater infrastructure. The private partner, selected through a global competitive bidding process, is responsible for investing in the terminal super-structure, installing the automated cargo handling equipment, and managing the day-to-day commercial operations of the port under a long-term, multi-decade concession agreement. This allocation of risk ensures that the private sector is not deterred by the initial, insurmountable regulatory hurdles that plague greenfield island projects.

The tourism sector features a robust and rapidly expanding PPP pipeline, particularly in the development of premium eco-resorts. The administration has identified several pristine,

uninhabited or sparsely populated islands, such as Long Island, Aves Island, and Smith Island, for high-end tourism development. Instead of selling the land, the government offers long-term lease concessions to luxury hospitality developers. The PPP contracts in this sector are uniquely stringent, featuring binding performance clauses regarding zero-liquid discharge, mandatory solar power generation, and strict limits on the physical footprint of the resorts. The private partner assumes the entire capital risk of construction and operation, while the government benefits from lease revenues, increased high-value tourist footfall, and the creation of formal employment for local residents.

Furthermore, the administration is heavily utilizing the PPP model to solve the territory's crippling energy crisis. The pipeline includes numerous projects for establishing utility-scale solar parks integrated with advanced Battery Energy Storage Systems. Private energy developers are invited to construct and operate these renewable energy facilities under long-term Power Purchase Agreements signed with the territorial Electricity Department. These PPAs provide a guaranteed, sovereign-backed revenue stream for the developers, completely eliminating market risk and making the investments highly attractive. By expanding the PPP pipeline into aviation management, municipal solid waste processing, and advanced desalination plants, the Andaman and Nicobar Islands are systematically importing private sector efficiency to solve complex, capital-intensive infrastructure deficits, thereby laying the groundwork for a resilient and modernized island economy.

4.8 Regional cooperation: Shared region and growth

The economic future of the Union Territory of the Andaman and Nicobar Islands is not confined within its own territorial waters; it is inextricably linked to the broader geopolitical and macroeconomic dynamics of the Indo-Pacific region. For decades, the islands were governed as a defensive frontier, oriented entirely backwards towards the Indian mainland. In 2026, this strategic posture has been completely inverted. The territory is now explicitly positioned as India's primary maritime springboard into Southeast Asia, designed to serve as the physical and economic manifestation of the nation's "Act East" policy. Regional cooperation, shared maritime security, and deep economic integration with the Association of Southeast Asian Nations (ASEAN) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) form the cornerstone of the territory's long-term growth strategy.

The geographical reality of the archipelago dictates this regional orientation. The northernmost point of the Andaman Islands is closer to the coast of Myanmar than it is to the Indian mainland, while the southernmost tip of Great Nicobar, Indira Point, lies just over 150 kilometres from the Indonesian province of Aceh. This extraordinary proximity presents massive opportunities for cross-border trade, joint tourism initiatives, and shared infrastructure development. A primary focus of the administration's regional cooperation strategy is the establishment of direct maritime trade and connectivity links with the Indonesian port of Sabang. By developing a reciprocal shipping corridor between Port Blair and Sabang, the territory can significantly reduce the cost of importing essential construction

materials like cement and aggregate, while simultaneously opening up a lucrative export market for Indian agricultural and manufactured goods destined for the ASEAN region (Ministry of External Affairs, 2026).

Furthermore, regional cooperation is critical for the success of the premium eco-tourism anchor industry. The administration is actively working with counterparts in Thailand, Malaysia, and Indonesia to develop integrated, multi-nation cruise tourism circuits in the Andaman Sea. By marketing the region as a unified, high-end tropical destination, the participating nations can attract global luxury cruise lines that previously bypassed the Bay of Bengal. This requires harmonizing visa regulations, standardizing maritime safety protocols, and establishing joint search and rescue operational frameworks to ensure the safety and seamless movement of international tourists across these closely aligned maritime borders.

In the realm of the primary sector, regional cooperation is absolutely essential for the sustainable management of the shared marine resources in the Bay of Bengal. The highly migratory pelagic fish stocks, such as tuna, do not recognize international maritime boundaries. The Andaman and Nicobar administration, functioning as the vanguard of Indian maritime interests, must play a leading role in regional fisheries management organizations. This involves sharing scientific data regarding fish stock assessments, coordinating joint naval and coast guard patrols to combat Illegal, Unreported, and Unregulated fishing by distant-water fishing fleets, and developing shared protocols for sustainable deep-sea aquaculture.

Ultimately, the economic expansion of the Andaman and Nicobar Islands depends on transforming the surrounding oceanic space from a barrier into a bridge. By deeply integrating its newly developed transshipment logistics, its premium tourism offerings, and its maritime security apparatus with the emerging economies of Southeast Asia, the territory can transcend the limitations of its small domestic population. This outward-facing, regionally integrated economic posture is not merely an option for the islands; it is the fundamental strategic requirement for realizing the ambitious vision of becoming a prosperous, secure, and globally significant maritime hub by 2047.

Chapter 5: Education - Access, Quality and Future Readiness

5.1 Elementary Education: Enrolment, Retention, Dropout and Learning Outcomes

The foundation of human capital development in the Andaman and Nicobar Islands rests upon its elementary education system. Historically, the territorial administration has demonstrated a robust and unwavering commitment to universalizing elementary education, viewing it as a primary instrument for social equalization among the diverse settler communities and indigenous populations. In 2026, the territory boasts a highly impressive Gross Enrolment Ratio at the primary level, consistently matching or marginally exceeding the national average (Ministry of Education, 2026). This statistical achievement is the direct result of a highly decentralized network of primary schools. The Directorate of Education operates schools in almost every inhabited island, ensuring that physical access to foundational learning is guaranteed regardless of geographic isolation.

However, the administration of this vast network of primary schools is fraught with logistical complexities. Many primary schools located in the remote islands of the North and Middle Andaman district, as well as the Nicobar district, operate as micro-schools with very small student populations. Maintaining these institutions requires a disproportionately high per capita expenditure. The logistical costs of transporting educational materials, textbooks, nutritional supplies for the mid-day meal scheme, and school uniforms across maritime routes are substantial. During the extended monsoon season, which frequently disrupts inter-island shipping, schools in remote locations often face temporary shortages of essential supplies. Despite these physical frictions, the administration has largely succeeded in eliminating the physical distance barrier to elementary education.

Retention at the elementary level is generally strong, although localized disparities persist. The dropout rate at the primary level is commendably low in the urbanized South Andaman district, where parental awareness and economic stability are higher. However, in the remote agricultural settlements of the northern islands and the tribal regions of the Nicobars, retention requires continuous administrative vigilance. In these areas, economic vulnerabilities sometimes compel families to withdraw children, particularly older male children, to assist in traditional fishing or plantation agriculture during peak harvest seasons. To combat this, the administration relies heavily on the strict implementation of the Right to Education mandate and the comprehensive delivery of the PM POSHAN scheme. The provision of hot, cooked meals acts as a critical incentive for daily attendance, while also addressing the nutritional deficits that can hinder cognitive development among children from economically marginalized island households (Department of School Education and Literacy, 2026).

The linguistic diversity of the Andaman and Nicobar Islands presents a unique pedagogical challenge at the elementary level. Because the territory is a melting pot of migrant communities, primary school classrooms often contain students whose mother tongues include Bengali, Tamil, Telugu, Hindi, and Malayalam. The administration attempts to provide foundational instruction in the mother tongue where feasible, in alignment with the

National Education Policy guidelines. However, recruiting and retaining qualified teachers proficient in all these regional languages, particularly for remote island postings, remains a persistent administrative hurdle. In the Nicobar district, the challenge is even more nuanced. Educational policy must balance the necessity of integrating indigenous tribal children into the national mainstream through Hindi and English instruction with the absolute imperative of preserving their unique indigenous languages and traditional ecological knowledge systems.

Learning outcomes at the elementary level present a mixed picture that demands targeted reform. While the territory performs well on basic literacy and numeracy metrics compared to several mainland states, advanced learning assessments indicate a qualitative deficit. The focus of the educational machinery has historically been heavily skewed towards maximizing enrolment and building physical infrastructure, sometimes at the expense of pedagogical innovation and rigorous learning outcome monitoring. The transition from rote memorization to competency-based learning is progressing slowly. To ensure future readiness, the administration must aggressively prioritize Foundational Literacy and Numeracy (FLN) missions, investing heavily in modern, contextualized teaching learning materials that resonate with the island environment, and instituting regular, low-stakes diagnostic assessments to identify and remediate learning gaps before students transition to higher grades.

5.2 Secondary and Senior Secondary Education: Transition and Achievement

The transition from elementary to secondary and senior secondary education in the Andaman and Nicobar Islands reveals the structural limitations imposed by the territory's archipelagic geography. While primary schools can be established in almost every small settlement, the financial and logistical realities dictate that secondary and senior secondary schools must be consolidated in larger, nodal islands and tehsil headquarters. This necessary consolidation creates an immediate and profound barrier to educational access for students residing in smaller, peripheral islands.

To overcome this geographical barrier, the territorial administration has developed an extensive network of residential hostels and relies heavily on inter-island transport subsidies. Students from remote islands are often required to leave their families at a young age to reside in government-run hostels attached to senior secondary schools in Port Blair, Rangat, Mayabunder, or Car Nicobar (Directorate of Education, 2026). While the government heavily subsidizes these residential facilities, the psychological and social toll of family separation can negatively impact student well-being and academic performance. Furthermore, the reliance on maritime transport means that students commuting daily from nearby islands face arduous journeys that are highly susceptible to weather disruptions, leading to increased absenteeism during the monsoon months.

The transition rate from secondary to senior secondary levels is a critical metric for evaluating the health of the educational system. In 2026, the territory is grappling with a noticeable drop in enrolment at the senior secondary level compared to the secondary level.

This attrition is driven by a combination of factors. For students from economically vulnerable households, the pressure to enter the informal labour market, particularly in the tourism or fisheries sectors, becomes significant by the age of sixteen. Additionally, the academic rigor of the senior secondary curriculum, particularly in the science and mathematics streams, exposes the qualitative learning gaps accumulated during the elementary years. Students who lack strong foundational concepts frequently struggle to cope, leading to frustration and voluntary dropout.

The availability of diverse academic streams at the senior secondary level is another structural constraint. While schools in the Port Blair municipal area offer a comprehensive range of subjects encompassing the sciences, commerce, and humanities, schools in the outer islands often suffer from a restricted curriculum. Due to the chronic shortage of qualified post-graduate teachers in specialized subjects like physics, chemistry, and advanced mathematics, many remote senior secondary schools can only offer instruction in the humanities and basic commerce streams (Ministry of Education, 2026). This systemic inequity severely limits the career aspirations of students in the northern and southern districts, effectively precluding them from pursuing higher education in engineering, medicine, or advanced scientific research, and perpetually reinforcing the developmental disparity between the capital and the periphery.

Gender parity at the secondary and senior secondary levels is a notable achievement for the territory. The enrolment and retention rates of female students are consistently high, and female students frequently outperform their male counterparts in the standardized board examinations. This reflects a broadly egalitarian social structure among the settler communities and a strong cultural emphasis on female education. However, translating this academic achievement into equitable female workforce participation remains a profound challenge, as discussed in the economic chapters of this report. To strengthen the secondary education tier, the administration must prioritize the upgrading of school infrastructure in the outer islands, ensure the equitable distribution of subject-specific teachers through mandatory rotational transfer policies, and invest heavily in modern science laboratories and digital libraries to bridge the qualitative gap between urban and rural island schools.

5.3 Higher Education: Institutional Capacity, Gross Enrolment and Quality

The higher education sector in the Andaman and Nicobar Islands is the most critically underdeveloped segment of the territory's human capital pipeline. In 2026, the institutional capacity for tertiary education remains severely stunted, creating a massive bottleneck that forces thousands of talented young islanders into involuntary out-migration every year. The territory does not possess a single central university, state university, or autonomous degree-granting institution of national importance. The entire higher education ecosystem is heavily reliant on a small handful of government-run colleges, all of which are concentrated in the South Andaman district and affiliated with mainland universities, primarily Pondicherry University.

The Jawaharlal Nehru Rajkeeya Mahavidyalaya (JNRM) and the Dr. B. R. Ambedkar Institute of Technology (DBRAIT) are the flagship institutions providing undergraduate and limited postgraduate education. However, the carrying capacity of these institutions is woefully inadequate to absorb the growing number of students graduating from the senior secondary system (Department of Higher Education, 2026). Consequently, the Gross Enrolment Ratio in higher education within the territory is artificially suppressed by the lack of physical seats and academic diversity. The available degree programs are overwhelmingly focused on generic arts, commerce, and basic sciences. There is a glaring, systemic deficit in specialized professional courses, advanced research programs, and specialized academic disciplines that are relevant to the modern global economy.

This severe deficit in institutional capacity triggers a massive annual exodus of students. Families who possess the financial means are compelled to send their children to mainland metropolitan centres such as Chennai, Bengaluru, Kolkata, and Delhi to pursue quality higher education in engineering, medicine, law, business administration, and applied sciences. This forced educational migration has profound and damaging economic consequences for the territory. It results in a massive outflow of capital from the island economy to mainland educational hubs. More importantly, it creates a permanent "brain drain." Because the territory lacks a dynamic private sector or advanced research facilities, the vast majority of these highly educated youths never return to the islands, depriving the territory of its most capable and innovative human resources (NITI Aayog, 2026).

The quality of instruction and research output in the existing higher education institutions is another area requiring urgent, radical intervention. The colleges suffer from chronic faculty shortages, particularly at the senior professorial levels. The geographic isolation of the islands makes it exceedingly difficult to attract and retain top-tier academic talent from the mainland. Furthermore, the administrative and bureaucratic constraints imposed by being affiliated with a distant mainland university severely stifle academic autonomy, curriculum innovation, and timely examination processing. The research ecosystem is virtually non-existent, lacking the funding, modern laboratory infrastructure, and industry-academia linkages necessary to produce globally relevant knowledge.

To fundamentally alter the trajectory of higher education, the Government of India must establish an autonomous Central University or a specialized Institute of National Importance within the Andaman and Nicobar Islands. Given the territory's strategic location and ecological assets, this proposed institution should be explicitly designed as a premier Marine Research University. It should focus exclusively on oceanography, marine biology, sustainable aquaculture, maritime law, island ecology, and blue economy management. By leveraging the surrounding ocean as a living laboratory, such an institution could attract international scholars, generate globally significant research, and provide local students with world-class, contextually relevant education that guarantees high-value employment in the emerging maritime economy. Until this institutional leap is made, the territory will remain permanently handicapped in its quest for sustainable economic development.

5.4 Technical, Vocational Education and Training (TVET) Ecosystem

The Technical, Vocational Education and Training (TVET) ecosystem in the Andaman and Nicobar Islands is currently characterized by a profound and damaging disconnect between the skills being imparted and the actual demands of the local and regional economy. In 2026, as the territory attempts to pivot towards a sustainable blue economy and premium eco-tourism, the vocational training infrastructure remains stubbornly anchored in outdated, generic curricula that fail to produce the specialized workforce required for this economic transformation. The failure to align technical education with strategic economic priorities is a primary contributor to the high rates of structural youth unemployment previously detailed in this report.

The formal TVET infrastructure is relatively sparse, comprising a limited number of government-run Industrial Training Institutes (ITIs) and polytechnic colleges. These institutions overwhelmingly focus on traditional, conventional trades such as basic electrical work, plumbing, welding, carpentry, and generic computer operations (Ministry of Skill Development and Entrepreneurship, 2026). While these foundational skills are necessary for basic civic maintenance, they are fundamentally insufficient to support the high-value industries the territory is attempting to build. A student trained in basic welding cannot immediately transition to maintaining the complex, automated cargo-handling equipment proposed for the Great Nicobar transshipment terminal. A student trained in basic data entry is not equipped to manage the digital marketing and logistics of a luxury eco-resort. This structural skills mismatch ensures that lucrative, technical positions in new infrastructure projects are invariably filled by skilled migrant workers imported from the mainland, leaving local youth disenfranchised.

The most glaring deficit in the TVET ecosystem is the near-total absence of specialized maritime and hospitality training institutes. Despite being completely surrounded by the ocean, the territory lacks comprehensive, internationally certified vocational programs in marine engine diagnostics, modern deep-sea navigation, sustainable fishing technologies, and boat building utilizing modern composite materials. Similarly, while tourism is the largest private sector employer, there is a critical shortage of premier hospitality management institutes capable of producing executive chefs, multilingual tour guides, luxury resort managers, and certified scuba diving instructors. The absence of these specialized training pathways forces the hospitality sector to incur high costs importing trained personnel from mainland tourism hubs, which further depresses local employment opportunities.

Furthermore, the industry-academia linkage within the TVET sector is virtually non-existent. Vocational curricula are determined by centralized boards on the mainland and rarely reflect the rapidly changing, highly specific technological requirements of island-based industries. There is very little participation from private sector employers in designing training modules, providing modern apprenticeship opportunities, or updating the aging machinery in government ITIs.

To rectify this critical failure, the territorial administration must execute a complete overhaul of the TVET ecosystem. The strategy must shift from providing low-level, generic trade skills to establishing highly specialized, industry-led Centres of Excellence. The government must partner with established international maritime academies and global hospitality chains to set up dedicated vocational campuses in Port Blair and Great Nicobar. These centres must offer internationally recognized certifications in marine logistics, underwater welding, renewable energy micro-grid maintenance, and premium hospitality services. Furthermore, the administration must institute mandatory, heavily subsidized apprenticeship programs, compelling large contractors and hoteliers operating in the islands to train and absorb local vocational graduates. By aggressively realigning the TVET sector with the specific needs of the blue economy, the territory can transform its unemployed youth into a highly competitive, globally employable workforce.

5.5 Teacher Recruitment, Training and Professional Development

The quality of any educational system is fundamentally determined by the calibre, motivation, and continuous professional development of its teaching workforce. In the Andaman and Nicobar Islands, managing the teaching cadre presents a unique set of administrative and human resource challenges that are directly linked to the territory's isolated geography and decentralized settlement patterns. In 2026, the administration continues to struggle with the equitable distribution of teaching talent, maintaining pedagogical standards in remote locations, and ensuring that the teaching workforce remains updated with modern, digital-first educational paradigms.

The recruitment process for teachers in the territory is centralized and highly competitive, ensuring that baseline academic qualifications are met. However, the subsequent deployment of these recruited teachers creates massive systemic friction. Postings to schools in the remote islands of the North and Middle Andaman district, and particularly the isolated tribal areas of the Nicobar district, are highly unpopular among the teaching staff. These locations lack modern medical facilities, reliable internet connectivity, and quality higher education options for the teachers' own children. Consequently, teachers frequently utilize political influence or continuous medical leave to secure transfers back to the urbanized, comfortable environs of Port Blair (Directorate of Education, 2026).

To counteract this natural aversion to remote postings, the administration relies on a system of rotational transfers and provides a specialized "island hardship allowance." While financial incentives are necessary, they are often insufficient to overcome the severe lifestyle and professional isolation experienced in distant islands. This dynamic results in a high turnover rate and frequent teacher absenteeism in remote schools, which disproportionately impacts the educational continuity and learning outcomes of rural and tribal students. The administration must strictly enforce a mandatory, non-negotiable rotational policy, ensuring that all newly recruited teachers serve a minimum term in designated hard-to-reach areas before being eligible for urban postings, thereby guaranteeing equitable teaching resources across the archipelago.

The institutional framework for teacher training and professional development is anchored by the District Institutes of Education and Training (DIET) and the State Institute of Education (SIE). However, the operational capacity of these institutions is hindered by the same logistical constraints that affect the broader territory. Conducting in-person, centralized training workshops in Port Blair requires teachers from outer islands to abandon their classrooms for extended periods, incurring high travel and accommodation costs. The pedagogical content of these training programs also frequently lacks contextual relevance. Training modules designed on the mainland often fail to incorporate the unique ecological, cultural, and linguistic realities of the island classrooms, making the training feel abstract and disconnected from the teachers' daily challenges (National Council of Educational Research and Training, 2026).

To modernize teacher professional development, the administration must aggressively leverage the newly available high-speed digital connectivity. Continuous Professional Development (CPD) must transition from sporadic, centralized physical workshops to a continuous, decentralized, and heavily digitized model. The administration should develop specialized, island-specific online training modules that teachers can access on-demand without leaving their respective islands. Furthermore, the training curriculum must urgently pivot towards equipping teachers with the skills necessary to integrate digital technology into their daily pedagogy, manage inclusive classrooms, and deliver localized environmental education. Establishing robust, peer-led professional learning communities, facilitated by digital platforms, will allow teachers in isolated schools to collaborate, share best practices, and overcome the professional isolation that currently stifles pedagogical innovation in the territory.

5.6 Digital Education, EdTech Integration and ICT in Schools

The integration of digital education and Information and Communication Technology (ICT) in the Andaman and Nicobar Islands has undergone a revolutionary, albeit uneven, transformation over the past five years. For decades, the territory's educational system was severely handicapped by profound digital isolation. The reliance on highly limited, erratic, and exorbitantly expensive satellite bandwidth meant that modern Educational Technology (EdTech) tools, digital libraries, and interactive online learning platforms were essentially inaccessible to island students and educators. This digital dark age severely widened the qualitative gap between the island education system and the rapidly modernizing schools on the Indian mainland.

The operationalization of the Chennai-Andaman and Nicobar Islands (CANI) submarine optical fibre cable fundamentally altered this dismal trajectory. The arrival of high-speed, reliable, and affordable broadband internet in Port Blair and several major outer islands provided the critical infrastructural backbone necessary for digital integration (Department of Telecommunications, 2026). In 2026, the territorial administration is engaged in a massive, capital-intensive effort to digitize the public school network. The rollout of "Smart

Classrooms," equipped with interactive flat panel displays, high-speed Wi-Fi, and digital content servers, is progressing rapidly across secondary and senior secondary schools in the South Andaman district. This digital infusion allows teachers to augment traditional textbook learning with rich multimedia content, virtual science laboratories, and interactive assessments, thereby significantly enhancing student engagement and conceptual understanding.

However, the implementation of this digital education agenda is characterized by a severe and deeply concerning spatial digital divide. While schools in Port Blair and major nodal islands enjoy the benefits of fibre-optic connectivity, dozens of schools located in the more remote islands of the North and Middle Andaman and Nicobar districts remain unconnected to the submarine cable network. These peripheral schools must still rely on upgraded, but inherently limited, satellite connectivity, which frequently suffers from high latency and bandwidth caps, making video-heavy EdTech applications unusable. This uneven digital infrastructure threatens to exacerbate the existing educational inequalities within the territory, creating a two-tiered system where urban students receive a modern, globally connected education, while rural and tribal students remain technologically marginalized (Ministry of Electronics and Information Technology, 2026).

Beyond the physical hardware and connectivity constraints, the successful integration of ICT in schools is heavily dependent on hardware maintenance logistics and software localization. In the tropical, highly humid, and saline environment of the islands, electronic equipment degrades rapidly. The territory lacks a robust network of IT service centres and certified hardware technicians. When a smart board or a computer lab server malfunctions in a remote island school, it can take weeks or months to procure spare parts from the mainland and arrange for a qualified technician to travel to the site, rendering the expensive digital infrastructure useless for extended periods. Furthermore, the digital content provided by national EdTech platforms is often not localized. It lacks representation of the island's unique geography, culture, and linguistic diversity, which can diminish its pedagogical effectiveness.

To ensure that digital education becomes a great equalizer rather than a new source of disparity, the administration must prioritize a holistic, resilient ICT strategy. This requires deploying alternative, high-capacity wireless technologies or low-earth orbit satellite systems to bridge the connectivity gap in the most remote islands. The government must establish decentralized, highly responsive IT maintenance hubs in each district to ensure maximum uptime for school hardware. Crucially, the administration must invest in training a dedicated cadre of "Digital Pedagogy Champions" within the teaching workforce, ensuring that technology is used not merely as a digital substitute for chalk and board, but as a transformative tool for personalized, inquiry-based learning that connects isolated island students to the broader global knowledge economy.

5.7 Special Education: Children with Disabilities and Inclusive Schooling

Providing comprehensive special education and ensuring truly inclusive schooling for Children with Special Needs (CwSN) presents one of the most profound administrative,

medical, and logistical challenges for the Union Territory of the Andaman and Nicobar Islands. The national mandates of the Rights of Persons with Disabilities Act, 2016, assert the absolute right to inclusive education, yet the archipelagic geography of the territory creates massive physical and institutional barriers to realizing this mandate on the ground. In 2026, while the administration has made concerted policy efforts, the delivery of specialized educational care remains highly uneven, heavily centralized, and structurally inadequate to meet the diverse needs of the disabled student population across all islands.

The most critical bottleneck in the special education ecosystem is the severe, systemic lack of early identification and diagnostic infrastructure. Accurate diagnosis of intellectual disabilities, autism spectrum disorders, specific learning disabilities, and complex physical impairments requires highly trained clinical psychologists, developmental pediatricians, and specialized audiologists and speech therapists. Currently, this specialized medical and diagnostic expertise is almost exclusively concentrated in the G.B. Pant Hospital in Port Blair (Directorate of Health Services, 2026). For a family residing in a remote island in the North Andaman or Nicobar district, obtaining an accurate early diagnosis requires an expensive, arduous maritime journey to the capital, a logistical hurdle that frequently results in delayed interventions and missed critical developmental windows for the child.

Once a diagnosis is secured, accessing appropriate educational support is equally challenging. The territory relies heavily on the inclusive education model mandated by the Samagra Shiksha framework, which dictates that CwSN should be integrated into mainstream classrooms. However, the physical infrastructure of the vast majority of government schools across the islands is not fully barrier-free or universally accessible. Retrofitting aging school buildings with ramps, accessible sanitation facilities, and tactile pathways is a slow and capital-intensive process that is particularly difficult to execute in remote locations. Furthermore, mainstream classroom teachers generally lack the rigorous, specialized training required to differentiate instruction, manage complex behavioral needs, or utilize specialized assistive technologies effectively, leading to functional segregation even within theoretically inclusive classrooms (Ministry of Education, 2026).

The availability of specialized support personnel is desperately low. The territory suffers from a chronic shortage of certified special educators, occupational therapists, and speech-language pathologists. Recruiting these highly specialized professionals from the mainland is exceedingly difficult due to the perceived isolation and lack of career progression in the islands. Consequently, the itinerant special educators employed by the education department are severely overburdened, forced to cover vast geographic areas and multiple schools, resulting in highly diluted and infrequent support for individual students. For children with severe or profound disabilities who require highly specialized, dedicated institutional care, the options are severely limited, often forcing families into the painful choice of migrating to the mainland to secure adequate educational and therapeutic facilities.

To build a genuinely inclusive educational system, the territorial administration must radically decentralize its diagnostic and therapeutic infrastructure. This requires establishing well-equipped, multi-disciplinary Early Intervention Centres in every district headquarters,

not just in Port Blair. The administration must utilize telemedicine and digital consultation platforms to connect remote schools and families with specialized therapists on the mainland. Furthermore, aggressive financial incentives and fast-track recruitment processes must be implemented to attract and retain certified special educators. Extensive, mandatory in-service training programs must be instituted for all general education teachers, equipping them with the practical pedagogical tools necessary to support neurodiverse learners. Only by dismantling the geographical and institutional barriers to specialized care can the territory ensure that its most vulnerable children are afforded their fundamental right to equitable and empowering education.

5.8 State-Specific Educational Challenges and Reform Priorities

The educational trajectory of the Andaman and Nicobar Islands stands at a critical juncture in 2026. This comprehensive analysis has demonstrated that while the territory has largely triumphed in establishing basic educational access across a highly challenging archipelago, it is currently failing to deliver the specialized quality, higher educational capacity, and future-ready skills required to sustain its ambitious economic transformation. The overarching state-specific challenge is the profound misalignment between the human capital being produced by the generic, outdated educational system and the highly specialized, dynamic human capital required by the emerging blue economy, strategic logistics sectors, and premium eco-tourism industry. Solving this misalignment is the absolute prerequisite for long-term territorial prosperity.

The first and most urgent reform priority is the complete restructuring of the higher education and TVET ecosystem. The administration must break the cycle of forced educational out-migration and brain drain. The Government of India must prioritize the establishment of an autonomous, world-class Marine and Island Studies University in Port Blair. This institution must serve as the intellectual anchor for the territory, offering specialized degrees and advanced research facilities in oceanography, sustainable aquaculture, maritime law, and island ecology. Concurrently, the vocational training sector must be radically overhauled, moving away from generic trades to establish highly specialized, industry-partnered Centres of Excellence focusing on marine engineering, luxury hospitality management, and renewable energy technology. These institutions must be designed to guarantee that the lucrative jobs generated by the Great Nicobar Holistic Development Project and other anchor industries are captured by highly trained local youth, rather than imported mainland labour.

The second critical reform priority is the aggressive, equitable closure of the spatial digital divide. The transformative potential of the submarine optical fibre cable cannot be restricted to the administrative elite and the urban centres. The administration must deploy a resilient, multi-modal connectivity strategy combining satellite and wireless extensions to guarantee that every single school, regardless of its geographic isolation, possesses high-speed internet access and functional digital hardware. This digital infrastructure must be leveraged to completely decentralize teacher training, provide remote diagnostic support for special

education, and connect island students directly to global knowledge platforms, thereby negating the disadvantages of physical isolation.

The third reform priority involves a fundamental shift in pedagogical philosophy and quality monitoring. The administration must transition its focus from merely measuring enrolment and physical infrastructure to rigorously tracking competency-based learning outcomes, particularly Foundational Literacy and Numeracy in the early grades. The curriculum must be deeply contextualized, integrating indigenous knowledge systems, marine conservation principles, and disaster resilience training into the standard syllabus, making education highly relevant to the lived reality of the islanders. Furthermore, the systemic inequities regarding teacher deployment and subject availability in remote senior secondary schools must be eradicated through strict, non-negotiable rotational policies and the utilization of digital remote teaching for specialized subjects.

Ultimately, the educational vision for the Andaman and Nicobar Islands in 2047 must transcend the limitations of its geography. By aligning higher education with strategic maritime objectives, guaranteeing universal digital equity, and ensuring that no child is marginalized by distance or disability, the territory can transform its small population into its most powerful, resilient, and globally competitive asset. The successful execution of these specific, targeted reform priorities will determine whether the islands remain a subsidized, dependent outpost, or rise to become a dynamic, self-sustaining hub of innovation and prosperity in the Indo-Pacific region.

Chapter 6: Health, Nutrition and Population

6.1 Public Health Infrastructure: Facilities, Human Resources and Gaps

The public health infrastructure in the Andaman and Nicobar Islands is virtually the sole provider of medical care for the vast majority of the population. Unlike mainland India, where a robust private healthcare sector operates parallel to the government system, the private medical sector in the territory is essentially restricted to a few small clinics and diagnostic centres concentrated exclusively in the capital city of Port Blair. Consequently, the territorial administration bears the total, absolute responsibility for healthcare delivery across the entire archipelago. The infrastructure is organized into a rigid, multi-tiered system designed to cascade patients from remote islands toward central medical hubs.

At the apex of this system is the Govind Ballabh Pant (G.B. Pant) Hospital located in Port Blair, within the South Andaman district. In 2026, this facility functions as the only tertiary care referral hospital for the entire territory. It is equipped with specialized departments, intensive care units, and advanced diagnostic machinery. However, the carrying capacity of G.B. Pant Hospital is under constant, severe strain. It must handle the complex medical caseloads generated not only by the densely populated South Andaman district but also by all critical referrals arriving from the North and Middle Andaman and Nicobar districts. To decentralize secondary care, the administration operates two district hospitals: the Dr. R.P. Hospital in Mayabunder serving the North and Middle Andaman district, and the Bishop John Richardson (BJR) Hospital in Car Nicobar serving the tribal populations of the Nicobar district (Directorate of Health Services, 2026).

Below the district hospital level, the foundational public health infrastructure relies on a network of Community Health Centres (CHCs), Primary Health Centres (PHCs), and sub-centres strategically located across the inhabited islands. The physical condition of these peripheral facilities varies dramatically. While some PHCs in larger islands have been upgraded to Health and Wellness Centres under the Ayushman Bharat initiative, many sub-centres in remote locations suffer from decaying physical infrastructure due to the highly corrosive, humid, and saline maritime environment. Maintaining medical equipment in these conditions is a logistical nightmare. Sensitive diagnostic machines frequently break down, and repairing them requires importing specialized technicians and spare parts from the mainland, rendering the equipment useless for extended periods.

The most critical and persistent gap in the public health infrastructure is the severe shortage of specialized human resources. The territory faces an acute crisis in recruiting and retaining specialist doctors, including cardiologists, nephrologists, neurosurgeons, and advanced gynecologists. The geographic isolation, the lack of private practice opportunities, and the limited avenues for continuing professional medical education make the islands an unpopular posting for highly qualified medical professionals from the mainland. In 2026, official health workforce data reveals that vacancy rates for specialist positions in the outer islands routinely exceed fifty per cent (Ministry of Health and Family Welfare, 2026). To cope with this

deficit, the administration relies heavily on short-term contractual appointments and rotational deployments, which severely undermines the continuity of patient care.

Furthermore, the logistical infrastructure required to transport patients is a massive and expensive component of the healthcare system. The administration operates a fleet of marine boat ambulances and heavily subsidizes helicopter medical evacuation (MEDEVAC) services to airlift critically ill patients from remote islands to Port Blair. During the turbulent monsoon season, boat ambulances often cannot navigate the rough seas, and poor visibility grounds the helicopter fleet, entirely cutting off remote communities from emergency life-saving interventions. This absolute dependence on weather-contingent transport highlights the urgent need to build greater self-sufficiency and secondary care capacity directly within the peripheral islands, rather than relying exclusively on the centralized hub in Port Blair.

6.2 Epidemiological Profile: Communicable and Non-Communicable Disease Burden

The epidemiological profile of the Andaman and Nicobar Islands is currently undergoing a rapid and complex transition, characterized by a severe double burden of disease. The territory is simultaneously battling the rising tide of modern lifestyle diseases among its settler populations while remaining perpetually vigilant against unique, environment-specific communicable diseases and zoonotic threats. The isolated nature of the island ecosystems creates specific biogeographical conditions that profoundly influence disease transmission vectors and public health vulnerabilities.

In 2026, Non-Communicable Diseases (NCDs) constitute the leading cause of morbidity and mortality among the general settler population. The rapid urbanization of Port Blair, shifting dietary habits heavily reliant on imported processed foods, and increasingly sedentary lifestyles have catalyzed a public health crisis. The prevalence of type 2 diabetes mellitus, systemic hypertension, and cardiovascular diseases has surged dramatically over the past decade. Epidemiological surveys indicate that the incidence of these metabolic disorders in the South Andaman district now mirrors, and in some demographic segments exceeds, the national averages seen in mainland metropolitan cities (Indian Council of Medical Research, 2026). The burden of managing these chronic conditions places immense financial and operational strain on the territory's limited healthcare infrastructure, dictating a massive shift in resources towards long-term pharmaceutical provisioning and chronic disease management clinics.

Conversely, the territory must constantly manage a unique profile of communicable diseases. The tropical, humid climate and extensive forest cover provide ideal breeding grounds for vector-borne diseases. While rigorous, decades-long public health campaigns have successfully controlled and nearly eliminated endemic malaria in several islands, the territory remains highly vulnerable to periodic outbreaks of dengue fever and chikungunya, particularly during the post-monsoon months. Furthermore, the islands have historically recorded high incidences of leptospirosis and scrub typhus, occupational diseases that disproportionately affect agricultural workers and populations living in close proximity to the

forest fringe in the North and Middle Andaman district (National Centre for Disease Control, 2026).

The epidemiological profile is most critically and delicately defined by the presence of the Particularly Vulnerable Tribal Groups (PVTGs). The indigenous populations, particularly the Sentinelese and the Jarawa, have lived in near-absolute genetic and geographic isolation for millennia. Consequently, they possess virtually zero acquired immunological defense against common, modern communicable diseases that are endemic to the settler populations and the mainland. Even a minor viral infection, such as measles or influenza, introduced by an outsider could trigger a catastrophic, extinction-level epidemiological event among these tribes. Therefore, the administration's health policy regarding the PVTGs is strictly preventative and isolationist. In 2026, the government maintains rigid buffer zones and enforces draconian quarantine protocols for any medical or administrative personnel authorized to interact with the accessible tribes, such as the Onge and the Great Andamanese. The epidemiological security of these indigenous groups relies entirely on the successful spatial segregation of their habitats from the advancing frontier of the modernized settler economy.

6.3 Maternal and Child Health: MMR, IMR, Under-5 Mortality and Nutrition

Maternal and child health indicators serve as the most sensitive barometer of an administrative region's overall public health efficacy and social equity. In the Andaman and Nicobar Islands, the territorial administration has historically prioritized these metrics, viewing them as fundamental obligations of the welfare state. The outcomes achieved in this sector are highly commendable, especially when evaluated against the profound logistical frictions that complicate emergency obstetric and neonatal care across the dispersed archipelago.

The Maternal Mortality Ratio (MMR) and the Infant Mortality Rate (IMR) in the territory consistently rank well below the national averages. In 2026, the estimated IMR stands at approximately 10 deaths per 1,000 live births, and the Under-5 Mortality Rate (U5MR) shows a similarly positive, downward trajectory (Ministry of Health and Family Welfare, 2026). These strong indicators are the direct result of aggressive, targeted public health interventions. The administration has successfully institutionalized nearly all deliveries in the territory. The network of Primary Health Centres and Community Health Centres is mandated to track every registered pregnancy diligently. To overcome the geographical barriers that prevent women in remote islands from accessing delivery facilities during their final trimester, the administration operates "waiting huts" near the district hospitals. Pregnant women from distant islands are relocated to these huts well in advance of their expected delivery dates, ensuring they have immediate access to emergency obstetric care and surgical interventions if complications arise.

Despite these aggregate successes, the delivery of specialized pediatric and maternal care remains highly centralized. The only fully equipped Neonatal Intensive Care Unit (NICU) and specialized pediatric surgical facilities are located at the G.B. Pant Hospital in Port Blair.

If a high-risk pregnancy or a complex neonatal emergency occurs in the North Andaman or Nicobar districts, the survival of the mother and child depends entirely on the rapid mobilization of the helicopter MEDEVAC service. When weather conditions prevent air evacuation, the outcomes can be tragic. Decentralizing basic emergency obstetric care and establishing mini-NICU facilities at the district hospitals in Mayabunder and Car Nicobar is a critical, ongoing priority to reduce this hazardous dependency on aerial transport.

Maternal and child nutrition presents a complex, persistent challenge that intersects directly with the territory's vulnerable maritime supply chains. While outright starvation is non-existent due to the comprehensive Public Distribution System, hidden hunger and micronutrient deficiencies remain prevalent. The prevalence of anemia among pregnant women and adolescent girls is an area of significant clinical concern. The dietary habits in the islands are heavily reliant on polished rice and subsidized wheat imported from the mainland. Fresh, locally grown vegetables and fruits are often scarce and prohibitively expensive, particularly in the outer islands during the monsoon season when inter-island shipping is disrupted. This lack of dietary diversity directly impacts maternal health and fetal development. To combat this, the administration must aggressively promote localized kitchen gardens, incentivize the local cultivation of iron-rich leafy greens, and ensure that iron and folic acid supplementation programs are monitored with absolute, uncompromising rigor across every island sub-centre (Directorate of Health Services, 2026).

6.4 Universal Health Coverage: State Health Assurance Schemes

Achieving Universal Health Coverage (UHC) is a stated mandate of the territorial administration, and the Andaman and Nicobar Islands have developed a highly unique health assurance architecture to fulfill this goal. Because the territory lacks a private tertiary healthcare sector and operates under the direct administrative control of the central government, the mechanisms for financial health protection differ significantly from the insurance models deployed in mainland states. The objective is not merely to provide financial cover, but to physically bridge the vast oceanic gap between the islands and the advanced medical infrastructure of mainland India.

The foundational pillar of universal health coverage in the territory is the provision of entirely free healthcare services across all government facilities. From primary consultations at rural sub-centres to complex surgeries at the G.B. Pant Hospital, residents of the Andaman and Nicobar Islands do not incur out-of-pocket expenses for treatments, diagnostics, or essential medicines provided within the territorial boundaries. This absolute commitment to free public healthcare prevents medical impoverishment and ensures that basic health equity is maintained across all socio-economic strata. Furthermore, in 2026, the administration has fully integrated the national Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) to cover the vulnerable settler populations and ensure seamless health data integration with the national digital health grid (National Health Authority, 2026).

However, the true complexity of health assurance in the islands arises when patients require super-specialty interventions that are simply unavailable within the territory. Organ

transplants, advanced oncology treatments, complex pediatric heart surgeries, and highly specialized neurosurgery cannot be performed at the G.B. Pant Hospital due to the lack of specialized surgeons and dedicated super-specialty infrastructure. To address this critical deficit, the administration operates the Andaman and Nicobar Islands Scheme for Health Insurance (ANISHI). This bespoke, state-sponsored scheme acts as a vital financial lifeline. When a local medical board certifies that a patient requires super-specialty care unavailable in the islands, the ANISHI scheme provides complete financial coverage for the patient to be referred and transported to empanelled super-specialty corporate hospitals in mainland cities, primarily Chennai and Kolkata (Andaman and Nicobar Administration, 2026).

The ANISHI scheme covers the cost of advanced medical treatment, prolonged hospital stays, and the highly expensive airfare for the patient and a designated escort. This mechanism essentially extends the territory's healthcare infrastructure across the Bay of Bengal, leveraging the private medical capacity of the mainland to serve island residents. While the ANISHI scheme is a remarkable model of administrative welfare, it is also incredibly resource-intensive and places a massive, escalating financial burden on the territory's health budget. The logistical friction of coordinating mainland referrals, managing patient accommodation in unfamiliar mainland cities, and auditing the billing of corporate hospitals requires a dedicated and highly efficient administrative apparatus. The long-term strategic goal for the territory must be to systematically upgrade the capacity of the G.B. Pant Hospital and establish public-private partnerships to bring super-specialty doctors to the islands, thereby gradually reducing the financial and psychological toll of massive mainland medical referrals.

6.5 Mental Health Services: Availability, Access and Stigma Reduction

Mental health is arguably the most neglected, yet profoundly critical, component of the public health landscape in the Andaman and Nicobar Islands. The unique geography and extreme isolation of the archipelago generate specific psychosocial stressors that are rarely encountered with such intensity in contiguous mainland environments. In 2026, as the territory attempts to modernize its economy and integrate digitally with the world, the administration is belatedly recognizing the urgent need to build a comprehensive, compassionate, and accessible mental health infrastructure.

The psychological phenomenon colloquially known as "island fever" is a recognized sociological reality in the territory. Residents, particularly migrants from the mainland who are separated from their extended family networks, frequently experience profound feelings of geographical confinement, claustrophobia, and severe social isolation. During the extended, torrential monsoon season, when inter-island ferries are cancelled and outdoor activities are curtailed, these feelings of confinement are drastically exacerbated. Furthermore, the high cost of airfare to the mainland means that many residents cannot easily return home for family emergencies or social events, leading to prolonged separation anxiety and depression. Historically, the territory has recorded suicide rates that are alarmingly high

compared to the national average, a tragic statistic that underscores the acute, underlying mental health crisis (National Crime Records Bureau, 2026).

Despite the urgent need, the availability of specialized mental health services remains woefully inadequate. The entire territory relies on a minuscule number of qualified psychiatrists and clinical psychologists, almost all of whom are exclusively stationed at the psychiatric ward of the G.B. Pant Hospital in Port Blair. In the outer islands of the North and Middle Andaman district and the entirety of the Nicobar district, specialized psychiatric care is virtually non-existent. Primary care physicians at the peripheral Community Health Centres generally lack the specialized training required to diagnose complex psychiatric disorders, manage severe depressive episodes, or provide necessary psychotherapy. Consequently, mental health issues in remote islands often go entirely undiagnosed until they manifest in severe, acute crises.

Furthermore, profound social stigma surrounding mental illness acts as a massive barrier to seeking treatment. In small, tight-knit island communities where anonymity is impossible, families frequently hide mental health conditions to avoid social ostracization. Seeking psychiatric help is often viewed as a moral failing rather than a medical necessity. To combat this crisis, the administration in 2026 is rolling out an aggressive District Mental Health Programme (DMHP) mandated to decentralize care. A critical component of this strategy is the leveraging of the newly established high-speed submarine optical fibre cable to initiate comprehensive tele-psychiatry services. By connecting patients in remote Primary Health Centres with psychiatrists in Port Blair and mainland clinical psychologists via secure video consultations, the administration is attempting to bypass the physical barriers of the ocean. Simultaneously, widespread, culturally sensitive public awareness campaigns are being deployed through local panchayats and tribal councils to aggressively dismantle the stigma associated with mental health care, normalizing it as a standard component of overall well-being (Directorate of Health Services, 2026).

6.6 Nutrition Programmes: ICDS, Mid-Day Meal and Poshan Abhiyan

Ensuring optimal nutritional security across the Andaman and Nicobar Islands is a monumental logistical and administrative undertaking. The territory's nutritional strategy is not merely about funding programs; it is an incessant battle against maritime distance, weather disruptions, and the fundamental limitations of island agriculture. The administration relies entirely on the robust implementation of national nutritional frameworks, specifically the Integrated Child Development Services (ICDS), the PM POSHAN (formerly Mid-Day Meal) scheme, and the overarching Poshan Abhiyan, adapting them to function within the rigid constraints of the archipelago.

The Integrated Child Development Services (ICDS) forms the frontline of nutritional defense for pregnant women, lactating mothers, and children under the age of six. The administration operates a vast network of Anganwadi centres that penetrate into the most remote settler

villages and accessible tribal settlements. These centres are tasked with providing supplementary nutrition, tracking child growth metrics, and delivering basic pre-school education. However, maintaining the supply chain for supplementary nutrition is exceptionally challenging. The dry rations, fortified supplements, and specialized nutritional powders required for the Anganwadi network must be procured from the mainland, shipped to Port Blair, and then distributed via smaller inter-island vessels to the respective districts. Any disruption in this fragile supply chain, particularly during the turbulent monsoon months, threatens to halt the delivery of vital nutrients to vulnerable populations (Ministry of Women and Child Development, 2026).

The PM POSHAN scheme is implemented with absolute rigor across all government and government-aided schools in the territory. Recognizing that for many children from economically disadvantaged households, the school meal represents their primary source of balanced daily nutrition, the administration heavily subsidizes the program. The logistical challenge here involves procuring fresh vegetables, eggs, and protein sources. Because local agricultural production is highly constrained, schools frequently struggle to source diverse, fresh ingredients locally, often relying on imported, non-perishable alternatives that may lack optimal micronutrient profiles.

In 2026, the territorial administration has strategically aligned the Poshan Abhiyan mandates with the islands' greatest natural resource: marine fisheries. The government is actively piloting initiatives to decentralize protein procurement by formally linking local fishermen's cooperatives directly with the school meal programs and Anganwadi centres. By substituting expensive, imported protein sources with locally caught, highly nutritious pelagic fish, the administration aims to solve two structural problems simultaneously. Firstly, it drastically improves the protein and omega-3 fatty acid intake of the island children, directly combating stunting and malnutrition. Secondly, it creates a guaranteed, stable institutional market for local artisanal fishermen, boosting the local rural economy and reducing the territory's dependency on mainland supply chains. This highly localized, resource-aware adaptation of national nutritional programs is absolutely essential for achieving sustainable food security in the isolated archipelago (Department of Social Welfare, 2026).

6.7 Population Stabilisation and Family Planning

The demographic policy and population stabilization strategy of the Union Territory of the Andaman and Nicobar Islands operates under a uniquely bifurcated and highly sensitive framework. The administration must apply entirely contradictory demographic strategies to two distinct segments of its population: actively promoting family planning and population stabilization among the modern settler communities, while desperately encouraging population growth and demographic survival among the critically endangered indigenous tribes.

For the vast majority of the population, comprising the diverse migrant settler communities concentrated in the South Andaman and North and Middle Andaman districts, the territory has successfully achieved advanced population stabilization. The Total Fertility Rate (TFR)

in these districts has steadily declined over the past two decades and currently sits well below the replacement level of 2.1 in 2026 (Ministry of Health and Family Welfare, 2026). This significant demographic achievement is the direct result of high female literacy rates, widespread participation of women in the local workforce, delayed age of marriage, and the comprehensive, free availability of modern contraceptive methods through the network of Primary Health Centres. The demographic challenge regarding the settler population has shifted away from aggressive population control. The policy focus is now entirely oriented towards family welfare, promoting optimal birth spacing to ensure maternal health, and providing high-quality reproductive healthcare services. The administration recognizes that given the strict ecological carrying capacity of the islands and the severe limitations on available land and fresh water, maintaining a stabilized, non-expanding settler population is an absolute imperative for long-term environmental survival.

Conversely, the demographic policy applied to the Particularly Vulnerable Tribal Groups (PVTGs) is driven by the urgent, existential necessity of preventing extinction. The populations of the Great Andamanese, the Onge, and the Shompen have been historically decimated by colonial encounters, loss of traditional habitats, and exposure to external diseases. Their numbers remain critically low, rendering them highly vulnerable to demographic collapse from inbreeding, sudden disease outbreaks, or natural disasters like the 2004 tsunami. The government's family welfare strategy for these indigenous groups explicitly excludes any promotion of family planning or contraception. Instead, the administration employs dedicated medical teams tasked with closely monitoring the reproductive health of tribal women, treating underlying conditions that cause infertility, and ensuring the survival of every single newborn infant through highly specialized, culturally sensitive pediatric care (Ministry of Tribal Affairs, 2026). This dual demographic approach underscores the profound complexity of governing a territory where modern development metrics clash directly with ancient anthropological preservation.

6.8 Health System Strengthening and Future Preparedness

As the Andaman and Nicobar Islands project their developmental vision toward the centennial year of 2047, the territorial administration recognizes that the public health system cannot merely remain reactive. It must undergo a radical, structural evolution to become resilient, highly digitized, and capable of mitigating the unique existential threats posed by climate change, oceanic isolation, and future pandemics. Health system strengthening in the territory is no longer defined simply by building more concrete clinics; it is defined by building integrated, technologically advanced, and climate-adaptive healthcare networks.

The most immediate and severe threat to the territory's health infrastructure is global climate change. The archipelago is highly susceptible to rising sea levels, severe coastal erosion, and an alarming increase in the frequency and intensity of cyclonic storms in the Bay of Bengal. Many existing Primary Health Centres and sub-centres are located in low-lying coastal areas that are increasingly vulnerable to storm surges and tidal inundation. A critical component of future preparedness involves conducting rigorous geographical audits of all health facilities.

The administration must commit massive capital expenditure to relocate vulnerable clinics to higher, safer ground and ensure that all new medical infrastructure adheres strictly to advanced, disaster-resilient green building codes tailored for extreme tropical maritime environments. The health system must be capable of functioning autonomously during catastrophic weather events that sever supply lines and ground aerial evacuation services (National Disaster Management Authority, 2026).

Digital health integration forms the second fundamental pillar of system strengthening. The operationalization of the submarine optical fibre cable has finally provided the bandwidth necessary to revolutionize remote care. In 2026, the administration is aggressively rolling out the Ayushman Bharat Digital Mission (ABDM), creating unique digital health IDs for all islanders and digitizing decades of paper-based medical records. This digital integration is crucial for maintaining continuity of care when patients are referred from remote islands to Port Blair or the mainland. Furthermore, the territory is heavily investing in the eSanjeevani telemedicine platform. By establishing robust telemedicine nodes in every remote PHC, the administration intends to provide isolated patients with direct, real-time video consultations with specialists in Port Blair and mainland super-specialty hospitals, effectively bypassing the logistical nightmare of maritime transport for routine specialist care and initial diagnostics (Ministry of Health and Family Welfare, 2026).

Finally, true future preparedness requires the territory to systematically reduce its absolute dependence on the Indian mainland for tertiary medical care. While the ANISHI scheme currently provides a financial bridge to mainland hospitals, the logistical, psychological, and financial costs of this dependency are unsustainable in the long term. The administration must foster ambitious public-private partnerships to elevate the G.B. Pant Hospital into a true, self-sufficient super-specialty hub. This requires creating highly attractive, bespoke incentive packages to lure top-tier surgical teams and medical researchers to the islands permanently. By transforming the islands into a centre of excellence for tropical medicine and advanced marine pharmacology research, the territory can not only secure the health of its own population but also position itself as a strategic medical hub for the broader Indo-Pacific region by 2047.

Chapter 7: Social Justice, Inclusion and Community Welfare

7.1 Scheduled Castes: Demographic Profile, Deprivation and Development Programmes

The demographic profile and the administrative framework regarding Scheduled Castes in the Union Territory of the Andaman and Nicobar Islands represent a profound and highly unique constitutional anomaly within the Republic of India. In stark contrast to every other state and major union territory, the Government of India has not notified any specific community or group as a Scheduled Caste within the Andaman and Nicobar Islands. Consequently, there is an absolute absence of a formally recognized Scheduled Caste population native to the territory (Ministry of Social Justice and Empowerment, 2026). This unique sociological reality requires a deep historical and administrative analysis to understand its implications for the broader social justice framework of the archipelago.

The absence of a Scheduled Caste population is not a statistical error but a direct consequence of the territory's unique settlement history. The modern demographic foundation of the Andaman Islands was laid during the British colonial period with the establishment of the penal settlement, infamously known as the Cellular Jail or Kala Pani. Convicts brought from all corners of the Indian subcontinent, representing a vast array of religious, linguistic, and caste backgrounds, were subjected to the brutal realities of prison life and forced labour. Within the confines of the penal settlement, the rigid hierarchies, purity taboos, and exclusionary practices that characterized the caste system on the mainland were systematically dismantled by necessity. Convicts were forced to share living quarters, consume food prepared in communal kitchens, and engage in collective manual labour. This forced integration entirely eroded traditional caste identities, leading to widespread inter-caste and inter-religious marriages. The descendants of these political prisoners and convicts formed a new, highly egalitarian community known as the "Local Borns" or the Andaman Indians (Anthropological Survey of India, 2026). This community fundamentally rejected caste-based discrimination, establishing a social fabric defined by remarkable communal harmony and social equality.

Following Indian independence, the islands witnessed successive waves of government-sponsored resettlement. Refugees from East Pakistan were settled in the North and Middle Andaman district, and repatriates from Sri Lanka and ex-servicemen were settled in various other islands. While these migrant communities brought their regional cultures, the overarching, egalitarian ethos established by the Local Born community largely dictated the social norms of the islands. The profound geographical isolation and the shared struggle against a harsh tropical environment further cemented a sense of unified island identity that superseded traditional mainland caste divisions.

However, the constitutional absence of a notified Scheduled Caste list creates complex administrative and legal challenges in 2026. Thousands of individuals belonging to communities notified as Scheduled Castes in their home states on the mainland migrate to the Andaman and Nicobar Islands for employment, particularly in the lower tiers of the public administration, the construction sector, and the unorganized hospitality industry. Under the

constitutional framework, a person recognized as a Scheduled Caste in a mainland state does not automatically carry that status and its associated privileges into the Andaman and Nicobar Islands. Consequently, these migrants cannot claim reservations in government jobs, educational institutions, or dedicated welfare schemes within the territorial jurisdiction (Ministry of Home Affairs, 2026).

This administrative reality leads to situations of perceived deprivation. Migrant workers from marginalized backgrounds often find themselves performing the most physically demanding and poorly compensated labour in the islands, such as municipal sanitation work, unregulated construction labour, and menial tasks in the fishing industry. Because they lack formal recognition as marginalized groups within the territory, they cannot access the targeted developmental programmes, financial subsidies, and dedicated sub-plans that are typically deployed by the Ministry of Social Justice and Empowerment to uplift Scheduled Castes in other regions.

The future developmental framework for the territory must address this vulnerability not through the rigid lens of caste, but through the universal lens of economic deprivation and occupational hazard. The administration must ensure that the comprehensive social security architecture, including the e-Shram portal and localized labour welfare boards, aggressively covers all unorganized and migrant workers regardless of their mainland caste origins. Ensuring fair wages, strictly enforcing occupational safety standards in the construction and maritime sectors, and providing high-quality, subsidized housing and sanitation for the migrant labour force are essential prerequisites for maintaining social justice. By focusing relentlessly on economic inclusion and universal welfare delivery, the territory can uphold its proud historical legacy of an egalitarian society while protecting the most vulnerable segments of its modern workforce.

7.2 Scheduled Tribes: Rights, Forest Dwelling Communities and Welfare Measures

The protection, welfare, and survival of the Scheduled Tribes in the Andaman and Nicobar Islands constitute the most sensitive, internationally scrutinized, and ethically complex administrative responsibility of the Government of India. The territory is home to six distinct indigenous tribal communities, divided broadly into two ethnic and geographical groups. The Negrito tribes, comprising the Great Andamanese, the Onge, the Jarawa, and the Sentinelese, inhabit the Andaman group of islands. The Mongoloid tribes, comprising the Nicobarese and the Shompen, inhabit the Nicobar group of islands. Five of these six communities, with the sole exception of the larger Nicobarese population, are officially classified as Particularly Vulnerable Tribal Groups (PVTGs) due to their declining or stagnant populations, pre-agricultural levels of technology, extremely low levels of literacy, and absolute economic backwardness (Ministry of Tribal Affairs, 2026).

The legal cornerstone of tribal protection is the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation of 1956. This draconian but absolutely necessary legislation grants the administration sweeping powers to declare vast tracts of traditional tribal habitats as strictly prohibited Tribal Reserves. Entry into these reserves by any non-tribal person without a highly specific, officially sanctioned pass is a criminal offence. The primary

objective of this regulation is to prevent any unauthorized contact that could lead to the transmission of external communicable diseases, against which these isolated populations possess absolutely zero immunological defence. The territory's overarching policy regarding the PVTGs is universally defined as an "eyes-on and hands-off" approach, emphasizing maximal observation for health security while minimizing cultural and physical interference (Ministry of Home Affairs, 2026).

The Sentinelese community on North Sentinel Island represents the most extreme example of this policy. Believed to be the last pre-Neolithic tribe in the world to remain in complete, voluntary isolation, the Sentinelese have consistently and fiercely violently rejected all attempts at external contact. In 2026, the Government of India maintains an absolute exclusion zone surrounding the island, patrolled continuously by the Indian Coast Guard to prevent poachers, adventure tourists, and researchers from approaching the shores. The administration respects their undeniable right to self-determination and isolation, acknowledging that any forced integration would inevitably result in immediate demographic annihilation due to disease.

The Jarawa community, inhabiting a vast reserve spanning the South and Middle Andaman districts, presents a highly complex, dynamic administrative challenge. Unlike the Sentinelese, the Jarawas have experienced increasing, albeit regulated, contact with the outside world over the past two decades. The Andaman Trunk Road, a critical logistical artery for the settler populations, unfortunately cuts directly through the heart of the Jarawa reserve. This proximity has historically led to highly problematic interactions, instances of exploitation, and severe disease outbreaks. In response, the administration has implemented highly stringent convoy systems, completely banned tourism-related activities along the road, and established dedicated Jarawa Protection Police units. The Andaman Adim Janjati Vikas Samiti (AAJVS), an autonomous body, is tasked exclusively with monitoring the health and welfare of the Jarawas, deploying specialized medical personnel who operate strictly from the periphery of the reserve to treat ailments without forcing the community into mainland medical facilities (Directorate of Tribal Welfare, 2026).

The Shompen community, a semi-nomadic hunter-gatherer tribe residing in the dense interior forests of Great Nicobar Island, faces profound and unprecedented challenges in 2026. The NITI Aayog's mega-infrastructure initiative, the Great Nicobar Holistic Development Project, involves massive land diversion and infrastructural development in close proximity to the Shompen biosphere. While the project layout technically avoids the legally demarcated Shompen reserve, environmentalists and anthropologists warn of severe, cascading secondary impacts. The influx of hundreds of thousands of construction workers and settlers, the drastic alteration of the hydrological cycle, and the extensive deforestation threaten to disrupt the traditional foraging routes and the delicate ecological balance upon which the Shompen depend for absolute survival. The administration must execute the Shompen Policy of 2015 with uncompromising rigor, ensuring that the development project incorporates massive, impermeable buffer zones, and that independent, international standard anthropological impact assessments continuously monitor the well-being of the tribe (Ministry of Environment, Forest and Climate Change, 2026).

The Nicobarese community, the largest tribal group in the territory, presents a different paradigm of tribal welfare. Having integrated significantly into the modern administrative and democratic framework, the Nicobarese are active participants in the local economy, primarily engaged in coconut and arecanut plantation agriculture. However, they remain highly vulnerable to economic shocks and the impacts of climate change. The devastating legacy of the 2004 Indian Ocean Tsunami, which decimated their populations and permanently destroyed their traditional coastal plantations, still shapes their developmental needs. The administration focuses on providing advanced, climate-resilient housing, improving higher educational access, and facilitating sustainable market linkages for their agricultural produce through tribal cooperative societies.

The implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, within the territory requires intense, highly specialized adaptation. Recognizing individual and community forest rights must be balanced carefully against the strict preservation of the island ecologies. For the PVTGs, their entire traditional habitat is implicitly recognized as their inviolable community forest resource. The future of social justice for the indigenous tribes of the Andaman and Nicobar Islands depends entirely on the government's unwavering commitment to prioritizing human survival and cultural sovereignty over aggressive economic expansion and resource extraction.

7.3 Other Backward Classes: Identification, Reservation and Social Mobility

The identification, classification, and empowerment of the Other Backward Classes (OBC) in the Andaman and Nicobar Islands reflect the intricate and unique migration history of the archipelago. Because the territory was populated through successive, distinct waves of settlement, the framework for determining social and educational backwardness deviates significantly from the caste-based models utilized in the major mainland Indian states. The administration has established highly specific, localized criteria for recognizing communities that require affirmative action and dedicated welfare interventions to ensure equitable social mobility.

The cornerstone of the OBC classification in the territory is the historical cut-off date related to migration and settlement. The primary demographic group recognized under the OBC category comprises the "Pre-1942 Settlers" and their descendants. This specific temporal classification includes the families of the original penal convicts, the early political prisoners of the Cellular Jail, and the diverse individuals who were brought to the islands by the British colonial administration for various logistical and administrative duties before the Japanese occupation of the islands during the Second World War. These communities, often collectively referred to as the Local Borns, endured the immense hardships of establishing civilization in a hostile, malaria-infested penal colony. The Government of India formally recognizes their unique historical sacrifices and their socio-economic vulnerabilities, granting them OBC status to facilitate their inclusion in the modern developmental trajectory (Ministry of Social Justice and Empowerment, 2026).

Another highly distinct community recognized as an Other Backward Class in the territory is the Bhatu community. Originally classified by the British colonial administration as a

"Criminal Tribe" in the United Provinces (modern-day Uttar Pradesh), members of the Bhatu community were deported to the Andaman Islands in the early twentieth century. They were settled primarily in the Ferrargunj tehsil of the South Andaman district and were subjected to intense surveillance and forced agricultural labour. Following Indian independence and the repeal of the draconian Criminal Tribes Act, the Bhatu community faced profound social stigma and acute economic marginalization. Recognizing their historical oppression and severe educational backwardness, the territorial administration has rightfully extended OBC reservations to the Bhatu community, providing a vital mechanism for their social integration and economic upliftment (Directorate of Social Welfare, 2026).

The reservation policy for OBCs in the Andaman and Nicobar Islands is strictly implemented across all territorial government employment and admissions to the limited local higher educational institutions, such as the Jawaharlal Nehru Rajkeeya Mahavidyalaya and the Dr. B. R. Ambedkar Institute of Technology. Given that the government is the overwhelmingly dominant formal employer in the islands, access to public sector jobs through the OBC reservation quota is a massive and highly sought-after driver of economic security and upward social mobility.

However, the administration of the OBC framework in 2026 is not without significant bureaucratic and demographic challenges. The primary administrative friction involves the stringent enforcement of the "creamy layer" criteria. As the descendants of the pre-1942 settlers have increasingly secured stable government employment over successive generations, a significant portion of the community has achieved middle-class economic status. The administration must deploy rigorous income verification mechanisms to ensure that the benefits of affirmative action are effectively targeted towards the genuinely disadvantaged segments of the OBC population, rather than being continuously monopolized by the economically advanced families within the same designated communities.

Furthermore, there is a recurring administrative complexity regarding migrants from the mainland who hold valid OBC certificates issued by their respective home states. Similar to the situation involving Scheduled Castes, the territorial administration strictly maintains that an individual migrating to the islands cannot automatically claim OBC reservation benefits within the Union Territory's jurisdiction based solely on a mainland certificate (Ministry of Home Affairs, 2026). The territorial OBC list is entirely distinct and locally tailored. This policy frequently leads to extensive litigation and administrative grievances, as mainland migrants competing for limited government positions feel arbitrarily excluded from affirmative action frameworks.

To enhance the welfare and social mobility of the genuine OBC communities by 2047, the administration must pivot its strategy from merely providing public sector employment reservations to actively fostering private sector entrepreneurship. The territory must establish dedicated venture capital funds, highly subsidized skill development programmes, and preferential procurement policies tailored specifically for OBC youth. By empowering these communities to launch sustainable businesses in the burgeoning eco-tourism, marine logistics, and digital services sectors, the administration can ensure that the Other Backward

Classes achieve true, self-sustaining economic parity within the rapidly modernizing island economy.

7.4 Gender Equity: Women's Participation in Education, Economy and Governance

Achieving comprehensive gender equity in the Andaman and Nicobar Islands requires navigating a society that exhibits highly progressive social indicators on one hand, while suffering from deeply entrenched, structural economic disparities on the other. The territory presents a fascinating demographic and cultural mosaic. The modern settler communities in the Andaman district generally adhere to standard patriarchal norms imported from the mainland, albeit softened by the egalitarian history of the penal settlements. Conversely, the indigenous Nicobarese society in the southern district is fundamentally organized around highly equitable, and in some aspects matrilineal, kinship structures. Formulating a unified policy for gender equity across these divergent cultural landscapes is a profound administrative challenge in 2026.

In the realm of education and foundational human development, the territory demonstrates spectacular success regarding gender equity. The female literacy rate in the islands consistently matches, and in certain rural pockets exceeds, the male literacy rate. The Gross Enrolment Ratios for young girls in elementary, secondary, and senior secondary educational institutions are exceptionally robust, reflecting a universal cultural consensus among island families prioritizing female education (Ministry of Education, 2026). Furthermore, critical maternal health indicators, such as the Maternal Mortality Ratio and institutional delivery rates, are among the best in the Republic of India, driven by the universally accessible, free public healthcare infrastructure. From a purely developmental perspective, women and girls in the Andaman and Nicobar Islands enjoy a baseline quality of life and educational access that is highly commendable.

However, this triumphant narrative of educational parity completely collapses when analyzing women's participation in the formal economy. The Female Labour Force Participation Rate (FLFPR) in the territory is alarmingly low, revealing a severe and chronic structural deficit. Despite possessing high educational qualifications, women face immense, systemic barriers to entering the workforce. The private sector in the islands is highly restricted, and the available jobs in the unorganized tourism, construction, and deep-sea fisheries sectors are culturally perceived as physically unsuitable or socially unacceptable for educated women. Consequently, qualified female graduates are largely confined to competing for the scarce, saturated administrative positions within the government bureaucracy. When public sector employment is unattainable, a vast demographic of highly educated women is involuntarily relegated to domestic duties, resulting in a massive, tragic underutilization of the territory's human capital (Ministry of Labour and Employment, 2026).

To combat this severe economic disenfranchisement, the territorial administration relies heavily on the Andaman and Nicobar Islands Rural Livelihood Mission (ANIRLM), a customized implementation of the national Deendayal Antyodaya Yojana. The ANIRLM focuses intensely on mobilizing rural and semi-urban women into Self-Help Groups (SHGs). This network has become the most powerful institutional engine for female economic

empowerment in the archipelago. The administration provides these SHGs with seed capital, revolving funds, and highly subsidized bank linkages, empowering women to launch micro-enterprises. These women-led collectives are increasingly dominating localized supply chains, engaging in commercial organic farming, operating specialized tourist homestays, manufacturing localized handicrafts, and managing decentralized solid waste processing units under the Swachh Bharat Mission (Ministry of Rural Development, 2026).

Women's participation in local governance and political decision-making has been fundamentally transformed by the mandated constitutional reservations. Across the three-tier Panchayati Raj system in the Andaman district, and within the Port Blair Municipal Council, the reservation of seats for women has ensured substantial female representation in local administrative bodies. Elected female representatives are increasingly dictating local resource allocation, prioritizing investments in clean drinking water infrastructure, community healthcare, and early childhood education. However, in the Nicobar district, the interaction between modern democratic mandates and traditional tribal leadership requires extreme sensitivity. While the government encourages female participation, it must respect the internal dynamics and traditional selection processes of the indigenous tribal councils to prevent cultural destabilization.

The strategic imperative for the territory leading up to 2047 is to aggressively dismantle the structural barriers preventing women from entering the modern, high-value sectors of the blue economy. The administration must establish highly specialized, women-only vocational training centres focused on advanced marine biology, sustainable hospitality management, and digital information technology. Furthermore, the government must mandate strict gender equity clauses in all Public-Private Partnership contracts, particularly those related to the mega-infrastructure projects in Great Nicobar, ensuring that multinational corporations provide safe, equitable, and highly skilled employment opportunities for the women of the islands.

7.5 Child Rights, Protection and Development: POCSO, Child Labour and Nutrition

Safeguarding child rights, ensuring absolute physical protection, and fostering holistic early childhood development are fundamental operational priorities for the administration of the Andaman and Nicobar Islands. The territory's extreme geographic isolation introduces highly specific vulnerabilities regarding child welfare that require specialized, highly responsive institutional mechanisms. While the islands benefit from low general crime rates and a tight-knit community structure, the administration must maintain unwavering vigilance against child exploitation, nutritional deficits, and the psychological impacts of geographic remoteness.

The legislative framework for child protection is anchored by the rigorous implementation of the Protection of Children from Sexual Offences (POCSO) Act, 2012, and the Juvenile Justice (Care and Protection of Children) Act, 2015. The Directorate of Social Welfare operates dedicated Child Welfare Committees (CWCs) and Juvenile Justice Boards (JJBs) across the three districts. However, the logistical friction of the archipelago severely complicates the delivery of justice and rehabilitation. Transporting a child victim or a

juvenile in conflict with the law from a remote island in the North Andaman or Nicobar district to the specialized observation homes and counselling facilities located exclusively in Port Blair is a traumatic and logistically complex process. The administration in 2026 is aggressively working to decentralize child protection infrastructure, establishing fully equipped, child-friendly safe houses and permanent counselling centres in the district headquarters of Mayabunder and Car Nicobar to ensure immediate, localized support (Ministry of Women and Child Development, 2026).

The incidence of formal, hazardous child labour in the Andaman and Nicobar Islands is virtually non-existent. This highly positive reality is driven by the near-universal retention of children in the elementary and secondary education systems, heavily incentivized by the provision of free school uniforms, textbooks, and the mid-day meal scheme. However, subtle forms of vulnerability persist in the unorganized sectors. During the peak tourism season, there is a risk of adolescents dropping out of school to engage in unregulated, low-wage employment in the hospitality industry or as unregistered tour guides. Furthermore, in the remote agricultural and fishing settlements, older children are frequently required to participate in arduous household labour or assist in subsistence fishing, which can negatively impact their academic performance and long-term developmental prospects. The administration utilizes the District Child Protection Units (DCPUs) to conduct continuous, localized surveillance, particularly in the peri-urban slums around Port Blair and the transient migrant labour camps, to preemptively identify and rescue any children subjected to economic exploitation.

Nutritional security is the most critical biological determinant of early childhood development, and it remains a constant logistical battle in the territory. The administration relies entirely on the Integrated Child Development Services (ICDS) and the Poshan Abhiyan framework to deliver vital supplementary nutrition to pregnant mothers and children under six years of age. The Anganwadi network is extensive, penetrating into almost every inhabited settlement. However, maintaining the integrity of the nutritional supply chain is a monumental task. The specialized nutritional supplements, fortified dry rations, and medical supplies required for the Anganwadi centres must be shipped from the mainland to Port Blair and subsequently distributed across the archipelago.

During the tumultuous monsoon season, which can last for up to six months, inter-island maritime transport is frequently disrupted. This causes severe, unavoidable delays in the delivery of perishable nutritional supplies to remote islands, directly threatening the continuous nutritional intake of the most vulnerable children (Directorate of Social Welfare, 2026). To mitigate this structural vulnerability, the administration is increasingly pivoting towards a strategy of nutritional localization. The government aggressively incentivizes the establishment of robust "Poshan Vatikas" (nutritional kitchen gardens) adjacent to all rural Anganwadi centres and primary schools. Furthermore, the administration is actively integrating locally sourced, highly nutritious pelagic fish and locally cultivated organic poultry into the daily mid-day meal menus. By reducing the absolute dependency on extended, vulnerable mainland supply chains, the territory can guarantee uninterrupted

nutritional security, thereby eliminating childhood stunting and ensuring the optimal cognitive development of the future island generation.

7.6 Welfare of Elderly Persons: Pension, Care Infrastructure and Policy

The demographic transition occurring within the Union Territory of the Andaman and Nicobar Islands presents an escalating and highly complex policy challenge regarding the welfare, healthcare, and psychological support of the elderly population. Driven by historically high life expectancies, excellent baseline public health outcomes, and a rapidly declining fertility rate, the proportion of senior citizens in the territory is expanding significantly in 2026. This aging demographic profile necessitates a profound, structural shift in the administration's social security architecture and specialized healthcare infrastructure to ensure that the elderly can live with absolute dignity, physical security, and economic independence.

The financial security of the elderly population is primarily anchored by the implementation of the National Social Assistance Programme (NSAP), specifically the Indira Gandhi National Old Age Pension Scheme (IGNOAPS). The territorial administration meticulously ensures that these vital pension transfers are disbursed efficiently. Leveraging the comprehensive digitalization of the territory, pensions are delivered exclusively through Direct Benefit Transfer (DBT) directly into the Aadhaar-seeded bank accounts of the beneficiaries (Ministry of Rural Development, 2026). This digital architecture has fundamentally eradicated the bureaucratic delays and systemic corruption that historically plagued manual cash disbursements. Furthermore, for elderly individuals who have retired from the massive territorial government workforce, the formal, inflation-indexed government pension system provides an exceptionally high degree of financial stability, establishing a secure middle-class elderly demographic, primarily concentrated in the South Andaman district.

However, the physical care infrastructure required to support a growing elderly population remains critically and dangerously underdeveloped. The traditional Indian joint family system, which historically absorbed the burdens of eldercare, is rapidly disintegrating in the islands. The pervasive phenomenon of educated youth out-migration to the mainland in search of employment frequently leaves aging parents physically isolated and entirely reliant on their own resources. The territory suffers from a severe, almost total deficit of specialized, professional geriatric care facilities, modern assisted living communities, and government-run old age homes equipped with continuous medical supervision. When elderly individuals in remote islands lose their physical mobility or develop severe cognitive impairments such as dementia, their families face overwhelming, often insurmountable burdens, as the peripheral health centres completely lack specialized geriatric care protocols.

The psychological well-being of the elderly in the archipelago is an equally critical, yet frequently ignored, dimension of welfare. The phenomenon of "island fever" and the profound feelings of geographic confinement disproportionately affect the elderly, particularly those whose children have migrated far away. The inability to easily or

affordably travel to the mainland to visit relatives exacerbates feelings of profound loneliness and depression.

To address these escalating vulnerabilities leading up to 2047, the territorial administration must execute a massive expansion of dedicated geriatric infrastructure. The government must immediately construct fully equipped, professionally staffed, and highly subsidized old-age care homes in every district headquarters. More importantly, the administration must aggressively deploy Mobile Geriatric Healthcare Units. These specialized, sea-faring medical teams must be tasked with conducting regular, scheduled visits to remote islands to deliver chronic disease management, specialized physiotherapy, and vital mental health counseling directly to the homes of immobile senior citizens (Directorate of Health Services, 2026). Furthermore, the territory must foster community-driven, localized day-care centres where the elderly can engage in social activities, preserving their mental acuity and preventing the devastating impacts of complete social isolation.

7.7 Persons with Disabilities: Rights, Accessibility and Empowerment

The realization of absolute human rights, universal accessibility, and comprehensive socio-economic empowerment for Persons with Disabilities (PwDs) in the Andaman and Nicobar Islands requires overcoming some of the most extreme logistical, medical, and infrastructural barriers present anywhere in the Republic of India. The territorial administration is legally and morally bound by the stringent mandates of the Rights of Persons with Disabilities (RPwD) Act, 2016. However, translating these mainland-designed legislative mandates into functional, everyday reality across an archipelago characterized by rough seas, dense forests, and highly uneven public infrastructure presents a monumental, continuous governance challenge in 2026.

The foundational step toward empowerment is the accurate medical identification and formal certification of disabilities. The administration is aggressively driving the implementation of the Unique Disability ID (UDID) project, attempting to ensure that every disabled citizen possesses a universally recognized digital identity card to seamlessly access targeted welfare schemes, pension transfers, and subsidized medical equipment (Department of Empowerment of Persons with Disabilities, 2026). However, the critical bottleneck lies in the severe, systemic lack of specialized medical assessment boards. Accurate, clinical certification for complex intellectual disabilities, specific learning disorders, or advanced neurological conditions requires highly trained psychiatrists, developmental pediatricians, and specialized audiologists. In the territory, this specialized medical expertise is almost exclusively localized at the G.B. Pant Hospital in Port Blair. For a family residing in the remote Nicobar district or the outer islands of North Andaman, securing an official disability certificate frequently necessitates an expensive, physically exhausting, and highly traumatic maritime journey to the capital, creating a profound initial barrier to accessing any subsequent welfare services.

Physical accessibility across the territory remains a glaring and dangerous deficit. While new, high-profile government buildings and modern airport terminals in Port Blair are generally designed with ramps, accessible elevators, and tactile paving, the vast majority of the existing, older civic infrastructure is completely inaccessible. This is particularly devastating

regarding maritime transport, which is the absolute lifeline of the territory. The aging fleet of inter-island passenger ferries, the steep, slippery concrete jetties, and the chaotic boarding procedures are almost entirely unnavigable for individuals using wheelchairs or those with severe mobility impairments. This lack of accessible transport effectively confines many disabled individuals to their immediate, localized settlements, utterly destroying their ability to access higher education, seek specialized employment, or travel for advanced medical rehabilitation.

The ecosystem for specialized rehabilitation and inclusive education is similarly inadequate. The territory suffers from a chronic, desperate shortage of certified special educators, occupational therapists, sign language interpreters, and vocational training experts equipped to teach specialized skills to neurodiverse youth. Inclusive education in mainstream island schools frequently amounts to mere physical integration without any of the necessary, specialized pedagogical support, leading to severe academic marginalization (Directorate of Education, 2026).

To forge a genuinely inclusive society by 2047, the administration must completely decentralize its therapeutic and diagnostic architecture. The government must establish fully equipped, multi-disciplinary District Disability Rehabilitation Centres (DDRCs) in Mayabunder and Car Nicobar, eliminating the need for arduous travel to the capital. The administration must mandate and aggressively fund the complete, uncompromising retrofitting of all passenger ferries and maritime jetties to ensure universal, dignified physical access. Furthermore, utilizing the high-speed submarine optical fibre cable, the territory must launch highly advanced, continuous tele-rehabilitation services, connecting disabled individuals in remote islands with specialized therapists and vocational trainers across the nation. Only by actively dismantling these profound geographical and infrastructural barriers can the territory empower Persons with Disabilities to achieve true, dignified socio-economic independence.

7.8 Minority Communities: Development, Representation and Welfare

The demographic composition of the Andaman and Nicobar Islands is characterized by a rich, deeply integrated, and highly harmonious pluralism that stands as a powerful testament to successful social integration. The territory is devoid of the deep-seated historical, sectarian, and communal fault lines that frequently fracture social cohesion in various mainland states. The development, political representation, and general welfare of minority communities in the archipelago are managed within an overarching framework of absolute secularism, constitutional equality, and a shared, unifying identity as "Islanders."

In 2026, the Christian and Muslim communities constitute the principal, most highly visible religious minorities within the territory. The Christian population is particularly significant and demographically unique, comprising over twenty-one per cent of the total territorial population. This high concentration is primarily driven by the indigenous Nicobarese tribal community, who almost universally embraced Christianity following extensive and sustained missionary activities in the Nicobar archipelago during the twentieth century, alongside a substantial influx of Christian migrants from the southern Indian states of Kerala and Tamil

Nadu. The Muslim community, with deep historical roots tracing back to the early penal settlement era and augmented by subsequent migrations, forms a vibrant, economically active, and highly integrated demographic, particularly concentrated in the urban and peri-urban zones of the South Andaman district (Ministry of Minority Affairs, 2026).

The territorial administration ensures the welfare of these communities through the meticulous, uncompromised implementation of the Prime Minister's 15 Point Programme for the Welfare of Minorities. This comprehensive framework guarantees equitable, non-discriminatory access to all universal public services, highly subsidized housing under the PMAY scheme, and crucial financial credit for minority-owned micro-enterprises. The Directorate of Social Welfare aggressively executes dedicated pre-matric and post-matric scholarship schemes designed explicitly to prevent educational dropout among economically vulnerable minority students, facilitating their uninterrupted progression into higher education and technical vocational training.

Furthermore, the administration provides robust, dedicated institutional support for the management and preservation of minority cultural and religious assets. The Andaman and Nicobar Islands Wakf Board operates with full administrative backing to meticulously manage, protect, and develop Wakf properties, utilizing the generated revenues to fund localized educational and localized healthcare initiatives that directly benefit the marginalized segments of the Muslim community. Similarly, the myriad churches, community halls, and educational institutions managed by various Christian denominations operate with complete, unhindered religious freedom, contributing massively to the territory's social infrastructure, particularly in the realms of primary education and localized healthcare delivery.

The most defining and celebrated characteristic of minority welfare in the Andaman and Nicobar Islands is the absolute, unbroken legacy of communal harmony. The territory has an impeccable, historically uninterrupted record of zero systemic communal violence. Members of all religious communities participate enthusiastically in each other's festivals, forging a deeply syncretic cultural environment. Political representation in the local Panchayati Raj Institutions and the Port Blair Municipal Council is diverse, equitable, and generally free from aggressive sectarian polarization. The administration's primary strategic objective for 2047 is to fiercely protect and nurture this extraordinary social cohesion. As the territory undergoes rapid, massive economic modernization and strategic militarization, the government must ensure that the resulting economic dividends, lucrative employment opportunities, and infrastructural advancements are distributed equitably across all communities, actively preventing any emergence of localized economic disenfranchisement that could threaten the foundational harmony of the islands.

7.9 Social Security and Beneficiary-Linked Welfare Architecture

The social security and beneficiary-linked welfare architecture in the Union Territory of the Andaman and Nicobar Islands is the absolute, indispensable lifeline that prevents widespread destitution in an economy characterized by immense logistical costs, high inflation, and limited private sector employment. The administration executes a vast, highly complex array of central and territorial welfare schemes designed to provide an impenetrable financial safety

net for the elderly, widows, persons with disabilities, destitute farmers, and economically vulnerable migrant labourers. In 2026, the defining operational characteristic of this welfare architecture is the complete, uncompromising transition to a digitized, technologically driven delivery model.

The successful, territory-wide operationalization of the Chennai-Andaman and Nicobar Islands submarine optical fibre cable has fundamentally revolutionized welfare administration. The government has aggressively leveraged this high-speed connectivity to implement the Direct Benefit Transfer (DBT) mechanism across all major social security schemes. Utilizing the robust JAM trinity (Jan Dhan bank accounts, Aadhaar biometric identification, and Mobile connectivity), the administration now transfers pensions, agricultural subsidies under PM-KISAN, and educational scholarships directly and instantaneously into the authenticated bank accounts of the beneficiaries (Ministry of Finance, 2026). This digital architecture has permanently eradicated the systemic inefficiencies, bureaucratic delays, and widespread corruption that historically plagued manual, cash-based welfare disbursements, ensuring that every allocated rupee reaches the intended recipient.

To ensure that this digital welfare architecture reaches the absolute "last mile" across the highly dispersed archipelago, the administration relies heavily on a dense network of Common Service Centres (CSCs). These vital digital kiosks are established in almost every remote Gram Panchayat and accessible island settlement. Equipped with reliable broadband and biometric authentication devices, the CSCs serve as the primary interface between the government and the citizen. They allow islanders to register for new welfare schemes, download vital digital documents, apply for specialized medical referrals, and update their Aadhaar information without undertaking an expensive, multi-day maritime journey to the administrative headquarters in Port Blair (Ministry of Electronics and Information Technology, 2026).

Despite these massive technological advancements, the execution of the social security architecture faces continuous, severe logistical and financial challenges. The banking infrastructure in the territory remains highly concentrated in the South Andaman district. In the remote islands of the North Andaman and Nicobar districts, the physical presence of commercial bank branches and functional ATMs is shockingly sparse. To withdraw the cash transferred via DBT, elderly or disabled beneficiaries are frequently forced to rely on a highly limited network of Bank Mitras (Banking Correspondents). During the extended monsoon season, when internet connectivity can still be intermittently disrupted due to local power failures, or when the Bank Mitras lack sufficient physical cash liquidity, beneficiaries can be temporarily cut off from their vital financial lifelines.

Furthermore, the integration of the unorganized sector into the formal social security net remains an urgent, incomplete priority. The thousands of informal workers engaged in the tourism, construction, and artisanal fisheries sectors operate in a highly precarious economic environment without access to Provident Fund benefits, formal health insurance, or guaranteed pensions. The administration is aggressively attempting to register these

vulnerable workers on the national e-Shram portal to provide baseline accidental insurance and formalize their economic status (Ministry of Labour and Employment, 2026).

Looking toward the strategic horizon of 2047, the administration must evolve its social security architecture from a passive system of cash transfers to a dynamic system of comprehensive economic empowerment. The Public Financial Management System (PFMS) must be further refined to ensure real-time, predictive tracking of all welfare fund utilization across the districts. More importantly, the administration must ensure that the welfare payouts are continuously and aggressively indexed to the specific, exorbitant "island premium" rate of inflation, ensuring that the real purchasing power of the most vulnerable islanders is not silently eroded by the inescapable logistical costs of archipelagic survival.

Chapter 8: Transport and Connectivity Infrastructure

8.1 Road Network: National Highways, State Highways and Rural Roads

The road network in the Andaman and Nicobar Islands operates under severe geographical constraints, serving as the primary mode of internal passenger and freight movement within the larger, contiguous island groups. Unlike mainland states characterized by dense, grid-like road networks spanning vast plains, the road architecture of the territory is predominantly linear, strictly dictated by the narrow, elongated topography of the islands. In 2026, the total road length in the territory was meticulously maintained to balance necessary connectivity with the absolute imperative of preserving the surrounding primary rainforests and sensitive tribal reserves (Ministry of Road Transport and Highways, 2026). The structural fragility of the island soils, combined with extreme annual rainfall exceeding 3,000 millimetres, makes the construction and maintenance of these roads one of the most capital-intensive engineering endeavours in the Republic of India.

The absolute backbone of the territory's surface transport is National Highway 4, historically known as the Andaman Trunk Road. This critical arterial highway stretches for approximately 333 kilometres, connecting the capital city of Port Blair in the South Andaman district to Diglipur in the North and Middle Andaman district. National Highway 4 serves as the indispensable lifeline for the agricultural and rural settlements of the northern islands, facilitating the transport of essential commodities, agricultural produce, and medical emergencies. In 2026, the National Highways and Infrastructure Development Corporation Limited is executing comprehensive upgradation works along this corridor to ensure all-weather reliability (National Highways and Infrastructure Development Corporation Limited, 2026). This upgradation involves widening existing carriageways, reinforcing retaining walls against recurrent landslides, and laying high-durability bituminous concrete specifically formulated to withstand the intense tropical moisture and heavy axle loads of cargo trucks.

However, the alignment of National Highway 4 presents one of the most globally scrutinized environmental and anthropological controversies in modern infrastructure planning. A significant segment of this highway passes directly through the legally protected Jarawa Tribal Reserve. This intersection of modern linear infrastructure with the traditional habitat of a Particularly Vulnerable Tribal Group has historically led to severe negative impacts, including the introduction of external diseases and cultural disruption. In response to directives from the Supreme Court of India and intense advocacy by international anthropological organizations, the territorial administration enforces an exceptionally strict convoy system in 2026. Vehicles are only permitted to traverse the reserve section at designated times, under heavy armed police escort, with absolute prohibitions on stopping, photographing, or interacting with the Jarawa community. While this protocol mitigates direct contact, the persistent traffic volume continues to cause ecological fragmentation and noise pollution within the pristine reserve ecosystem, forcing policymakers to continuously evaluate alternative sea-route options to eventually bypass the reserve entirely (Ministry of Tribal Affairs, 2026).

A monumental achievement in the territory's road infrastructure is the ongoing construction and recent operationalization of massive sea-bridges designed to replace archaic and highly inefficient vehicle ferry crossings along National Highway 4. The geography of the Andaman archipelago is fractured by deep tidal creeks, most notably the Middle Strait and the Humphrey Strait. Historically, commercial trucks and passenger buses endured wait times spanning several hours to board small, flat-bottomed roll-on and roll-off ferries to cross these straits. In 2026, the completion of the Humphrey Strait Bridge, named the Azad Hind Fauj Setu, stands as a triumph of maritime civil engineering. Spanning over 1.18 kilometres across deep, fast-flowing tidal waters, this bridge has drastically reduced travel times between the Middle and North Andaman districts. The concurrent construction of the Middle Strait Bridge, despite facing immense technical hurdles related to deep foundational piling in treacherous seabed conditions, is projected to further revolutionize the logistical efficiency of the northern corridor once fully operationalized (Ministry of Road Transport and Highways, 2026).

Beyond the national highway, the territory maintains a vital network of state highways and major district roads that connect the peripheral agricultural settlements, fishing hamlets, and tourist nodes to the primary arterial spine. In the South Andaman district, state highways connecting Port Blair to key tourist destinations like Wandoor and Chidiya Tapu have been prioritized for high-quality surfacing and safety enhancements to support the premium eco-tourism anchor industry. However, the maintenance of these secondary roads presents a continuous fiscal challenge. The absolute requirement to import bitumen, aggregate stone, and heavy construction machinery from the Indian mainland via maritime shipping adds a massive cost premium to every kilometre of road constructed or repaired in the islands. This "island premium" forces the administration to allocate disproportionately large segments of its capital expenditure budget merely to maintain existing surface connectivity against the relentless erosive forces of the tropical climate.

Rural connectivity is systematically addressed through the rigorous implementation of the Pradhan Mantri Gram Sadak Yojana (PMGSY). In 2026, the territory is actively working to ensure that every eligible, legally recognized rural habitation possesses all-weather road access (Ministry of Rural Development, 2026). The execution of PMGSY projects in the islands involves highly specialized engineering adaptations. To mitigate the rapid deterioration of conventional asphalt in areas prone to localized flooding and high water tables, the administration has increasingly adopted the use of interlocking concrete block pavements and specialized soil stabilization technologies for rural roads. These adaptations significantly improve the lifecycle and durability of the rural road network, ensuring that farmers in remote settlements can reliably transport their perishable coconut, arecanut, and marine catch to the primary markets without suffering massive post-harvest losses due to impassable muddy tracks during the extended monsoon season.

8.2 Railways: Existing Network, Pending Projects and Expansion Proposals

The Union Territory of the Andaman and Nicobar Islands currently possesses absolutely no operational passenger or commercial freight railway network. The extreme, fractured

archipelagic geography, characterized by hundreds of small landmasses separated by deep ocean channels, fundamentally precludes the development of a conventional, continuous railway grid. However, the comprehensive evaluation of transport infrastructure in 2026 requires a meticulous analysis of historical railway operations, recent feasibility studies, and the strategic rationales that continue to drive discussions regarding potential rail connectivity in this uniquely constrained environment (Ministry of Railways, 2026).

Historically, the concept of railways in the Andaman Islands is not entirely unprecedented. During the late nineteenth and early twentieth centuries, the British colonial administration successfully constructed and operated several narrow-gauge industrial tramways and logging railways, primarily in and around the dense forests of the South Andaman and Middle Andaman districts. These localized, highly specific rail networks were designed exclusively to transport massive logs of valuable tropical timber, such as Andaman Padauk, from the interior extraction zones to the coastal sawmills and loading jetties. However, following Indian independence and the eventual, necessary cessation of commercial logging ordered by the Supreme Court to protect the fragile ecology, these industrial railways were completely dismantled and abandoned, leaving no legacy infrastructure suitable for modern passenger or freight operations (Ministry of Environment, Forest and Climate Change, 2026).

In the modern developmental era, the persistent and severe logistical bottlenecks experienced along the Andaman Trunk Road prompted the Government of India to seriously reconsider the feasibility of introducing a railway network. In the late 2010s, the Ministry of Railways sanctioned and executed a comprehensive, highly detailed final location survey for a proposed 240-kilometre broad-gauge railway line connecting Port Blair in the south to Diglipur in the extreme north. This proposed project was envisioned as a strategic and economic game-changer. By establishing a high-capacity, all-weather rail corridor, the government aimed to bypass the heavily congested, environmentally sensitive road network, drastically reduce the transport time for agricultural freight, and provide a secure, high-speed logistical spine for military movements across the length of the Andaman group (Ministry of Railways, 2026).

The findings of this rigorous feasibility study highlighted the immense, almost prohibitive engineering and financial complexities associated with island railway construction. The proposed alignment was forced to navigate exceptionally difficult, undulating terrain, requiring the construction of numerous long tunnels through hard volcanic rock and massive, complex viaducts over deep tidal creeks and ecologically sensitive mangrove swamps. The capital cost of the project was estimated to be astronomically high, exceeding tens of thousands of crores, primarily due to the necessity of importing every single component, from steel rails to specialized rolling stock and heavy tunnel boring machines, from the mainland. Furthermore, the projected passenger and freight traffic volumes, given the relatively small population of the northern islands, were deemed fundamentally insufficient to ensure the commercial financial viability of the line or recover the massive capital investment.

Crucially, the proposed railway alignment faced insurmountable environmental and anthropological hurdles. Any broad-gauge railway traversing the length of the islands would

inevitably require substantial diversion of pristine, legally protected primary rainforests. More importantly, the alignment would have to either pass through or closely skirt the deeply sensitive Jarawa Tribal Reserve, potentially causing permanent, catastrophic ecological fragmentation and cultural disruption to the indigenous population. Given these profound environmental risks and the highly unfavourable economic cost-benefit analysis, the mega-railway project was officially shelved and remains dormant in 2026. The consensus among transport planners and ecological experts is that large-scale railway infrastructure is fundamentally incompatible with the fragile carrying capacity and the unique archipelagic geography of the territory.

Despite the rejection of a territory-wide broad-gauge network, highly localized, specialized rail concepts continue to be evaluated within the context of specific mega-projects. The Great Nicobar Holistic Development Project, spearheaded by the NITI Aayog in 2026, includes preliminary spatial allocations for internal, dedicated freight rail corridors or automated guided transit systems designed exclusively to connect the proposed International Container Transshipment Terminal at Galathea Bay with the adjacent planned industrial zones and the new international airport (NITI Aayog, 2026). These proposed systems are strictly confined to the designated development zones, focused entirely on maximizing the operational efficiency and automated cargo movement of the transshipment hub, rather than serving as general public passenger transport. Therefore, while conventional railways remain absent from the territory, targeted, highly specialized rail technologies may play a niche, heavily localized role in the future strategic logistics architecture of specific mega-projects.

8.3 Aviation: Airport Infrastructure and Air Connectivity

Aviation infrastructure is the absolute, non-negotiable critical lifeline for the Union Territory of the Andaman and Nicobar Islands. Given the vast maritime distance separating the archipelago from the Indian mainland, air travel is the only viable mode for rapid passenger transit, emergency medical evacuations, the delivery of high-value perishable cargo, and the rapid deployment of national security assets. In 2026, the aviation sector in the territory is undergoing a massive, unprecedented phase of modernization, expansion, and strategic capacity enhancement, completely transforming the islands from a remote outpost into a highly accessible, globally connected destination (Ministry of Civil Aviation, 2026).

The absolute hub and central nervous system of the territory's aviation architecture is the Veer Savarkar International Airport, located in the capital city of Port Blair. This facility operates as a civil enclave integrated within the Indian Navy's strategic airbase, INS Utkrosh. In 2026, the operationalization of the newly constructed, state-of-the-art New Integrated Terminal Building represents a watershed moment for the island economy. This massive, architecturally striking facility, designed with a unique shell-shaped structure inspired by the island's marine environment, has drastically expanded the airport's handling capacity to accommodate over five million passengers annually (Airports Authority of India, 2026). The new terminal features advanced automated baggage handling systems, multiple modern aero-bridges, expansive retail and duty-free concourses, and highly efficient energy management systems utilizing extensive natural lighting and rooftop solar arrays. This

infrastructure upgrade is perfectly synchronized to support the territory's strategic pivot towards attracting high-net-worth international eco-tourists and facilitating the rapid movement of corporate investors.

A critical, transformative upgrade at the Veer Savarkar International Airport in 2026 is the full operationalization of night landing and Instrument Flight Rules (IFR) facilities. Historically, the airport was strictly restricted to daylight operations due to complex surrounding terrain and the lack of advanced navigational aids. This limitation severely constrained flight scheduling, caused massive congestion during peak morning hours, and crippled the ability to conduct emergency night-time medical evacuations to the mainland. The successful installation and commissioning of advanced runway lighting systems and precision approach radar now permit round-the-clock flight operations. This capability has revolutionized connectivity, allowing airlines to maximize aircraft utilization, introduce red-eye flights to major mainland hubs like Delhi, Mumbai, Chennai, and Kolkata, and provide the territorial administration with critical 24-hour emergency response capabilities.

Beyond the primary hub in Port Blair, the territory is aggressively expanding its regional and inter-island aviation network. The geographical isolation of the northern and southern island groups makes surface transport agonizingly slow, elevating the importance of decentralized airfields. In the North and Middle Andaman district, the Indian Naval Air Station, INS Kohassa, located in Shibpur near Diglipur, plays a dual role. While serving as a forward operating base for maritime reconnaissance aircraft monitoring the Bay of Bengal, the runway has been systematically upgraded to accommodate civilian commercial flights under the UDAN (Ude Desh ka Aam Nagrik) regional connectivity scheme (Ministry of Defence, 2026). The commencement of regular, scheduled fixed-wing passenger flights between Port Blair and Shibpur in 2026 has collapsed a twelve-hour, grueling road journey into a forty-five-minute flight, unlocking immense, previously inaccessible tourism and economic potential in the northern islands.

In the strategically vital Nicobar district, aviation infrastructure serves primarily military and administrative imperatives. The Campbell Bay airstrip on Great Nicobar Island, operated as INS Baaz, is India's southernmost military air facility, providing critical reach over the Six Degree Channel and the Malacca Strait. Similarly, the Car Nicobar Air Force Station serves as an essential logistical hub for the tribal district. In 2026, these military airfields facilitate essential civilian movements, disaster relief operations, and high-level administrative visits, though routine commercial passenger operations remain restricted due to the tribal reserve status of the islands. However, the NITI Aayog's Great Nicobar Holistic Development Project includes the construction of a massive, greenfield dual-use international airport, designed to handle the largest commercial airliners and heavy military transport aircraft, aiming to serve the massive projected logistical and passenger demands of the future transshipment terminal and coastal city (NITI Aayog, 2026).

Inter-island aerial connectivity is further supported by an extensive, highly vital network of helicopter operations managed primarily by Pawan Hans Limited under contract with the territorial administration. Helicopters serve as the ultimate, indispensable lifeline for connecting the smaller, remote islands that lack runways. In 2026, the administration

maintains a rigorous schedule of subsidized helicopter sorties connecting Port Blair to distant nodes like Hut Bay (Little Andaman), Car Nicobar, Kamorta, and Campbell Bay. These services are absolute prerequisites for medical evacuations, transporting administrative personnel, and moving critical, time-sensitive cargo. Furthermore, the territory is actively pioneering the deployment of seaplane operations under the UDAN scheme, developing specialized water aerodromes at premier tourist destinations like Swaraj Dweep, Shaheed Dweep, and Long Island, offering high-end tourists rapid, scenic transfers and reducing the massive burden on the inter-island maritime ferry network.

8.4 Ports, Inland Waterways and Logistics Hubs

The maritime infrastructure of the Union Territory of the Andaman and Nicobar Islands constitutes the absolute, irreplaceable foundation of its entire economic survival and strategic utility. Given that every essential commodity, construction material, and drop of liquid fuel must cross hundreds of miles of open ocean to reach the islands, the ports function as the central arteries of the territory. In 2026, the administration and the central government are executing a comprehensive, multi-billion-dollar transformation of the maritime sector, aiming to modernize aging legacy infrastructure while simultaneously constructing globally competitive, mega-scale transshipment facilities designed to alter the entire logistical landscape of the Indian Ocean (Ministry of Ports, Shipping and Waterways, 2026).

The administration and regulation of the territory's port infrastructure are primarily managed by the Port Management Board (PMB). The flagship commercial maritime facility is the Port Blair port complex, which includes several specialized wharves and jetties such as the Chatham wharf, Haddo wharf, and the Hope Town facility. In 2026, the Port Blair port handles the overwhelming majority of the territory's inbound cargo, serving as the sole entry point for containerized freight, break-bulk cargo, and specialized petroleum, oil, and lubricant (POL) shipments from the mainland ports of Chennai, Kolkata, and Visakhapatnam. The PMB is heavily investing in upgrading the cargo handling capacities at Haddo wharf, deploying modern, high-capacity mobile harbour cranes and expanding the container stacking yards to alleviate chronic vessel congestion and drastically reduce turnaround times, thereby actively lowering the massive logistical costs that inflate the local island economy (Port Management Board, 2026).

The lifeblood of intra-territorial mobility is the Directorate of Shipping Services (DSS). Operating a massive, highly complex fleet of over seventy passenger vessels, vehicle ferries, and specialized cargo ships, the DSS is tasked with maintaining continuous connectivity across the sprawling archipelago. This inter-island shipping network is categorized into foreshore services, connecting islands immediately adjacent to Port Blair; inter-island services, connecting the middle and northern districts; and the incredibly demanding southern group services, navigating the treacherous waters to reach the remote tribal settlements of the Nicobar district. In 2026, the DSS faces immense operational and fiscal challenges. A significant portion of its fleet is aging rapidly, requiring exorbitant maintenance costs and frequent dry-docking. To ensure safety and operational efficiency, the administration is executing a massive fleet acquisition plan, commissioning modern, air-conditioned,

fuel-efficient vessels designed to provide dignified and reliable transport for the islanders, heavily subsidized by the central government as an absolute social obligation (Directorate of Shipping Services, 2026).

The most consequential and globally significant development in the territory's maritime infrastructure is the proposed International Container Transshipment Terminal (ICTT) at Galathea Bay on Great Nicobar Island. Steered directly by the central government and the NITI Aayog in 2026, this mega-project is designed to exploit the island's extreme proximity to the globally vital East-West shipping route passing through the Malacca Strait. Currently, a massive portion of India's international containerized cargo is transshipped through foreign ports like Colombo, Singapore, and Klang, resulting in massive revenue losses and supply chain vulnerabilities. The Galathea Bay ICTT is designed to arrest this capital flight. Planned with an ultimate natural draft exceeding sixteen metres, the terminal will be fully capable of accommodating the world's largest Ultra Large Container Vessels (ULCVs) without the need for expensive, continuous capital dredging (Ministry of Ports, Shipping and Waterways, 2026). The project is slated to handle a capacity of four million Twenty-foot Equivalent Units (TEUs) in its initial phase, fundamentally positioning India as a dominant maritime logistics player in the Indo-Pacific.

Furthermore, the territory is strategically upgrading its ship repair and dry-docking capabilities. Historically, large passenger vessels and naval assets operating in the islands were forced to travel to mainland shipyards in Chennai or Visakhapatnam for mandatory maintenance, resulting in immense operational downtime and wasted fuel. In 2026, the expansion and modernization of the marine dry dock facilities at Port Blair represent a critical step toward maritime self-reliance. By enhancing the capacity to undertake complex underwater repairs, hull maintenance, and marine engineering tasks locally, the territory significantly improves the operational availability of both the civilian DSS fleet and the vital naval assets deployed by the Andaman and Nicobar Command.

Inland waterways, in the conventional sense of navigable rivers, are largely absent due to the short, fast-flowing nature of the island streams. However, the complex network of sheltered coastal creeks, mangroves, and narrow straits functions effectively as an intricate, natural waterway system. This system is extensively utilized by small local boats, motorized dinghies, and specialized tourist vessels. The administration is actively developing specialized marine infrastructure, including floating jetties and eco-friendly marinas, specifically designed to support the burgeoning high-end yachting and coastal cruise tourism sectors, ensuring that maritime infrastructure expansion directly aligns with the territory's premium eco-tourism growth corridors.

8.5 Urban Mass Transit: Metro, Bus Rapid Transit and Integrated Mobility

The concept of urban mass transit in the Union Territory of the Andaman and Nicobar Islands is exclusively applicable to the South Andaman district, and specifically the rapidly urbanizing, highly congested municipal limits of Port Blair and its contiguous peri-urban zones. Unlike the sprawling megacities of the Indian mainland, the urban geography of Port Blair is fiercely constrained by steep, hilly topography, narrow coastal margins, and the

surrounding ocean. This specific topography inherently precludes the development of large-scale, rigid mass transit systems like heavy Metro Rail or expansive Bus Rapid Transit (BRT) corridors. Consequently, in 2026, the strategy for urban mobility in the capital relies heavily on highly adaptable, appropriately scaled bus networks, progressive electrification, and the seamless, intelligent integration of land and water-based transport modes.

The Port Blair Municipal Council and the State Transport Department jointly manage the public road transport architecture within the city. The core of the urban transit system is a fleet of public and heavily regulated private buses that navigate the winding, narrow arterial roads connecting the commercial centre of Aberdeen Bazaar with residential suburbs like Garacharma, Bambooflat, and Chidiya Tapu. In 2026, Port Blair faces severe, escalating urban congestion. The rapid, exponential increase in private vehicle ownership, particularly two-wheelers and tourist taxis, combined with the lack of available land for road widening, results in frequent traffic gridlock during peak administrative and tourism hours. To mitigate this congestion, the administration is strictly enforcing optimized traffic routing, heavily restricting heavy vehicle movement during daylight hours, and constructing multi-level, automated parking facilities in the densest commercial zones (Ministry of Housing and Urban Affairs, 2026).

A hallmark of the urban transit evolution in Port Blair in 2026 is the aggressive, mandated transition toward clean energy mobility. The administration has successfully inducted a substantial fleet of modern, air-conditioned Electric Vehicles (EV) buses for intra-city routes. This deployment is a highly strategic intervention designed to simultaneously reduce the territory's massive dependence on expensive, imported diesel fuel and significantly curtail the localized vehicular air pollution that threatens the pristine quality of the island environment. The rollout of the EV bus fleet is supported by the concurrent, targeted establishment of specialized high-capacity charging infrastructure at key bus depots and strategic urban nodes, ensuring the operational reliability of the clean transit network. Furthermore, the administration provides heavy subsidies and tax incentives to private tour operators and commercial taxi owners to accelerate the transition of the massive tourist vehicle fleet toward electric and hybrid technologies.

While conventional heavy metro systems are topographically and financially unviable, the administration is actively leveraging the city's unique coastal geography to develop innovative alternative mass transit solutions. Port Blair is surrounded by navigable bays and deep natural harbours. In 2026, the territory is actively expanding its urban water transport network, drawing direct inspiration from successful mainland projects like the Kochi Water Metro. The administration is procuring a fleet of modern, high-speed, and low-emission water taxis designed to provide rapid, comfortable transit across the bay, connecting densely populated suburbs like Bambooflat and Hope Town directly to the central commercial district in Aberdeen. This water-based transit bypasses the congested, circuitous road network entirely, slashing commute times for thousands of daily workers and students, while simultaneously offering a highly attractive, scenic transit option for the massive influx of domestic and international tourists (Port Management Board, 2026).

Integrated mobility is the ultimate objective of the territory's urban transit strategy. The administration is developing comprehensive, digital transit applications that allow residents and tourists to seamlessly plan journeys across buses, water taxis, and auto-rickshaws. This digital integration includes unified ticketing systems and real-time GPS tracking of public transport assets. Furthermore, the Smart City initiatives in Port Blair emphasize the crucial development of Non-Motorized Transport (NMT) infrastructure. The construction of dedicated, safe pedestrian walkways and the strict enforcement of designated no-vehicle zones in heritage and heavy-commercial areas aim to create a highly walkable, sustainable, and aesthetically pleasing urban environment that caters equally to the daily needs of the local citizenry and the expectations of premium eco-tourists.

8.6 Multimodal Logistics: Last-Mile Connectivity and Freight Corridors

Achieving true economic efficiency and export competitiveness in the Andaman and Nicobar Islands requires transcending isolated modes of transport and forging a highly synchronized, multimodal logistics architecture. The territory's unique geography mandates that goods must transition multiple times—from ship to truck, from truck to smaller inter-island ferry, and finally from ferry to rural road—before reaching the end consumer or leaving the territory for export. Every point of transition in this complex chain represents potential friction, delay, and financial loss. In 2026, the administration, guided strictly by the overarching framework of the PM Gati Shakti National Master Plan, is aggressively focusing on eliminating these systemic frictions by creating seamless multimodal logistics hubs and guaranteeing robust, reliable last-mile connectivity (Ministry of Commerce and Industry, 2026).

The core of this multimodal strategy is the complete integration of the port facilities with the road network and the aviation sector. At the Port Blair maritime complex, the administration is establishing highly automated, designated freight corridors designed to expedite the rapid evacuation of imported cargo directly from the Haddo wharf onto National Highway 4, completely bypassing the heavily congested urban roads of the capital. This involves the construction of dedicated truck staging areas, advanced digital weighbridges, and streamlined, single-window customs and excise clearance nodes located directly at the port boundaries. By drastically reducing the dwell time of cargo trucks at the port, the administration effectively lowers the massive inventory carrying costs that burden local merchants and inevitably inflate retail prices for the island population.

In the crucial primary sectors of fisheries and agriculture, multimodal logistics and specialized cold chain infrastructure are absolute prerequisites for economic survival and export success. The territory's greatest economic potential lies in exporting high-value pelagic fish, such as yellowfin tuna, to lucrative international markets in Southeast Asia and Japan. However, this potential is entirely contingent on maintaining an unbroken, highly precise cold chain. In 2026, the administration is heavily subsidizing the establishment of localized, high-capacity blast freezers and specialized cold storage facilities directly adjacent to the primary fish landing centres in the North and Middle Andaman and South Andaman districts. Furthermore, customized, refrigerated logistical protocols are being implemented to ensure that the catch can be transported seamlessly from these rural landing centres via

refrigerated trucks to the Veer Savarkar International Airport, where dedicated, specialized perishable cargo handling facilities ensure rapid, temperature-controlled loading onto outbound commercial or dedicated freighter aircraft (Department of Fisheries, 2026).

Last-mile connectivity for the dispersed agricultural settlements is systematically addressed through the integration of the PMGSY road network with small-scale, decentralized maritime jetties. In the intricate archipelagic environment, a rural road often terminates at a creek or a narrow strait. The administration is investing heavily in constructing and upgrading durable, all-weather roll-on/roll-off (Ro-Ro) ramps and specialized shallow-draft jetties at these precise terminal points. This infrastructure allows small commercial trucks carrying perishable coconut, arecanut, and organic spices to drive directly onto localized ferry services, cross the water barrier without the necessity of unloading and reloading cargo, and continue their journey to the primary consolidation markets in Port Blair or Mayabunder. This seamless, unbroken physical connectivity significantly minimizes post-harvest losses, protects the quality of the agricultural produce, and substantially increases the final financial realization for the rural farmers.

Looking forward, the ultimate manifestation of multimodal logistics in the territory is the planned architecture surrounding the Great Nicobar Holistic Development Project. The proposed International Container Transshipment Terminal is not being designed as an isolated maritime asset; it is being intricately, digitally, and physically woven into a massive, integrated logistics hub. The master plan for the project mandates absolute, frictionless physical connectivity between the deep-water terminal, the adjacent Free Trade Warehousing Zones (FTWZ), the specialized industrial estates, and the new greenfield dual-use international airport. Utilizing advanced digital tracking systems, automated guided vehicles, and unified, cloud-based logistics management software, the Great Nicobar hub aims to provide global shipping lines and multinational corporations with a hyper-efficient, highly predictable, and completely seamless multimodal transit environment, thereby solidifying the territory's strategic and economic supremacy in the Indian Ocean by 2047 (NITI Aayog, 2026).

Chapter 9: Energy, Power and Renewable Transition

9.1 Power Generation: Installed Capacity, Mix and Dependence Profile

The power generation architecture of the Union Territory of the Andaman and Nicobar Islands is fundamentally characterized by a dangerous and financially crippling over-reliance on fossil fuels, specifically High-Speed Diesel. Because the archipelago is separated from the Indian mainland by over 1,200 kilometres of the Bay of Bengal, physical integration with the national synchronous power grid via submarine cables has historically been deemed technologically and financially unviable for bulk power transmission. Consequently, the territory must generate every megawatt of its electricity locally. In 2026, the total installed power generation capacity across the entire territory is estimated at approximately 165 Megawatts, a figure that is incredibly small when compared to the capacities of mainland states, yet profoundly difficult to maintain given the localized constraints (Ministry of Power, 2026).

The generation mix is heavily skewed, with diesel-based thermal generation accounting for nearly eighty-five per cent of the total installed capacity. The remaining fifteen per cent is contributed by a combination of a single legacy hydroelectric plant, an expanding but intermittent portfolio of solar photovoltaic installations, and experimental renewable pilot projects. The Electricity Department of the Andaman and Nicobar Administration serves as the primary generation utility, operating dozens of decentralized diesel power houses scattered across the inhabited islands. To augment its own limited capital capacity, the administration also relies heavily on Power Purchase Agreements signed with private Independent Power Producers. These private entities operate several of the larger diesel generation facilities, particularly in the South Andaman district, supplying base-load power to the grid at negotiated, yet still exceptionally high, tariffs (Central Electricity Authority, 2026).

The dependence profile associated with this diesel-heavy generation mix creates a logistical and financial nightmare. The territory possesses zero domestic petroleum resources and no domestic refining capacity. Therefore, millions of litres of High-Speed Diesel must be procured continuously from mainland refineries located in Chennai, Visakhapatnam, and Haldia. This fuel is transported across the ocean in specialized, chartered tanker vessels. This maritime supply chain is highly vulnerable to disruption. During the extended and violent tropical monsoon seasons, cyclonic storms and rough seas frequently delay tanker arrivals for weeks. Such disruptions severely threaten the fuel inventory levels at the local storage depots operated by the Andaman and Nicobar Islands Integrated Development Corporation. If a critical fuel shortage occurs, the administration is forced to implement severe, rolling power rationing across the islands, crippling commercial activity and causing immense hardship to the civilian population (Ministry of Petroleum and Natural Gas, 2026).

Furthermore, once the diesel arrives at the primary port in Port Blair, the logistical challenge multiplies. The fuel must be decanted and then re-loaded onto a fleet of smaller, aging inter-island ferry tankers to be distributed to the decentralized power houses located in the North and Middle Andaman district and the remote tribal settlements of the Nicobar district.

This secondary distribution network is incredibly expensive, highly inefficient, and introduces a severe, perpetual risk of localized marine oil spills in some of the most pristine and ecologically sensitive coral reef environments on the planet. The environmental degradation associated with the continuous transport and combustion of millions of litres of diesel is entirely antithetical to the territory's stated goal of becoming a premium, sustainable eco-tourism destination.

The financial cost of this generation mix is astronomical. The "island premium" applied to the procurement, maritime shipping, storage, and localized distribution of diesel means that the actual cost of power generation in the territory is among the highest in the entire Republic of India. In 2026, the cost of supply frequently exceeds twenty-five to thirty Indian Rupees per unit of electricity generated (Joint Electricity Regulatory Commission, 2026). Because charging consumers this actual cost would instantly destroy the local economy and cause widespread civil unrest, the central government is forced to provide a massive, continuous operational subsidy to cover the gap between the cost of generation and the subsidized consumer tariffs. This operational subsidy consumes hundreds of crores of rupees annually, representing a massive drain on public finances that completely crowds out necessary capital investments in healthcare, education, and modern infrastructure. Transitioning away from this disastrous dependency on imported diesel is not merely an environmental goal; it is the absolute, existential prerequisite for the fiscal survival and economic modernization of the territory.

9.2 Transmission and Distribution: Infrastructure, Losses and Reliability

The transmission and distribution infrastructure in the Andaman and Nicobar Islands presents a unique set of profound engineering and administrative challenges that are entirely absent in contiguous mainland power systems. The fundamental reality of the territory is that there is no single, unified state power grid. The archipelagic geography, characterized by deep ocean channels and wide straits separating the islands, makes it technologically and financially prohibitive to inter-connect the various island groups with high-voltage submarine transmission cables. Consequently, the Electricity Department is forced to operate and manage over fifty entirely distinct, electrically isolated micro-grids of varying sizes and capacities across the territory (Department of Power, 2026).

The largest and most complex of these isolated networks is the South Andaman grid, which services the densely populated capital city of Port Blair and its contiguous peri-urban and rural areas. This grid features a rudimentary transmission backbone operating primarily at 33 Kilovolts, which steps down to 11 Kilovolts for secondary distribution. The North and Middle Andaman district is serviced by a deeply fragmented patchwork of localized grids, some of which are loosely interconnected along the path of the Andaman Trunk Road, while others remain entirely isolated. In the Nicobar district, the fragmentation is absolute, with each inhabited island, and often each individual tribal village, relying on its own dedicated, standalone diesel generator and low-voltage distribution network. This extreme fragmentation completely eliminates the economies of scale and the load-balancing efficiencies that

mainland power utilities rely upon to ensure grid stability and minimize operational costs (Ministry of Power, 2026).

The physical environment of the Andaman and Nicobar Islands acts as a relentless, corrosive force against the power distribution infrastructure. The entire electrical network is exposed to a highly saline, humid, and constantly corrosive maritime atmosphere. Aluminum conductors, steel transmission towers, and distribution transformers experience accelerated rates of oxidation and physical degradation that are significantly higher than those observed in inland territories. Furthermore, the islands are heavily forested, and the overhead distribution lines frequently pass through dense tropical canopies. Falling trees and rapid vegetative overgrowth lead to frequent line faults and short circuits. During the intense tropical cyclones that routinely strike the Bay of Bengal, the overhead distribution infrastructure is highly susceptible to catastrophic physical damage, often resulting in prolonged, multi-day power outages while line crews struggle to clear debris and erect new poles in hazardous conditions (National Disaster Management Authority, 2026).

Aggregate Technical and Commercial losses represent a massive and persistent drain on the financial viability of the territory's power sector. In 2026, the Aggregate Technical and Commercial losses in the territory hover around sixteen to eighteen per cent (Joint Electricity Regulatory Commission, 2026). While this figure is an improvement from historical highs, it remains unacceptable given the exorbitant base cost of generating diesel power. The technical losses are primarily driven by the aging nature of the distribution transformers, the use of undersized conductors in rapidly expanding peri-urban areas, and the inherent inefficiencies of operating numerous small, low-voltage distribution networks. Commercial losses, while aggressively targeted by the administration, still occur due to faulty metering, instances of power theft in informal settlements, and inefficiencies in the billing and collection cycle. Every single unit of electricity lost in transmission represents a direct, unrecoverable loss of highly expensive, imported diesel fuel.

To improve reliability and reduce technical losses, the administration is undertaking significant capital upgrades in 2026. A massive, centrally funded project is underway to systematically replace aging, bare overhead conductors with modern Aerial Bunched Cables across the densely populated areas of Port Blair and the major tourist islands like Swaraj Dweep. Aerial Bunched Cables are highly resistant to saline corrosion, prevent accidental short circuits from falling branches, and virtually eliminate the possibility of direct power theft via line hooking. Furthermore, the administration is heavily investing in the modernization of substations and the deployment of advanced Supervisory Control and Data Acquisition systems to provide real-time visibility and automated fault detection across the South Andaman grid. However, ensuring absolute power reliability in the outer islands will ultimately require a transition away from vulnerable, centralized diesel power houses toward decentralized, storm-resilient solar micro-grids coupled with robust battery energy storage systems, thereby reducing the sheer length and vulnerability of the low-voltage distribution lines.

9.3 Rural and Household Electrification: Coverage and Quality

The Union Territory of the Andaman and Nicobar Islands has ostensibly achieved a remarkable statistical milestone regarding universal power access. Driven by the aggressive, centrally mandated directives of the Pradhan Mantri Sahaj Bijli Har Ghar Yojana, the territorial administration officially declared one hundred per cent household electrification across all legally recognized, inhabited revenue villages several years prior to 2026. This statistical achievement required immense administrative determination and logistical effort, involving the physical transportation of poles, transformers, and cables via small boats and manual labour to some of the most remote, isolated tribal hamlets and settler outposts in the Bay of Bengal (Ministry of Power, 2026). On paper, the territory stands as a fully electrified entity.

However, a rigorous analysis of the reality on the ground in 2026 reveals a profound and critical distinction between basic infrastructural connection and the actual quality, duration, and reliability of the power supplied. While every recognized household may possess an official electricity meter and a physical connection to a local distribution line, the lived experience of power access varies drastically depending on geographic location. In the administrative hub of Port Blair, the administration strives to provide continuous, twenty-four-hour power supply. Yet, even in the capital, the fragile nature of the generation capacity and the aging distribution grid means that residents and commercial establishments frequently experience sudden voltage fluctuations, unplanned outages, and scheduled load-shedding during peak evening demand hours or when diesel shipments are delayed by monsoon storms.

In the rural settlements of the North and Middle Andaman district, and particularly in the remote tribal islands of the Nicobar group, the quality of electrification is severely compromised. Many decentralized diesel power houses operating in these peripheral islands are not designed or funded to run continuously. Consequently, the administration enforces strict, scheduled power rationing. Residents in these remote locations may only receive electricity for six to eight hours per day, typically restricted to the evening hours to provide basic lighting. This intermittent, highly restricted power supply completely paralyzes the potential for modern economic development. Rural entrepreneurs cannot operate cold storage facilities for their fisheries catch, agricultural processing units cannot function, and students are unable to utilize digital learning tools or the internet outside of the narrow, scheduled window of power availability (Directorate of Economics and Statistics, 2026).

The severe voltage fluctuations and poor power quality also inflict massive hidden costs on the island consumers. The unstable grid frequently destroys sensitive household appliances, refrigerators, and expensive electronic equipment. To protect their assets, nearly all middle-class households and commercial establishments in the territory are forced to invest heavily in specialized voltage stabilizers, uninterruptible power supply systems, and private, highly polluting backup diesel or petrol generators. This reliance on private backup generation significantly increases the localized noise and air pollution in residential areas and places an additional, hidden financial burden on the citizens, effectively negating the benefits of the heavily subsidized government power tariffs.

Furthermore, the tourism sector, which serves as the primary engine of private economic growth in the territory, is critically handicapped by the poor quality of rural electrification. Luxury eco-resorts operating in popular destinations like Swaraj Dweep and Shaheed Dweep absolutely require continuous, high-quality power to run intensive air conditioning loads, water desalination plants, and modern hospitality amenities. Because the local grid cannot guarantee this reliability, every major hotel is forced to operate massive, captive diesel generation plants. This dramatically increases the operational overheads for the hospitality sector, reduces their global cost competitiveness, and entirely contradicts the territory's marketing image as a pristine, sustainable ecological paradise (Ministry of Tourism, 2026).

To bridge the massive gap between statistical electrification and true power quality, the administration is executing a comprehensive rollout of Smart Meters across all consumer categories in 2026. The transition to advanced metering infrastructure is designed to completely eliminate manual meter reading errors, enable precise, time-of-day billing, and provide the utility with granular data to rapidly identify and isolate distribution faults. However, the ultimate solution to the rural power quality crisis requires a fundamental paradigm shift. The administration must abandon the futile attempt to supply continuous diesel power to remote islands. Instead, the focus must shift entirely toward deploying autonomous, highly resilient solar-wind-battery hybrid micro-grids tailored specifically to the load profiles of individual rural settlements, thereby guaranteeing continuous, clean, and stable power independence for the rural periphery.

9.4 Renewable Energy Potential: Solar, Wind, Hydro and Biomass

The transition toward renewable energy is not merely an environmental aspiration for the Andaman and Nicobar Islands; it is the absolute, most critical strategic imperative required to ensure the long-term economic survival and fiscal solvency of the territory. The current reliance on imported diesel is fundamentally unsustainable. In 2026, the administration, backed by massive central funding and guided by the national commitments to the Paris Agreement, is aggressively attempting to map, exploit, and scale the available renewable energy resources within the archipelago. However, unlike the vast, arid plains of mainland states like Rajasthan or Gujarat where massive, gigawatt-scale solar parks can be easily deployed, the Andaman and Nicobar Islands face severe, incredibly restrictive geographical and ecological constraints that complicate every single renewable energy project.

Solar photovoltaic technology represents the most viable, immediate, and scalable renewable energy pathway for the territory. The islands receive abundant, intense tropical sunlight for the majority of the year. However, the deployment of utility-scale ground-mounted solar parks is critically hindered by the absolute lack of available, non-forested land. With over eighty-one per cent of the territory legally locked as protected forest, and strict regulations preventing the conversion of scarce agricultural land for industrial purposes, identifying large, contiguous tracts of land for solar arrays is practically impossible. Furthermore, the strict Coastal Regulation Zone guidelines prohibit the construction of major energy infrastructure near the fragile high-tide lines (Ministry of Environment, Forest and Climate Change, 2026).

To overcome this severe land constraint, the administration has pivoted heavily toward alternative solar deployment strategies. In 2026, the territory is executing a massive, comprehensive Rooftop Solar mandate. Every single government building, public school, primary health centre, and state-owned enterprise is being aggressively targeted for rooftop solar installations. Furthermore, the administration provides heavy capital subsidies to incentivize residential and commercial consumers, particularly the energy-intensive hotels, to install grid-connected rooftop systems. In addition to rooftop installations, the territory is pioneering the deployment of Floating Solar Photovoltaic technology. By utilizing the surfaces of existing fresh-water reservoirs, such as the Kalpong reservoir in North Andaman and various municipal water storage bodies in South Andaman, the administration can deploy significant solar capacity without acquiring a single square metre of scarce terrestrial land, while simultaneously reducing water evaporation from the vital reservoirs (Ministry of New and Renewable Energy, 2026).

The potential for wind energy in the territory is substantial, particularly during the powerful South-West and North-East monsoons. However, harnessing this energy presents profound engineering and logistical hurdles. The primary challenge is the extreme vulnerability of the archipelago to catastrophic cyclonic storms. Standard, commercial-grade wind turbines designed for mainland wind farms are generally incapable of withstanding the immense wind speeds and structural stresses generated by severe tropical cyclones in the Bay of Bengal. Deploying wind energy requires the procurement of highly specialized, heavily reinforced, cyclone-rated turbines, which are exceedingly expensive. Furthermore, the physical transportation of massive turbine blades and heavy steel towers from mainland ports, and their subsequent inland transport along narrow, winding island roads, presents a logistical nightmare that drastically inflates the capital cost of any wind project. Despite these hurdles, pilot projects utilizing specialized, smaller-scale vertical axis wind turbines are being evaluated for deployment in the more exposed coastal areas of the Nicobar district.

Hydroelectric power is currently limited to a single operational facility: the Kalpong Hydroelectric Project in the North Andaman district. Commissioned over two decades ago, this 5.25 Megawatt facility remains a vital, clean baseload contributor to the localized northern grid. However, the potential for expanding conventional hydroelectric power is severely limited. The islands lack the large, perennial, high-volume river systems required for massive hydro dams. The existing streams are mostly seasonal, heavily dependent on the monsoon, and run dry during the summer months. Furthermore, the construction of new dams would require the inundation of pristine primary rainforests, an action that is ecologically unacceptable and legally prohibited under current forest conservation laws. Therefore, hydro potential is strictly limited to micro-hydro and run-of-the-river projects that require minimal structural intervention.

Biomass energy presents a highly contextualized and largely untapped opportunity. The territory generates massive quantities of agricultural and organic waste, primarily in the form of coconut shells, coconut fronds, arecanut husks, and timber offcuts from permitted, localized sawmill operations. Historically, this biomass has been burned inefficiently or left to decay. In 2026, the administration is incentivizing the establishment of decentralized

biomass gasification plants and organic waste-to-energy facilities. These systems are particularly suited for the remote agricultural islands and the Nicobar district, where coconut plantations dominate the landscape. By converting abundant agricultural waste into localized, clean electricity, the administration can simultaneously solve solid waste management challenges and reduce the need for diesel imports in the peripheral settlements.

Finally, the long-term, futuristic potential of the territory lies in Ocean Energy. Situated in deep oceanic waters with significant thermal gradients and tidal movements, the Andaman and Nicobar Islands are geologically ideal for Ocean Thermal Energy Conversion and advanced tidal energy technologies. While these technologies remain largely in the experimental and high-cost research phase globally in 2026, the territory is perfectly positioned to serve as a national testing ground. The central government is currently funding comprehensive feasibility studies and specialized oceanic surveys to map the thermal profiles and tidal velocities around the Great Nicobar Island, aiming to eventually harness the infinite, baseload power of the ocean to fuel the massive energy demands of the proposed international transshipment terminal (National Institute of Ocean Technology, 2026).

9.5 Energy Efficiency, Conservation and Demand-Side Management

While the massive expansion of renewable energy generation capacity is vital, it represents only one half of the solution to the energy crisis in the Andaman and Nicobar Islands. The other, equally critical component is the aggressive implementation of energy efficiency, rigorous power conservation protocols, and intelligent Demand-Side Management. Because the baseline cost of generating every single unit of electricity in the territory is astronomically high, the financial and environmental return on investment for saving a unit of energy is significantly greater than the return on generating a new unit. In 2026, the territorial administration has recognized that unrestrained, inefficient energy consumption is fiscally suicidal, and has instituted a comprehensive suite of policies designed to fundamentally alter how energy is consumed across the archipelago.

The primary driver of energy consumption, and consequently the primary target for efficiency interventions, is the massive cooling load required by the territory's tropical climate. The high temperatures and extreme humidity, which persist almost year-round, necessitate the extensive use of ceiling fans, refrigeration, and increasingly, energy-intensive air conditioning systems. The rapid modernization of Port Blair, the proliferation of glass-facade commercial buildings, and the massive expansion of luxury, fully air-conditioned resorts in the tourism sector have triggered an exponential surge in the demand for cooling. To combat this, the administration, acting in coordination with the Bureau of Energy Efficiency, has strictly mandated the adoption of the Energy Conservation Building Code for all new commercial and government construction projects within the municipal limits of Port Blair (Bureau of Energy Efficiency, 2026). These codes mandate the use of high-performance thermal insulation, energy-efficient glazing, optimized natural ventilation designs, and the compulsory installation of high-efficiency Variable Refrigerant Flow air conditioning systems in large commercial structures.

In the residential sector, the administration has successfully executed massive, territory-wide campaigns modeled on the national UJALA scheme. Millions of highly subsidized, energy-efficient Light Emitting Diode bulbs and energy-efficient ceiling fans have been distributed to households across all three districts, completely replacing archaic, power-hungry incandescent lighting. This singular intervention has systematically shaved several megawatts off the critical evening peak load. Furthermore, the administration conducts continuous, aggressive public awareness campaigns through local media, schools, and panchayat meetings, educating the citizenry on the massive financial subsidies hidden within their electricity bills and emphasizing the moral and economic imperative of power conservation. The government is also heavily promoting the adoption of five-star rated, energy-efficient domestic appliances, offering targeted tax rebates to local merchants who exclusively stock high-efficiency refrigerators and air conditioners (Ministry of Power, 2026).

The hospitality and tourism sector, which functions as the largest private consumer of electricity, is subjected to intense regulatory scrutiny regarding energy efficiency. Luxury resorts and large hotels, particularly those operating on vulnerable, diesel-dependent micro-grids in places like Swaraj Dweep, are legally mandated to conduct comprehensive, independent annual energy audits. These audits identify massive, hidden energy leakages in archaic chiller plants, inefficient commercial kitchens, and poorly insulated guest rooms. The administration enforces strict compliance, tying the renewal of crucial hospitality operating licenses and environmental clearances directly to the successful implementation of the energy-saving measures identified in these mandatory audits. Additionally, resorts are compelled to utilize solar thermal water heating systems for all guest accommodations and commercial laundries, entirely eliminating the massive electrical load previously required for electric water boilers.

Intelligent Demand-Side Management is being radically transformed by the comprehensive rollout of the Smart Grid architecture. The installation of advanced Smart Meters across the South Andaman district in 2026 allows the Electricity Department to move beyond passive billing and engage in dynamic load management. By gathering granular, real-time consumption data, the utility can accurately forecast demand spikes and implement highly targeted Time-of-Day tariffs. This pricing mechanism deliberately charges premium, punitive rates for electricity consumed during the critical evening peak hours, while offering heavily discounted, attractive rates during the daylight hours when the expanding portfolio of solar photovoltaic installations is generating maximum output. This strategic price signaling actively forces heavy commercial consumers, water desalination plants, and electric vehicle charging stations to shift their massive, flexible loads to the daytime, thereby flattening the overall demand curve, minimizing the need to fire up expensive backup diesel generators, and perfectly aligning consumption patterns with the natural generation profile of renewable energy (Joint Electricity Regulatory Commission, 2026).

9.6 State Electricity Regulatory Framework and Tariff Policy

The regulatory framework and the tariff policy governing the power sector in the Union Territory of the Andaman and Nicobar Islands present a highly complex, politically sensitive,

and fiscally precarious balancing act. The electricity sector is regulated by the Joint Electricity Regulatory Commission for the State of Goa and Union Territories. This independent statutory body is tasked with the incredibly difficult mandate of ensuring the financial viability of the territory's power utility while simultaneously protecting the interests of consumers who live in a highly vulnerable, low-income, and logistically penalized island economy. In 2026, the regulatory landscape is dominated by the monumental challenge of managing the massive chasm between the true, exorbitant cost of power generation and the heavily subsidized rates at which power is sold to the islanders.

As established previously, the absolute reliance on imported high-speed diesel, combined with the extreme inefficiencies of operating dozens of fragmented micro-grids, drives the Average Cost of Supply in the territory to levels that are entirely unprecedented on the Indian mainland. The true cost of generating and delivering a single unit of electricity frequently exceeds twenty-five to thirty Indian Rupees. However, the Average Billing Rate, which is the actual amount collected from the consumers across all categories, is a mere fraction of this true cost, often hovering between six to eight Rupees per unit. This massive, yawning gap between the cost of supply and the revenue realized creates an immediate, catastrophic financial deficit for the Electricity Department (Joint Electricity Regulatory Commission, 2026).

To prevent the total collapse of the power sector, this massive deficit is entirely bridged by a direct, continuous operational subsidy provided by the Ministry of Home Affairs out of the central Consolidated Fund of India. This massive subsidy is arguably the single largest recurring financial transfer required to sustain the territory. The regulatory tariff policy is therefore fundamentally characterized by intense, structural cross-subsidization. Industrial and commercial consumers, primarily the luxury hotels, private hospitals, and large retail establishments, are subjected to heavily punitive, premium tariff rates. These high commercial tariffs are designed to partially offset the immense losses incurred by supplying highly subsidized, below-cost power to the domestic residential consumers, marginalized agricultural workers, and vulnerable indigenous tribal populations. While this cross-subsidization is a socio-political necessity to prevent mass poverty, it fundamentally distorts the commercial market, actively penalizes business expansion, and severely degrades the territory's overall ease of doing business.

The Joint Electricity Regulatory Commission plays a critical role in enforcing operational discipline within the utility to ensure that the central subsidy is not squandered on sheer bureaucratic incompetence. The JERC strictly limits the pass-through of costs related to excessive Aggregate Technical and Commercial losses. If the Electricity Department fails to meet its mandated loss reduction targets due to poor maintenance or failure to curb power theft, the JERC refuses to allow the utility to recover those lost costs by raising consumer tariffs. This harsh regulatory stance forces the administration to aggressively pursue grid modernization, deploy smart meters, and crack down on commercial leakages, ensuring a baseline level of operational accountability (Ministry of Power, 2026).

To accelerate the transition toward renewable energy, the regulatory framework has established highly favourable policies for green power integration. The JERC has

implemented robust Net Metering and Gross Metering regulations, which provide the crucial legal and financial architecture required to incentivize private investment in rooftop solar installations. Under these regulations, residential and commercial consumers who install solar panels can feed their excess, unconsumed power back into the local grid, receiving direct financial credits on their subsequent electricity bills. Furthermore, the regulatory commission has established highly attractive, long-term Feed-in Tariffs specifically designed to lure private Independent Power Producers into establishing multi-megawatt solar and battery storage hybrid plants. These sovereign-backed Power Purchase Agreements guarantee a fixed, profitable return on investment for private solar developers over a twenty-five-year period, effectively eliminating market risk and bypassing the territory's inability to fund massive capital energy transitions independently. Ultimately, the survival of the power sector by 2047 depends entirely on the regulatory commission's ability to ruthlessly phase out the diesel subsidy regime, enforce brutal energy efficiency mandates, and create an unassailable, highly profitable legal framework that attracts massive global private capital into the territory's renewable energy transition.

Chapter 10: Water, Sanitation and Solid Waste Management

10.1 Drinking Water Supply: Coverage, Quality and Infrastructure

The provision of safe, reliable, and equitable drinking water across the Andaman and Nicobar Islands is the most critical and perpetual civic challenge facing the territorial administration in 2026. The unique hydrological profile of the archipelago completely defies conventional mainland water management strategies. While the territory receives an average annual rainfall exceeding 3,000 millimetres, concentrated primarily during the intense South-West and North-East monsoons, the topography is fundamentally unsuited for large-scale water retention. The islands are characterized by short, fast-flowing, seasonal streams that rapidly discharge rainwater directly into the ocean. The highly porous nature of the soil and the complex geological fault lines prevent the formation of massive, easily exploitable groundwater aquifers. Consequently, as soon as the monsoon season concludes, the territory invariably enters a period of severe, acute water scarcity that lasts from February until the onset of the next monsoon in late May.

In the densely populated South Andaman district, which encompasses the capital city of Port Blair and houses the vast majority of the territory's population and commercial enterprises, the water supply infrastructure is stretched to its absolute breaking point. The primary source of drinking water for the capital is the Dhanikhari Dam, a concrete gravity dam constructed several decades ago. However, the storage capacity of the Dhanikhari reservoir is no longer sufficient to meet the exponential growth in urban population and the massive influx of tourists. During the dry summer months, the water levels in the reservoir routinely plummet to critical depths. To manage this systemic deficit, the Port Blair Municipal Council and the Andaman Public Works Department are frequently forced to implement draconian water rationing protocols. Residents and commercial establishments often receive piped municipal water for only a few hours every alternate day, and in severe drought years, supply is restricted to once every three days (Ministry of Jal Shakti, 2026).

This chronic water scarcity inflicts immense hardship on the civilian population and completely paralyses the hospitality sector. Luxury resorts and hotels, which require massive volumes of fresh water for swimming pools, landscaping, and guest amenities, are forced to rely heavily on private water tankers. These private operators extract groundwater from rapidly depleting peripheral borewells, exacerbating the localized ecological stress and driving up the operational costs for the tourism industry. To augment the municipal supply, the administration has executed highly complex, capital-intensive engineering projects. A notable example is the Rutland Water Supply Project, which involves tapping sub-surface water from the relatively uninhabited Rutland Island and transporting it to Port Blair via a technically challenging submarine pipeline laid across the ocean floor. While this project provides vital supplementary capacity, it is technically difficult to maintain against the corrosive marine environment and the strong tidal currents of the Macpherson Strait.

The implementation of the national Jal Jeevan Mission in the Andaman and Nicobar Islands has driven a massive administrative push to ensure functional household tap connections

across all rural and tribal settlements. In 2026, the administration reports exceptionally high statistical coverage under the Jal Jeevan Mission, successfully laying distribution pipelines in some of the most remote and logistically challenging topographies in the Republic of India. However, achieving statistical pipeline connectivity does not automatically translate into water security. In the rural settlements of the North and Middle Andaman district, the piped networks rely heavily on localized, rain-fed minor reservoirs, shallow dug wells, and localized stream tap-offs. Because these sources are highly susceptible to seasonal drying, the functional tap connections often fail to deliver water during the peak summer months.

To prevent complete humanitarian crises in the outer islands during the dry season, the Directorate of Shipping Services is frequently drafted to perform highly inefficient and expensive emergency water logistics. The administration commandeers specialized water barges and retrofitted cargo vessels to physically transport millions of litres of fresh water from islands with surplus capacity to critically parched settlements in the Nicobar group and the northern archipelagos. This maritime water transport is incredibly costly, logistically perilous during rough seas, and serves merely as a desperate stop-gap measure rather than a sustainable infrastructural solution (Andaman Public Works Department, 2026).

Water quality is a compounding, deeply concerning issue that threatens public health across the territory. The high water table in the coastal margins, combined with rising sea levels driven by global climate change, has led to severe saline intrusion into the shallow groundwater aquifers. In many coastal settlements, the water extracted from traditional dug wells becomes increasingly brackish and entirely non-potable as the dry season progresses. Furthermore, the pervasive reliance on unregulated, decentralized septic tanks for sanitation, as detailed later in this chapter, poses a massive risk of biological and chemical contamination to the extremely fragile groundwater sources. The administration conducts regular water quality testing through decentralized laboratories, but enforcing purification protocols in remote tribal hamlets remains administratively difficult.

To secure the long-term drinking water future of the Andaman and Nicobar Islands, the administration must execute a radical pivot toward advanced, decentralized, and climate-resilient water generation technologies. The absolute reliance on erratic monsoon rainfall and inadequate reservoirs must be broken. The Government of India is heavily subsidizing the deployment of large-scale, energy-efficient seawater reverse osmosis desalination plants. A massive desalination facility is currently being integrated into the master plan of the Great Nicobar Holistic Development Project to guarantee water security for the proposed transshipment terminal and the new coastal city without depleting the island's fragile natural hydrology (NITI Aayog, 2026). Additionally, the territory must strictly mandate and aggressively subsidize universal rainwater harvesting systems for every single residential, commercial, and government building. By converting every structure into a micro-catchment area, the territory can significantly reduce the peak demand on the municipal supply and build a decentralized buffer against the inevitable, escalating impacts of climate-induced drought.

10.2 Irrigation Infrastructure: Command Area, Efficiency and Water-Use Productivity

The irrigation infrastructure in the Union Territory of the Andaman and Nicobar Islands is defined by its incredibly small scale, its profound lack of centralized canal networks, and its complete subordination to the unique, plantation-heavy agricultural profile of the region. Unlike the massive, food-producing agrarian states of the Indian mainland, such as Punjab or Uttar Pradesh, where millions of hectares are integrated into complex, perennial river basin command areas, the archipelago lacks any large river systems. The undulating topography, characterized by steep hills and very narrow, fragmented valleys, fundamentally precludes the construction of massive irrigation dams or extensive gravity-fed canal networks. Consequently, in 2026, the concept of a contiguous "command area" is virtually non-existent in the territory, and irrigation is executed entirely through decentralized, localized, and predominantly rain-fed minor irrigation works.

Agriculture in the Andaman and Nicobar Islands is structurally divided between monsoon-dependent paddy cultivation in the limited valley lands and extensive, perennial plantation crops such as coconut, arecanut, rubber, and mixed spices on the hill slopes. During the intense South-West monsoon, the natural rainfall is overwhelmingly sufficient, and often excessive, for the cultivation of paddy. The primary agricultural engineering challenge during this period is not irrigation, but rather effective drainage and flood management to prevent the inundation of the low-lying crop lands. However, once the monsoon retreats, the rapid depletion of soil moisture severely restricts the possibility of a lucrative second crop cycle. To support winter vegetable cultivation and protect the highly valuable arecanut and spice plantations during the scorching dry months, farmers rely exclusively on highly localized water harvesting structures (Department of Agriculture, 2026).

The dominant form of irrigation infrastructure across the rural settlements of the North and Middle Andaman district and the South Andaman district consists of small, excavated farm ponds, localized check dams across seasonal streams, and shallow dug wells. The territorial administration, leveraging the financial resources of the Pradhan Mantri Krishi Sinchayee Yojana, heavily subsidizes the excavation of these micro-water bodies. By capturing and storing the tail-end runoff of the monsoon, these farm ponds provide a critical, life-saving supplementary water source that allows farmers to irrigate their high-value cash crops and maintain kitchen gardens during the dry season. However, the storage capacity of these structures is extremely limited, and they suffer from high rates of natural evaporation and percolation, often running completely dry before the onset of the next monsoon.

Water-use productivity and irrigation efficiency represent absolutely critical areas for administrative intervention and technological modernization. Historically, the limited irrigation that occurred in the territory relied on highly inefficient, traditional flood or furrow irrigation methods, leading to massive water wastage and localized soil erosion on the steep slopes. In 2026, the Department of Agriculture is aggressively driving a massive transition toward precision micro-irrigation technologies. Through comprehensive awareness campaigns and substantial capital subsidies exceeding ninety per cent for marginalized

farmers, the administration is pushing the universal adoption of drip and sprinkler irrigation systems.

These precision systems are exceptionally well-suited for the undulating topography of the islands and the specific requirements of the dominant plantation crops. Drip irrigation delivers precise volumes of water directly to the root zones of the coconut and arecanut palms, virtually eliminating evaporation losses and maximizing the crop yield per drop of precious stored water. Furthermore, these systems facilitate the process of fertigation, allowing farmers to deliver liquid fertilizers efficiently and reducing the chemical runoff that currently threatens the fragile coastal marine ecosystems. The aggressive scaling of micro-irrigation is the only scientifically viable method to enhance agricultural productivity and ensure rural food security in an environment characterized by acute, structural water scarcity (Ministry of Agriculture and Farmers Welfare, 2026).

The Nicobar district presents an entirely unique set of agricultural and irrigation realities. The indigenous Nicobarese community practices a traditional, largely subsistence-based form of agro-forestry, relying completely on the natural tropical environment to sustain their extensive coconut and pandanus plantations. Formal, engineered irrigation infrastructure is largely absent in the tribal reserves. The administration respects these traditional ecological management practices and refrains from introducing disruptive, mainland-style agricultural engineering. Instead, the focus in the Nicobar district is primarily on providing localized, community-managed drinking water security and protecting the natural coastal aquifers from contamination and saltwater intrusion, recognizing that the indigenous crops are historically adapted to survive the natural climatic cycles of the archipelago.

Ultimately, the future of irrigation and agricultural water management in the Andaman and Nicobar Islands depends on recognizing that water is the absolute limiting factor for primary sector growth. The administration must expand its focus beyond simple pond excavation and invest heavily in advanced, climate-smart agricultural research. Developing drought-resistant varieties of local spices and promoting the cultivation of low-water-demand horticultural crops are essential long-term strategies. Furthermore, the territory must strictly regulate the extraction of groundwater for agricultural purposes to prevent the irreversible salinization of the coastal aquifers. By merging precision micro-irrigation technology with rigorous, community-led watershed management, the territory can optimize its agricultural water-use productivity and protect the delicate hydrological balance of the islands for future generations.

10.3 Sanitation and Open Defecation Free Status: Post-ODF Sustainability

The management of sanitation and public hygiene in the Union Territory of the Andaman and Nicobar Islands is a matter of profound ecological and public health urgency. The archipelago possesses some of the most sensitive, pristine, and globally significant marine ecosystems on the planet, heavily reliant on unpolluted coastal waters for the survival of the coral reefs and the associated marine biodiversity. Consequently, any failure in sanitation management does not merely pose a localized public health risk; it threatens the very biological foundation that supports the territory's fisheries and its lucrative eco-tourism industry. In 2026, the

administration operates under the absolute mandate to maintain the highest possible standards of sanitation, building upon the foundational successes of the national Swachh Bharat Mission while navigating the extreme geological and logistical constraints of the island environment (Ministry of Housing and Urban Affairs, 2026).

The territory proudly achieved and formally declared its Open Defecation Free status several years prior, aligning with the national targets set by the central government. The administration, through the concerted efforts of the Directorate of Rural Development and Local Self Government, executed a massive, highly successful campaign to construct individual household latrines across every rural settlement and tribal hamlet in the archipelago. This monumental task required transporting cement, ceramic pans, and construction materials across hundreds of kilometres of open ocean, physically demonstrating the government's commitment to universal sanitation access. The construction of these facilities was accompanied by intensive, culturally sensitive Information, Education, and Communication campaigns designed to fundamentally alter traditional behavioral patterns and ensure the continuous, hygienic usage of the newly constructed infrastructure.

However, the declaration of Open Defecation Free status was merely the initial, foundational step in a much longer and infinitely more complex sanitation journey. In 2026, the overwhelming policy focus is firmly fixed on achieving and sustaining ODF Plus status under the second phase of the Swachh Bharat Mission Grameen. Post-ODF sustainability in the Andaman and Nicobar Islands presents incredibly unique engineering challenges. The standard twin-pit or simple septic tank designs widely deployed across the Indian mainland are frequently inappropriate and actively dangerous in the specific geological context of the islands.

The primary challenge is the exceptionally high water table prevalent across the coastal margins and the low-lying valleys, particularly during the prolonged monsoon season. When traditional soak pits are constructed in these areas, the effluent frequently leaches directly into the shallow groundwater aquifers, causing severe biological contamination. Because the rural populations rely heavily on adjacent shallow dug wells for their drinking water, as detailed previously in this chapter, this cross-contamination poses a massive, localized risk of waterborne diseases such as cholera, dysentery, and acute diarrheal infections. Furthermore, the rapid subsurface flow of untreated or partially treated effluent inevitably reaches the adjacent coastal waters, delivering high loads of raw nutrients and pathogens that directly trigger harmful algal blooms, degrade water clarity, and actively suffocate the fragile, light-dependent coral reef ecosystems.

To mitigate this catastrophic environmental risk, the territorial administration is aggressively promoting and subsidizing the adoption of advanced, ecologically safe sanitation technologies. In ecologically sensitive coastal zones and areas with high water tables, the government mandates the construction of specialized eco-san toilets, bio-digester tanks, and elevated septic systems designed to absolutely prevent the leaching of raw effluent into the soil profile. The Defence Research and Development Organisation has provided customized bio-digester technology that utilizes specialized bacterial consortiums to break down human waste into harmless water and biogas, a technology uniquely suited for the extreme

constraints of the island environment. While these advanced systems are significantly more expensive to install than traditional pits, the administration absorbs the capital cost, recognizing that protecting the groundwater and the coral reefs is a non-negotiable economic and environmental imperative (Ministry of Drinking Water and Sanitation, 2026).

In the rapidly urbanizing capital of Port Blair and the major tourism hubs like Swaraj Dweep, maintaining sanitation sustainability requires massive institutional effort. The Port Blair Municipal Council is tasked with managing public conveniences and community sanitary complexes that serve a highly transient population of domestic and international tourists, migrant laborers, and daily commuters. Maintaining the cleanliness and functional integrity of these public facilities requires a massive, dedicated sanitation workforce and continuous financial outlay. The administration has increasingly adopted the Public-Private Partnership model, contracting professional facility management agencies to operate and maintain community toilets, ensuring high standards of hygiene and leveraging digital feedback mechanisms to monitor service quality.

Looking forward, the absolute sustainability of the territory's sanitation architecture depends on a continuous, unwavering commitment to behavioral reinforcement and technological adaptation. The administration must conduct regular, rigorous audits of the existing household latrines to ensure structural integrity against the corrosive tropical climate and facilitate timely repairs. Moreover, the territory must enforce strict building codes that mandate the inclusion of climate-resilient, non-leaching sanitation systems in all new residential and commercial construction, ensuring that the rapid economic development of the islands does not compromise the fundamental purity of their land and surrounding oceans.

10.4 Solid Waste Management: Municipal, Biomedical and Hazardous Waste

Solid waste management is arguably the most visible, politically sensitive, and logistically insurmountable civic challenge facing the Union Territory of the Andaman and Nicobar Islands in 2026. The archipelago represents an entirely closed, rigidly constrained geographical system. Unlike mainland municipalities that can simply acquire vast tracts of cheap, peripheral land for the creation of massive, sprawling sanitary landfills, the islands absolutely lack any surplus, non-ecologically sensitive landmass. Every single square metre of land is either legally protected primary forest, vital agricultural space, or highly dense human settlement. Consequently, the traditional, linear mainland model of "collect, transport, and dump" is fundamentally unviable and environmentally disastrous in the context of the territory. The administration is forced to operate on the absolute imperative of zero-waste principles, aiming to maximize recovery and drastically minimize the volume of residual waste that requires ultimate disposal (Ministry of Environment, Forest and Climate Change, 2026).

The epicentre of the solid waste crisis is the Port Blair municipal area, which generates the vast majority of the territory's municipal solid waste, driven by its concentrated population and its status as the primary hub for the massive tourism industry. For decades, the Port Blair Municipal Council relied on the unscientific, open dumping of mixed waste at the Brookshabad dumping site, located on the outskirts of the capital. This legacy dumping

ground became a massive environmental hazard, prone to frequent, toxic subsurface fires, generating massive volumes of hazardous leachate that threatened the adjacent coastal waters, and serving as a potent symbol of municipal failure. In 2026, the administration, under intense scrutiny from the National Green Tribunal and driven by the mandates of the Swachh Bharat Mission Urban, has executed a massive, capital-intensive remediation project. The legacy waste at Brookshabad is being aggressively bio-mined, segregated, and systematically cleared to reclaim the valuable land and eliminate the environmental toxicity.

To replace the archaic dumping model, the Port Blair Municipal Council has instituted a highly rigid, uncompromising system of 100 per cent door-to-door waste collection coupled with mandatory segregation at source. Residents and commercial establishments are legally compelled to segregate their waste into wet biodegradable, dry recyclable, and domestic hazardous streams. The municipal council has deployed a modern fleet of specialized, compartmentalized collection vehicles that navigate the narrow, hilly terrain of the capital. The collected wet waste is transported to localized, decentralized composting facilities and bio-methanation plants, where it is converted into organic manure for the agricultural sector and biogas for localized energy generation. By diverting the massive volume of heavy, wet organic waste away from the disposal sites, the administration significantly reduces the logistical burden and mitigates the primary source of landfill methane emissions and foul odours (Port Blair Municipal Council, 2026).

The management of dry, non-biodegradable waste, particularly single-use plastics, packaging materials, and glass, exposes the brutal reality of the "island penalty." While the segregated dry waste is brought to Material Recovery Facilities for further sorting and baling, the territory lacks any large-scale recycling industries. Consequently, thousands of tons of baled plastic, cardboard, and metal must be physically loaded onto cargo vessels and shipped across the Bay of Bengal to recycling facilities on the Indian mainland. This reverse logistics operation is incredibly expensive, financially unviable for private operators without massive government subsidies, and highlights the territory's absolute dependence on mainland infrastructure even for waste disposal. To combat this, the administration strictly enforces Extended Producer Responsibility mandates, compelling major consumer goods companies and packaging manufacturers to bear the financial cost of shipping their plastic waste back to the mainland, thereby internalizing the environmental cost of selling goods in the archipelago.

Biomedical waste management requires absolute precision and specialized handling to prevent the outbreak of severe communicable diseases. The vast majority of the territory's biomedical waste is generated at the G.B. Pant Hospital and the network of peripheral healthcare centres. The administration operates a centralized Common Biomedical Waste Treatment Facility equipped with modern, dual-chamber incinerators, heavy-duty autoclaves, and specialized shredding machinery. All infectious waste, anatomical waste, and sharps are collected in color-coded, puncture-proof containers and transported in dedicated, GPS-tracked vehicles to the central facility for safe, immediate destruction. In the remote islands, where transporting infectious waste across the ocean to Port Blair is prohibitively dangerous, the primary health centres utilize deep burial pits and specialized, decentralized

microwave treatment units strictly adhering to the Biomedical Waste Management Rules to ensure absolute local sterilization (Directorate of Health Services, 2026).

Hazardous waste, encompassing highly toxic materials such as used lead-acid batteries, electronic waste, discarded solar panels, and the massive volumes of waste oil generated by the inter-island shipping fleet and diesel powerhouses, presents a complex regulatory challenge. The territory absolutely lacks any facilities capable of safely dismantling, recycling, or securing these hazardous materials. Therefore, the administration mandates that all commercial generators of hazardous waste must securely containerize their materials and physically export them to authorized, highly regulated hazardous waste treatment, storage, and disposal facilities located in mainland states like Tamil Nadu and Andhra Pradesh. This strict export mandate ensures that heavy metals and toxic chemicals do not irrevocably contaminate the island soils or the surrounding coral reefs, preserving the pristine ecological baseline that is essential for the territory's long-term survival.

10.5 Liquid Waste and Sewerage: Urban and Peri-Urban Treatment Infrastructure

The management of liquid waste, domestic sewerage, and highly toxic faecal sludge in the Union Territory of the Andaman and Nicobar Islands represents the most critical, yet historically neglected, infrastructural deficit in the entire civic architecture. In 2026, the lack of comprehensive, centralized sewerage networks stands as a glaring contradiction to the territory's otherwise high developmental indicators and its absolute reliance on maintaining pristine marine environments. The rapid, largely unregulated urbanization of Port Blair, combined with the explosive growth of the hospitality sector along the fragile coastlines of the outer islands, has generated an exponentially increasing volume of raw wastewater that severely threatens the public health and the ecological foundation of the archipelago.

Astoundingly, the capital city of Port Blair currently lacks a comprehensive, city-wide underground sewerage network and a centralized, high-capacity Sewage Treatment Plant. The vast majority of residential households, commercial complexes, and government buildings rely entirely on decentralized, individual septic tanks and simple soak pits for the disposal of human waste. In the densely populated, hilly terrain of the capital, these localized systems are frequently constructed inadequately, lacking proper sealed bottoms or adequate drainage fields. Given the steep slopes and the extremely high monsoon rainfall, these septic systems frequently overflow, malfunction, and directly discharge untreated, highly pathogenic raw sewage into the open municipal storm-water drains. These open drains subsequently channel the contaminated effluent directly into the coastal bays and the sensitive mangrove ecosystems surrounding the city, causing severe, localized marine pollution, triggering harmful algal blooms, and creating acute public health hazards for the coastal communities (Andaman Public Works Department, 2026).

To urgently rectify this massive infrastructural failure, the territorial administration, heavily supported by the capital funding of the Atal Mission for Rejuvenation and Urban Transformation 2026, is executing a phased, highly complex rollout of centralized sewerage infrastructure. However, the topography of Port Blair, characterized by fragmented, undulating hills, renders a single, massive gravity-fed sewer network technologically

impossible and financially ruinous. Instead, the administration is adopting a decentralized, modular approach. The city is being divided into distinct, manageable topographical zones, with each zone equipped with its own dedicated, modern Sewage Treatment Plant and localized collection network. This modular approach allows for phased commissioning, reduces the requirement for massive, deep-trench pumping stations, and builds operational resilience against localized system failures.

While the underground sewer networks are being painstakingly constructed, the administration faces the immediate, severe crisis of managing the highly toxic, concentrated faecal sludge that accumulates within the thousands of existing, decentralized septic tanks across the territory. Historically, the mechanical desludging of these tanks was poorly regulated, and private vacuum truck operators frequently resorted to the illegal, highly destructive practice of dumping raw, untreated sludge directly into isolated forest areas, agricultural fields, or tidal creeks. To definitively end this environmental vandalism, the administration has constructed specialized, dedicated Faecal Sludge Treatment Plants in Port Blair and is rapidly expanding these facilities to the major tourist nodes like Swaraj Dweep. Vacuum truck operators are now strictly licensed, their vehicles are mandated to carry continuous GPS tracking, and they are legally compelled to discharge all collected sludge exclusively at the official treatment facilities, where the waste is scientifically processed, neutralized, and converted into safe organic compost and treated water (Ministry of Housing and Urban Affairs, 2026).

The hospitality sector, functioning as the primary economic engine of the territory, is subjected to exceptionally rigorous, uncompromising regulations regarding liquid waste management. The administration recognizes that luxury resorts located on pristine beaches pose a massive, concentrated threat to the adjacent coral reefs. Consequently, under the strict mandates of the Coastal Regulation Zone rules and the territorial Pollution Control Committee, every significant hotel and resort is legally mandated to construct, operate, and maintain its own captive, highly advanced package Sewage Treatment Plant. These private facilities must treat all greywater and blackwater generated on the premises to the highest possible discharge standards. Furthermore, the administration aggressively enforces a Zero Liquid Discharge policy for major commercial entities, mandating that the treated wastewater must be entirely recycled within the resort premises for landscaping, toilet flushing, and cooling tower makeup, absolutely prohibiting any discharge of effluent into the ocean or the groundwater aquifers (Pollution Control Committee, 2026).

In the rural settlements and the remote islands of the North and Middle Andaman district, constructing centralized sewerage systems is entirely financially unviable due to the dispersed nature of the populations. In these areas, the focus of the administration shifts toward the scientific management of greywater generated from kitchens and bathrooms. The Directorate of Rural Development heavily subsidizes the construction of individual and community-level soak pits, specialized leach pits, and localized stabilization ponds. By effectively managing the greywater at the source, the administration prevents the formation of stagnant, disease-breeding pools in the rural hamlets, thereby controlling the spread of vector-borne diseases like dengue and malaria. Ultimately, securing the liquid waste

infrastructure of the Andaman and Nicobar Islands is the absolute, non-negotiable prerequisite for ensuring that the territory's rapid economic expansion does not destroy the breathtakingly beautiful, yet immensely fragile, marine environment that is the very foundation of its existence and its future prosperity.

Chapter 11: Urban Development, Housing and Smart Cities

The process of urbanization within the Union Territory of the Andaman and Nicobar Islands represents one of the most structurally complex and ecologically sensitive spatial challenges currently facing the Republic of India. Unlike the vast and contiguous landmasses of the Indian mainland where urban sprawl can spread outward in an unchecked manner into adjacent agricultural hinterlands, urban development in this fragile archipelago is strictly confined by severe topographical limitations, absolute ecological boundaries, and an overarching, rigid framework of national security considerations. As the territory accelerates aggressively toward the centennial developmental milestone of 2047, the management of its urban spaces has fundamentally transitioned from a peripheral administrative duty to a central, indispensable pillar of long-term economic strategy. The cities and towns of the islands are no longer viewed merely as isolated administrative outposts but are rapidly evolving into the primary commercial engines of the proposed sustainable blue economy, the premium eco-tourism industry, and the strategic maritime logistics sector. However, this monumental transition is fraught with immense and unprecedented difficulties. The territory must safely house a growing local population, provide world-class civic amenities to discerning international tourists, and build climate-resilient infrastructure, all while operating within a fiercely restricted land budget and relying almost entirely on highly vulnerable maritime supply chains for every single piece of construction material. This chapter provides an exhaustive, highly rigorous analysis of the urbanization trends, municipal governance architecture, housing affordability crises, and the implementation of national urban missions within the territory. It critically examines the preservation of urban heritage and the pressing need to rehabilitate vulnerable informal settlements, offering a comprehensive roadmap to build sustainable, highly livable, and technologically advanced island cities for the future.

11.1 Urbanisation Trends and Urban Governance Architecture

The urbanization pattern of the Andaman and Nicobar Islands is fundamentally characterized by an extreme form of demographic and spatial concentration known in urban planning literature as the primate city phenomenon. Unlike mainland states that boast multiple tier-two and tier-three cities serving as decentralized and balanced economic nodes, the urbanization of this specific territory is almost entirely unipolar in its configuration. In the current assessment year of 2026, the overwhelming majority of the officially designated urban population resides exclusively within the South Andaman district, and more specifically within the municipal limits of Port Blair and its immediately contiguous peri-urban census towns such as Garacharma, Bambooflat, and Prothrapur (Directorate of Economics and Statistics, 2026). The urban population share of the territory is estimated to be over forty-two per cent of the total territorial population, and an astonishing nearly ninety per cent of this entire urban demographic is concentrated tightly within the greater Port Blair agglomeration (Ministry of Housing and Urban Affairs, 2026).

This intense unipolar concentration is not a random occurrence but is the direct and inevitable result of historical administrative centralization and the basic, unyielding economics of island logistics. Port Blair hosts the only major commercial seaport capable of handling large cargo

vessels, the only operational international civilian airport handling daily flights, the territory's sole tertiary referral hospital, and the central headquarters of both the territorial administration and the Andaman and Nicobar Command of the Indian Armed Forces. Consequently, the capital city acts as a massive demographic magnet, continuously drawing young adults and job seekers from the remote agricultural settlements of the North and Middle Andaman district and the protected tribal reserves of the Nicobar district. This relentless and largely unregulated inward migration places an extraordinary and highly unsustainable burden on the civic infrastructure, housing stock, and natural freshwater resources of the capital city. The hilly, undulating topography of Port Blair severely limits the availability of flat land for organized expansion, leading directly to haphazard, high-density residential and commercial development on steep slopes that are inherently vulnerable to catastrophic landslides during the torrential tropical monsoon season.

In stark and dramatic contrast, the North and Middle Andaman district exhibits a deeply and persistently rural character, with only minor administrative and commercial nodes such as Diglipur, Mayabunder, and Rangat showing nascent and very slow signs of urban or semi-urban transition. These northern settlements function primarily as localized market centres for the surrounding agricultural and fishing communities rather than true, diversified urban economies capable of independent growth. In the Nicobar district, urbanization in the conventional sense is entirely absent due to the legally protected tribal status of the land and the traditional, dispersed settlement patterns of the indigenous Nicobarese community (Ministry of Tribal Affairs, 2026). However, this historical spatial paradigm is poised for a violent and permanent disruption in the coming decades. The execution of the Great Nicobar Holistic Development Project involves the planned creation of a massive, greenfield coastal city adjacent to the proposed international transshipment terminal in Galathea Bay. This mega-project is explicitly designed to artificially induce the creation of a second, massive urban core in the extreme south of the archipelago, fundamentally altering the territory's unipolar urban geography and creating entirely new, unprecedented challenges regarding sustainable greenfield urban management in a highly sensitive biosphere reserve (NITI Aayog, 2026).

The urban governance architecture tasked with managing these complex, evolving spatial dynamics is currently highly fragmented and frequently characterized by overlapping, conflicting jurisdictional mandates. The primary institution responsible for localized urban management in the capital is the Port Blair Municipal Council. Elected democratically by the city residents, the Port Blair Municipal Council is theoretically mandated to execute the urban functions listed in the Twelfth Schedule of the Indian Constitution, which comprehensively includes urban planning, solid waste management, public health, and the provision of basic civic amenities. However, the functional autonomy and operational effectiveness of the municipal council are severely constrained by the overarching, dominant authority of the territorial administration, which is directed by the Lieutenant Governor appointed by the central government.

Furthermore, urban planning and land use regulation are incredibly complex and protracted due to the presence of multiple powerful institutional stakeholders with competing interests.

A highly significant portion of the land within and immediately surrounding the Port Blair municipal limits is legally controlled by the Ministry of Defence, serving as absolutely critical operational space for the tri-services command and therefore unavailable for civilian expansion. Additionally, the Department of Environment and Forests exercises strict, unyielding regulatory control over any land diversion, enforcing rigid Coastal Regulation Zone guidelines that dictate exactly what can and cannot be built along the extensive, fragile shorelines. The Town and Country Planning Department of the territorial administration struggles continuously to create cohesive, forward-looking master plans that simultaneously satisfy the developmental demands of the municipal council, the strict security imperatives of the military establishment, and the absolute ecological redlines drawn by the forest authorities (Department of Environment and Forests, 2026). To achieve truly sustainable urbanization by the target year of 2047, the territory must urgently and decisively rationalize this fragmented governance architecture, establishing a unified, legally empowered metropolitan development authority capable of overriding bureaucratic silos and executing comprehensive, climate-resilient regional plans.

11.2 Urban Local Bodies: Financial Health, Capacity and Service Delivery

The financial health, technical capacity, and service delivery efficiency of Urban Local Bodies in the Andaman and Nicobar Islands represent critical structural weaknesses that severely threaten the long-term sustainability and livability of the territory's cities. The Port Blair Municipal Council is currently the only fully fledged municipal corporation operating in the archipelago, and its operational and financial dynamics serve as the primary, definitive indicator of urban governance capability within the region. In 2026, the fundamental reality defining the Port Blair Municipal Council is a state of chronic, severe, and worsening financial insolvency. The local body is entirely incapable of generating sufficient own-source revenue to cover even its basic, day-to-day operational expenditures, let alone fund the capital-intensive infrastructure upgrades required for a growing population.

The primary engine of municipal finance globally is the collection of property tax, yet in Port Blair, the financial yield from this crucial revenue stream is dismally low and structurally inadequate. The property tax assessment system has historically relied on archaic Annual Rental Value methodologies that completely fail to capture the exponential appreciation of real estate capital values driven by the booming tourism sector and rapid commercial expansion. Furthermore, the base of officially assessed properties is highly porous and incomplete. Rapid, informal peri-urban expansion and the widespread, often illegal conversion of residential properties into highly lucrative commercial tourist homestays frequently escape the formal municipal tax net altogether. Compounding this systemic issue is the widespread local political reluctance to revise property tax rates upwards or strictly enforce aggressive collections against defaulters, leading to massive accumulated arrears and a permanent structural revenue deficit. Consequently, the Port Blair Municipal Council is forced to rely overwhelmingly on grants-in-aid provided directly by the central government through the Ministry of Home Affairs and the periodic awards of the central Finance Commission (Ministry of Finance, 2026).

This absolute financial dependency on central transfers strips the municipal council of any meaningful administrative autonomy or long-term planning capability. Without a robust, independent, and growing revenue base, the local body cannot approach the commercial capital markets, issue municipal bonds for infrastructure financing, or successfully negotiate complex Public-Private Partnerships for urban development, as it utterly lacks the credit rating and the guaranteed, predictable cash flows required to attract risk-averse private investors. The ongoing transition in national urban policy away from direct central grant funding and firmly toward reform-linked financial incentives and market borrowing places the Port Blair Municipal Council in an incredibly precarious and vulnerable position. To survive financially and meet future obligations, the municipality must aggressively transition to a comprehensive Capital Value-based property tax system, implement comprehensive Geographic Information System mapping to digitize and vastly expand the property tax net, and drastically increase user charges for basic municipal services like solid waste collection and commercial water supply.

Beyond severe financial insolvency, the Port Blair Municipal Council suffers from a profound and crippling deficit in technical and administrative capacity. Managing a modern, climate-vulnerable island city requires highly specialized, contemporary expertise in urban hydrology, coastal zone planning, disaster-resilient structural engineering, and digital civic management systems. However, the municipal cadre is largely staffed by generalist administrators and lower-level clerical personnel. There is a desperate, critical shortage of certified town planners, environmental engineers, and geographic data analysts within the local government structure. Recruiting and retaining these highly skilled, specialized professionals from the mainland is exceedingly difficult due to the perceived lack of upward career progression, the physical isolation of the islands, and the high cost of living compared to mainland metropolitan centres. This severe capacity deficit results in poorly designed civic projects, a continuous and expensive reliance on external mainland consultants for basic planning, and a general inability to execute complex national urban missions efficiently and on schedule (Port Blair Municipal Council, 2026).

The direct and unavoidable consequence of these combined financial and capacity constraints is a severe degradation in the overall quality and reliability of basic civic service delivery. The provision of safe drinking water is highly erratic and characterized by massive, unacceptable distribution losses due to aging, leaking pipeline networks. Solid waste management consumes a disproportionately massive share of the entire municipal operating budget, yet the severe logistical challenges of island waste processing ensure that street-level cleanliness remains highly inconsistent and problematic. The regular maintenance of urban roads, street lighting infrastructure, and public recreational parks is frequently deferred indefinitely due to a chronic lack of funds, negatively impacting the daily quality of life for permanent residents and significantly detracting from the territory's ambitious aspirations to become a premium, world-class tourism destination. Reforming the Port Blair Municipal Council requires the territorial administration to aggressively invest in direct municipal capacity building, temporarily second specialized engineering staff to the local body, and strictly enforce revenue enhancement reforms, fundamentally transforming the municipality

from a dependent administrative appendage into a proactive, financially solvent engine of modern urban management.

11.3 Housing: Demand Assessment, Affordability and Flagship Schemes

The urban and peri-urban housing sector in the Union Territory of the Andaman and Nicobar Islands is currently experiencing a severe, multi-dimensional crisis characterized by rapidly escalating demographic demand, absolute and unyielding land scarcity, and prohibitively high construction costs. Providing safe, affordable, and climate-resilient housing for the growing urban population stands as one of the most pressing socio-economic challenges facing the territorial administration in the year 2026. The fundamental dynamics of the housing market in the islands are highly distorted by geographical constraints and logistical realities that simply do not exist on the Indian mainland, rendering standard national housing models largely ineffective and unworkable without profound, localized adaptation.

The demand for residential housing in the South Andaman district, particularly within the municipal boundaries and the immediate periphery of Port Blair, is driven by a powerful confluence of demographic and economic forces. The natural, baseline growth of the local settler population is heavily compounded by a continuous, large-scale influx of migrants from the northern and southern districts who are desperately seeking better education and employment opportunities. Furthermore, the rapid and sustained expansion of the tourism and hospitality sector requires a massive, transient workforce of semi-skilled and unskilled labourers who are recruited from mainland states like West Bengal, Bihar, and Jharkhand. Additionally, the very large, permanent presence of central government employees, bureaucratic officials, and military personnel exerts continuous, strong upward pressure on the demand for quality rental accommodations. This highly concentrated, multi-faceted demand encounters an absolute, unyielding constraint on the supply side: the extreme scarcity of developable, non-forest land.

The topography of Port Blair and its environs is remarkably hilly and fractured, severely limiting the availability of flat, easily developable parcels of land. More importantly, outward urban expansion is legally throttled and contained by strict, non-negotiable environmental regulations. The city is bordered tightly by protected forest reserves, and all coastal development is rigidly governed by Coastal Regulation Zone norms that strictly prohibit new residential construction near the high-tide line to prevent environmental degradation and protect against storm surges. As a direct result, the available pool of freehold, non-forest revenue land suitable for new residential construction is microscopic and continuously shrinking (Directorate of Economics and Statistics, 2026). This absolute artificial land scarcity has triggered explosive, highly speculative appreciation in real estate capital values. Land prices in the South Andaman district now rival those of major, highly developed metropolitan suburbs on the mainland, completely and permanently pricing out the local working class, young professionals, and lower-middle-income families from participating in the formal property ownership market.

Compounding the severe crisis of land scarcity is the exorbitant, unavoidable cost of physical construction, universally referred to within the territory as the "island premium". Because the

archipelago possesses virtually no heavy industry or cement manufacturing capacity, every single critical component of modern residential construction must be imported via maritime shipping from mainland ports located in Chennai or Kolkata. Cement, structural steel bars, roofing materials, electrical fixtures, plumbing supplies, and even specialized construction sand and aggregate stone are transported across the Bay of Bengal at great expense. This complex, multi-stage logistical chain adds a massive, permanent cost premium to all building materials. Furthermore, the territory is situated squarely in Seismic Zone V, which is the highest risk classification for devastating earthquakes in India. Strict local building codes mandate the mandatory use of highly reinforced, earthquake-resistant structural designs for all new buildings, further inflating the required volume of expensive imported steel and cement. Consequently, the final per-square-foot cost of constructing a basic, functional residential unit is exorbitantly high, effectively destroying housing affordability for the majority of the population (Ministry of Housing and Urban Affairs, 2026).

To actively address this compounding crisis, the territorial administration relies heavily on the implementation of the national Pradhan Mantri Awas Yojana Urban flagship scheme. The execution of PMAY-U in the territory primarily focuses on the Beneficiary Led Construction and the Affordable Housing in Partnership verticals. Under the Beneficiary Led Construction model, the government provides direct financial subsidies to eligible, low-income families to construct new houses or enhance existing, dilapidated structures on their own legally owned land. However, the standard, uniform national subsidy amounts provided under PMAY-U are entirely inadequate and fundamentally flawed when applied to the economic reality of the Andaman and Nicobar Islands. The rigid national subsidy formula completely fails to account for the massive "island premium" on imported construction materials and the high cost of specialized seismic engineering. Consequently, even with maximum government assistance, poor families frequently struggle to complete their homes, leading directly to stalled, half-finished construction projects and increased, unmanageable debt burdens for the most vulnerable citizens.

The Affordable Housing in Partnership model involves the government actively partnering to construct multi-story apartment complexes to house the urban poor and economically weaker sections. However, identifying suitable, geologically stable land for these large complexes is extraordinarily difficult, and multi-story construction requires even higher degrees of expensive, complex seismic reinforcement. To truly and permanently solve the housing crisis by the target year of 2047, the territorial administration must aggressively and persistently lobby the central government for a customized, substantially enhanced PMAY subsidy structure that is specifically calculated and indexed for island logistics and transportation costs. Furthermore, the territory must actively explore, heavily subsidize, and mandate the use of alternative, sustainable, and lightweight building materials that do not rely on massive imports of cement and steel, promoting localized, climate-responsive architectural designs that are inherently suited to the humid, tropical, and highly seismic environment of the archipelago.

11.4 Smart Cities Mission and AMRUT: State-Level Implementation Review

The aggressive integration of advanced urban technology and the systematic, large-scale modernization of core civic infrastructure are absolutely fundamental to the territory's strategic vision for achieving sustainable urbanization. In the current evaluation year of 2026, the ongoing implementation of two massive, centrally funded national flagship programs essentially dictates the entire trajectory of urban renewal in the capital: the Smart Cities Mission and the Atal Mission for Rejuvenation and Urban Transformation. Port Blair was successfully selected in the advanced rounds of the highly competitive national Smart Cities selection process, presenting a unique, carefully calibrated vision that sought to balance the demanding requirements of a high-tech civic administration with the absolute, non-negotiable necessity of preserving a fragile coastal ecology and a rich, historically significant colonial heritage (Smart Cities Mission Directorate, 2026).

The complex execution of the Smart Cities Mission in Port Blair is managed entirely by a dedicated Special Purpose Vehicle officially known as Port Blair Smart Projects Limited. The strategic focus of the mission within the territory is fundamentally different from the approaches taken in mainland industrial cities. The approved projects are heavily oriented toward enhancing the operational efficiency of the vital tourism economy, improving public safety and disaster response, and optimizing the management of scarce natural resources. A cornerstone achievement of the mission in the city is the successful operationalization of the Integrated Command and Control Centre. This highly advanced, centralized digital hub aggregates massive volumes of real-time data feeds from across the entire municipal area. It actively integrates intelligent traffic management systems equipped with automated number plate recognition cameras, city-wide environmental sensors continuously monitoring air and coastal water quality, and an extensive, dense network of public surveillance cameras designed to enhance physical security for permanent residents and international tourists alike.

Furthermore, the Smart Cities Mission has heavily funded the aesthetic and functional upgrading of vital, highly trafficked public spaces. This comprehensive upgrading includes the development of climate-resilient coastal promenades that can withstand storm surges, the installation of intelligent, highly energy-efficient LED street lighting networks that automatically adjust their brightness based on real-time pedestrian and vehicular movement, and the extensive rollout of digital citizen service kiosks for streamlined municipal interactions. However, the physical execution of these sophisticated technological projects has faced severe, uniquely archipelagic logistical hurdles. The procurement, maritime shipping, and delicate installation of fragile electronic sensors and advanced digital command servers are frequently delayed by unpredictable monsoon maritime disruptions. Moreover, maintaining this highly advanced, sensitive digital infrastructure in a highly corrosive, highly saline, and intensely humid tropical environment requires specialized technical support and frequent component replacement that is scarcely available locally, leading directly to frequent system downtimes and exceptionally high recurring maintenance costs.

Running in parallel with the technology-focused Smart Cities Mission is the aggressive execution of AMRUT 2.0, which targets the absolute, foundational layers of urban infrastructure: reliable water security and scientific liquid waste management. As detailed

extensively in earlier chapters of this report, Port Blair suffers from acute, highly disruptive seasonal water scarcity and a near-total historical absence of centralized underground sewerage. The AMRUT 2.0 funding is being aggressively and strategically directed toward solving these existential vulnerabilities. The mission mandates the universal coverage of functional household water tap connections, a formidable goal the administration is pursuing by heavily investing in massive, highly energy-intensive seawater reverse osmosis desalination plants designed to permanently and reliably decouple the city's drinking water supply from the increasingly erratic and unpredictable monsoon rains.

Simultaneously, AMRUT 2.0 is funding the incredibly complex, highly expensive, and physically disruptive process of laying extensive underground sewerage networks and constructing decentralized, modular sewage treatment plants in the densely populated, rocky, and hilly terrain of the capital. This vital process involves the painstaking excavation of narrow, critical urban roads, causing severe temporary traffic congestion and significant public inconvenience for the citizens. The successful, timely completion of these AMRUT projects is the absolute, non-negotiable prerequisite for the long-term survival and viability of the city. Without guaranteed, reliable drinking water and scientific, environmentally safe sewage treatment, the digital advancements and aesthetic improvements of the Smart City Mission are rendered entirely superficial and ultimately meaningless.

The critical review of these state-level mission implementations in 2026 reveals a highly significant, looming administrative challenge regarding post-project financial sustainability. The central government provides massive, one-time capital grants to build the sophisticated Smart City command centres and the complex AMRUT desalination plants. However, the immense, permanently recurring operations and maintenance costs of these highly sophisticated assets must ultimately and entirely be borne by the Port Blair Municipal Council. Given the municipal council's chronic, severe financial insolvency discussed at length earlier in this chapter, there is a profound and highly dangerous risk that these expensive, highly technical infrastructural assets will rapidly degrade and fail completely due to a severe lack of local maintenance funding once the official central mission periods conclude. To prevent this catastrophic infrastructure failure, the territorial administration must urgently and strictly enforce aggressive municipal tax reforms and institute legally ring-fenced, dedicated maintenance funds sourced directly from newly instituted, increased tourist entry fees and higher commercial utility tariffs, guaranteeing that the smart infrastructure built today does not become the decaying, unusable ruins of tomorrow (Andaman Public Works Department, 2026).

11.5 Heritage Cities, Cultural Landscapes and Urban Tourism

The urban landscape of Port Blair and its immediately surrounding islands is not merely a collection of modern civic infrastructure and residential sprawl; it is a profound, globally significant repository of complex, often painful historical memory and highly rich colonial heritage. In 2026, the territorial administration faces the highly delicate, multi-faceted challenge of managing this irreplaceable urban heritage, leveraging it as a primary, lucrative driver of the crucial tourism economy, while simultaneously and vigorously preventing its

physical degradation by the very commercial forces and massive footfall it seeks to attract. The intersection of strict heritage conservation, sensitive cultural landscape management, and aggressive urban tourism promotion requires a highly sophisticated, multi-disciplinary urban planning approach that profoundly respects the past while safely accommodating the economic imperatives of the future.

The absolute architectural and historical epicentre of the territory is the Cellular Jail, a colossal, radiating colonial-era prison recognized globally as a deeply revered National Memorial. This massive brick structure is not merely a historical building; it is considered a sacred pilgrimage site for hundreds of thousands of domestic tourists annually, honoring the immense suffering and sacrifices of the Indian independence movement. The urban planning immediately surrounding the Cellular Jail requires extreme sensitivity and rigid enforcement. The administration enforces strict, non-negotiable zoning regulations to permanently prevent the construction of any high-rise commercial structures or inappropriate modern developments that would visually overshadow, dominate, or detract from the solemnity and visual prominence of the memorial. The daily logistical management of thousands of tourists visiting the site creates massive, concentrated pressures on the immediate urban infrastructure, demanding highly specialized traffic routing, extensive and secure parking facilities, and high-capacity, invisible solid waste management systems that operate continuously to maintain the absolute sanctity and cleanliness of the area (Archaeological Survey of India, 2026).

Beyond the monumental presence of the Cellular Jail, the urban heritage extends significantly to Ross Island, which has been officially renamed Netaji Subhash Chandra Bose Island. Serving historically as the former, exclusive administrative headquarters of the British colonial government, the island is a unique, deeply haunting cultural landscape where the extensive ruins of opulent Victorian architecture, including a church, a ballroom, and a commissioner's residence, are slowly and dramatically being reclaimed by the dense, aggressive tropical jungle. The management of this specific island perfectly exemplifies the ongoing tension between historical preservation and commercial tourism. The administration must carefully and continuously stabilize the crumbling masonry structures against persistent seismic activity and devastating cyclonic winds without destroying the atmospheric, ruinous aesthetic that primarily attracts visitors to the site. The complex logistics of safely transporting thousands of tourists daily via small motorized boats from the Aberdeen Jetty in Port Blair to the island require rigorous maritime safety regulations and robust, strictly enforced crowd management protocols to prevent the highly fragile island ecosystem and the delicate ruins from being overwhelmed and destroyed by excessive foot traffic.

The commercial heart of Port Blair, Aberdeen Bazaar, presents an entirely different type of living cultural landscape. It is a vibrant, chaotic, and historic trading hub featuring a highly unique architectural blend of vernacular wooden structures and mid-century post-colonial concrete buildings. However, the rapid, largely unregulated expansion of the retail sector and the exponential, unchecked increase in vehicular traffic have transformed Aberdeen Bazaar into a severely congested, highly polluted urban bottleneck that degrades the visitor experience. To revitalize this critical cultural and commercial core, the administration is

actively executing targeted, highly planned urban renewal projects under the Smart Cities framework. This comprehensive renewal involves the systematic, phased pedestrianization of key market streets, the incentivized restoration of historic wooden shop facades, and the forced relocation of heavy wholesale logistics operations to the city outskirts. By transforming the bazaar into a safe, walkable, and aesthetically pleasing heritage precinct, the administration aims to significantly enhance the tourist experience and substantially increase the dwell time and commercial spending of visitors, boosting the local retail economy (Ministry of Tourism, 2026).

The overarching, fundamental challenge of managing urban tourism in the territory is adhering to the strict concept of environmental and infrastructural carrying capacity. The aggressive, successful marketing of the islands as a premium destination has significantly increased visitor numbers, but the urban infrastructure of Port Blair and popular, highly trafficked tourist islands like Swaraj Dweep is finite and easily overwhelmed. The administration must urgently transition from a policy of merely maximizing raw tourist arrivals to actively and scientifically managing the impact of tourism on the urban fabric. This requires implementing sophisticated, dynamic pricing models for entry to heritage sites to manage demand, legally restricting the total number of daily visitors to highly sensitive locations, and rigorously enforcing environmental compliance among the numerous luxury resorts and hotels that dominate the coastal urban landscapes. The future economic viability of urban tourism in the Andaman and Nicobar Islands depends entirely on recognizing that the territory's heritage and natural beauty are non-renewable, fragile assets; they must be managed with absolute ecological and cultural reverence to ensure they continue to drive the economy toward the ambitious 2047 developmental vision without being destroyed in the process.

11.6 Urban Poverty, Slum Rehabilitation and In-Situ Upgradation

While the Union Territory of the Andaman and Nicobar Islands generally exhibits highly favourable overall social development indicators and a statistically low overall incidence of extreme consumption poverty compared to the national average, the territory is absolutely not immune to the highly complex, deeply entrenched challenges of urban poverty and the proliferation of informal settlements. In 2026, the rapid, unipolar urbanization of Port Blair, driven by continuous inward migration and the relentless demands of the booming tourism and construction sectors, has generated highly specific, geographically constrained manifestations of severe urban vulnerability. Addressing the urgent housing and basic civic needs of the urban poor requires navigating the territory's severe, structural land scarcity and highly complex environmental regulations, making traditional mainland slum clearance and mass relocation models largely unworkable and socially destructive.

Urban poverty in Port Blair does not typically manifest in the vast, sprawling, contiguous mega-slums characteristic of massive mainland cities like Mumbai or Delhi. Instead, it is firmly characterized by smaller, highly dense, and highly precarious informal settlements tucked into the marginal, often extremely dangerous peripheral lands of the city. These vulnerable settlements are predominantly populated by the essential, yet economically

marginalized, migrant workforce imported from the mainland to serve as low-wage construction labourers, municipal sanitation workers, and informal hospitality staff. Because formal, affordable housing is completely non-existent due to the skyrocketing real estate capital values discussed extensively earlier in this chapter, these migrant families are forced by economic necessity to construct informal, highly vulnerable semi-permanent dwellings using corrugated tin, plastic sheeting, and salvaged scrap wood (Ministry of Housing and Urban Affairs, 2026).

The specific physical location of these informal settlements presents a massive, acute, and continuous risk to public health and physical safety. Driven by the absolute, territory-wide lack of flat, developable land, these precarious settlements are frequently established illegally on steep, unstable hill slopes, or pushed to the very muddy edges of low-lying, tidal creeks and sensitive mangrove swamps. During the intense, prolonged tropical monsoon season, which pounds the islands relentlessly for six months of every year, these informal settlements are highly susceptible to catastrophic, lethal landslides, severe soil erosion, and devastating coastal flooding. The dwellings generally lack any formal, safe connection to the municipal piped water supply network, forcing residents to rely on contaminated, shallow surface wells or highly expensive private water vendors for survival. Furthermore, the complete absence of underground sewerage or even adequate, safe septic systems in these dense clusters results in the direct, uncontrolled discharge of raw human waste into the surrounding environment, creating highly dangerous breeding grounds for vector-borne diseases like dengue and malaria, and actively contaminating the very coastal waters upon which the territory's fisheries and tourism economy ultimately depends (National Disaster Management Authority, 2026).

The territorial administration's strategic approach to slum rehabilitation and urban poverty alleviation is heavily dictated and constrained by the absolute, physical impossibility of large-scale relocation. The territorial government simply does not possess vast tracts of surplus, non-forest land required to construct massive, sprawling resettlement colonies on the outskirts of the city. Any aggressive attempt to forcefully clear the informal settlements and involuntarily relocate the populations would cause immense social disruption, violate human rights, and completely sever the essential workers from their daily employment in the urban core, paralyzing the city's economy. Consequently, the explicit, mandatory, and only viable policy focus of the administration in 2026 is entirely centered on the highly complex process of In-Situ Upgradation.

In-Situ Upgradation involves a highly complex, meticulously localized engineering and profound social intervention strategy. The administration, carefully leveraging specific funds from the Pradhan Mantri Awas Yojana and limited municipal budgets, works directly within the existing, highly constrained spatial footprint of the informal settlements. The primary, overriding focus is on immediate hazard mitigation and the provision of basic, life-saving civic infrastructure. This critical work involves the highly engineered construction of massive, heavily reinforced concrete retaining walls to physically stabilize the dangerous, slipping hill slopes and prevent lethal landslides during the monsoon. The administration strictly prioritizes the laying of paved, reinforced concrete pedestrian pathways to replace

dangerous muddy tracks, ensuring safe, reliable access during the torrential rains. Crucially, the government intervenes directly to provide secure, communal drinking water tap points and constructs highly durable, hygienic community sanitary complexes connected to localized, advanced bio-digesters, thereby definitively eradicating open defecation and containing the immediate biological hazard to public health.

Furthermore, true urban poverty alleviation requires extending the comprehensive social security net to cover these highly transient, marginalized populations. The administration is actively and aggressively working to ensure that migrant workers residing in these informal settlements are officially registered on the national e-Shram portal, granting them vital access to basic health insurance, occupational safety nets, and formal identification. By officially recognizing the existence of these settlements, providing critical, life-saving hazard-mitigation infrastructure, and formally integrating the essential migrant workforce into the broader social welfare architecture, the territorial administration seeks to fundamentally humanize the difficult process of rapid urbanization. The ultimate, overarching goal for the territory leading up to the year 2047 is not merely to build a wealthy, technologically advanced Smart City for the elite, but to ensure that the fundamental dignity, absolute safety, and basic public health of the essential working classes are permanently secured, guaranteeing that the future prosperity of the island capital is built firmly on an unshakable foundation of inclusive, resilient, and highly equitable urban development.

Chapter 12: Rural Development and Decentralised Governance

The conceptualization, administration, and execution of rural development and decentralized governance within the Union Territory of the Andaman and Nicobar Islands represent an incredibly sophisticated, historically layered, and ecologically constrained administrative challenge. This challenge fundamentally diverges from the conventional, standardized rural development paradigms deployed across the contiguous, land-abundant states of the Indian mainland. Administering rural development and establishing robust, highly responsive decentralized governance within this specific territory requires navigating a vast, highly fragmented archipelago comprising over five hundred islands, islets, and rocky outcrops, which are scattered across hundreds of nautical miles of the turbulent Bay of Bengal and the Andaman Sea. The rural landscape of this territory is unequivocally defined by its extreme geographical isolation, severely limited and weather-dependent logistical connectivity, and profound, uncompromising ecological fragility. Furthermore, the complex demographic composition of the archipelago dictates a strictly bifurcated, culturally sensitive approach to grassroots governance. The northern and central island groups, primarily the North and Middle Andaman district and the South Andaman district, are populated predominantly by highly diverse settler communities whose localized governance is managed through conventional, constitutionally mandated Panchayati Raj Institutions. Conversely, the southern Nicobar group is inhabited almost exclusively by ancient, indigenous tribal populations whose civic affairs and developmental trajectories are governed by legally recognized, fiercely protected traditional tribal councils. In the current evaluation year of 2026, the overarching, non-negotiable strategic mandate for the territorial administration is to systematically and aggressively bridge the massive, deeply entrenched developmental deficit that separates these remote, vulnerable rural outposts from the comparatively modernized, resource-heavy urban centre of Port Blair. This comprehensive chapter provides a rigorous, exhaustive, and highly detailed analytical evaluation of the decentralized governance architecture, the localized implementation of massive national rural employment schemes, the extreme logistical and financial challenges of executing rural housing projects, the promotion of grassroots livelihoods through women-led collectives, and the critical, capital-intensive expansion of rural infrastructure. The ultimate, overarching objective is to formulate a comprehensive, actionable roadmap that fundamentally empowers rural island communities, ensures absolute environmental sustainability, and completely eradicates the structural, historical inequities that hinder rural prosperity as the territory progresses purposefully toward the centennial developmental vision of 2047.

12.1 Panchayati Raj Institutions: Structure, Devolution and Capacity

The formal implementation of democratic, decentralized governance in the settler-dominated islands of the Andaman and Nicobar Islands is governed primarily and stringently by the Andaman and Nicobar Islands (Panchayats) Regulation of 1994. This highly specific legal framework was promulgated by the central government to align the administrative structure of the Union Territory directly with the democratic, empowering constitutional mandates of the seventy-third amendment to the Constitution of India. This sweeping regulation establishes a classic, interconnected three-tier Panchayati Raj system across the designated

rural areas of the South Andaman district and the North and Middle Andaman district. The foundational, grassroots tier consists of the Gram Panchayats operating at the individual village or cluster-of-villages level, followed by the Panchayat Samitis operating at the intermediate block level, and culminating in the Zilla Parishad, which functions as the apex local governance planning and coordinating body at the district level. However, the theoretical elegance of this democratic structure is heavily and continuously constrained in practice by the unique, unforgiving archipelagic geography and the overarching, highly centralized administrative control exercised by the Government of India. In 2026, accurately evaluating the true efficacy and democratic success of these Panchayati Raj Institutions requires a highly critical, unflinching examination of their physical structural integrity, the actual, practical extent of financial devolution they enjoy, and the severe, persistent deficits in their technical, engineering, and administrative capacities (Ministry of Panchayati Raj, 2026).

Structurally, the fragmented maritime geography of the islands introduces immense, highly disruptive friction into the daily administrative operations and democratic processes of the Panchayati Raj Institutions. Unlike a contiguous mainland block where elected representatives can easily travel by road to attend meetings, a single Panchayat Samiti in the Andaman archipelago may encompass multiple, entirely separate inhabited islands divided by wide, turbulent ocean straits and treacherous tidal creeks. Convening regular, legally mandated meetings, seamlessly coordinating localized developmental works, and ensuring the physical, active attendance of all elected representatives from these highly dispersed island wards requires significant, continuous logistical effort and consumes an exorbitant amount of financial expenditure on maritime transport. During the extended, violent tropical monsoon season, which frequently brings severe, destructive cyclonic storms and consistently rough seas to the Bay of Bengal, civilian inter-island maritime travel is frequently and entirely suspended by the port authorities for safety reasons. This absolute physical isolation severely disrupts the democratic, deliberative functioning of the intermediate and apex tiers of the Panchayat system, completely paralyzing critical decision-making processes, halting the disbursement of funds, and dangerously delaying the approval of vital, time-sensitive rural infrastructure projects. Consequently, the individual Gram Panchayats often operate in a state of enforced, prolonged isolation, structurally disconnected from the broader, cohesive developmental planning mechanisms of the Zilla Parishad.

The most critical, deeply debilitating, and fundamentally structural challenge facing the Panchayati Raj Institutions in the territory is the profound, systemic lack of genuine, empowering financial devolution. Unlike full-fledged state governments on the mainland that can statutorily devolve a fixed, guaranteed percentage of robust state tax revenues to their local bodies through a constitutionally empowered State Finance Commission, the Andaman and Nicobar Islands function as a Union Territory without a legislative assembly. Consequently, the territory possesses a highly limited, stunted own-source revenue base. The Gram Panchayats and Panchayat Samitis are, therefore, almost entirely, chronically dependent on grant-in-aid financial transfers provided directly by the central government through the Ministry of Home Affairs and the periodic awards of the central Finance Commission. The actual capacity of the rural local bodies to independently generate their own sustaining revenue through localized taxation, such as imposing property taxes on rural

dwellings, levying professional taxes, or collecting user fees for water and sanitation services, is virtually non-existent. This inability to generate own-source revenue is driven by the generally impoverished, subsistence nature of the rural agrarian island economy and the widespread, deeply entrenched political reluctance of local leaders to impose additional financial tax burdens on already economically vulnerable and logistically penalized islander populations (Directorate of Rural Development, 2026).

This absolute, unyielding financial dependency fundamentally strips the rural local bodies of any meaningful, independent administrative autonomy or long-term strategic planning capability. The vast majority of the financial grants provided by the central government are overwhelmingly tied to highly specific, inflexible national flagship schemes, leaving the elected Panchayats with minimal, often negligible discretionary funds to address urgent, highly localized, and unanticipated community priorities. For instance, a remote Gram Panchayat in the North Andaman district may receive substantial, strictly ring-fenced tied funds intended exclusively for the construction of sanitation infrastructure under the Swachh Bharat Mission, but simultaneously lack the minor discretionary capital required to urgently repair a critical, storm-damaged wooden maritime jetty that serves as the singular, life-saving access point for the entire village. This extreme financial rigidity actively prevents elected grassroots representatives from executing holistic, context-specific, and highly responsive developmental planning that addresses the true, immediate needs of their constituents. To genuinely empower these vital democratic institutions by 2047, the territorial administration must urgently and systematically implement a formalized, guaranteed mechanism for untied financial devolution, ensuring that a fixed, highly predictable percentage of the territory's growing non-tax revenues, such as those generated from premium eco-tourism levies, port berthing fees, or shipping tariffs, is transferred directly and unconditionally to the Panchayati Raj Institutions to foster genuine, robust local self-governance.

Furthermore, the internal administrative, engineering, and technical capacity of the Panchayati Raj Institutions is currently severely inadequate to meet the increasingly complex, highly technical demands of modern rural development in a fiercely protected, ecologically sensitive archipelagic zone. The Gram Panchayats across the territory suffer from a chronic, desperate shortage of qualified, specialized personnel. They critically lack certified, experienced civil engineers required to design climate-resilient, disaster-proof rural infrastructure, trained and certified accountants capable of seamlessly managing complex digital public financial fund transfers, and specialized environmental officers to ensure that all localized construction projects comply strictly and flawlessly with the rigid Coastal Regulation Zone guidelines and forest conservation laws. The elected local representatives themselves, many of whom are first-generation political participants, frequently require comprehensive, highly rigorous, and ongoing professional training in utilizing modern digital e-governance tools, executing transparent financial auditing protocols, and facilitating inclusive participatory planning methodologies. The central government has proactively attempted to address this severe capacity deficit through the implementation of the Rashtriya Gram Swaraj Abhiyan, providing targeted, specific funding for capacity building, computerization, and training programs. However, delivering this critical training effectively, consistently, and comprehensively across dozens of remote, disconnected islands remains a

monumental, often insurmountable logistical challenge for the centralized administration in Port Blair. To resolve this, the administration must rapidly establish decentralized, highly mobile training units equipped with reliable satellite internet connectivity to deliver continuous, localized, and highly contextualized capacity building directly to the Gram Panchayats, effectively transforming them from passive, overwhelmed recipients of central funds into highly capable, proactive, and technologically proficient engines of rural administration (Ministry of Panchayati Raj, 2026).

The rural governance architecture operating within the Nicobar district is fundamentally distinct, legally separate, and deliberately excluded from the conventional, mainland-style Panchayati Raj framework described above. Recognizing the highly unique socio-cultural organization, the complex traditional land and resource tenure systems, and the extreme demographic vulnerability of the indigenous Nicobarese tribes, the entire region is governed strictly by traditional tribal councils under the powerful legal umbrella of the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation of 1956. These traditional tribal councils operate highly effectively at both the individual village level and the broader island level, and are led by traditionally selected, highly respected Chief Captains, Vice Captains, and village headmen. These traditional councils exercise profound, legally recognized authority over all community natural resource management, the resolution of internal civil and social disputes, the distribution of agricultural lands, and the localized implementation of specialized developmental projects within the boundaries of the tribal reserves. The modern territorial administration must necessarily execute all rural development initiatives, healthcare programs, and educational interventions in the Nicobar district through close, highly respectful, and continuous consultation with these established tribal councils. This collaborative governance approach ensures that modern infrastructure projects, digital connectivity rollouts, and disaster relief efforts do not inadvertently disrupt the delicate, ancient cultural fabric, the strong social cohesion, or the highly evolved traditional ecological knowledge systems that have successfully sustained these resilient indigenous communities in their island habitats for thousands of years (Ministry of Tribal Affairs, 2026).

12.2 VB G-Ram-G (MGNREGA): Coverage, Wage Trends and Livelihood Outcomes

The Mahatma Gandhi National Rural Employment Guarantee Act functions as an absolutely indispensable, legally binding mechanism for poverty alleviation, fundamental social security, and critical livelihood protection across the diverse rural settlements of the Andaman and Nicobar Islands. Given the severe, structural lack of private sector industrial employment, the complete absence of large-scale manufacturing, and the extreme, weather-driven volatility of the traditional agricultural and artisanal fisheries sectors in the territory, the guaranteed, predictable wage employment provided by this massive national scheme serves as the ultimate, reliable financial safety net for thousands of economically vulnerable rural island households. In 2026, a highly comprehensive, data-driven evaluation of the scheme's localized implementation within the archipelago reveals highly unique, archipelagic operational dynamics, distinct wage trends that are heavily influenced by the exorbitant, unavoidable cost of island living, and highly specific, environmentally

constrained challenges related to physical asset creation in a fragile, protected tropical environment.

The geographical coverage and democratic penetration of the rural employment guarantee scheme are incredibly extensive across all the recognized rural administrative areas of the South Andaman district and the heavily agrarian North and Middle Andaman district. The implementation of the scheme is particularly vital and economically transformative for the diverse settler communities whose primary, traditional livelihoods are derived directly from small-scale, heavily rain-fed agriculture and localized, artisanal coastal fishing. During the extended, violent tropical monsoon season, which completely paralyzes all agricultural harvesting activities, destroys standing crops, and renders the open sea too dangerous and turbulent for small, unmotorized fishing crafts to operate safely, the primary cash income of these vulnerable rural households frequently plummets to near zero. In these highly distressed, economically desperate periods of seasonal unemployment, the guaranteed one hundred days of wage employment provided by the national scheme actively prevents acute financial destitution, widespread malnutrition, and severe food insecurity among the islanders. Furthermore, the localized implementation of the scheme exhibits a remarkably, consistently high rate of female workforce participation. In a vast majority of the island Gram Panchayats, women enthusiastically constitute the overwhelming, dominant majority of the active, registered workforce executing projects under the scheme. This high participation rate strongly reflects the program's absolutely critical, transformative role in advancing rural gender equity, dismantling traditional patriarchal economic barriers, and providing direct, independent financial agency and bank-account-linked economic empowerment to women living within the historically conservative settler communities (Ministry of Rural Development, 2026).

The statistical wage trends associated with the employment guarantee scheme in the territory starkly expose the fundamental, inescapable economic contradiction of remote island life, a phenomenon commonly and accurately referred to by economists as the "island premium." The central government in New Delhi formally notifies a specific, localized daily wage rate for the Andaman and Nicobar Islands, a rate which is statistically and nominally higher than the baseline wage rates notified for the vast majority of the contiguous mainland states. This nominally higher, adjusted wage rate is theoretically designed and intended to adequately compensate the local workforce for the severe geographical isolation and the associated logistical difficulties of the territory. However, rigorous, inflation-adjusted economic analysis clearly indicates that this notified wage rate remains completely inadequate when critically adjusted for the true, exorbitant, and continuously rising cost of living in the archipelago. Because almost all essential daily commodities, critical construction materials, specialized medical supplies, and basic consumer goods must be continuously imported via highly expensive, slow maritime shipping routes from mainland ports, the baseline retail inflation in the rural islands is crushingly high. Consequently, the real, actionable purchasing power of the daily nominal wage earned under the employment scheme is severely and artificially depressed. The hard-working rural labourers find it increasingly, painfully difficult to meet basic, fundamental nutritional requirements and cover escalating educational and healthcare expenses for their families while relying solely on the statutory wage. To ensure the scheme

genuinely fulfills its noble mandate of providing a true, dignified living wage, the territorial administration must relentlessly and successfully advocate for a localized, highly specialized cost-of-living indexation formula that mathematically, accurately, and continuously accounts for the massive, inescapable logistical penalties and transportation premiums structurally imposed on the island economy (Directorate of Economics and Statistics, 2026).

The precise nature of physical asset creation permitted and executed under the employment guarantee scheme is rigidly dictated and fiercely constrained by the extreme topographical limitations and the absolute ecological fragility of the territory. Unlike massive, land-abundant mainland states that can effectively utilize the massive scheme workforce to construct vast, sprawling networks of wide rural roads, excavate massive earthen irrigation dams, or clear enormous tracts of land for forestry, the focus of asset creation in the islands is entirely localized, highly restricted, and necessarily environmentally sensitive. The most critical, life-saving category of rural asset creation in the territory involves highly targeted water conservation and localized drought-proofing structures. Because the islands suffer from acute, severe dry-season water scarcity despite receiving heavy monsoon rains, the mobilized rural workforce is extensively and strategically deployed to manually excavate specialized, shallow farm ponds, systematically clear debris from traditional, natural drainage channels to prevent waterlogging, and carefully construct localized rainwater harvesting pits and percolation tanks. These vital micro-irrigation and water-retention assets are absolutely essential for sustaining the highly valuable, deeply rooted arecanut and coconut cash crop plantations through the scorching, water-deprived summer months, thereby ensuring the economic survival of the farming communities.

Another highly critical, environmentally focused area of physical asset creation involves advanced coastal protection and long-term disaster resilience. The rural island settlements, often located just metres above sea level, are highly vulnerable to continuous coastal erosion, devastating storm surges, and the rapidly escalating, existential impacts of global climate-induced sea-level rise. The administration highly strategically utilizes the dedicated employment guarantee workforce to construct expansive, living bio-shields by manually planting dense, protective belts of indigenous, salt-tolerant mangrove species along the highly exposed, vulnerable shorelines and fragile tidal creeks. These natural, biologically active coastal defences have proven to be infinitely more sustainable, ecologically beneficial, and financially cost-effective than attempting to construct rigid, highly expensive, and environmentally destructive engineered concrete seawalls. Additionally, the localized workforce is highly utilized to meticulously clear and maintain the intricate network of narrow rural footpaths, traditional pedestrian suspension bridges, and minor water culverts that serve as the only reliable connecting arteries within the dense, hilly, and deeply forested agricultural settlements, ensuring that these vital, life-saving paths remain entirely passable and safe during the torrential, continuous monsoon rains. However, the centralized administration must continuously, vigilantly ensure that the final selection of specific developmental works executed under the scheme is driven entirely by genuine, democratic, and highly participatory Gram Sabha resolutions, effectively preventing the top-down imposition of unnecessary, poorly conceived, or ecologically inappropriate infrastructure

projects by centralized bureaucratic authorities operating from Port Blair (Department of Rural Development, 2026).

12.3 Rural Housing: PMAY-Gramin and State Schemes

Providing secure, physically dignified, thoroughly safe, and highly climate-resilient housing for the expanding rural population of the Andaman and Nicobar Islands is a monumental, incredibly complex engineering, logistical, and financial challenge. The rural housing sector in the territory operates under a state of permanent, structural crisis, driven simultaneously by an acute, absolute scarcity of flat, legally developable land, the exorbitant, continuously escalating cost of importing heavy building materials, and the absolute, non-negotiable necessity of constructing homes capable of withstanding severe, catastrophic seismic activity and devastating cyclonic storms. In 2026, the local implementation of the massive national flagship program, Pradhan Mantri Awas Yojana Gramin, as well as the execution of highly specialized supplementary territorial housing schemes, must be critically, rigorously evaluated against these severe, unyielding geographical and economic constraints to understand their true efficacy and their persistent failures.

The fundamental, crippling, and most pervasive obstacle to delivering successful rural housing in the archipelago is the massive, unavoidable logistical cost premium applied to every single heavy component of modern, concrete-based residential construction. The islands possess absolutely no domestic cement manufacturing capacity, no heavy steel rolling mills to produce rebar, and highly restricted, legally controlled access to locally quarried aggregate stone and high-quality river construction sand due to stringent, heavily enforced environmental and coastal regulation laws. Consequently, every single heavy bag of Portland cement, every metric ton of structural reinforcing steel, every bundle of durable roofing sheets, and every specialized plumbing fixture must be physically loaded onto massive cargo vessels in distant mainland ports like Chennai or Kolkata, shipped across thousands of kilometres of the turbulent Bay of Bengal, unloaded at the congested docks in Port Blair, and subsequently, painstakingly re-loaded onto smaller, weather-dependent inter-island ferries to eventually reach the scattered rural settlements in the North and Middle Andaman district or the remote Nicobar group. This highly complex, multi-stage, highly inefficient, and heavily monopolized supply chain frequently and predictably doubles or even triples the final retail cost of basic building materials compared to standard mainland prices, destroying the financial feasibility of construction for the rural poor.

This extreme, systemic cost inflation renders the standard, uniform financial assistance subsidy provided under the national Pradhan Mantri Awas Yojana Gramin entirely, hopelessly inadequate for the specific island context. The rigid national subsidy amount, which is designed primarily by central planners for the economic realities and material costs of rural mainland states, is mathematically and practically insufficient to cover the exorbitant cost of constructing a basic, structurally safe, disaster-resilient concrete dwelling in the remote islands. Rural island beneficiaries who successfully qualify for and receive the housing subsidy frequently find themselves trapped in a vicious, inescapable cycle of debt, forced to borrow heavily from informal, high-interest local moneylenders simply to purchase the basic,

overpriced materials required to merely complete the foundational construction of their highly subsidized homes. This profound financial inadequacy inevitably leads to widespread, tragic instances of stalled, abandoned, and half-finished housing projects dotting the rural landscape, completely defeating the fundamental, noble objective of the national housing mission and leaving vulnerable families heavily indebted and still effectively homeless (Ministry of Rural Development, 2026).

Furthermore, the required architectural and structural engineering design of safe rural housing in the territory demands a radical, comprehensive departure from standardized mainland building templates. The entire archipelago is geologically located squarely in Seismic Zone V, which represents the absolute highest risk classification for devastating, high-magnitude earthquakes in the Republic of India. Additionally, the coastal and exposed island settlements are highly vulnerable to extreme, life-threatening cyclonic wind speeds and devastating, inundating storm surges generated in the Bay of Bengal. Constructing standard, unreinforced, heavy masonry or weak brick structures in this volatile environment is a recipe for catastrophic, mass loss of life and total property destruction during inevitable natural disasters. The rural housing schemes executed in the territory must strictly, legally mandate and heavily, explicitly subsidize the use of advanced, highly reinforced concrete structural frame designs, deep, reinforced pilings for coastal homes, and highly specialized, aerodynamic roofing structures capable of successfully resisting hurricane-force winds without failing.

To definitively solve the escalating rural housing crisis, the territorial administration must aggressively, persistently lobby the central government and the Ministry of Finance for a highly customized, special category financial subsidy structure specifically for the Andaman and Nicobar Islands that explicitly, fully, and mathematically accounts for the massive, unavoidable logistical cost premium of transporting materials across the ocean. Moreover, the administration must bravely spearhead a massive, territory-wide paradigm shift in rural construction methodologies and approved material sciences. The territory must strategically and systematically reduce its crippling, expensive reliance on imported heavy concrete and steel and aggressively, scientifically promote the use of locally treated, highly sustainable structural timber, advanced engineered bamboo composites, and prefabricated, extremely lightweight, disaster-resilient modular housing units that can be shipped easily and assembled rapidly. In the highly sensitive Nicobar district, the administration has successfully recognized and validated the inherent, proven structural resilience of the traditional, indigenous Nicobarese stilted architectural style, which features elevated living platforms and lightweight, flexible materials that are naturally, perfectly adapted to survive severe coastal flooding, high winds, and powerful seismic tremors without collapsing. By intelligently merging these highly proven, traditional, climate-adapted indigenous architectural principles with modern, scientifically validated structural engineering standards and safe material treatments, the territory can successfully provide safe, truly affordable, environmentally harmonious, and culturally appropriate housing for all its diverse rural and tribal populations by the centennial year of 2047 (Andaman Public Works Department, 2026).

12.4 Livelihood Promotion: SHGs, Cooperatives and Rural Enterprise

The successful economic empowerment, poverty eradication, and sustainable livelihood promotion of the rural population in the Andaman and Nicobar Islands require highly specialized, context-aware institutional frameworks capable of completely overcoming the severe, systemic constraints of a tiny, highly fragmented domestic consumer market and the prohibitive, margin-destroying costs of exporting finished goods to the mainland. The fragile rural island economy absolutely cannot rely on large-scale, polluting industrialization, mass commercial manufacturing, or extensive, land-intensive corporate agriculture. Instead, the highly targeted, ecologically sustainable strategy deployed in 2026 is entirely and intensely focused on mobilizing local human capital through powerful collective action, establishing robust, financially secure cooperative networks, and aggressively fostering innovative micro-enterprises that add significant, localized value to the primary agricultural and marine resources of the islands. This collective, community-driven approach is the only mathematically and socially viable method to achieve necessary economies of scale, reduce individual risk, and fiercely protect vulnerable rural primary producers from highly exploitative, monopolistic market intermediaries.

The absolute, undisputed vanguard of rural livelihood promotion and poverty alleviation in the territory is the Andaman and Nicobar Islands Rural Livelihood Mission, which operates highly effectively as the customized, heavily localized implementation of the massive national Deendayal Antyodaya Yojana National Rural Livelihoods Mission. The core, unrelenting strategic objective of this vital mission is the aggressive, systematic, and continuous mobilization of rural women into highly organized, financially literate, and socially empowered Self-Help Groups (SHGs). In a predominantly patriarchal, conservative settler society where female economic independence has historically been restricted, the rapid proliferation and success of these women-led financial collectives represents a profound, genuinely transformative social and economic revolution. The mission administration meticulously provides these newly formed groups with intensive, ongoing capacity building, essential seed capital to begin operations, and highly subsidized, easily accessible revolving funds to expand their activities. More critically and structurally, the mission acts as a powerful, trusted institutional bridge, actively facilitating direct, secure financial linkages between the historically marginalized rural women and the formal, risk-averse commercial banking sector, which has historically viewed rural islanders as high-risk, unbankable entities unworthy of commercial credit (Ministry of Rural Development, 2026).

The diverse, highly profitable economic activities undertaken by these empowered Self-Help Groups are intimately and sustainably tied to the rich natural resource base of the archipelago. In the dense agricultural settlements of the North and Middle Andaman district, highly organized women's collectives are deeply, successfully engaged in dominating the massive, lucrative coconut and arecanut value chains. Rather than simply selling raw, heavy, low-value copra or unprocessed nuts to highly exploitative mainland middlemen who control the maritime shipping routes, these intelligent groups are utilizing mission funds to establish decentralized, highly efficient micro-processing units. These units successfully produce high-value, lightweight export products such as premium, export-grade virgin coconut oil,

finely desiccated coconut powder, hygienically packaged organic coconut water, and highly specialized, durable coir handicrafts that command excellent prices in premium mainland markets. In the scattered coastal fishing hamlets, SHGs are actively breaking the long-standing, oppressive monopoly of the traditional, predatory fish merchants by establishing hygienic, community-managed, solar-powered drying facilities for marine fish. These groups are successfully producing high-quality, attractively packaged seafood pickles, smoked fish, and organic preserves that command premium, highly profitable prices in the urban consumer markets and luxury hotels of Port Blair.

Furthermore, the territory relies heavily on a deeply entrenched, historical, and highly complex network of primary agricultural credit and marketing cooperative societies to support the broader rural peasantry. The traditional cooperative model is absolutely, structurally essential for aggregating and consolidating the highly fragmented, small-volume agricultural output of thousands of independent smallholder farmers scattered across dozens of islands. The established cooperative societies officially procure raw arecanut, diverse spices, and dried copra directly from the rural farmers at the village level, officially offering fair, highly transparent, government-regulated pricing and providing a critical, life-saving protective financial buffer against the extreme, devastating price volatility of the distant mainland commodity markets. However, in the current assessment year of 2026, it is evident that many of these legacy, decades-old cooperative societies suffer terribly from archaic, highly bureaucratic management practices, a severe, crippling lack of modern professional marketing and branding expertise, and critically inadequate capital reserves necessary to invest in modern, high-capacity cold storage, automated sorting, and advanced processing infrastructure. The territorial administration must urgently, forcefully recapitalize and professionally, ruthlessly modernize these vital cooperative networks, actively transforming them from sluggish, bureaucratic procurement agencies into aggressive, highly competitive, export-oriented commercial entities fully capable of successfully marketing the highly valuable, premium "Andaman Organic" brand directly to discerning global and premium domestic consumers, thereby maximizing the wealth retained within the islands (Department of Agriculture, 2026).

The strategic integration of these revitalized rural livelihoods with the territory's booming, high-value tourism sector represents the absolute most lucrative, sustainable, and rapidly expanding economic opportunity for the rural islands. The administration is aggressively, financially promoting and licensing the establishment of authentic rural homestays, highly organized community-managed eco-tourism ventures, sustainable guided nature walks, and authentic, hyper-local culinary dining experiences operated directly and exclusively by the trained rural Self-Help Groups. By rigorously training rural women in premium, international hospitality standards, advanced digital marketing using social media, and basic spoken English, the administration actively empowers and enables the rural communities to directly, fiercely capture a highly significant, transformative share of the massive tourist expenditure that was previously monopolized entirely by large, mainland-owned luxury resorts and external tour operators based in Port Blair. This highly strategic, deliberate convergence of traditional, sustainable agricultural livelihoods with premium, high-yield eco-tourism ensures that the immense economic dividends of the territory's rapid modernization are distributed

broadly, deeply, and equitably across the archipelago, thereby actively creating a highly resilient, deeply diversified, and highly prosperous rural economy fully prepared for the challenges and opportunities of the future.

12.5 Rural Infrastructure: PMGSY, Connectivity and Market Linkages

The reliable provision and continuous, rigorous maintenance of robust, high-quality, all-weather rural infrastructure is the absolute, fundamental, non-negotiable physical foundation upon which all other rural development, healthcare, and educational initiatives in the Andaman and Nicobar Islands strictly depend. In a highly fragmented archipelagic environment, the persistent absence of reliable physical connectivity does not merely result in simple economic inconvenience or slow travel times; it actively causes absolute, life-threatening socio-economic paralysis. A lack of infrastructure permanently prevents rapid access to lifesaving emergency medical care during health crises, completely stalls educational progression by preventing students from reaching centralized senior schools, and ensures permanent, inescapable economic destitution for the isolated agricultural settlements unable to sell their produce. In 2026, the territorial administration is heavily engaged in a massive, highly complex, astronomically expensive, and environmentally sensitive engineering effort to construct, upgrade, and maintain the vital physical and maritime arteries that connect the deeply remote rural periphery to the territory's economic and administrative urban cores.

The execution and engineering of the Pradhan Mantri Gram Sadak Yojana within the territory is an infrastructural endeavour of extreme, unprecedented difficulty and high cost. The targeted rural settlements, particularly those located deep in the North and Middle Andaman district, are frequently and widely separated by dense, legally protected, impenetrable primary rainforests, exceptionally steep, landslide-prone hillsides, and treacherous, deep tidal creeks characterized by rapid currents and thick mangrove swamps. Constructing durable rural roads in this unforgiving, highly corrosive environment requires highly specialized, incredibly expensive technical and engineering adaptations that are entirely unnecessary on the mainland. Standard, cheap mainland road construction techniques, such as simple bitumen topping over loose gravel, are entirely useless and rapidly destroyed against the relentless, highly erosive forces caused by the torrential, months-long tropical monsoons. To ensure survival, the administration is forced by nature to utilize highly durable, massively heavy interlocking concrete block pavements, construct exceptionally deep, heavily reinforced concrete retaining walls to actively prevent devastating, road-destroying landslides, and deploy highly specialized, expensive imported soil stabilization chemicals to ensure the permanent structural integrity of the rural road network sub-base. Predictably, the final capital cost per kilometre of rural road constructed and engineered in the islands is exponentially, massively higher than the standard national average, severely and continuously straining the territory's allocated financial resources and necessitating continuous, often desperate requests for enhanced, special-category central funding to merely meet basic connectivity targets (Ministry of Rural Development, 2026).

Furthermore, the vital, necessary expansion of the rural road network is continuously, severely, and highly frustratingly bottlenecked by the incredibly stringent, multi-layered, and deeply bureaucratic environmental and forest clearance procedures mandated by national law. Because almost any proposed new rural road alignment must inevitably, by geographical necessity, pass directly through or very closely skirt legally protected, highly sensitive pristine forest lands, vital wildlife sanctuaries, or highly regulated Coastal Regulation Zones, the project approval process involves exhaustive, multi-year ecological impact assessments and mandatory, slow-moving approvals from the central Ministry of Environment, Forest and Climate Change located thousands of kilometres away in New Delhi. While these rigorous, unyielding environmental protocols are absolutely, indisputably vital to protect the irreplaceable, globally significant biodiversity and forest cover of the islands, the resulting severe bureaucratic delays severely, actively hamper the timely delivery of critical, life-saving connectivity to highly marginalized, desperate rural communities. To resolve this paralyzing conflict, the administration must urgently and forcefully establish a highly specialized, fast-track, yet ecologically rigorous environmental clearance mechanism specifically designed and legally empowered to expedite small-scale, essential, low-impact rural infrastructure projects, carefully and intelligently balancing absolute ecological preservation with the urgent, undeniable humanitarian need for basic physical connectivity.

Rural infrastructure in the context of the archipelago extends far, far beyond terrestrial, paved roads; it critically and fundamentally encompasses the highly specialized, robust maritime infrastructure absolutely required to physically bridge the vast, deep oceanic gaps separating the islands. The vital concept of "last-mile connectivity" in the territory frequently and abruptly terminates at a crumbling coastal jetty rather than a paved village road. Recognizing this, the administration is currently heavily investing hundreds of crores of capital in the specialized construction and upgrading of robust, all-weather reinforced concrete jetties, advanced, durable floating pontoons, and highly specialized, heavy-duty roll-on/roll-off (Ro-Ro) concrete ramps located directly in the remote, coastal agricultural and fishing islands. This absolutely vital, heavy maritime infrastructure allows the small, motorized inter-island passenger ferries, specialized cargo vessels, and heavy vehicle ferries to dock safely, efficiently, and securely regardless of the extreme tidal variations, powerful coastal currents, or rough weather conditions. The seamless, friction-free physical integration of the terrestrial rural road network with these localized, advanced maritime hubs is absolutely essential for creating unbroken, highly efficient logistical chains capable of moving people and heavy goods.

The ultimate, overriding economic objective of this massive, combined terrestrial and maritime infrastructural investment is the successful establishment of hyper-efficient, highly resilient, and highly profitable market linkages for the rural producers. The hardworking rural farmers, spice growers, and artisanal fishermen of the outer islands operate in a state of permanent, structural economic disadvantage due to their historical physical inability to rapidly, safely, and cheaply transport highly perishable produce to the primary, lucrative, high-paying consumer markets located in Port Blair or the advanced export cargo terminals at the international airport. To permanently solve this logistical nightmare, the administration must heavily, directly subsidize the deployment of specialized, small-scale refrigerated

transport trucks on the islands and dedicate a fleet of cold-storage-equipped fast cargo ferries to serve the coastal routes. By successfully establishing an unbroken, technologically advanced, end-to-end cold chain infrastructure seamlessly connecting the most remote, isolated rural landing centres directly to the urban core and export nodes, the territory can completely, permanently eliminate massive, financially crippling post-harvest losses, absolutely guarantee premium, high-profit prices for the rural primary producers, and finally, successfully integrate the historically isolated, impoverished agrarian periphery into the dynamic, high-value, rapidly growing modern island economy, securing their prosperity for the long term (Andaman Public Works Department, 2026).

12.6 Community-Based Development Institutions and Participatory Planning

The ultimate success, profound legitimacy, and true long-term ecological and social sustainability of rural development in the Union Territory of the Andaman and Nicobar Islands depend entirely, absolutely, and unequivocally on the active, genuine, and legally empowered participation of the highly diverse local communities in the meticulous planning and execution of all developmental initiatives. In a highly fragile environment characterized by immense, isolating geographical fragmentation and profound, deep-seated cultural and ethnic diversity, centralized, top-down bureaucratic planning dictated remotely from secretariats in Port Blair or ministries in New Delhi is inherently, fundamentally flawed. Such top-down planning frequently and disastrously results in the forced imposition of ecologically inappropriate, culturally insensitive, and highly expensive infrastructure that utterly fails to serve the true needs of the islanders. In 2026, the absolute strategic focus of the progressive territorial administration is firmly and rightly fixed on radically strengthening grassroots community-based development institutions and permanently embedding rigorous, deeply democratic participatory planning methodologies at the absolute, lowest grassroots level across all islands.

The legal and constitutional foundation of this participatory planning in the diverse settler communities of the Andaman district is the Gram Sabha. Fully mandated by the robust framework of the Panchayati Raj Act, the Gram Sabha is the open, democratic assembly of all registered adult residents within a village, serving powerfully as the ultimate, legally recognized deliberative body for all local development and resource allocation. The territorial administration has successfully and legally institutionalized a highly rigorous, strict annual decentralized planning process, officially mandating that the elected Gram Panchayats formulate their comprehensive, annual Gram Panchayat Development Plans strictly and exclusively based on the explicit, democratically prioritized resolutions passed openly by the respective Gram Sabhas. This highly structured, bottom-up planning architecture theoretically and legally ensures that the scarce allocated financial resources are directed precisely and efficiently toward the most urgent, highly localized community needs, whether that involves the critical, immediate construction of a check dam for dry-season irrigation, the urgent structural repair of a vital, cyclone-damaged rural school building, or the establishment of a localized, community-managed solid waste management and composting facility (Ministry of Panchayati Raj, 2026).

However, the actual, practical execution of this noble participatory planning ideal via the Gram Sabhas faces significant, deeply entrenched, and highly stubborn systemic and sociological hurdles. In many rural island settlements, the actual, physical public attendance at Gram Sabha meetings remains distressingly, unacceptably low. This low attendance is driven by a pervasive, highly corrosive sense of civic apathy and a historically ingrained, deeply cynical belief among the populace that the final, most consequential financial and administrative decisions are ultimately, inevitably controlled and altered by the powerful, centralized bureaucracy in Port Blair, regardless of any localized, democratic input or passionate community resolutions. Furthermore, the most marginalized, vulnerable segments of the rural population, particularly the impoverished, landless migrant agricultural labourers and women from highly conservative households, frequently face subtle, unspoken, yet powerful social and cultural barriers that severely inhibit their active, vocal, and assertive participation in these open, often male-dominated democratic forums. To truly and permanently revitalize the Gram Sabhas and restore their democratic legitimacy, the administration must execute aggressive, highly targeted, and continuous civic awareness campaigns, strictly mandate the scheduling of meetings at times and locations genuinely convenient for the working population and women, and most critically, strictly, legally enforce the rapid execution of Gram Sabha resolutions, thereby definitively and visibly proving to the skeptical rural citizenry that their democratic participation actually yields tangible, immediate, physical developmental results and improves their daily lives.

In the highly protected Nicobar district, the model for community-based development relies entirely, respectfully, and legally on the profound, ancient authority and the robust traditional structure of the indigenous tribal councils. The modern administration must engage in a fundamentally different, highly sensitive, and culturally deferential paradigm of participatory planning in these legally protected, pristine reserves. Modern developmental initiatives absolutely cannot be aggressively imposed through standard, rigid bureaucratic procedures or mainland administrative templates; they must be carefully negotiated, extensively modified, and explicitly, formally approved by the traditional village headmen and the highly respected Chief Captains of the respective islands. The administration must guarantee that all modern infrastructure projects, such as the vital provision of sustainable solar micro-grids, the construction of critical, cyclone-resilient community shelters, or the rollout of digital educational tools, are seamlessly, harmoniously integrated with the traditional spatial organization, the deeply held spiritual beliefs, and the specific cultural preferences of the Nicobarese community. This incredibly delicate process requires deploying highly trained, culturally sensitive, and deeply empathetic administrative officers who possess a deep, highly respectful understanding of tribal anthropology, indigenous linguistics, and the profound, highly effective traditional ecological knowledge systems that have governed these islands for centuries (Ministry of Tribal Affairs, 2026).

The ultimate, overarching, and highly ambitious strategic objective for the territory leading up to the centennial year of 2047 is to achieve total, seamless institutional convergence at the grassroots level. The territorial administration must systematically, purposefully, and legally dismantle the rigid bureaucratic silos that currently, inefficiently separate the operations of the formal Panchayati Raj Institutions, the highly dynamic, women-led

Kudumbashree-modelled Self-Help Groups, and the deeply respected, traditional tribal councils. By legally, operationally, and financially integrating these diverse, powerful community-based institutions, the territory can successfully create a highly unified, incredibly powerful, and profoundly democratic grassroots developmental apparatus. This converged, synergistic institutional architecture will be fully, uniquely capable of successfully executing highly complex, multi-dimensional, and transformative projects, such as large-scale, community-managed premium eco-tourism ventures and highly decentralized, technologically advanced, and fiercely climate-resilient water and energy management systems. By placing the absolute, unyielding power of strategic planning, financial allocation, and project execution directly and permanently into the capable hands of the islanders themselves, the Andaman and Nicobar Islands can successfully forge a highly resilient, deeply democratic, and environmentally flawless rural economy that serves as a shining, globally recognized model for sustainable archipelagic development and indigenous empowerment in the twenty-first century.

Chapter 13: Environment and Natural Resource Governance

13.1 Forest Cover, Biodiversity and Wildlife Conservation

The forest cover of the Andaman and Nicobar Islands is the defining ecological characteristic of the territory, serving as the fundamental biological engine that sustains the entire archipelagic ecosystem. According to the comprehensive assessments published by the Forest Survey of India in 2026, the recorded forest area constitutes an overwhelming 81.74 per cent of the total geographical landmass of the territory (Forest Survey of India, 2026). This exceptionally high percentage places the islands among the most densely forested administrative units in the Republic of India and highlights the paramount importance of terrestrial conservation in regional planning. The forests are broadly classified into highly diverse typologies, encompassing incredibly dense tropical wet evergreen forests, complex tropical semi-evergreen forests, moist deciduous forests, and highly specialized littoral and swamp forests. These primary rainforests are characterized by their multi-tiered canopy structures, towering emergent tree species, and a dense, impenetrable undergrowth of canes, bamboos, and endemic climbing palms.

Biodiversity within these terrestrial ecosystems is staggering, featuring an extraordinary degree of endemism driven by millions of years of geographic isolation from the Asian mainland. The flora of the Andaman group shows strong affinities with Myanmar and Northeast India, while the Nicobar group exhibits botanical lineages closely related to Indonesia and the Malaysian archipelago. The territory hosts over two thousand species of flowering plants, of which approximately eleven per cent are strictly endemic and found nowhere else on earth (Botanical Survey of India, 2026). Commercially and ecologically significant timber species, such as the iconic Andaman Padauk and various species of Dipterocarpus, historically formed the basis of the local economy. However, following landmark, sweeping interventions by the Supreme Court of India in the early two thousands, all commercial logging and unscientific timber extraction operations were permanently and legally banned. This judicial mandate fundamentally transformed the Department of Environment and Forests from a resource extraction agency into a strict, highly empowered conservation authority, ensuring that the primary rainforests were preserved as inviolate carbon sinks and vital ecological reserves (Ministry of Environment, Forest and Climate Change, 2026).

Wildlife conservation in the territory is managed through a vast, highly protected network of National Parks, Wildlife Sanctuaries, and Biosphere Reserves. The archipelago boasts nine National Parks and nearly one hundred Wildlife Sanctuaries, which collectively cover a massive proportion of the total land and coastal area. The faunal diversity is uniquely adapted to the island environment. The territory is devoid of large terrestrial predators like tigers or leopards, which has allowed distinct evolutionary pathways for other species. Endemic mammals, such as the Andaman Wild Pig, the Nicobar Macaque, and the highly elusive Andaman Shrew, are strictly protected under the Wildlife Protection Act. Avian biodiversity is particularly rich, with the islands serving as critical habitats for endemic species like the Narcondam Hornbill, the Nicobar Megapode, and the Andaman Wood Pigeon. The

conservation of the Narcondam Hornbill, restricted entirely to a tiny, dormant volcanic island, represents one of the most specialized and successful species-specific conservation programs executed by the Indian government, requiring continuous monitoring and absolute habitat protection (Wildlife Institute of India, 2026).

Furthermore, the conservation of biodiversity in the Andaman and Nicobar Islands is inextricably and legally linked to the protection of the indigenous tribal populations. Vast tracts of the most pristine, untouched primary rainforests are legally designated as Tribal Reserves, specifically intended to protect the Particularly Vulnerable Tribal Groups such as the Jarawa, the Sentinelese, and the Shompen. These reserves function de facto as the most strictly protected ecological zones in the territory, as unauthorized entry, commercial activity, and resource extraction are criminalized to protect the indigenous inhabitants. The traditional ecological knowledge and the low-impact, sustainable hunter-gatherer practices of these tribes have actively preserved the biodiversity of their ancestral lands for millennia. Therefore, any effective wildlife conservation strategy in the territory must necessarily run in perfect parallel with the anthropological protection of the indigenous communities, recognizing that the survival of the forest ecosystem is fundamentally dependent on the continued sovereignty and isolation of its original human inhabitants (Ministry of Tribal Affairs, 2026).

Despite these robust legal frameworks, wildlife conservation in 2026 faces escalating, modern threats. The rapid expansion of linear infrastructure, particularly the widening of the Andaman Trunk Road, introduces severe risks of habitat fragmentation and increases the incidence of fatal wildlife-vehicle collisions. Additionally, the insidious spread of invasive alien species, both flora and fauna, poses a massive, silent threat to the endemic biodiversity. Invasive plant species accidentally introduced by settlers compete aggressively with native flora for scarce nutrients and sunlight, while introduced animals like feral dogs and spotted deer actively predate on the ground-nesting eggs of endemic birds and marine turtles. The Department of Environment and Forests is compelled to allocate significant financial resources and technical manpower toward systematic invasive species eradication programs, illustrating that passive protection is no longer sufficient to maintain the ecological integrity of the island forests.

13.2 Land Use Change, Soil Degradation and Land Resource Management

The management of land resources and the strict regulation of land use changes in the Union Territory of the Andaman and Nicobar Islands constitute a perpetual, high-stakes administrative battle against extreme geographical scarcity. The fundamental reality of the archipelago is that legally available, developable land is exceptionally rare. With over eighty-one per cent of the territory locked as protected forest, and significant additional percentages classified as tribal reserves and military zones, the actual quantum of non-forest revenue land available for civilian residential, agricultural, and commercial purposes is a microscopic fraction of the total geographical area. In 2026, the intense, compounding demographic pressures of a growing settler population, the massive expansion of the tourism

industry, and the strategic requirements of the central government place unprecedented, overwhelming demand on this severely constrained land budget.

The regulatory architecture governing land use in the coastal margins is defined by the highly specific Island Protection Zone notifications and the Coastal Regulation Zone rules. These legal frameworks are specifically tailored to address the unique vulnerabilities of oceanic islands, superseding the standard environmental regulations applied to the Indian mainland. The Island Protection Zone rules strictly mandate designated "No Development Zones" originating from the High Tide Line, severely restricting the construction of permanent structures, resorts, and commercial facilities in areas deemed highly susceptible to coastal erosion, storm surges, and the projected impacts of sea-level rise (Ministry of Environment, Forest and Climate Change, 2026). Enforcing these regulations requires constant, unwavering vigilance by the Andaman and Nicobar Coastal Zone Management Authority. However, the immense economic incentives associated with premium, ocean-front tourism development frequently lead to localized regulatory friction, illegal encroachments, and protracted legal disputes, demanding a robust, highly digitized spatial monitoring system utilizing continuous satellite imagery to detect and penalize unauthorized land use conversions.

The most profound, highly controversial, and globally debated land use change currently occurring in the territory surrounds the Great Nicobar Holistic Development Project. This mega-infrastructure initiative, pioneered by the NITI Aayog in 2026, necessitates the formal diversion of over one hundred and thirty square kilometres of pristine, primary tropical rainforest on Great Nicobar Island to facilitate the construction of an international transshipment terminal, a greenfield airport, and a massive coastal township (NITI Aayog, 2026). The ecological implications of this colossal land use conversion are unprecedented in the history of the territory. To comply with the Forest Conservation Act, the central government has mandated massive, highly expensive Compensatory Afforestation programs. However, because there is absolutely no degraded forest land available within the Andaman and Nicobar Islands to absorb this compensatory planting, the government has controversially proposed undertaking the afforestation in mainland states like Haryana and Madhya Pradesh. This administrative workaround highlights the absolute, unyielding spatial limits of the island ecosystem, demonstrating that large-scale development in the archipelago inevitably requires permanent, localized ecological sacrifice that cannot be physically mitigated within the territory itself.

Soil degradation represents a severe, structural threat to both the ecological stability and the agricultural viability of the islands. The topography of the territory is characterized by steep, undulating hills with very narrow intervening valleys. The soils are predominantly lateritic, highly porous, inherently poor in organic nutrients, and highly susceptible to rapid weathering. During the intense, prolonged tropical monsoon season, which subjects the islands to torrential, continuous downpours for several months, the risk of severe topsoil erosion is exceptionally high. Historically, the unscientific clearing of hill slopes for timber extraction and the expansion of poorly managed cash crop plantations exacerbated this erosion, leading to the rapid loss of the fertile topsoil layer and the subsequent siltation of the vital coastal creeks and coral reefs (Department of Agriculture, 2026).

To combat soil degradation and ensure sustainable land resource management, the territorial administration aggressively enforces strict regulations against slope cultivation and promotes highly specialized, climate-resilient agro-forestry models. Farmers in the North and Middle Andaman district are heavily subsidized and technically supported to transition away from soil-depleting, short-term crops toward sustainable, multi-tiered plantation systems utilizing deep-rooted crops like arecanut, coconut, and specialized spices. Furthermore, the administration heavily funds localized watershed management projects, constructing specialized contour trenches, vegetative bio-terraces, and gabion structures to aggressively slow the velocity of surface water runoff, enhance crucial groundwater percolation, and anchor the fragile topsoil to the steep hillsides. Effective land resource management in the Andaman and Nicobar Islands ultimately requires the absolute, non-negotiable recognition that land is the territory's most finite and irreplaceable asset, and any conversion of its use must be justified by overwhelming, sustainable, and long-term public benefit.

13.3 Water Bodies, Wetlands and River Ecosystem Health

The hydrological profile and the health of the aquatic ecosystems in the Andaman and Nicobar Islands are defined by a complex, highly fragile interplay between abundant seasonal rainfall, the absolute absence of major continental river systems, and the pervasive, overwhelming influence of the surrounding oceanic environment. The management of water bodies and wetlands in this territory is not merely an environmental priority. It is the fundamental, existential prerequisite for ensuring drinking water security, sustaining agricultural productivity, and protecting the rich marine biodiversity that forms the economic backbone of the archipelago. In 2026, the territorial administration faces severe, escalating challenges in maintaining the ecological health of these vital, highly sensitive aquatic resources against the dual threats of rapid, unipolar urbanization and global climate change.

The territory is fundamentally characterized by a total lack of large, perennial, glacier-fed or massive basin-fed river systems. The undulating, highly fragmented topography allows only for the formation of short, fast-flowing, and highly seasonal streams. The Kalpong River, located in the North Andaman district, is the only watercourse in the entire archipelago that is officially classified as a river and hosts the territory's singular hydroelectric dam project. The vast majority of the freshwater supply relies on the collection of monsoon runoff in natural and artificially constructed surface reservoirs, shallow dug wells, and localized, highly vulnerable freshwater swamps. The ecological health of these small-scale water bodies is highly precarious. In the rapidly urbanizing and densely populated South Andaman district, natural freshwater ponds and minor streams are constantly threatened by illegal solid waste dumping, encroachment for unauthorized residential construction, and the direct, unregulated discharge of untreated domestic greywater and raw sewage, which leads to severe eutrophication and the complete biological death of the localized aquatic ecosystems (Andaman Public Works Department, 2026).

Wetlands in the Andaman and Nicobar Islands are predominantly coastal and estuarine, and they represent some of the most biologically productive and ecologically critical landscapes in the Indian Ocean. The territory boasts an incredibly extensive and highly diverse network

of mangrove ecosystems, which line the intricate, winding tidal creeks, the sheltered bays, and the expansive mudflats. These mangrove forests are absolutely vital ecological assets. They function as highly effective, natural bio-shields, aggressively dissipating the kinetic energy of devastating storm surges, powerful cyclonic waves, and tsunamis, thereby providing critical physical protection to the inland human settlements and agricultural zones. Furthermore, the complex, submerged root systems of the mangroves serve as indispensable, nutrient-rich nurseries for a vast array of commercially important marine fish species, crustaceans, and molluscs, making the health of the mangroves directly proportional to the economic success of the local fisheries sector (Wildlife Institute of India, 2026).

However, the ecological health of these vital coastal wetlands is subjected to continuous, multifaceted stress. While large-scale, commercial clearing of mangroves is strictly and successfully prohibited under the forest conservation laws, localized degradation occurs due to the unauthorized expansion of human settlements along the creek edges, illegal sand mining, and the unregulated harvesting of mangrove timber for domestic fuel and small-scale boat construction by peripheral communities. More significantly, the wetlands are highly vulnerable to the insidious impacts of systemic marine pollution. Oil spills from the massive volume of inter-island and international maritime traffic, alongside the chronic discharge of untreated bilge water, frequently contaminate the sensitive mudflats, suffocating the pneumatophores of the mangrove trees and causing extensive, localized die-offs. The territorial administration must deploy highly specialized, continuously mobile coastal marine police units and utilize advanced, high-resolution satellite imagery to detect and immediately prosecute any unauthorized interference with these critical wetland environments.

A highly specialized and intensely vulnerable subset of the territory's water bodies is the freshwater lenses found in the low-lying, flat coral islands, particularly within the Nicobar district. In these specific islands, fresh rainwater percolates through the highly porous coral sand and floats naturally in a delicate, convex lens shape directly above the denser, underlying saline seawater. These fragile freshwater lenses serve as the absolute, sole source of drinking water for the indigenous tribal populations and the local flora. In 2026, the ecological stability of these lenses is severely and immediately threatened by global climate change. The projected, accelerating rise in global sea levels inevitably increases the hydrostatic pressure of the underlying seawater, aggressively pushing the saline boundary upward and irreversibly contaminating the vital freshwater reserves. Furthermore, the increasing frequency of intense storm surges can result in the catastrophic, rapid overwashing of the islands with seawater, destroying the freshwater lens completely. Protecting these unique hydrological features requires absolute, rigorous restrictions on groundwater extraction and the urgent implementation of advanced, supplementary rainwater harvesting and decentralized desalination technologies to ensure the survival of the communities residing on these highly vulnerable coral atolls (Central Ground Water Board, 2026).

13.4 Mining and Mineral Resource Governance

The governance of mining and the extraction of mineral resources in the Union Territory of the Andaman and Nicobar Islands represents a highly restrictive, legally constrained, and

environmentally uncompromising administrative framework. Unlike the resource-rich, heavy-industry-focused states of the Indian mainland such as Odisha or Jharkhand, where large-scale mining constitutes a massive percentage of the state revenue and gross domestic product, the archipelago entirely prohibits the commercial extraction of heavy minerals, fossil fuels, or precious metals. The geological composition of the islands does not support massive, commercially viable deposits of coal, iron ore, or bauxite. More importantly, the overarching, absolute national policy imperative to preserve the extreme biodiversity, the fragile tropical forest cover, and the pristine, highly sensitive coastal ecosystems dictates that large-scale, disruptive mining operations can never be permitted within the territory. In 2026, the scope of mineral resource governance is therefore strictly, exclusively confined to managing the extraction, importation, and regulation of basic construction materials, specifically sand and coarse aggregate stone, which are vital for local infrastructure development.

The most acute, persistent, and environmentally destructive challenge in this sector revolves around the sourcing and regulation of construction sand. Historically, the territory relied heavily on the highly destructive practice of coastal and beach sand mining to meet the demands of local construction and infrastructure projects. This unregulated extraction led to devastating, highly visible environmental consequences. The systematic removal of sand from the beaches directly triggered severe coastal erosion, destroyed the vital nesting habitats of globally endangered marine turtles, accelerated the degradation of adjacent fringing coral reefs through heavy sedimentation, and significantly increased the vulnerability of coastal settlements to cyclonic storm surges. Recognizing the catastrophic ecological costs of this practice, the territorial administration and the judicial system intervened decisively, completely and permanently banning all forms of commercial beach and coastal sand mining across the entire archipelago (Ministry of Environment, Forest and Climate Change, 2026).

While this total ban was an absolute ecological necessity, it immediately precipitated a massive, paralyzing crisis in the local construction industry and severely delayed critical public infrastructure projects. To resolve this manufactured scarcity, the administration was forced to mandate the expensive, logistically complex importation of river sand and processed construction sand from the Indian mainland, and occasionally from international sources in Southeast Asia. This reliance on maritime importation significantly exacerbates the "island premium," drastically inflating the cost of all civil engineering projects, housing developments, and strategic military construction. Despite the strict legal prohibitions, the high cost of imported sand creates a highly lucrative black market, leading to isolated, clandestine instances of illegal sand mining in remote, unmonitored coastal creeks under the cover of darkness. The territory's law enforcement and forest protection agencies must maintain continuous, highly aggressive vigilance to suppress this illegal extraction network, utilizing coastal patrols and severe punitive measures to deter environmental vandalism.

To sustainably address the crushing demand for construction materials without relying exclusively on expensive imports, the administration in 2026 is aggressively promoting and subsidizing the adoption of alternative, sustainable building materials and advanced manufacturing technologies. The primary focus is on the localized, highly regulated production of Manufactured Sand (M-Sand). The administration cautiously issues highly

restricted, heavily monitored permits for the operation of specialized stone crushers and M-Sand manufacturing units in designated, non-forest, non-coastal rocky outcrops, primarily in the South Andaman district. These operations are subjected to extreme, uncompromising environmental scrutiny, requiring mandatory dust suppression systems, strict noise pollution controls, and continuous monitoring to ensure they do not contaminate adjacent water bodies or disrupt nearby human settlements (Andaman Public Works Department, 2026).

Furthermore, the territory is actively exploring the integration of sustainable, circular-economy principles within the construction sector. The administration heavily encourages the recycling and reuse of construction and demolition waste, mandating that all major civil contracts include provisions for utilizing processed debris as sub-base material for road construction and land leveling. As the central government accelerates the execution of mega-infrastructure projects like the Great Nicobar Holistic Development Project, the demand for aggregate and sand will reach unprecedented, massive volumes. The mineral resource governance framework must ensure that the enormous material requirements of these strategic projects do not trigger a localized ecological collapse. The government must legally enforce that the vast majority of the construction materials for these mega-projects are sourced entirely from the mainland or certified sustainable international suppliers, absolutely guaranteeing that the strategic modernization of the territory is not built upon the destruction of its own fragile geological and coastal foundations (NITI Aayog, 2026).

13.5 Pollution: Air, Water, Noise and Soil - Status and Regulatory Response

The management and mitigation of environmental pollution in the Union Territory of the Andaman and Nicobar Islands require a highly specialized, intensely vigilant regulatory approach. While the territory is famously devoid of the massive, polluting heavy industries, toxic chemical plants, and choking metropolitan smog that plague the major cities of the Indian mainland, the archipelago is absolutely not immune to severe, localized, and highly damaging forms of pollution. The extreme fragility of the closed island ecosystems means that even relatively minor, localized pollution events can trigger devastating, cascading ecological consequences that threaten public health, destroy marine biodiversity, and severely undermine the territory's premier status as a pristine eco-tourism destination. In 2026, the Andaman and Nicobar Pollution Control Committee operates as the primary regulatory authority, tasked with monitoring and controlling complex, multi-dimensional pollution sources driven by rapid urbanization, massive reliance on fossil fuels, and expansive maritime logistics.

Air pollution in the territory is highly localized and predominantly concentrated within the densely populated urban limits of the South Andaman district. The absolute, structural reliance on imported High-Speed Diesel for base-load electricity generation constitutes the single largest, continuous source of harmful atmospheric emissions. The decentralized network of aging, often inefficient diesel powerhouses operated by the Electricity Department continuously emits significant, concerning volumes of particulate matter, sulfur dioxide, and nitrogen oxides directly into the surrounding residential and commercial environments. This continuous emission severely degrades localized air quality and poses long-term, documented

respiratory health risks to the urban population. Furthermore, the explosive, unregulated growth of private vehicular traffic in Port Blair, characterized by thousands of two-wheelers and a massive fleet of diesel-powered tourist taxis navigating narrow, congested, and hilly roads, significantly exacerbates urban air pollution. The administration's regulatory response involves enforcing strict, rigorous emission testing for all commercial vehicles, heavily subsidizing the rapid adoption of electric buses for public transit, and desperately attempting to accelerate the transition of the power grid toward utility-scale solar and battery storage solutions to permanently eliminate the noxious reliance on diesel combustion (Ministry of Power, 2026).

Water pollution represents the most immediate, severe, and biologically destructive environmental threat facing the archipelago. The near-total lack of comprehensive, centralized underground sewerage networks and advanced, high-capacity Sewage Treatment Plants in the rapidly expanding capital of Port Blair results in the continuous, highly hazardous discharge of untreated or partially treated raw domestic sewage directly into the open municipal storm drains. These drains subsequently empty this toxic, pathogen-rich effluent directly into the coastal bays, tidal creeks, and sensitive near-shore marine environments. This chronic, severe contamination leads to rapid coastal eutrophication, triggers highly destructive, oxygen-depleting algal blooms, and physically suffocates the highly sensitive, light-dependent coral reef ecosystems situated adjacent to the urban centres. Additionally, the massive volume of inter-island shipping, commercial cargo vessels, and commercial fishing trawlers introduces a severe, continuous risk of localized marine pollution through the illegal, highly damaging discharge of oily bilge water, raw ballast water, and accidental, localized fuel spills. The Pollution Control Committee must heavily enforce zero-liquid-discharge mandates for all luxury coastal resorts, aggressively monitor maritime vessels for compliance with international anti-pollution protocols, and accelerate the desperately needed, capital-intensive deployment of decentralized sewage treatment infrastructure under the AMRUT mission (Andaman and Nicobar Pollution Control Committee, 2026).

Noise pollution is an increasingly pervasive, yet frequently ignored, environmental stressor that negatively impacts both the human population and the highly sensitive endemic wildlife. In the urban areas, the constant, low-frequency drone generated by the massive, captive diesel backup generators utilized by almost every single large commercial establishment and luxury hotel to counteract grid instability creates a pervasive, highly disruptive acoustic environment. More critically, the rapid expansion of high-speed motorized marine transport, powerful commercial shipping, and mechanized naval operations introduces severe, highly disruptive anthropogenic noise pollution directly into the marine environment. This underwater acoustic pollution significantly interferes with the complex, vital echolocation and communication systems of highly endangered, protected marine mammals, including dolphins and the vulnerable Dugong populations. The regulatory response requires strictly mandating the use of highly advanced acoustic enclosures for all new commercial diesel generators and implementing strictly enforced, reduced-speed zones for all motorized vessels operating in proximity to known, mapped marine mammal habitats and sensitive Marine Protected Areas (Wildlife Institute of India, 2026).

Soil pollution in the territory is primarily driven by localized, highly concentrated improper solid waste management and unscientific agricultural practices. The historical, decades-long reliance on the unscientific, open dumping of mixed municipal solid waste at legacy sites like Brookshabad generated massive, unquantifiable volumes of highly toxic, heavy-metal-laced leachate. During the heavy monsoon rains, this toxic leachate actively percolates deep into the porous soil profile, severely and irreversibly contaminating the underlying shallow groundwater aquifers and poisoning the adjacent coastal ecosystems. In the agricultural settlements of the North and Middle Andaman district, the historical, unregulated overuse of imported chemical fertilizers and highly toxic synthetic pesticides in intensive cash crop plantations led to localized soil degradation and harmful chemical runoff into the streams. The administration is combating this by executing massive, highly expensive bio-mining operations to completely eliminate legacy waste dumps, aggressively enforcing mandatory waste segregation at source, and providing massive financial and technical subsidies to aggressively promote a territory-wide transition to 100 per cent organic farming practices, ensuring that the soil remains unpolluted and capable of supporting sustainable, clean agriculture for future generations (Ministry of Environment, Forest and Climate Change, 2026).

13.6 Coastal and Marine Resource Management

The coastal and marine resources of the Union Territory of the Andaman and Nicobar Islands constitute the absolute, undisputed, and most immensely valuable economic and ecological foundation of the entire archipelago. The territory commands an unimaginably vast Exclusive Economic Zone covering approximately 600,000 square kilometres of the Bay of Bengal and the Andaman Sea. This oceanic expanse accounts for nearly thirty per cent of India's total maritime zone and represents a staggering, largely unexploited frontier of geopolitical influence, immense biological wealth, and massive future economic potential. In 2026, the highly sophisticated, science-driven management of these marine resources is the central, dominating pillar of the territory's strategic vision. The administration must flawlessly execute a highly complex, precarious balance: rapidly developing a highly lucrative, technologically advanced sustainable blue economy while simultaneously executing absolute, uncompromising protection of the hyper-fragile coral reef ecosystems and combating severe, escalating international maritime threats.

The coral reef ecosystems surrounding the islands are universally recognized as some of the most pristine, highly diverse, and biologically complex in the entire Indian Ocean region. They provide absolutely critical, irreplaceable habitats for thousands of species of marine flora and fauna, act as massive, natural coastal defence bio-shields against catastrophic oceanic swells, and serve as the fundamental, irreplaceable visual attraction driving the entire premium eco-tourism industry. However, these vital ecosystems are currently facing severe, escalating, and existential threats driven directly by global climate change. Over the past two decades, the reefs have suffered through multiple, devastating, mass coral bleaching events, most notably during the severe El Nino anomalies in 2010, 2016, and recent, highly concerning oceanic heatwaves leading up to 2026. These catastrophic bleaching events, triggered by sustained, abnormally elevated sea surface temperatures and worsening ocean

acidification, cause the corals to expel their symbiotic algae, leading to massive, localized coral mortality and the rapid collapse of the associated marine food webs. The administration, operating in close coordination with the Zoological Survey of India and specialized marine research institutes, is forced to deploy highly advanced, continuous oceanic monitoring buoys to track precise thermal stress levels and is actively experimenting with highly complex, localized coral reef restoration and transplantation techniques utilizing heat-resilient coral genotypes to attempt to salvage damaged reef tracts (Ministry of Earth Sciences, 2026).

The management of the immense fisheries resources within the Exclusive Economic Zone requires highly sophisticated, rigorous regulation and massive, modernized infrastructural development. The oceanic waters are incredibly rich in highly valuable, commercially lucrative pelagic fish species, particularly yellowfin and skipjack tuna. However, the domestic extraction of these deep-sea resources by local island fishermen remains dismally low, primarily due to an absolute, crippling lack of capital investment in modern, highly mechanized deep-sea trawlers, the complete absence of advanced navigational technology, and a severe deficit in international-standard cold chain processing infrastructure. Consequently, this massive resource void is frequently and aggressively exploited by highly organized, heavily mechanized foreign fishing vessels engaging in severe Illegal, Unreported, and Unregulated (IUU) fishing operations. The Indian Coast Guard and the Indian Navy must maintain continuous, highly aggressive, and expensive maritime and aerial patrols to forcefully intercept, apprehend, and confiscate these foreign poachers, who routinely steal massive volumes of high-value fish and frequently harvest protected marine species like sea cucumbers and shark fins, causing immense, unquantifiable ecological and economic damage to the Indian state (Ministry of Defence, 2026).

To legally and securely capitalize on the blue economy, the territorial administration in 2026 is aggressively formulating and executing a comprehensive, highly capitalized Deep-Sea Fishing Policy. This ambitious policy explicitly aims to heavily subsidize the modernization of the domestic fishing fleet, actively attract massive private corporate investment to build state-of-the-art, export-oriented seafood processing hubs in designated northern coastal corridors, and strictly implement rigorous, scientifically determined sustainable catch quotas to absolutely ensure that the pelagic fish stocks are never driven to commercial collapse. Furthermore, the governance architecture relies heavily on the strict maintenance and expansion of an extensive network of highly protected Marine Protected Areas (MPAs). Flagship reserves, such as the Mahatma Gandhi Marine National Park in Wandoor and the Rani Jhansi Marine National Park, serve as absolute, inviolate ecological sanctuaries and critical scientific baselines. Within these strictly demarcated zones, all forms of commercial fishing, industrial extraction, and unregulated human activity are completely, legally prohibited. These MPAs provide highly secure, undisturbed breeding grounds and vital, safe biological spillover zones that naturally replenish and sustain the fish populations in the adjacent, regulated commercial fishing areas, ensuring the long-term, biological viability of the entire marine ecosystem (Department of Fisheries, 2026).

The ultimate, overarching success of coastal and marine resource management in the Andaman and Nicobar Islands depends entirely on executing a highly integrated,

scientifically rigorous, and technologically advanced spatial planning approach. The administration must absolutely ensure that the massive, highly disruptive maritime infrastructure projects, particularly the proposed international transshipment terminal and the associated massive capital dredging operations in Great Nicobar, do not irreversibly destroy the critical nesting beaches of globally endangered marine turtles, devastate the fragile coastal seagrass meadows, or permanently alter the complex, life-sustaining near-shore hydrodynamic currents. By seamlessly and intelligently merging advanced, satellite-driven oceanic research, aggressive, uncompromising maritime law enforcement against foreign poachers, and highly inclusive, community-based sustainable fisheries management, the territory can successfully transform its vast, intimidating oceanic isolation from a historical administrative liability into its most powerful, globally significant, and highly lucrative natural asset by 2047.

Chapter 14: Climate Change and Ecological Security

The Union Territory of the Andaman and Nicobar Islands stands at the absolute frontline of global climate change impacts within the Republic of India. The geographical reality of an archipelago composed of hundreds of low-lying islands scattered across the Bay of Bengal makes the territory extraordinarily susceptible to minute shifts in global climate patterns. In the current assessment year of 2026, the administration can no longer treat climate change as a distant theoretical possibility. It is an immediate, existential crisis that permeates every aspect of territorial planning, from infrastructure development and maritime security to agricultural sustainability and indigenous tribal protection. The surrounding oceanic environment, which has historically served as a protective barrier and a source of immense natural wealth, is rapidly transforming into a source of unprecedented vulnerability. Rising sea surface temperatures, escalating ocean acidification, accelerating sea-level rise, and the increasing frequency of highly intense tropical cyclones threaten to permanently alter the physical and biological boundaries of the islands. As the territory embarks on executing massive, multi-billion-dollar strategic and economic mega-projects leading up to the centennial developmental vision of 2047, incorporating aggressive, science-driven climate adaptation and disaster risk reduction frameworks is not an optional policy additive. It is the fundamental, non-negotiable prerequisite for ensuring that the islands remain physically habitable and economically viable. This comprehensive chapter provides a highly rigorous, exhaustive, and technical analysis of the territory's climate vulnerability profile, evaluating the existing institutional preparedness, the complex disaster response mechanisms, and the intricate structural challenges associated with transitioning the vulnerable island economy toward a sustainable, resilient green paradigm.

14.1 State Climate Vulnerability and Risk Profile

The climate vulnerability and risk profile of the Andaman and Nicobar Islands is profoundly complex and structurally differentiated from the climate challenges facing the contiguous landmass of the Indian mainland. The archipelago exhibits a multifaceted vulnerability that threatens its terrestrial biodiversity, its critical marine ecosystems, its scarce freshwater resources, and its densely populated coastal human settlements. According to comprehensive climate modeling and vulnerability assessments published by the Indian National Centre for Ocean Information Services in 2026, the territory is legally and scientifically classified as a highly vulnerable coastal zone subject to compounding, cascading environmental stressors (Ministry of Earth Sciences, 2026). The overarching driver of this extreme vulnerability is the unrelenting, mathematically measurable acceleration of global sea-level rise.

Because the vast majority of the inhabited islands possess very narrow, low-lying coastal plains where the bulk of the civic infrastructure, historical settlements, and agricultural lands are concentrated, even a marginal increase in the mean sea level results in disproportionately massive, devastating inland inundation. The administration continuously observes highly alarming, accelerating rates of coastal erosion across the South Andaman district and the highly exposed islands of the Nicobar group. This erosion is not a slow, geological process but a rapid, observable destruction of valuable landmass. Critical public infrastructure,

including sections of the Andaman Trunk Road, coastal jetties, and primary health centres located near the high-tide line, face continuous, escalating threats of physical collapse into the ocean. Furthermore, the rising sea levels exert immense, inexorable hydrostatic pressure on the delicate, highly porous coastal aquifers, driving toxic saltwater intrusion deep into the vital freshwater lenses that serve as the sole source of potable drinking water for thousands of islanders. This salinization permanently destroys agricultural viability in the coastal margins and forces the administration to rely on highly expensive, energy-intensive desalination plants to prevent localized humanitarian crises (Central Ground Water Board, 2026).

Beyond the physical encroachment of the ocean, the territory is highly vulnerable to severe, rapid disruptions in its fundamental meteorological cycles. The Andaman and Nicobar Islands historically relied on a highly predictable, stable monsoon pattern to sustain their agricultural output and replenish their scarce surface water reservoirs. However, in 2026, climate change has introduced profound, destructive volatility into this system. The territory increasingly experiences highly erratic rainfall distribution, characterized by sudden, localized, extremely intense torrential downpours followed by uncharacteristically prolonged, scorching dry spells. These intense downpours rapidly overwhelm the natural drainage capacities of the steep, hilly terrains, triggering massive, lethal landslides and severe flash flooding in the densely populated, poorly planned peri-urban valleys of Port Blair. Conversely, the extended dry periods exacerbate the acute summer water scarcity, leading to widespread agricultural crop failures and placing immense physiological stress on the endemic flora and fauna of the primary rainforests, which are evolutionarily adapted to constant, high moisture levels (India Meteorological Department, 2026).

The marine ecosystem, which forms the absolute biological and economic foundation of the territory, faces arguably the most immediate and catastrophic climate-driven threat. The expansive, highly diverse coral reefs surrounding the archipelago are exquisitely sensitive to minute variations in their ambient environment. The continuous, steady increase in sea surface temperatures, punctuated by frequent, intense oceanic heatwaves, has triggered multiple, massive coral bleaching events across the territory. When the surrounding water temperatures remain abnormally elevated, the corals expel their vital, symbiotic zooxanthellae algae, leading to widespread coral mortality and the rapid, devastating collapse of the associated, complex marine food webs. Concurrently, the increasing absorption of anthropogenic carbon dioxide by the ocean leads to progressive ocean acidification. This acidification severely inhibits the fundamental biological ability of the corals to precipitate calcium carbonate and construct their complex skeletal structures, fundamentally compromising their ability to recover from bleaching events and storm damage. The degradation of these reef systems permanently destroys critical breeding habitats for commercially valuable pelagic fish, devastating the local artisanal fisheries sector, and removes the massive natural bio-shields that protect the fragile coastlines from the kinetic energy of oceanic swells and tsunamis (National Institute of Oceanography, 2026).

14.2 State Action Plan on Climate Change: Review and Second Generation Reforms

The initial State Action Plan on Climate Change for the Andaman and Nicobar Islands was formulated over a decade ago as a foundational policy document designed to align the territory's environmental strategies with the broader, overarching objectives of the National Action Plan on Climate Change. This first-generation document successfully served to identify baseline vulnerabilities, initiate basic, localized scientific monitoring, and embed the concept of climate adaptation into the vocabulary of the local administrative bureaucracy. However, a rigorous, uncompromising review of this initial framework in the context of the highly accelerated, compounding climate realities of 2026 reveals profound, systemic inadequacies. The initial plan was largely theoretical, chronically underfunded, and fundamentally lacked the strict, legally binding operational mandates required to enforce compliance across diverse government departments. It treated climate change primarily as an isolated environmental issue managed exclusively by the Department of Environment and Forests, rather than recognizing it as an overarching, macroeconomic existential threat that must dictate all infrastructural and developmental planning across the archipelago.

Recognizing these severe, structural shortcomings, the territorial administration, guided by stringent mandates from the central government, is currently executing a comprehensive, aggressive overhaul of its climate strategy, rolling out a highly detailed, technologically advanced Second Generation State Action Plan on Climate Change. This updated, modernized framework fundamentally shifts the administrative paradigm from passive vulnerability observation to aggressive, proactive climate resilience engineering. The absolute core of this second-generation reform is the strict, legally mandated mainstreaming of climate risk assessments into every single public expenditure and infrastructure approval process. No major civil engineering project, port expansion, or luxury eco-tourism resort development can be sanctioned without demonstrating absolute, scientifically verified compliance with newly established, highly rigorous climate resilience building codes specifically tailored for extreme tropical maritime environments (Ministry of Environment, Forest and Climate Change, 2026).

A critical, transformative component of the updated action plan involves a massive, capital-intensive transition toward renewable energy independence. As detailed extensively in the energy chapters of this report, the territory's historical, unyielding reliance on imported high-speed diesel for base-load electricity generation is both a massive fiscal liability and a profound, unacceptable contradiction of the territory's climate mitigation commitments. The second-generation reforms legally bind the administration to aggressive, non-negotiable targets for phasing out diesel combustion. This transition requires the rapid, large-scale deployment of advanced, highly resilient solar-wind-battery hybrid micro-grids, massive investments in floating solar photovoltaic arrays on existing reservoirs, and the active exploration of advanced ocean thermal energy conversion technologies. By forcefully decarbonizing its energy grid, the territory aims to significantly reduce its localized greenhouse gas emissions while simultaneously achieving vital energy security and isolating the local economy from the extreme volatility of global fossil fuel markets (Ministry of New and Renewable Energy, 2026).

Furthermore, the updated action plan mandates a radical, highly strategic shift in agricultural and hydrological management practices. The administration is aggressively subsidizing and heavily promoting the widespread adoption of climate-smart agricultural techniques among the rural settler communities. This includes introducing newly developed, highly saline-tolerant and drought-resistant varieties of traditional cash crops, enforcing the mandatory installation of precision micro-irrigation systems to maximize water use efficiency, and promoting sustainable, integrated agro-forestry models that enhance soil moisture retention and prevent severe erosion on the steep hill slopes. In the realm of hydrological security, the plan legally mandates universal, compulsory rainwater harvesting for all structures, heavily funds the protection and restoration of critical coastal mangrove wetlands to serve as natural bio-shields, and accelerates the strategic deployment of decentralized, energy-efficient seawater desalination plants to guarantee drinking water security against the relentless encroachment of saline groundwater (Department of Agriculture, 2026). The success of this second-generation plan depends entirely on establishing a highly empowered, legally binding central coordinating authority capable of mercilessly breaking down bureaucratic silos and ensuring that climate resilience becomes the absolute, overriding priority of every single administrative action in the territory.

14.3 Disaster Risk Profile: Hazard, Exposure and Vulnerability Mapping

The disaster risk profile of the Union Territory of the Andaman and Nicobar Islands is unequivocally one of the most severe, complex, and potentially catastrophic within the entire Republic of India. The archipelago sits at the volatile, highly active tectonic intersection of the Indian and Burmese plates, making it exquisitely vulnerable to massive, devastating geological events. Concurrently, its location in the open expanse of the Bay of Bengal exposes it entirely to some of the most intense, destructive meteorological phenomena on the planet. In 2026, constructing a highly accurate, granular, and continuously updated hazard, exposure, and vulnerability map is the absolute foundation of the territory's disaster management strategy. The administration utilizes advanced, high-resolution satellite imagery, continuous seismic monitoring networks, and complex hydrodynamic modeling to understand and anticipate the multitude of lethal threats that constantly surround the islands.

The most profound, terrifying, and historically destructive hazard facing the territory is its extreme vulnerability to massive, tsunamigenic earthquakes. The archipelago is geographically located squarely within Seismic Zone V, representing the absolute highest classification for earthquake risk in the country. The catastrophic, generation-defining memory of the 2004 Indian Ocean earthquake and the subsequent, devastating tsunami completely reshaped the geographical and demographic reality of the islands. That single, horrific event caused massive, permanent tectonic subsidence in the Nicobar group, permanently submerging vital coastal plantations, obliterating entire indigenous villages, and resulting in immense, irreplaceable loss of human life. The 2026 vulnerability mapping officially recognizes that the subduction zone adjacent to the islands remains highly active, holding the permanent, unyielding potential to unleash similar, catastrophic tectonic events at any given moment without significant prior warning. This continuous, lingering threat necessitates absolute, uncompromising adherence to strict seismic building codes for all new

construction and requires the perpetual, vigilant maintenance of highly advanced, rapid-response early warning systems capable of instantly broadcasting evacuation alerts to the most remote coastal hamlets (National Disaster Management Authority, 2026).

Beyond the sudden, unpredictable terror of tectonic events, the territory faces a continuous, escalating threat from highly intense, destructive tropical cyclones. The Bay of Bengal is globally recognized as a highly active, volatile basin for cyclogenesis. The Andaman and Nicobar Islands frequently sit directly in the primary, destructive path of these massive, swirling storm systems as they gather immense energy over the warm ocean waters before striking the Indian mainland or the Southeast Asian coast. The high-velocity hurricane-force winds associated with these cyclones routinely cause massive, widespread devastation to the territory's fragile, above-ground electrical distribution grid, completely destroy lightweight rural housing structures, and cause catastrophic, localized deforestation. However, the most lethal, highly destructive component of these cyclones is the associated massive storm surge. The territory's vulnerability mapping explicitly highlights that a massive proportion of the total population, the vital port infrastructure, and the critical tourism assets are located mere metres above the mean sea level. A significant, towering storm surge has the absolute, terrifying potential to completely, violently inundate these low-lying coastal zones, destroying essential civilian infrastructure, obliterating coastal agricultural fields with toxic salinity, and causing immense, widespread loss of life. The increasing intensity and frequency of these cyclonic events, driven directly by climate change, mandate that the administration heavily fortifies its critical, life-saving coastal infrastructure (India Meteorological Department, 2026).

Furthermore, the highly specific topography of the inhabited islands introduces severe, localized, and highly lethal hazards. The steep, heavily undulating hillsides, particularly within the densely populated urban and peri-urban zones of the South Andaman district, are incredibly susceptible to massive, highly destructive landslides. The rapid, often unregulated, and poorly engineered construction of residential and commercial structures on these precarious slopes, combined with the severe, prolonged, and incredibly intense rainfall characteristic of the tropical monsoon, continuously destabilizes the lateritic soils. During extreme rainfall events, massive, lethal mudslides frequently obliterate informal, precarious settlements, completely sever critical, lifesaving arterial road networks like the Andaman Trunk Road, and cause profound, localized humanitarian crises. The exposure and vulnerability mapping rigorously dictates that the administration must aggressively and mercilessly restrict any further unauthorized construction on slopes exceeding safe gradients, heavily invest in highly engineered, massive concrete retaining structures, and actively relocate highly vulnerable, marginalized populations living in identified, mathematically proven high-risk landslide zones to safer, more stable topographies, thereby actively preventing entirely predictable, preventable mass casualties.

14.4 Disaster Risk Reduction: Institutional Mechanisms and Preparedness

Effectively executing Disaster Risk Reduction in an incredibly remote, highly fragmented, and logistically fragile archipelagic environment requires an institutional mechanism that is

not merely reactive, but exceptionally proactive, highly decentralized, and intensely integrated into the very fabric of local community life. The unique, challenging geography of the Andaman and Nicobar Islands dictates that relying exclusively on centralized, mainland-style rescue forces dispatched from Port Blair during a catastrophic emergency is a fundamentally flawed, highly dangerous, and mathematically doomed strategy. In the event of a massive, territory-wide catastrophe such as a severe tsunami or a direct strike by a super cyclone, all inter-island maritime and aerial communication and transportation links are instantly, inevitably, and completely severed. Therefore, in 2026, the absolute, core philosophy driving the territory's disaster preparedness framework is the aggressive, systematic empowerment and the intense, continuous capacity building of the localized, isolated communities to function as the highly capable, fully equipped first responders during the critical, life-or-death golden hours immediately following a disaster.

The apex, central coordinating body for this massive undertaking is the Andaman and Nicobar State Disaster Management Authority, which operates under the direct, authoritative chairmanship of the Lieutenant Governor. This powerful authority is legally mandated to formulate the comprehensive, highly detailed State Disaster Management Plan, strictly enforce rigorous, unyielding compliance with disaster-resilient building codes, and seamlessly, flawlessly coordinate complex, multi-agency preparedness exercises with the highly capable Andaman and Nicobar Command of the Indian Armed Forces. The massive, sophisticated military presence on the islands serves as an incredibly powerful, highly equipped, and absolutely indispensable force multiplier for civilian disaster response. The administration conducts regular, highly complex, and intensely realistic joint simulation exercises with the Indian Navy, the Indian Coast Guard, and the National Disaster Response Force. These rigorous, demanding exercises meticulously test the rapid, synchronized deployment of specialized search and rescue teams, the massive, complex aerial evacuation of mass casualties, and the rapid, efficient maritime delivery of massive volumes of critical relief materials to the most distant, isolated, and completely cut-off islands (Ministry of Home Affairs, 2026).

However, the true, functional bedrock of disaster preparedness lies at the absolute grassroots level, managed through the active, localized District Disaster Management Authorities and the deeply embedded, community-based disaster management committees. The territorial administration has aggressively and systematically established highly trained, dedicated task forces within every single recognized, remote Gram Panchayat and highly vulnerable tribal settlement. These local, dedicated community volunteers undergo rigorous, continuous, and highly specialized training in advanced first aid techniques, complex search and rescue operations within collapsed structures, and the efficient, equitable management of emergency relief shelters. Recognizing that modern, sophisticated communication networks will inevitably fail during a severe, catastrophic event, the administration has extensively deployed highly resilient, hardened satellite phone terminals and specialized, robust HAM radio networks to these remote, isolated local committees. This vital, resilient communication architecture ensures that the decentralized communities can reliably transmit critical, life-saving distress signals and highly accurate, localized damage assessments to the

centralized emergency operations centre in Port Blair, even when all conventional, commercial cellular networks are completely and permanently obliterated by the storm.

Furthermore, physical, structural preparedness is heavily and visibly prioritized through the massive, territory-wide construction and continuous, rigorous maintenance of highly specialized, multipurpose cyclone and tsunami shelters. These massive, highly engineered, heavily reinforced concrete structures are strategically and carefully located on highly elevated, mathematically proven safe ground, well beyond the reach of the maximum projected tsunami run-up zones and storm surges. These shelters are specifically designed to safely, comfortably accommodate hundreds of displaced, terrified residents during a severe, prolonged crisis and are fully equipped with independent, reliable solar power generation, massive, secure emergency water storage tanks, and substantial stockpiles of non-perishable, highly nutritious food and essential medical supplies. The administration also mandates and heavily enforces rigorous, highly realistic evacuation drills, particularly in the most vulnerable coastal schools, highly populated tourism hubs, and isolated tribal hamlets, ensuring that every single resident and transient visitor possesses an absolute, internalized understanding of precisely how to swiftly, safely reach higher ground the absolute instant an early warning siren is activated (National Disaster Management Authority, 2026).

14.5 Post-Disaster Response, Relief and Reconstruction Framework

The Post-Disaster Response, Relief, and Reconstruction Framework in the Union Territory of the Andaman and Nicobar Islands is rigorously designed to effectively manage and rapidly overcome the profound, unique logistical nightmares and extreme isolation that invariably follow a catastrophic, territory-wide event in the archipelago. When a severe disaster inevitably strikes, the immediate, paramount, and absolute priority of the territorial administration is to rapidly re-establish severed connectivity, conduct highly accurate, massive search and rescue operations, and deliver vital, life-sustaining relief to communities that are entirely physically cut off from the capital and the mainland. In 2026, the administration's post-disaster response protocols are highly refined, heavily militarized out of necessity, and deeply structured around the concept of rapid, massive, and highly coordinated maritime and aerial mobilization.

During the immediate, highly chaotic aftermath of a severe disaster, the specialized, highly equipped assets of the Andaman and Nicobar Command of the Indian Armed Forces are instantly, automatically mobilized to lead the massive relief operations. Because civilian maritime ferries and commercial airlines are invariably disabled or destroyed, military transport helicopters and specialized naval landing craft become the absolute, sole mechanisms available for accessing the devastated, remote islands. The administration rapidly and efficiently establishes a highly secure, centralized unified command structure, seamlessly integrating civilian disaster management officials with high-ranking military commanders to carefully, strategically prioritize complex evacuation flights, airdrop massive, vital food and medical supplies to totally isolated hamlets, and rapidly deploy specialized military engineering task forces to quickly clear blocked, vital arterial roads and urgently repair critically damaged, life-saving coastal jetties (Ministry of Defence, 2026). The speed,

efficiency, and sheer logistical muscle of this combined, integrated civil-military response are the absolute, non-negotiable determinants of human survival during the initial, critical days of a massive island crisis.

The equitable, transparent, and highly efficient distribution of relief materials presents a massive, incredibly complex administrative challenge in a highly fragmented, archipelagic environment. The territorial administration maintains massive, highly secure, deeply fortified strategic reserves of essential, non-perishable food grains, specialized emergency medicines, heavy-duty tarpaulins, and reliable water purification tablets at secure, highly elevated nodal points across all three districts. However, the physical, equitable delivery of these vital stockpiles to the displaced, desperate populations requires meticulous, highly accurate, and completely transparent administration. The government heavily leverages the territory's comprehensive digital infrastructure to carefully identify authenticated beneficiaries and actively prevent the hoarding or inequitable distribution of critical relief supplies. In the unique, highly sensitive context of the tribal reserves in the Nicobar district, the administration ensures that all relief distribution is conducted strictly through the traditional, highly respected tribal councils, absolutely guaranteeing that the external assistance is culturally appropriate, highly sensitive, and completely equitable within the indigenous community structures (Directorate of Disaster Management, 2026).

The long-term, massive reconstruction phase following a severe disaster is not merely focused on simply rebuilding what was lost; it is fiercely driven by the overarching, absolute principle of "Building Back Better." The catastrophic, historically unprecedented devastation caused by the 2004 tsunami provided the territory with brutal, unforgettable lessons regarding the fatal consequences of inadequate, vulnerable coastal engineering and poor spatial planning. In 2026, any post-disaster reconstruction effort is strictly, legally mandated to incorporate highly advanced, rigorous, climate-resilient engineering principles. Completely destroyed coastal housing must be systematically relocated far beyond newly mapped, highly accurate hazard zones, or it must be radically redesigned utilizing specialized, elevated stilted architecture specifically and scientifically engineered to allow massive, destructive storm surges to pass harmlessly underneath the living structures. Similarly, all critical, life-saving public infrastructure, such as vital power generation stations, essential primary health clinics, and critical communication hubs, must be robustly rebuilt on elevated, mathematically proven safe ground, fully equipped with highly reliable, redundant, and secure renewable energy backup systems. This relentless, uncompromising focus on highly resilient, advanced reconstruction ensures that the territory does not merely recover from a disaster, but fundamentally and permanently reduces its structural vulnerability to all future, inevitable climatic and tectonic events, thereby securing its long-term physical and economic survival.

14.6 Green Economy Transition: Opportunities and Structural Challenges

The transition toward a fully sustainable, highly resilient Green Economy in the Union Territory of the Andaman and Nicobar Islands is not merely a noble, aspirational environmental goal; it is the absolute, existential, and non-negotiable prerequisite for securing the long-term economic prosperity and physical survival of the archipelago. The

territory's historical, deeply entrenched, and highly toxic economic reliance on massive, imported fossil fuels, highly vulnerable maritime supply chains, and highly disruptive, unscientific resource extraction is fundamentally incompatible with the fragile, highly sensitive realities of the island ecosystems and the escalating, terrifying threats posed directly by global climate change. In 2026, the territorial administration is aggressively attempting to execute a profound, highly complex, and incredibly difficult structural transformation, pivoting the entire island economy toward sustainable, high-value, green sectors that actively harmonize aggressive economic growth with absolute, uncompromising ecological preservation.

The most visible, highly lucrative, and actively promoted opportunity for this massive green transition lies directly in the comprehensive development of the premium, high-value eco-tourism sector. The administration is aggressively and deliberately moving away from the highly destructive, low-margin, high-volume mass tourism model that historically overwhelmed the fragile, limited local infrastructure and generated massive, unmanageable solid waste crises. The new, highly regulated strategic focus is entirely on attracting discerning, high-net-worth international and domestic tourists who are willing to pay massive premiums for exclusive, pristine, and highly sustainable ecological experiences. This strategic pivot involves auctioning prime, highly valuable coastal land to major global luxury hospitality chains under incredibly strict, legally binding environmental mandates. These exclusive luxury resorts are strictly required to operate as completely zero-emission, highly self-sufficient entities, utilizing massive captive solar power arrays, advanced, decentralized zero-liquid-discharge wastewater treatment plants, and sophisticated, hyper-local organic food sourcing. This premium, low-volume eco-tourism model generates significantly higher, sustained revenue for the territory while actively, mathematically minimizing the physical, destructive footprint on the fragile beaches and highly sensitive coral reefs (Ministry of Tourism, 2026).

Furthermore, the territory possesses immense, largely untapped, and highly lucrative potential in successfully developing a sustainable, technologically advanced Blue Economy. The vast, incredibly rich Exclusive Economic Zone surrounding the islands offers massive, sustainable opportunities for the highly regulated, scientific extraction of valuable marine resources. The administration is actively and aggressively soliciting massive private capital investments to establish highly modernized, sustainable deep-sea fishing fleets, specialized, high-tech export-oriented seafood processing hubs, and advanced, environmentally safe marine aquaculture facilities. Crucially, this aggressive marine development must be coupled with incredibly strict, scientifically determined catch limits, extensive, highly protected marine sanctuaries, and rigorous, continuous monitoring to absolutely ensure that the highly valuable pelagic fish stocks are never overexploited. Additionally, the islands hold immense, exciting potential for the development of a highly specialized, cutting-edge marine biotechnology sector, leveraging the incredibly unique, complex genetic resources found within the pristine coral reefs for highly advanced pharmaceutical research and the development of sustainable industrial products (Ministry of Earth Sciences, 2026).

However, achieving this massive, complex green transition is heavily hindered by profound, deeply entrenched, and incredibly difficult structural challenges. The most severe, paralyzing constraint is the absolute, astronomical capital cost required to completely overhaul the territory's archaic, highly polluting infrastructure. Transitioning the deeply entrenched, massive diesel-dependent power grid entirely to a highly complex, reliable solar-wind-battery hybrid system, constructing totally green, highly resilient port infrastructure, and deploying massive fleets of zero-emission electric passenger ferries require upfront, multi-billion-dollar financial investments that vastly exceed the limited, heavily constrained fiscal capacity of the territorial administration. To bridge this massive, overwhelming funding gap, the territory must aggressively rely on securing complex, highly specialized Public-Private Partnerships, attracting significant global climate finance, and issuing highly rated green municipal bonds. Furthermore, the territory desperately lacks the highly specialized, technically trained local workforce required to build, operate, and continuously maintain these highly advanced, green technologies. The administration must urgently and radically revamp its entire educational and vocational training ecosystem, deeply focusing on advanced renewable energy engineering, sophisticated sustainable hospitality management, and cutting-edge marine sciences, to successfully ensure that the local island youth can directly, profitably participate in and proudly lead this massive, historic green economic revolution by the target year of 2047.

Chapter 15: Administrative Governance Reform

The administrative governance architecture of the Union Territory of the Andaman and Nicobar Islands is fundamentally distinct from the governance models established across the contiguous states of the Indian mainland. As the territory is directly administered by the Government of India without a local legislative assembly, the mechanisms of public administration, legal enforcement, and regulatory oversight are intricately bound to the central ministries located in New Delhi. In the current assessment year of 2026, the territory is undergoing a profound strategic and economic metamorphosis. The rapid transition from a historically isolated, strictly protected ecological reserve into a highly militarized, globally integrated maritime and logistics hub places unprecedented, overwhelming stress on the existing bureaucratic apparatus. The administrative machinery, which was originally designed for passive welfare delivery and basic civic maintenance, must now radically evolve to manage multi-billion-dollar infrastructure projects, facilitate complex international investments, and execute sophisticated climate resilience strategies.

15.1 Structure of State Administration and Inter-Departmental Coordination

The structural organization of the state administration in the Union Territory of the Andaman and Nicobar Islands is highly centralized, strictly hierarchical, and firmly anchored to the executive authority of the central government. At the absolute apex of this administrative architecture is the Lieutenant Governor. Appointed directly by the President of India, the Lieutenant Governor serves as the chief executive and the primary representative of the central government, exercising profound, wide-ranging powers over all executive, financial, and strategic matters within the archipelago (Ministry of Home Affairs, 2026). Unlike full-fledged mainland states where a democratically elected Chief Minister and a cabinet of ministers direct the executive agenda, the territory lacks a local legislative assembly. Consequently, all major policy formulations, capital expenditure approvals, and legislative regulations are enacted through the administrative channels of the Ministry of Home Affairs in New Delhi, resulting in a governance model characterized by significant democratic deficit and extensive bureaucratic centralization.

The administrative secretariat, located in the capital city of Port Blair within the South Andaman district, functions as the central nervous system for the entire territory. It is headed by the Chief Secretary, who coordinates the activities of numerous specialized directorates and departments, ranging from public works and shipping to health and tribal welfare. However, the operational efficiency of this secretariat is frequently compromised by severe inter-departmental fragmentation and the rigid, vertical silos that define the Indian bureaucratic tradition. In a highly constrained archipelagic environment where infrastructure development, environmental conservation, and maritime logistics are inextricably linked, this lack of horizontal coordination produces severe administrative bottlenecks. For example, the construction of a critical rural jetty by the Andaman Public Works Department frequently stalls for years due to the delayed issuance of environmental clearances by the Department of Environment and Forests, while the Directorate of Shipping Services simultaneously struggles to maintain ferry schedules due to the lack of docking infrastructure. This disjointed

approach completely paralyzes holistic, synchronized regional development (Directorate of Economics and Statistics, 2026).

To mitigate this structural fragmentation and drive the strategic modernization of the territory, the central government relies heavily on the Island Development Agency. Chaired directly by the Union Home Minister and featuring representation from the NITI Aayog and key central ministries, the Island Development Agency operates as an apex, fast-track coordinating body specifically designed to override local bureaucratic silos and expedite the approval of mega-infrastructure projects. In 2026, the Island Development Agency dictates the overarching economic trajectory of the islands, forcefully coordinating complex initiatives such as the Great Nicobar Holistic Development Project and the expansion of premium eco-tourism enclaves. While this centralized agency successfully accelerates high-priority strategic projects, its distant location in New Delhi and its top-down operational methodology frequently result in a profound disconnect between the mandated macroeconomic policies and the actual, localized civic priorities of the island residents. The decisions formulated by the Island Development Agency often prioritize national strategic imperatives over the nuanced, localized ecological and social realities of the archipelago, generating significant friction with local civil society organizations and indigenous rights advocates (NITI Aayog, 2026).

At the district level, the administration is executed through the offices of the Deputy Commissioners, who operate in the South Andaman, North and Middle Andaman, and Nicobar districts. These officers serve as the primary interface between the government and the citizenry, tasked with managing revenue collection, maintaining law and order, and executing the welfare schemes dictated by the central secretariat. The logistical challenge of administering these districts is monumental. For the Deputy Commissioner of the North and Middle Andaman district, physically inspecting remote rural settlements requires arduous, multi-day maritime and road journeys. In the Nicobar district, the administrative structure is further complicated by the legal requirement to interface continuously and respectfully with the traditional tribal councils. The modern bureaucratic machinery must carefully negotiate the implementation of civic projects with the indigenous Chief Captains, ensuring that administrative actions do not violate the stringent protections afforded by the Andaman and Nicobar Islands Protection of Aboriginal Tribes Regulation.

To fundamentally reform the structure of the state administration and enhance inter-departmental coordination by 2047, the territory must urgently transition away from rigid, vertical bureaucratic hierarchies toward dynamic, project-based matrix organizations. The administration must establish highly empowered, cross-functional task forces specifically dedicated to overarching developmental themes, such as sustainable blue economy expansion, climate resilience engineering, and universal digital integration. These task forces must be granted comprehensive financial and operational authority to execute projects, effectively bypassing the traditional, sequential departmental approval processes. Furthermore, to bridge the severe democratic deficit, the administration must formally institutionalize powerful, legally recognized citizen advisory councils at the district level. These councils, comprising local business leaders, environmental experts, and community

representatives, must be granted statutory authority to review, modify, and approve localized developmental plans, ensuring that the highly centralized governance architecture becomes significantly more responsive, transparent, and accountable to the specific needs of the island populations.

15.2 Anti-Corruption Framework: Lokayukta, Vigilance and Enforcement

The establishment and rigorous maintenance of an uncompromising, highly effective anti-corruption framework are absolute prerequisites for ensuring the integrity of public administration, optimizing the utilization of scarce financial resources, and cultivating a transparent investment climate in the Union Territory of the Andaman and Nicobar Islands. Because the territory relies overwhelmingly on massive financial subsidies and large-scale capital grants provided by the central government, the potential for financial leakage, bureaucratic rent-seeking, and procurement fraud is significantly amplified. In 2026, the anti-corruption architecture of the territory faces unique, formidable logistical and jurisdictional challenges that complicate the detection, investigation, and prosecution of administrative malfeasance across the highly dispersed archipelago.

Unlike full-fledged mainland states that possess the constitutional authority to enact dedicated legislation establishing an independent, powerful Lokayukta to investigate allegations of corruption against high-ranking political executives and senior bureaucrats, the Andaman and Nicobar Islands operate without such a localized, statutory anti-corruption ombudsman. Because the territory functions directly under the jurisdiction of the central government, the overarching anti-corruption mandate is primarily executed by central agencies, specifically the Central Bureau of Investigation and the Central Vigilance Commission (Ministry of Personnel, Public Grievances and Pensions, 2026). While these central agencies possess immense investigative authority and technical resources, their operational headquarters are located thousands of kilometres away on the mainland. Consequently, their ability to proactively monitor localized administrative functions, conduct rapid, unannounced physical inspections of remote infrastructure projects, and cultivate deeply embedded local intelligence networks within the island bureaucracy is severely limited by geographical distance.

Within the localized territorial administration, the primary responsibility for enforcing administrative probity falls to the Directorate of Vigilance, functioning under the direct control of the Chief Secretary. The Directorate of Vigilance is tasked with conducting internal departmental inquiries, monitoring the ethical conduct of the civil service cadre, and investigating complaints of bribery, nepotism, and the misuse of public office. Furthermore, the local Anti-Corruption Branch of the Andaman and Nicobar Police holds the mandate to conduct criminal investigations and execute trap cases against corrupt public servants. However, the operational effectiveness of these local vigilance and enforcement bodies is frequently undermined by systemic capacity deficits and profound structural conflicts of interest. The officers posted to the Directorate of Vigilance and the Anti-Corruption Branch are typically drawn from the same general civil service and police cadres that they are mandated to investigate. This inherent lack of structural independence, combined with the

incredibly small, highly interconnected nature of the island bureaucratic community, generates significant informal social pressures that can severely inhibit aggressive, impartial investigations against senior administrative figures (Directorate of Vigilance, 2026).

The most significant vulnerabilities regarding public corruption in the territory are heavily concentrated in the sectors of maritime logistics, large-scale public infrastructure procurement, and the issuance of environmental clearances. The absolute, inescapable reliance on maritime shipping dictates that the procurement of highly expensive, specialized passenger vessels, the awarding of lucrative fuel supply contracts for the massive diesel powerhouses, and the chartering of private cargo ships involve transactions worth hundreds of crores of rupees. Historically, the extreme opacity and highly technical nature of these maritime contracts created fertile environments for systemic kickbacks, tender manipulation, and cartelization by established mainland logistics operators. Similarly, the execution of major civil engineering projects, such as the construction of the vital sea bridges on the Andaman Trunk Road, involves massive capital expenditures in remote, unmonitored locations. Ensuring that expensive, imported construction materials are not systematically pilfered and that the structural quality of the infrastructure matches the invoiced specifications requires relentless, technically sophisticated physical auditing, which is incredibly difficult to execute across the dispersed islands.

To combat these systemic vulnerabilities, the administration has increasingly relied on the forced digitization of public procurement. In 2026, the mandatory utilization of the Government e-Marketplace for all standardized goods and the implementation of end-to-end digital e-tendering platforms for complex engineering contracts have significantly reduced the scope for localized, manual interference in the bidding process. This digital architecture automatically guarantees a higher degree of baseline transparency, broadens the pool of competing national bidders, and creates permanent, easily auditable digital trails for every single financial transaction. However, sophisticated digital procurement systems cannot entirely eliminate collusion or the drafting of highly restrictive, biased technical specifications designed to favor specific vendors.

To forge a truly robust, uncompromising anti-corruption framework by 2047, the territorial administration must urgently establish a specialized, highly independent local ombudsman institution that mirrors the functions of a state Lokayukta, possessing sweeping statutory powers to independently investigate and prosecute administrative corruption without requiring prior sanction from the executive hierarchy. Furthermore, the administration must aggressively deploy advanced, artificial intelligence-driven data analytics to continuously monitor all digital financial transactions, automatically identifying suspicious procurement patterns, unnatural cost escalations, and the systematic cartelization of island tenders. Finally, to overcome the severe logistical barriers to physical auditing, the territory must comprehensively deploy high-resolution satellite imagery and specialized drone networks to conduct continuous, remote visual inspections of all major public infrastructure projects, ensuring that the physical reality on the ground strictly correlates with the financial expenditures authorized in the capital.

15.3 Legal and Judicial Administration: Pendency, Access and Reform

The legal and judicial administration within the Union Territory of the Andaman and Nicobar Islands is characterized by profound, systemic challenges regarding universal access to justice, the timely resolution of legal disputes, and the complex harmonization of modern statutory law with ancient indigenous customs. Guaranteeing equitable access to a functional, responsive judicial system across a highly fragmented archipelago is a monumental logistical undertaking. The geographical barriers that define the territory actively hinder the ability of citizens, particularly those residing in the remote, impoverished peripheries, to successfully navigate the complex, highly centralized legal apparatus. In 2026, reforming the judicial architecture to ensure that geographic isolation does not automatically translate into a denial of fundamental legal rights stands as a critical priority for the territorial administration and the broader Indian judiciary.

The highest tier of judicial authority for the territory is not physically located within the islands. The Andaman and Nicobar Islands fall under the official, constitutional jurisdiction of the Calcutta High Court, which is situated over 1,200 kilometres away in the state of West Bengal. To facilitate localized access to appellate justice, the Calcutta High Court operates a permanent Circuit Bench in the capital city of Port Blair (Ministry of Law and Justice, 2026). While the establishment of this Circuit Bench represents a vital, indispensable legal asset for the territory, its operational capacity is inherently limited. The deployment of High Court judges from Kolkata to Port Blair relies entirely on complex, rotating schedules and the uninterrupted availability of commercial air transport. Consequently, the appellate judicial capacity in the islands is structurally bottlenecked, contributing significantly to a persistent, escalating backlog of pending civil and criminal appeals, writ petitions, and complex environmental litigation.

At the district and subordinate levels, the judicial infrastructure is highly centralized and heavily concentrated in the South Andaman district. The District and Sessions Court, alongside the primary civil and criminal magistrate courts, operates extensively from Port Blair. For residents of the capital city and the immediate peri-urban zones, physical access to these subordinate courts is relatively straightforward. However, for the vast majority of citizens residing in the North and Middle Andaman district and the highly remote Nicobar district, accessing formal judicial remedies is a grueling, incredibly expensive, and frequently insurmountable logistical ordeal. A citizen involved in a protracted land dispute or seeking legal redress for a civil grievance in Diglipur or Campbell Bay must endure arduous, multi-day maritime and road journeys simply to attend a single, brief court hearing in Port Blair. The exorbitant costs associated with inter-island travel, mandatory hotel accommodations in the capital, and the loss of daily wages effectively construct a massive, unyielding financial barrier to justice for the marginalized rural populations.

To partially mitigate this profound geographical inequity, the judicial administration attempts to operate periodic circuit courts and mobile magistrate courts in the major administrative nodes of the outer islands. However, the frequency and reliability of these mobile courts are frequently compromised by severe weather disruptions during the prolonged monsoon season and the chronic shortage of localized judicial officers and supporting legal staff. The

administration of justice in the Nicobar district presents an additional, highly complex layer of anthropological challenge. The indigenous Nicobarese community operates under complex, ancient systems of customary law and traditional dispute resolution, managed entirely by the respected tribal captains and village councils. The formal Indian judicial apparatus must carefully and respectfully interface with these traditional legal structures, ensuring that the application of modern statutory criminal and civil law does not brutally override or destroy the deeply ingrained, socially cohesive customary practices of the tribal populations, particularly regarding traditional land tenure and localized family disputes (Ministry of Tribal Affairs, 2026).

The escalating crisis of judicial pendency within the territory is severely exacerbated by the critical, territory-wide shortage of qualified, specialized legal professionals. The islands completely lack an indigenous, high-quality legal educational institution. Consequently, the local bar association is relatively small, and litigants are frequently forced to import highly expensive, specialized legal counsel from the mainland, particularly for complex corporate, constitutional, and environmental litigation. Furthermore, the physical infrastructure of the subordinate courts, specifically in the outer islands, requires massive, urgent modernization. Aging court buildings frequently lack secure digital evidence storage facilities, reliable internet connectivity for virtual hearings, and basic civic amenities for litigants.

In 2026, the most promising and aggressively pursued reform in the judicial administration is the comprehensive, territory-wide implementation of the national e-Courts project. Leveraging the newly established, high-speed capabilities of the Chennai-Andaman and Nicobar Islands submarine optical fibre cable, the judiciary is actively attempting to transition toward a fully digitized, virtually accessible legal framework (Department of Justice, 2026). The implementation of mandatory e-filing for all civil suits, the comprehensive digitization of decades of decaying paper-based court records, and the widespread, aggressive utilization of secure video conferencing for routine remand hearings and witness testimonies are fundamentally altering the judicial landscape. By allowing litigants and their legal counsel in the remote North Andaman and Nicobar districts to participate fully and meaningfully in court proceedings in Port Blair without requiring physical travel, the digital courts initiative possesses the profound potential to completely obliterate the tyranny of geographical distance. The ultimate strategic objective for 2047 is to ensure that a citizen residing on the most isolated island in the archipelago enjoys the exact same rapid, frictionless, and affordable access to high-quality judicial remedies as a resident of the capital city.

15.4 Police Modernisation and Internal Security Management

The maintenance of internal security, the enforcement of public order, and the defense of the highly porous, incredibly extensive maritime borders of the Union Territory of the Andaman and Nicobar Islands represent an incredibly complex, multidimensional law enforcement challenge. The territory serves as the absolute, non-negotiable strategic frontline for the Republic of India in the Indo-Pacific region. Consequently, the localized law enforcement apparatus cannot function merely as a conventional civilian police force; it must seamlessly

integrate with massive, sophisticated military operations and constantly combat sophisticated transnational maritime threats. In 2026, the Andaman and Nicobar Police force is undergoing a rapid, critical phase of technological modernization and organizational restructuring, shifting its focus from routine, localized crime management to highly advanced coastal security and intelligence-driven threat mitigation.

The fundamental organizational structure of the Andaman and Nicobar Police is inherently shaped by the unique, tri-service military presence on the islands. The territory hosts the Andaman and Nicobar Command, which is the first and only integrated, operational tri-service command of the Indian Armed Forces, combining the formidable assets of the Indian Navy, the Indian Army, the Indian Air Force, and the Indian Coast Guard. The civilian police force operates in a state of continuous, deeply embedded coordination with this massive military apparatus. The primary, overriding internal security mandate for the local police is the absolute, uncompromising enforcement of coastal security. Given the archipelago's immense coastline extending over 1,900 kilometres and its extreme proximity to international maritime borders, the islands are structurally vulnerable to unauthorized infiltration, sophisticated transnational narcotics smuggling, and the illegal, large-scale poaching of highly valuable marine resources.

To actively combat these severe maritime vulnerabilities, the territory relies on a highly specialized, dedicated Marine Police Force. This specialized unit operates a large fleet of rapid interceptor boats, shallow-draft patrol vessels, and specialized coastal surveillance equipment. However, patrolling the vast, labyrinthine network of unpopulated islands, dense mangrove creeks, and deep ocean straits is a logistical nightmare. In 2026, the Andaman and Nicobar Police face persistent, severe challenges regarding the illegal intrusion of organized, highly aggressive foreign poachers, predominantly originating from neighboring Myanmar and other Southeast Asian nations. These poachers aggressively infiltrate the remote, unmonitored eastern coastlines of the archipelago to illegally harvest incredibly lucrative, highly protected marine resources such as sea cucumbers, rare trochus shells, and high-value shark fins. Intercepting these fast-moving, highly motivated poachers requires seamless, real-time intelligence sharing and complex, coordinated joint operations between the localized Marine Police and the heavily armed vessels of the Indian Coast Guard (Ministry of Home Affairs, 2026).

Beyond the external maritime threats, the Andaman and Nicobar Police bear the profoundly sensitive, internationally scrutinized responsibility of protecting the territory's isolated indigenous populations. The administration operates a specialized, highly trained unit known as the Jarawa Protection Police. This dedicated force is tasked explicitly with enforcing the strict, unyielding exclusion zones surrounding the legally protected tribal reserves. They are responsible for meticulously escorting the mandatory civilian vehicular convoys through the highly sensitive Andaman Trunk Road, preventing any unauthorized contact, illegal photography, or harmful exploitation of the Jarawa community by aggressive domestic tourists or illegal encroachers. This unique law enforcement mandate requires a highly specialized blend of robust security enforcement and deep anthropological sensitivity,

ensuring the absolute physical and cultural survival of the indigenous tribes without resorting to oppressive, militarized policing tactics within their ancestral habitats.

In the realm of conventional civilian law enforcement, the territory generally boasts an exceptionally low rate of violent crime and a strong legacy of communal harmony compared to the major metropolitan centres of the mainland. The tight-knit, highly integrated nature of the island society and the absolute geographical difficulty of escaping the territory after committing a crime serve as powerful, natural deterrents. However, the rapid urbanization of Port Blair, the massive influx of transient migrant construction labour, and the explosive growth of the lucrative tourism sector are introducing new, highly complex policing challenges. The administration is increasingly battling rising incidences of sophisticated cybercrime, localized narcotics distribution networks targeting the youth and tourist populations, and complex economic offenses related to the highly speculative, booming real estate market in the South Andaman district.

To combat these evolving, modernized threats, the Andaman and Nicobar Police are executing a massive, comprehensive technological modernization drive in 2026. Leveraging the robust capabilities of the newly installed submarine optical fibre network, the police force is aggressively implementing the advanced Crime and Criminal Tracking Network and Systems across all isolated island police stations, ensuring the rapid, real-time sharing of critical criminal intelligence with mainland security databases (National Crime Records Bureau, 2026). Furthermore, the administration is heavily investing in the widespread deployment of highly sophisticated, artificial intelligence-enabled video surveillance networks across the critical infrastructure nodes of Port Blair and the major tourism hubs, significantly enhancing the capability for automated threat detection and rapid incident response. To ensure absolute internal security leading up to 2047, the police force must continuously evolve into a highly specialized, digitally empowered coastal security agency, flawlessly integrating advanced drone surveillance, localized marine intelligence, and robust community policing to protect the strategic integrity and social harmony of the archipelago.

15.5 Regulatory Governance: Quality, Consistency and Independence

The architecture of regulatory governance within the Union Territory of the Andaman and Nicobar Islands is defined by an intricate, frequently contradictory mandate. The regulatory bodies operating within the archipelago are tasked with simultaneously facilitating massive, accelerated economic modernization and enforcing some of the most stringent, uncompromising ecological and environmental protections mandated anywhere in the Republic of India. In 2026, the territory is entirely dependent on the quality, consistency, and structural independence of its regulatory institutions to prevent the catastrophic, irreversible degradation of its pristine natural assets while the central government aggressively pushes to transform the islands into a highly militarized, commercial maritime hub. However, the current regulatory framework is frequently characterized by profound structural weaknesses, severe capacity deficits, and a dangerous lack of true institutional independence from the centralized executive administration.

The most powerful, consequential, and highly scrutinized regulatory framework in the territory governs environmental protection and land use. Given that the islands are legally recognized as a highly sensitive global biodiversity hotspot, almost every single significant commercial, infrastructural, or residential development project is strictly subject to the rigorous mandates of the Coastal Regulation Zone rules, the specific Island Protection Zone notifications, and the overarching Forest Conservation Act. The primary institution tasked with enforcing these complex mandates is the Andaman and Nicobar Coastal Zone Management Authority, operating in conjunction with the Andaman and Nicobar Pollution Control Committee. These bodies are responsible for meticulously evaluating the environmental impact of proposed luxury eco-resorts, vital road expansions, and massive port developments, and legally ensuring that no unauthorized construction occurs within the highly fragile, ecologically critical coastal margins and sensitive mangrove ecosystems (Ministry of Environment, Forest and Climate Change, 2026).

However, the operational efficacy and true structural independence of these crucial environmental regulatory bodies are profoundly compromised by the inherent architecture of the Union Territory administration. The chairpersons and the senior executive members of the Coastal Zone Management Authority and the Pollution Control Committee are almost exclusively drawn from the exact same senior bureaucratic cadre that forms the core territorial executive administration. This structural reality creates a massive, undeniable, and permanent conflict of interest. The very same senior bureaucrats who are heavily pressured by the central government and the Island Development Agency to rapidly expedite the clearance of mega-infrastructure projects, such as the massive Great Nicobar Holistic Development Project or the expansion of the Veer Savarkar International Airport, are simultaneously tasked with serving as the independent, impartial, and uncompromising ecological regulators of those exact same projects. This total lack of separation between the aggressive project proponent and the critical environmental regulator fundamentally undermines the integrity, objectivity, and public credibility of the entire environmental clearance process, frequently leading to intense, protracted litigation filed by local environmental advocacy groups and national civil society organizations before the National Green Tribunal.

In the critical realm of public utilities and energy pricing, the regulatory oversight is provided by the Joint Electricity Regulatory Commission for the State of Goa and Union Territories. As detailed extensively in the energy chapters of this report, the power sector in the Andaman and Nicobar Islands operates under extreme, highly distorted economic conditions. The true cost of generating electricity using imported high-speed diesel is astronomical, yet the consumer tariffs are kept artificially, politically low through massive, continuous financial subsidies provided by the central government. The Joint Electricity Regulatory Commission is tasked with the highly complex, mathematically difficult mandate of determining fair, realistic tariffs, heavily scrutinizing the operational inefficiencies and transmission losses of the local Electricity Department, and aggressively formulating highly attractive, financially viable policies to incentivize large-scale private investment in renewable energy generation (Joint Electricity Regulatory Commission, 2026).

While the Joint Electricity Regulatory Commission theoretically possesses statutory independence, its physical location on the mainland and its broad, multi-territory jurisdiction severely limit its ability to possess a nuanced, deeply contextualized understanding of the highly specific, unique logistical nightmares that constantly plague power generation in the remote archipelago. The regulatory decisions issued by the commission frequently clash violently with the political and social realities of the island administration. For instance, regulatory directives mandating steep, mathematically necessary increases in commercial electricity tariffs to reduce the crippling subsidy burden are often met with massive, organized resistance from the local tourism and hospitality sectors, who correctly argue that exorbitant energy costs completely destroy their ability to remain globally competitive.

To achieve robust, effective, and truly credible regulatory governance by 2047, the territorial administration and the central government must execute profound structural reforms. The absolute, non-negotiable priority is to completely sever the structural link between the executive administration and the environmental regulatory bodies. The territory must establish a highly specialized, entirely independent, and legally empowered Island Ecological Regulatory Commission, staffed exclusively by independent, globally recognized marine biologists, climate scientists, and environmental legal experts, rather than rotating generalist bureaucrats. Furthermore, to enhance regulatory consistency and drastically improve the ease of doing business, the administration must formulate and implement highly specific, customized, and legally binding regulatory master plans that proactively and permanently zone the islands for specific, permitted activities, thereby completely eliminating the current, highly corruptible system of slow, arbitrary, case-by-case regulatory approvals.

15.6 Reduction of Red-tapism: Simplification and way forward

The pervasive culture of bureaucratic red-tapism, characterized by agonizingly slow, multi-layered administrative processes and highly opaque, arbitrary decision-making, has historically served as the single most formidable, impenetrable barrier to dynamic private sector investment and robust economic expansion in the Union Territory of the Andaman and Nicobar Islands. In an archipelagic environment already severely handicapped by massive logistical costs and a fragile, isolated economy, the addition of artificial, suffocating bureaucratic friction destroys the commercial viability of almost any enterprise. In 2026, as the central government aggressively attempts to pivot the territory toward establishing a highly competitive, globally integrated maritime and tourism economy, the radical, systematic reduction of this red-tapism is not merely an administrative goal; it is an absolute, existential economic imperative. The territory cannot successfully compete with highly efficient, streamlined Southeast Asian maritime hubs if its internal governance is paralyzed by antiquated, paper-based bureaucratic delays.

The root cause of red-tapism in the territory is the highly complex, uniquely constrained regulatory environment. Because the islands are recognized as an incredibly fragile, globally significant ecological reserve and a highly sensitive, restricted tribal zone, initiating almost any commercial or infrastructural activity requires an exceptionally high number of specialized, redundant, and conflicting clearances from a multitude of disconnected, siloed

government departments. An entrepreneur attempting to establish a small, sustainable eco-resort on a peripheral island must endure a grueling, multi-year bureaucratic marathon. This involves desperately seeking complex, poorly defined approvals from the local Panchayat, obtaining commercial land diversion clearances from the highly restrictive Revenue Department, securing stringent Coastal Regulation Zone permissions from the Coastal Zone Management Authority, obtaining necessary no-objection certificates from the fragmented Pollution Control Committee, and frequently requiring high-level security clearances directly from the Ministry of Home Affairs in New Delhi (Ministry of Commerce and Industry, 2026).

This agonizingly complex, labyrinthine approval process is severely compounded by the "island penalty" of administrative centralization. The local, decentralized offices in the North and Middle Andaman district or the Nicobar district possess virtually no delegated authority to approve significant commercial or infrastructural initiatives. Consequently, every single file, application, and minor permit request must physically travel to the central secretariat in Port Blair. In many critical cases involving foreign investment, large-scale maritime infrastructure, or significant forest land diversion, the files must be physically forwarded to the respective central ministries in New Delhi. This extreme centralization generates massive, completely unacceptable delays, effectively paralyzing localized economic development and severely testing the patience and financial holding capacity of private investors.

Recognizing the catastrophic economic impact of this bureaucratic paralysis, the territorial administration in 2026 has initiated several highly aggressive, technology-driven reforms under the broader national Ease of Doing Business framework. The most significant and highly publicized administrative intervention is the launch and forced implementation of an integrated, comprehensive digital Single Window Clearance System. This advanced digital portal is theoretically designed to function as the single, unified interface between the private investor and the sprawling state apparatus. By mandating the complete digitization of all commercial applications, enforcing strict, legally binding, time-bound service delivery guarantees under the Right to Public Services Act, and actively attempting to minimize the requirement for physical, face-to-face interactions with lower-level regulatory inspectors, the administration has successfully and measurably reduced localized opportunities for bureaucratic rent-seeking and petty corruption (Department for Promotion of Industry and Internal Trade, 2026).

However, the complete, successful eradication of red-tapism requires interventions that go far beyond the mere digitization of existing, flawed processes. Digitizing a highly complex, redundant, and illogical regulatory process merely results in a faster, digital bottleneck. The true way forward requires a ruthless, systematic administrative rationalization. The territorial administration must conduct a comprehensive, independent audit of all existing commercial rules, archaic licensing requirements, and redundant environmental inspections, explicitly with the mandate to permanently repeal any regulation that does not directly and measurably contribute to demonstrable ecological safety or vital national security.

Furthermore, to truly streamline governance by 2047, the territory must aggressively pursue the concept of "deemed approvals" and self-certification for low-impact, sustainable

commercial activities. For instance, small-scale, highly sustainable local MSMEs engaged in clean, non-polluting food processing or local organic agriculture should not be subjected to the exact same, grueling, multi-year environmental scrutiny as a massive, heavy-impact maritime port developer. By aggressively transitioning from a heavily pessimistic, control-and-permit-based bureaucratic culture to a highly optimistic, dynamic, compliance-and-audit-based administrative philosophy, the Andaman and Nicobar Islands can successfully unleash the stifled entrepreneurial potential of its educated youth and transform its historically sluggish administrative machinery into a powerful, frictionless competitive advantage.

15.7 Civil service strength: Vacancy rates and Training institutions

The ultimate efficacy, strategic vision, and operational success of the administrative governance architecture in the Union Territory of the Andaman and Nicobar Islands are entirely, absolutely dependent upon the professional strength, technical capability, and deep, localized commitment of its civil service cadre. However, managing the human resources of the bureaucratic machinery in this highly remote, geographically isolated archipelago presents a chronic, structural, and deeply unresolved challenge. In 2026, the territory is severely handicapped by a governance system characterized by massive, unacceptable vacancy rates in highly specialized technical departments, rapid, disruptive leadership turnover at the highest echelons, and an excessive, structural reliance on a rotating cadre of mainland officers who frequently lack a deep, nuanced understanding of the highly specific, complex socio-ecological realities of the islands.

Because the Andaman and Nicobar Islands operate as a Union Territory, it does not possess its own dedicated, permanent State Public Service Commission capable of recruiting a native, localized cadre of senior administrative and police officers. Instead, the higher, most powerful echelons of the territory's bureaucracy are staffed exclusively by officers drawn from the centralized DANICS (Delhi, Andaman and Nicobar Islands, Lakshadweep, Daman and Diu and Dadra and Nagar Haveli Civil Service) and the DANIPS police cadres, alongside senior, highly ranked officers deputed directly from the elite, overarching All India Services, such as the Indian Administrative Service (IAS) and the Indian Police Service (IPS) (Ministry of Home Affairs, 2026).

While this centralized, national recruitment system guarantees a high baseline standard of generic administrative competence, it generates severe, highly detrimental operational frictions when applied to the unique island context. For the vast majority of these highly capable mainland officers, a posting to the Andaman and Nicobar Islands is not viewed as a highly sought-after, prestigious career milestone, but rather as a mandatory, geographically isolated "hardship posting." The geographical distance from power centres in New Delhi, the perceived lack of high-profile career advancement opportunities in a small territory, and the difficulties in accessing premium mainland educational and healthcare facilities for their families make the islands an unpopular destination for ambitious bureaucrats. Consequently, senior officers typically serve very brief, mandated tenures of merely two to three years before aggressively seeking immediate transfers back to the mainland or the national capital.

This rapid, continuous, and highly disruptive turnover at the absolute highest levels of policy-making effectively prevents the accumulation of vital institutional memory, completely destroys the continuity of complex, multi-year developmental projects, and ensures that the top administrative leadership remains in a perpetual, inefficient state of basic familiarization with the unique island environment.

The human resource crisis is even more acute and structurally damaging at the middle and technical tiers of the localized administration. The specialized departments that are absolutely critical for executing the territory's strategic modernization, such as the Andaman Public Works Department, the Directorate of Shipping Services, the Department of Environment and Forests, and the Town and Country Planning Department, suffer from chronic, massive vacancy rates, particularly regarding highly specialized technical positions like certified marine engineers, complex bridge design specialists, and advanced environmental scientists. The territorial administration attempts to recruit locally for these subordinate and technical positions through the Andaman and Nicobar Administration. However, the complete lack of world-class, specialized higher educational and engineering institutions within the islands means that the local candidate pool often lacks the highly specific, advanced technical skills required to manage sophisticated, modern infrastructure projects, forcing the administration to rely on expensive, external mainland consultants for basic engineering tasks (Directorate of Economics and Statistics, 2026).

To combat these severe capacity deficits, the territory operates the Administrative Training Institute in Port Blair. This institute is tasked with providing foundational, induction-level training and continuous, in-service capacity building for the localized, subordinate civil service staff. However, the curriculum and resources of the Administrative Training Institute are frequently outdated and largely focused on generic, archaic bureaucratic procedures rather than the highly specialized, dynamic skills required for modern archipelagic governance. In 2026, a civil servant in the islands does not merely need to know how to process a standardized mainland government file; they must possess deep, specialized knowledge of complex coastal zone management regulations, sophisticated disaster response logistics, and the nuanced, highly sensitive application of tribal protection laws.

To build a truly resilient, highly capable, and localized civil service by 2047, the Government of India must execute a fundamental structural reform of the cadre system. The administration must heavily incentivize longer, sustained, five-to-seven-year tenures for highly specialized senior officers to ensure the stable, continuous execution of massive mega-projects like the Great Nicobar development. Furthermore, the territory must aggressively transform its local training institutions into highly specialized, world-class centres of excellence, heavily focusing on advanced marine administration, climate-resilient infrastructure management, and digital e-governance. Ultimately, the long-term success of the territory requires the massive, aggressive expansion of high-quality local higher education, enabling the islands to recruit, train, and retain a dedicated, highly skilled, and passionate indigenous bureaucratic workforce that is permanently invested in the sustainable, prosperous future of their archipelagic home.

Chapter 16: Technology-Enabled Service Delivery

The integration of advanced, technology-enabled service delivery within the Union Territory of the Andaman and Nicobar Islands represents one of the most profound, transformative, and structurally necessary administrative evolutions currently underway in the Republic of India. For decades, the governance and civic administration of this vast, highly fragmented archipelago were severely handicapped by the tyranny of geographical distance. Delivering basic administrative services, processing citizen grievances, managing complex public health records, and executing localized developmental planning across hundreds of islands separated by deep, turbulent ocean straits relied exclusively on slow, paper-based bureaucratic processes and highly vulnerable maritime transport. This historical paradigm resulted in a deeply entrenched, systemic developmental lag, where citizens residing in the remote peripheries of the North and Middle Andaman district and the isolated tribal reserves of the Nicobar district experienced severe administrative disenfranchisement compared to the residents of the capital city, Port Blair. In the current evaluation year of 2026, the overarching strategic mandate for the territorial administration is to fundamentally obliterate these geographical barriers through the aggressive, comprehensive, and uncompromising deployment of digital technologies.

The transition toward a fully digitized, technology-enabled governance architecture in the archipelago is not merely an exercise in administrative modernization; it is an absolute, existential requirement for ensuring equitable social justice, optimizing the utilization of scarce financial resources, and securing the strategic integration of the territory into the broader digital economy of the nation. As outlined in the structural framework of the "Standardized Document Format.pdf", technology-enabled service delivery must seamlessly encompass robust digital infrastructure, dynamic e-governance architectures, secure data frameworks, and the integration of emerging predictive technologies. However, successfully executing this digital transformation within the highly specific, ecologically fragile, and logistically punishing environment of the Andaman and Nicobar Islands requires overcoming monumental engineering, financial, and sociological hurdles that are entirely absent in contiguous mainland states. The territory must battle highly corrosive maritime climates that rapidly destroy sensitive electronic hardware, overcome frequent, severe weather disruptions that threaten terrestrial communication networks, and ensure that rapid digital expansion does not inadvertently marginalize the digitally illiterate, elderly, or indigenous tribal populations. This incredibly detailed, exhaustive chapter provides a rigorous, highly critical analysis of the territory's digital infrastructure capabilities, the evolving architecture of its e-governance platforms, the mechanisms for decentralized citizen service delivery, the stringent requirements for localized data governance, the absolute necessity of robust cybersecurity in a strategic military zone, and the futuristic deployment of artificial intelligence and geospatial systems designed to permanently secure the archipelago's prosperous, highly connected future by the centennial developmental milestone of 2047.

16.1 Digital Infrastructure: Broadband, Optical Fibre and Connectivity Coverage

The foundational prerequisite for any functional, equitable, and technology-enabled service delivery system is the existence of a robust, high-speed, and universally accessible digital infrastructure network. Historically, the Andaman and Nicobar Islands suffered from a state of chronic, crippling digital isolation. Prior to recent massive infrastructural interventions, the entire territory relied exclusively on highly restricted, incredibly expensive, and technologically archaic satellite bandwidth provided by the Indian Space Research Organisation. This satellite-based connectivity was characterized by severe, unacceptable latency, incredibly low data transfer speeds, and frequent, prolonged total network blackouts during the intense, months-long tropical monsoon season. This digital dark age effectively precluded the territory from participating in the modern digital economy, stifled the growth of the premium tourism sector, crippled the delivery of modern digital education, and forced the territorial administration to rely on agonizingly slow, physical paper movements for all official communications.

The singular, most monumental infrastructural achievement that fundamentally altered the digital trajectory of the territory was the successful execution and operationalization of the Chennai-Andaman and Nicobar Islands submarine optical fibre cable project. Fully functional and carrying massive data loads in 2026, this incredible feat of deep-sea engineering spans over 2,300 kilometres across the Bay of Bengal, physically and digitally tethering the remote archipelago directly to the massive, global data gateways located in Chennai on the Indian mainland (Department of Telecommunications, 2026). The submarine cable project did not merely connect the capital city; it strategically extended dedicated, high-capacity fibre optic spurs to seven other highly critical islands across the territory, including Swaraj Dweep, Shaheed Dweep, Little Andaman, Car Nicobar, Kamorta, Great Nicobar, and Long Island. The arrival of reliable, high-speed, multi-gigabit broadband capacity has systematically eradicated the historical digital bottleneck, instantly enabling high-definition telemedicine consultations, seamless digital banking transactions, and the rapid deployment of complex, cloud-based e-governance applications that were previously mathematically and physically impossible to host locally.

However, while the submarine cable successfully solved the macro-level oceanic connectivity deficit, the territory in 2026 faces a massive, highly complex, and incredibly expensive "last-mile" connectivity challenge. Delivering high-speed optical fibre connectivity from the coastal cable landing stations to individual rural households, remote primary health centres, and isolated island schools requires laying thousands of kilometres of terrestrial optical fibre cable. This terrestrial expansion is severely hindered by the uncompromising, densely forested topography of the islands. The territorial administration must rigorously navigate incredibly strict environmental and forest clearance procedures to lay underground cables through legally protected primary rainforests and sensitive wildlife sanctuaries (Ministry of Environment, Forest and Climate Change, 2026). Furthermore, the highly undulating, rocky terrain and the constant threat of severe, road-destroying landslides during the monsoon season frequently result in critical, physical cuts to the terrestrial fibre network, requiring

expensive, continuous maintenance and highly rapid emergency repair protocols that are logistically difficult to execute in remote districts.

To achieve truly universal, uninterrupted connectivity coverage by 2047, the territorial administration must urgently recognize that relying solely on terrestrial optical fibre is an inherently fragile and mathematically insufficient strategy for an archipelago. The digital infrastructure architecture must be heavily diversified and aggressively fortified with robust, redundant backup systems. The administration is actively and heavily subsidizing the widespread deployment of advanced, high-capacity 5G and emerging 6G wireless cellular networks across the densely populated South Andaman district to provide rapid, wireless broadband access where laying physical fibre is economically unviable. More critically, the territory must aggressively integrate emerging Low Earth Orbit satellite internet constellations into its official digital infrastructure master plan. These advanced, low-latency satellite systems provide an absolute, non-negotiable layer of technological redundancy. In the highly probable event of a massive, catastrophic seismic event or a devastating underwater landslide completely severing the primary submarine optical fibre cable, these Low Earth Orbit satellite networks will ensure that the territory does not instantaneously plunge back into total digital isolation, thereby guaranteeing the uninterrupted, vital continuity of emergency administrative services and national security communications (Ministry of Electronics and Information Technology, 2026).

16.2 e-Governance Architecture and Digital Public Infrastructure

The successful execution of technology-enabled service delivery requires a highly sophisticated, deeply integrated, and intensely resilient e-governance architecture capable of operating continuously in a severely resource-constrained environment. In the Andaman and Nicobar Islands, the territorial administration has aggressively adopted the foundational principles of the national Digital India initiative, systematically adapting these broad mainland frameworks to suit the highly specific, incredibly challenging realities of archipelagic governance. In 2026, the absolute core of this technological transformation is the systematic migration of all disparate, historically isolated departmental databases and archaic legacy software systems into a highly secure, centralized, and cloud-based state data architecture.

The establishment and continuous, rigorous upgrading of the State Data Centre located in Port Blair represents the primary physical and logical anchor for the territory's entire e-governance ecosystem. This highly secure, technically advanced facility hosts the critical, sensitive servers that power the territory's financial management systems, dynamic land records databases, comprehensive health information systems, and vital municipal management portals (Andaman and Nicobar Administration, 2026). However, operating a high-capacity data centre in Port Blair presents unique, severe engineering challenges. The facility must be heavily fortified against the constant, highly corrosive effects of the humid, saline maritime air, which rapidly degrades sensitive microprocessors and server hardware. More importantly, the data centre absolutely requires a massive, uninterrupted, and perfectly clean power supply. Given the highly erratic, diesel-dependent, and frequently fluctuating

power grid of the capital city, the State Data Centre is forced to rely on incredibly expensive, massively redundant arrays of industrial-scale uninterrupted power supply systems and captive, high-capacity diesel generators to prevent catastrophic, data-destroying sudden power failures.

To enhance systemic resilience and reduce the terrifying operational risks associated with hosting all critical data in a single, highly cyclone-prone physical location, the territorial administration is aggressively accelerating its transition toward the national MeghRaj cloud computing initiative. By securely migrating non-sensitive, public-facing civic applications and massive, static public datasets to highly secure, geographically distributed cloud servers located in safe zones on the Indian mainland, the territory significantly reduces its localized hardware maintenance burden and ensures robust, automatic disaster recovery capabilities. This cloud-first strategy ensures that if the physical State Data Centre in Port Blair is compromised by a natural disaster, the essential digital services required for post-disaster administrative recovery remain completely functional and accessible to the central government and the local disaster management authorities (Ministry of Electronics and Information Technology, 2026).

The fundamental, transformative power of the territory's e-governance architecture lies in its deep, aggressive integration with the national Digital Public Infrastructure. The administration has successfully and comprehensively embedded the Aadhaar biometric authentication system, the Unified Payments Interface, and the DigiLocker digital document verification platform directly into the core workflows of almost every single territorial government department. This deep, systemic integration has fundamentally revolutionized the internal mechanics of the island bureaucracy. Government subsidies, elderly pensions, and agricultural support funds are now routed directly and instantly to authenticated beneficiaries via the Aadhaar Enabled Payment System, permanently eradicating the massive historical leakages and systemic, petty corruption that plagued manual, cash-based disbursements in the remote islands. Furthermore, the mandatory adoption of the national e-Office platform across the entire territorial secretariat and the district administrations has systematically eliminated the agonizingly slow, easily manipulated physical movement of paper files, drastically accelerating administrative decision-making processes and creating a permanent, highly transparent, and easily auditable digital trail for every single bureaucratic action (Department of Administrative Reforms and Public Grievances, 2026).

16.3 Citizen Service Delivery: CSCs, Service Portals and Mobile Governance

The ultimate, true metric of success for any technological governance initiative is the measurable, tangible improvement in the speed, transparency, and dignity with which ordinary citizens can access essential government services. In the highly dispersed, geographically punishing environment of the Andaman and Nicobar Islands, requiring citizens to physically travel to administrative headquarters to obtain basic documents or process simple applications is not merely an inconvenience; it constitutes a profound, unacceptable denial of basic civic rights. Recognizing this severe structural inequity, the territorial administration in 2026 has focused intensely on radically decentralizing citizen

service delivery, aggressively pushing government services directly to the remote island peripheries through highly localized digital access points and comprehensive mobile platforms.

The absolute, indispensable vanguard of this decentralized service delivery strategy is the extensive, continuously expanding network of Common Service Centres established across the entire archipelago. These localized, digitally equipped kiosks are strategically located in almost every single recognized Gram Panchayat, serving as the primary, and often the only, vital digital interface between the isolated rural citizenry and the centralized state apparatus (Ministry of Electronics and Information Technology, 2026). In the Andaman and Nicobar Islands, Common Service Centres perform highly specialized, context-critical functions that extend far beyond the standard suite of digital services offered in mainland states. Due to the absolute, life-and-death reliance on maritime and aerial connectivity, one of the most critical, highly utilized functions of these localized centres is the facilitation of online booking for subsidized inter-island passenger ferries and emergency helicopter medical evacuation flights. By allowing rural citizens to securely book these scarce, vital transit tickets locally, the administration has successfully eradicated the rampant, exploitative black market for ferry tickets that historically plagued the major ports.

Furthermore, these decentralized centres act as absolutely critical nodes for the execution of localized, digital tele-medicine services. Citizens residing in the remote agricultural settlements of the North and Middle Andaman district can utilize the high-speed broadband connections at the local Common Service Centres to participate in secure, real-time video consultations with specialized medical professionals operating out of the G.B. Pant Hospital in Port Blair or super-specialty hospitals located on the mainland. This highly effective digital health intervention saves incredibly poor, vulnerable patients from undertaking physically agonizing, financially ruinous, and potentially fatal maritime journeys to the capital city for routine diagnostic reviews or basic follow-up consultations. To ensure the absolute, continuous operational reliability of these vital digital lifelines, the administration must heavily subsidize and strictly mandate the installation of robust, autonomous solar power and battery backup systems for every single Common Service Centre, permanently immunizing them from the frequent, crippling power outages that plague the rural island electricity grids.

To complement the physical network of localized access points, the territory has successfully developed and launched the highly integrated Andaman and Nicobar Islands State Portal. This comprehensive, user-centric digital platform functions as a single, unified gateway for residents to securely access hundreds of specific government services from the comfort of their homes or mobile devices. Citizens can utilize the portal to seamlessly apply for crucial land revenue certificates, digitally renew their essential islander identity cards, officially register new commercial businesses, and securely pay their municipal property taxes online without ever needing to physically visit a crowded government office. However, recognizing that the rapid penetration of affordable smartphones vastly outpaces the adoption of traditional, fixed-line broadband connections among the poorer demographics, the administration is aggressively pivoting its developmental strategy toward comprehensive Mobile Governance. The administration is systematically redesigning all critical

public-facing applications and civic service platforms to be completely mobile-responsive, ensuring that vital administrative functions can be executed seamlessly over 4G cellular networks. Crucially, the administration must ensure that these mobile applications are heavily localized and offered in multiple regional languages, including Bengali, Tamil, Telugu, and Hindi, to ensure absolutely zero digital exclusion for the diverse, multi-lingual migrant settler communities that populate the territory (Directorate of Information Technology, 2026).

16.4 Data Governance, Open Data Policy and Privacy Framework

As the Union Territory of the Andaman and Nicobar Islands rapidly accelerates its comprehensive transition toward a fully digitized, highly interconnected e-governance architecture, the administration is inevitably generating, collecting, processing, and storing an absolutely massive, unprecedented volume of digital data. This rapidly expanding digital repository includes highly sensitive personal citizen information, incredibly valuable geospatial mapping coordinates, granular public health statistics, and vital, high-security maritime logistics data. Establishing a highly rigorous, exceptionally secure, and legally transparent data governance framework is no longer an optional administrative best practice; it is the absolute, foundational prerequisite for maintaining public trust, optimizing complex resource allocation, and fiercely protecting the constitutional privacy rights of the island residents. In 2026, the administration faces the highly complex, delicate challenge of actively promoting a progressive, innovation-driving Open Data culture while simultaneously executing absolute, uncompromising protection of highly sensitive strategic and anthropological information.

The territorial administration has officially and enthusiastically adopted the guiding principles of the National Data Sharing and Accessibility Policy, recognizing that anonymized, highly accurate public data is a tremendously valuable asset that can drive massive private sector innovation and significantly improve the quality of academic research (Ministry of Electronics and Information Technology, 2026). The administration is actively working to establish a comprehensive, centralized Andaman and Nicobar Open Data Portal. This portal is designed to host vast arrays of non-sensitive, deeply anonymized datasets related to daily tourism footfalls, highly detailed meteorological and oceanic weather patterns, localized agricultural crop yields, and detailed municipal solid waste generation metrics. By making this valuable, high-quality data freely and easily accessible to independent software developers, academic researchers, and ambitious local entrepreneurs, the administration aims to actively stimulate the rapid development of highly innovative, localized technological solutions. For instance, making real-time, historical inter-island ferry scheduling and passenger load data completely open source enables brilliant local startups to develop highly accurate, predictive transit applications that significantly streamline the often chaotic, frustrating tourist and citizen travel experience.

However, the implementation of this progressive open data policy within the highly specific, incredibly sensitive context of the archipelago requires intense, highly cautious calibration. The Andaman and Nicobar Islands occupy a position of paramount, non-negotiable strategic and military importance for the Republic of India. Consequently, a massive, highly

significant proportion of the geospatial data, high-resolution coastal bathymetry charts, and detailed logistical supply chain information generated by the territory cannot, under any circumstances, be released into the public domain due to severe, overriding national security protocols managed by the Andaman and Nicobar Command of the Indian Armed Forces. The territorial administration must establish highly rigid, multi-layered data classification protocols to absolutely ensure that civilian open data initiatives do not inadvertently, dangerously expose critical military installations or compromise sensitive maritime security operations.

Furthermore, the territory hosts several Particularly Vulnerable Tribal Groups, including the Jarawa, the Sentinelese, and the Shompen, whose absolute physical safety and profound cultural survival depend entirely on the strict maintenance of their isolation and privacy. The administration holds massive, highly sensitive repositories of anthropological, demographic, and specific medical data regarding these indigenous communities. This tribal data must be treated with an extraordinary, unprecedented level of extreme confidentiality. It must be permanently and aggressively ring-fenced from any open data initiatives and shielded with the highest possible cryptographic security to prevent unauthorized access by exploitative commercial entities, unethical researchers, or potential biological threats (Ministry of Tribal Affairs, 2026).

In the realm of protecting individual citizen privacy, the territory is strictly bound by the comprehensive legal mandates of the Digital Personal Data Protection Act, 2023. The administration is undertaking a massive, complex, and highly expensive operational overhaul to ensure complete, flawless compliance with this stringent legislation. This massive undertaking involves completely redesigning all legacy government software applications to strictly adhere to the fundamental principles of data minimization, ensuring that departments only collect the absolute minimum amount of personal information necessary for service delivery. Furthermore, the administration must implement robust, highly transparent mechanisms for obtaining explicit, informed digital consent from citizens before processing their data, and establish highly secure, encrypted data vaults to aggressively protect citizens against the escalating, global threat of malicious cyber identity theft and devastating financial fraud.

15.5 Cybersecurity: State-Level Institutional Mechanisms

The aggressive, rapid, and territory-wide digitization of all critical public infrastructure, vital administrative communication networks, and essential civic service delivery systems in the Union Territory of the Andaman and Nicobar Islands has fundamentally, permanently expanded the surface area for highly sophisticated, potentially devastating cyber threats. In 2026, robust, uncompromising cybersecurity within this territory is not merely an important civic IT management issue; it is recognized as a paramount, critical national security imperative of the highest order. The archipelago's extreme physical proximity to highly congested, globally vital international shipping lanes, combined with the massive, continuous operational presence of the integrated tri-services military command, transforms the territory's digital infrastructure into a highly attractive, strategically valuable, and constantly

probed target for sophisticated, hostile state-sponsored cyber actors and highly organized transnational cybercriminal syndicates. A successful, crippling cyber-attack that disables the territory's fragile power grid management systems, compromises the sensitive digital logistics of the commercial seaports, or paralyzes the critical, life-saving aviation communication networks would immediately precipitate a cascading, catastrophic economic collapse and cause a massive, unacceptable degradation of regional military readiness.

To actively, aggressively defend against this continuously escalating, highly complex threat matrix, the territorial administration has officially established the specialized Andaman and Nicobar Computer Emergency Response Team. This highly specialized, technologically advanced institutional body functions as the absolute, apex nodal agency responsible for continuously monitoring the territory's vast digital threat landscape, actively identifying critical software vulnerabilities across all government networks, and coordinating rapid, highly effective multi-agency responses to localized cyber incidents (Ministry of Electronics and Information Technology, 2026). The emergency response team operates under incredibly strict, uncompromising security protocols and works in continuous, seamless, and highly classified coordination with the national Indian Computer Emergency Response Team and the specialized cyber-warfare divisions operating within the Andaman and Nicobar Command. This deep, embedded civil-military cyber integration is absolutely essential, as sophisticated cyber-attacks frequently and deliberately blur the traditional lines between civilian infrastructure sabotage and acts of modern, asymmetrical strategic warfare.

The absolute, highest priority for the localized emergency response team is the fierce, uncompromising protection of the Critical Information Infrastructure that underpins the territory's survival. This specifically includes the heavily fortified landing stations of the vital Chennai-Andaman and Nicobar Islands submarine optical fibre cable, the highly sensitive digital control systems of the G.B. Pant tertiary hospital, the automated dispatch systems of the power utilities, and the complex digital management networks of the primary commercial seaports. The administration legally mandates that all departments operating critical infrastructure must execute rigorous, continuous, and highly sophisticated independent security audits, aggressively implement multi-factor authentication protocols for all administrative users, and maintain completely physically isolated, air-gapped, and frequently updated offline data backups to ensure rapid, total system restoration in the highly probable event of a devastating, targeted ransomware attack.

However, executing this highly aggressive cybersecurity mandate is severely, structurally constrained by a massive, critical shortage of highly specialized, locally available cybersecurity professionals. The territory completely lacks the advanced, world-class technical educational institutions required to produce certified ethical hackers, advanced digital forensics experts, and sophisticated network security architects. Consequently, the administration is heavily, uncomfortably reliant on expensive, external mainland cybersecurity consultants for complex threat mitigation and advanced system hardening. To permanently rectify this severe, highly dangerous vulnerability, the administration must urgently launch massive, highly subsidized, and intensely focused cyber capacity-building programs specifically tailored for the local Andaman and Nicobar Police force, aggressively

establishing specialized, high-tech cybercrime investigation laboratories in Port Blair, and heavily incentivizing the brightest local island youth to fiercely pursue advanced, specialized careers in cutting-edge information security (Department of Telecommunications, 2026).

16.6 Emerging Technologies: AI, Geospatial Systems and Smart Governance

As the Union Territory of the Andaman and Nicobar Islands aggressively drives toward its highly ambitious, centennial developmental vision for 2047, the administration recognizes that relying solely on conventional, legacy digital tools is entirely insufficient to manage the extreme, unprecedented complexities of archipelagic governance. To successfully navigate the profound, overlapping challenges of rapid, unipolar urbanization, terrifying, accelerating climate change, and the rigorous demands of massive marine resource management, the territory is aggressively, systematically embracing the highly transformative power of emerging, cutting-edge technologies. In 2026, the strategic, highly targeted deployment of advanced Artificial Intelligence, incredibly sophisticated Geographic Information Systems, and comprehensive, highly integrated Internet of Things networks forms the absolute vanguard of the administration's aggressive push toward true, predictive Smart Governance.

The integration of advanced Artificial Intelligence and complex machine learning algorithms is fundamentally revolutionizing the administration's capacity to execute complex, predictive planning and optimize the utilization of severely scarce, expensive resources. In the critical realm of maritime logistics, which forms the absolute lifeblood of the island economy, the Directorate of Shipping Services is aggressively piloting specialized, highly complex AI-driven predictive maintenance platforms. By continuously analyzing massive, real-time data streams generated by advanced sensors installed deep within the aging engines of the massive inter-island passenger ferries, these sophisticated algorithms can accurately, mathematically predict critical, catastrophic mechanical failures long before they actually occur. This allows the administration to execute highly targeted, proactive, and significantly cheaper preventative maintenance during scheduled downtime, thereby drastically reducing the terrifying, highly dangerous incidence of sudden, mid-ocean vessel breakdowns and significantly optimizing the overall operational reliability of the vital civilian fleet (Ministry of Ports, Shipping and Waterways, 2026).

Furthermore, Artificial Intelligence is being aggressively deployed as a highly critical, life-saving component of the territory's disaster risk reduction framework. By rapidly and continuously processing colossal, complex datasets encompassing historical regional weather patterns, real-time, high-resolution satellite imagery, and localized oceanographic tidal readings, highly advanced predictive AI models can provide incredibly precise, hyper-localized early warnings for impending, highly destructive extreme weather events. These advanced systems mathematically predict the exact, highly specific path of devastating cyclonic storm surges and the precise, localized risk of catastrophic mudslides on unstable, populated urban hillsides with unprecedented, incredibly high accuracy. This provides the local disaster management authorities with critical, life-saving additional lead time to execute targeted, highly organized, and safe civilian evacuations from mathematically identified,

high-risk coastal impact zones, thereby directly saving hundreds of lives during severe, inevitable environmental crises.

Geographic Information Systems constitute the absolute, non-negotiable foundational digital layer for all modern spatial planning, severe environmental monitoring, and sustainable resource management across the fragile archipelago. The territory has successfully established a highly comprehensive, incredibly detailed, and continuously updated digital spatial data infrastructure. This highly advanced GIS platform seamlessly integrates deeply layered, high-resolution spatial datasets detailing strict forest boundaries, fragile coral reef distributions, complex coastal topography, and sensitive urban utility networks. The administration utilizes this incredibly powerful spatial technology to meticulously and mathematically monitor the terrifying, accelerating rate of coastal erosion, actively track deeply concerning, highly illegal changes in land use within legally protected, sensitive buffer zones, and scientifically map the devastating, widespread extent of coral bleaching events across the territory with pinpoint, exact geographic precision. This incredibly rich, spatial data empowers the administration to make highly objective, scientifically indisputable, and completely evidence-based decisions regarding complex coastal zone management and the highly strategic, safe routing of new, multi-billion-dollar linear infrastructure projects (Ministry of Environment, Forest and Climate Change, 2026).

The comprehensive deployment of Internet of Things technology is the ultimate, defining characteristic of the Smart Cities Mission currently being aggressively executed in Port Blair. The municipal administration has successfully deployed a massive, dense, and highly complex network of interconnected, smart sensors across the entire urban landscape. Highly sensitive environmental sensors continuously, autonomously monitor localized ambient air and water quality in real-time. Sophisticated, intelligent water management networks utilizing thousands of digital smart meters actively, rapidly detect massive, hidden pipeline leakages, automatically optimizing the highly stressed, inadequate urban water distribution system and severely reducing crippling, expensive non-revenue water losses. The seamless, comprehensive integration of these highly advanced, emerging technologies transforms the traditionally reactive, sluggish island bureaucracy into a highly dynamic, incredibly proactive, and intensely responsive Smart Governance machine, absolutely guaranteeing that the Andaman and Nicobar Islands remain a highly resilient, deeply prosperous, and technologically supreme maritime territory for generations to come.

Chapter 17: Innovation, Research and Knowledge Economy

The transition of the Union Territory of the Andaman and Nicobar Islands from a historically subsidized, administratively dependent outpost into a dynamic, self-sustaining economic powerhouse requires a fundamental restructuring of its economic paradigms. In the critical assessment year of 2026, the territorial administration recognizes that relying exclusively on traditional primary sectors or low-value mass tourism is mathematically and ecologically insufficient to secure the long-term prosperity of the archipelago. The future of the territory depends entirely on its successful, aggressive evolution into a robust Knowledge Economy. This economic model relies on the generation, dissemination, and commercial application of advanced intellectual capital, particularly in highly specialized fields such as marine biology, tropical medicine, sustainable ocean logistics, and climate resilience engineering. Cultivating this knowledge economy demands the systematic creation of a vibrant innovation ecosystem, the forging of deep academic and industrial linkages, the aggressive protection of intellectual property, and the complete alignment of the local workforce with the complex technological demands of the twenty-first century. This comprehensive chapter provides a rigorous, exhaustive, and highly technical analysis of the innovation landscape within the Andaman and Nicobar Islands. It meticulously examines the nascent startup ecosystem, the critical deficits in research and development, the urgent need for intellectual property commercialization, the transformative potential of localized knowledge institutions, and the absolute necessity of building a youth-centric innovation culture to guarantee the territory's competitive supremacy in the Indo-Pacific region by 2047.

17.1 State Innovation Ecosystem: Startups and Accelerators

The innovation ecosystem in the Union Territory of the Andaman and Nicobar Islands is currently in a nascent, highly fragile, and fundamentally transitional phase of development. For decades, the local economy was dominated almost exclusively by government employment and traditional, unorganized retail trade. The concept of private, technology-driven startups was virtually non-existent, primarily due to the severe, crippling lack of high-speed digital connectivity and the immense logistical frictions associated with archipelagic geography. However, the successful operationalization of the Chennai to Andaman and Nicobar Islands submarine optical fibre cable has fundamentally altered this restrictive baseline reality. By introducing reliable, high-bandwidth internet to the capital city of Port Blair and several major peripheral islands, the central government has provided the absolute foundational infrastructure required to support a modern digital startup ecosystem (Ministry of Electronics and Information Technology, 2026).

Despite this monumental infrastructural leap, the territory faces profound, unique challenges in nurturing localized innovation. Startups operating in the Andaman and Nicobar Islands suffer from extreme geographical and financial isolation from the massive, highly active venture capital markets and angel investor networks located in mainland metropolitan hubs such as Bengaluru, Mumbai, and Delhi. Local entrepreneurs frequently struggle to secure early-stage seed funding, as mainland investors are naturally hesitant to deploy capital into a remote, logistically complex territory characterized by a tiny domestic consumer base and

exorbitant shipping costs. To counteract this severe financial isolation, the territorial administration in 2026 is aggressively formulating a highly customized Andaman and Nicobar Innovation and Startup Policy. This comprehensive policy explicitly aims to heavily subsidize early-stage innovation by providing generous matching grants, deeply subsidized co-working spaces, and vital digital infrastructure support to registered local startups (Department for Promotion of Industry and Internal Trade, 2026).

The strategic focus of the island startup ecosystem must necessarily diverge from generic mainland software development or conventional e-commerce models. The territorial administration is actively and forcefully directing entrepreneurial energy toward highly specialized, location-specific domains, primarily the Sustainable Blue Economy and premium eco-tourism technology. There is an immense, incredibly lucrative potential for local startups to develop advanced, artificial intelligence-driven predictive maintenance software for the aging inter-island shipping fleets. Other highly viable sectors include the development of sophisticated, hyper-local digital logistics platforms designed to streamline the chaotic, weather-dependent supply chains that transport essential agricultural produce from the North and Middle Andaman district to the consumer markets in Port Blair. Furthermore, startups focusing on advanced, low-cost water desalination technologies, localized solid waste upcycling processes, and digital ecotourism management systems hold immense commercial promise and direct relevance to the territory's survival.

To physically anchor and support this nascent ecosystem, the administration has established the first dedicated, state-sponsored technology incubator within the Dr. B. R. Ambedkar Institute of Technology campus in Port Blair. This centralized incubation facility is designed to provide ambitious local youth with crucial access to high-speed computing resources, secure legal counseling, and vital mentorship from established mainland industry veterans via continuous video conferencing. However, for the innovation ecosystem to truly flourish and achieve critical mass by 2047, the administration must rapidly scale this incubation infrastructure beyond the capital city. The government must establish decentralized, specialized micro-accelerators in major agricultural and tourism nodes like Diglipur and Swaraj Dweep. These peripheral accelerators must focus exclusively on fostering grassroots, rural innovation, empowering artisanal fishermen and smallholder farmers to develop and commercialize sustainable, high-value marine and agricultural technologies, thereby ensuring that the immense wealth generated by the knowledge economy is equitably distributed across the entire, highly fragmented archipelago.

17.2 Research and Development: Academic-Industry Linkages

The landscape of Research and Development within the Andaman and Nicobar Islands currently exhibits a profound, highly damaging disconnect between the massive, globally significant ecological resources of the territory and the localized capacity for scientific investigation. The archipelago is universally recognized as an incredibly rich, pristine biological laboratory. It features hyper-diverse coral reef ecosystems, incredibly complex tropical rainforests, and unique, isolated indigenous populations. Despite this unparalleled natural wealth, the territory suffers from a severe, chronic deficit in advanced,

institutionalized Research and Development infrastructure. In 2026, the vast majority of highly specialized scientific research conducted in the islands is executed by visiting scholars and scientific teams dispatched temporarily from prestigious mainland institutions, rather than being driven by powerful, permanent local research bodies. This dynamic results in a continuous extraction of vital scientific data without fostering the necessary, permanent scientific capacity within the island community itself (Ministry of Science and Technology, 2026).

The absolute, non-negotiable prerequisite for building a resilient knowledge economy is the establishment of deep, highly productive linkages between localized academic institutions and the emerging private industries. Currently, this academic and industrial synergy is practically non-existent in the territory. The limited local colleges and technical institutes function almost entirely as passive teaching centres, focusing heavily on rote memorization and generic degree conferment rather than dynamic, problem-solving industrial research. Consequently, when the territorial administration or private hospitality chains encounter complex, island-specific challenges, such as designing severe-cyclone-resistant architectural structures or developing advanced, localized coral reef restoration protocols, they are immediately forced to import incredibly expensive, external consulting expertise from the mainland. This complete lack of localized, applied research capability severely handicaps the territory's ability to achieve true, sustainable economic self-reliance.

To radically transform this stagnant research landscape, the territorial administration and the central government must execute a highly coordinated, massively funded strategic intervention. The most urgent priority is the aggressive expansion and permanent localization of elite national research institutions within the archipelago. The administration is actively lobbying for the establishment of a massive, fully equipped, and permanently staffed regional centre of the National Institute of Ocean Technology in Port Blair. This proposed advanced research facility would be explicitly mandated to conduct deep-sea explorations, develop localized ocean thermal energy conversion technologies, and pioneer sustainable, high-yield marine aquaculture systems tailored specifically for the Andaman Sea. By physically anchoring elite researchers in the territory, the government can stimulate a vibrant, continuous culture of scientific inquiry and provide local students with unprecedented access to world-class laboratory facilities and prestigious mentorship programs (Ministry of Earth Sciences, 2026).

Furthermore, the territorial administration must proactively engineer and heavily subsidize structured partnerships between the local educational institutions and the rapidly expanding private tourism and maritime logistics sectors. The government must legally mandate that all major, multi-national corporations investing in the Great Nicobar Holistic Development Project or establishing luxury eco-resorts in the outer islands allocate a strict, mandatory percentage of their massive capital expenditures directly toward localized research funding. These corporate funds must be channeled into specific, localized applied research projects, such as developing highly efficient, decentralized wastewater bioremediation systems or creating advanced, artificial intelligence-based predictive models for local weather disruptions. By forcing the integration of private capital with localized academic inquiry, the

territory can successfully ensure that the lucrative commercial development of the islands directly and continuously funds the intellectual and scientific advancement of its resident population.

17.3 Intellectual Property: Awareness, Registration and Commercialisation

The strategic management, rigorous protection, and aggressive commercialization of Intellectual Property constitute an entirely neglected, yet profoundly critical, dimension of economic governance in the Union Territory of the Andaman and Nicobar Islands. In the intensely competitive global knowledge economy of 2026, raw natural resources and generic manual labour no longer serve as the primary drivers of massive wealth generation. True, sustainable prosperity is derived directly from the ownership and monetization of unique ideas, advanced localized technologies, and exclusive biological resources. However, the current awareness regarding Intellectual Property rights, patent filing protocols, and trademark protection among the local island population, rural artisans, and small business owners remains alarmingly and unacceptably low. This severe, systemic ignorance leaves the territory incredibly vulnerable to immense economic exploitation and the devastating, uncompensated extraction of its unique cultural and biological assets.

The most severe, pressing threat facing the territory in the realm of Intellectual Property is the insidious, highly damaging practice of biopiracy. The archipelago is a globally recognized biodiversity hotspot, hosting thousands of endemic plant and marine species that possess immense, untapped genetic value. The complex, highly evolved biochemical compounds found within the territory's pristine coral reefs, rare deep-sea sponges, and unique tropical flora hold massive, multi-billion-dollar potential for the global pharmaceutical, cosmetic, and agricultural industries. Without a highly aggressive, hyper-vigilant Intellectual Property protection framework, incredibly well-funded foreign and mainland corporate researchers can easily extract these unique biological resources, patent the resulting lucrative genetic discoveries in international jurisdictions, and generate massive corporate profits without returning any financial compensation or acknowledging the sovereign ownership of the island territory. The administration must urgently and ruthlessly enforce the strict mandates of the Biological Diversity Act, demanding that all external researchers sign ironclad, legally binding benefit-sharing agreements before being granted access to the islands' genetic wealth (Ministry of Environment, Forest and Climate Change, 2026).

Furthermore, the territory possesses a rich, unique cultural heritage and localized traditional knowledge that require immediate, aggressive legal protection. The indigenous tribal populations, particularly the Nicobarese community, possess profound, ancient knowledge regarding the medicinal properties of endemic island plants and highly specialized, sustainable agricultural techniques. Protecting this ancient, traditional knowledge from unauthorized, exploitative commercial patenting by external entities is a paramount moral and legal obligation of the government. Additionally, the territory produces several unique, highly distinctive agricultural and artisanal products, such as the highly resilient Nicobari coconut, unique varieties of localized spices, and specialized, intricately carved coastal woodwork. The administration must proactively and aggressively assist local agricultural

cooperatives and artisanal groups in securing highly coveted Geographical Indication tags for these unique, localized products. Securing Geographical Indication status legally protects the local producers from cheap, fraudulent mainland imitations, significantly elevates the premium brand value of Andaman products in lucrative international markets, and directly guarantees substantially higher income realizations for the marginalized rural producers (Department for Promotion of Industry and Internal Trade, 2026).

To fundamentally eradicate the widespread ignorance surrounding Intellectual Property, the territorial administration is establishing a dedicated, highly empowered Intellectual Property Facilitation Cell within the Directorate of Industries in Port Blair. This specialized, highly trained cell is explicitly mandated to conduct continuous, extensive awareness campaigns across all islands, targeting local high schools, technical colleges, and rural entrepreneurial networks. The cell provides entirely free, highly specialized legal counsel to local innovators, heavily subsidizes the incredibly expensive patent filing fees, and actively assists local startups in navigating the complex, often bewildering international trademark registration processes. By systematically demystifying Intellectual Property laws and providing aggressive, localized administrative support, the territory can successfully transform its highly unique biological and cultural assets into legally protected, immensely profitable economic monopolies by 2047.

17.4 Knowledge Institutions as Engines of Development

The realization of a prosperous, self-sustaining, and globally competitive knowledge economy in the Union Territory of the Andaman and Nicobar Islands depends entirely, absolutely, and unequivocally on the presence and operational excellence of robust, world-class localized knowledge institutions. In 2026, a highly critical, unflinching assessment of the territory's higher educational and research infrastructure reveals a profound, systemic inadequacy. The territory remains almost entirely dependent on a tiny, underfunded handful of government-run colleges, specifically the Jawaharlal Nehru Rajkeeya Mahavidyalaya and the Dr. B. R. Ambedkar Institute of Technology. While these foundational institutions have historically provided basic, necessary undergraduate education to the island settler communities, they are fundamentally and structurally incapable of serving as the massive, dynamic intellectual engines required to propel a modern, highly complex maritime economy.

The most glaring, critical deficit in the current institutional architecture is the absolute, shocking absence of an independent, autonomous Central University or a highly specialized Institute of National Importance located directly within the archipelago. Because the existing local colleges are merely affiliated with distant, mainland universities, primarily Pondicherry University, they completely lack the academic autonomy necessary to rapidly design, update, and deploy highly specialized, contextually relevant curricula. The academic courses offered are overwhelmingly generic, focusing heavily on standard arts, basic commerce, and theoretical sciences. These traditional, archaic courses fail entirely to equip the local island youth with the highly complex, specific technical skills demanded by the emerging, lucrative sectors of marine biotechnology, sustainable tropical architecture, advanced oceanographic

data analysis, and highly specialized, premium maritime law. This severe, crippling institutional vacuum forces thousands of the brightest, most ambitious island students into involuntary, expensive educational migration to the mainland, resulting in a continuous, devastating brain drain that systematically strips the territory of its most vital intellectual capital (Ministry of Education, 2026).

To fundamentally and permanently reverse this destructive trajectory, the Government of India must urgently, aggressively execute the establishment of a premier, autonomous Island University in Port Blair, with highly specialized, affiliated research campuses located in the North and Middle Andaman district and the Nicobar district. This proposed, visionary institution must be explicitly designed from its inception to function as a premier, globally recognized hub for marine and archipelagic studies. The university must attract world-class, elite faculty by offering highly competitive, premium research grants and leveraging the unparalleled, pristine natural laboratory provided by the surrounding ocean and tropical forests. By offering highly advanced, specialized postgraduate and doctoral programs in sustainable blue economy management, coral reef ecology, and complex maritime disaster resilience engineering, the university will not only retain brilliant local talent but actively attract elite international scholars and massive global research funding to the territory.

Furthermore, true knowledge institutions do not operate in isolated, academic silos. To serve as genuine engines of regional development, these proposed institutions must be deeply, seamlessly integrated into the very fabric of the localized administrative and economic planning processes. The territorial administration must formally, legally mandate that the academic faculties of these institutions serve as the primary, authoritative scientific advisory bodies for all major public policy decisions. When the administration plans the construction of a massive new coastal highway or a complex desalination plant, the engineering and environmental viability assessments must be conducted directly by the local, specialized university departments rather than by incredibly expensive, disconnected mainland consulting firms. By aggressively transforming its higher educational landscape into a powerful, localized engine of applied, relevant research, the Andaman and Nicobar Islands can successfully generate the sophisticated intellectual capital required to independently, confidently manage its own complex destiny leading up to 2047.

17.5 Building a Youth Innovation and Research Ecosystem

The ultimate, long-term sustainability of the knowledge economy in the Union Territory of the Andaman and Nicobar Islands rests entirely and absolutely upon the shoulders of its youth. If the next generation of islanders is not systematically, deeply ingrained with a robust culture of scientific inquiry, aggressive technological innovation, and bold entrepreneurial risk-taking, the territory will remain perpetually subservient to external mainland expertise and imported technological solutions. In 2026, the territorial administration recognizes that fostering this critical culture of innovation cannot commence at the university level; it must be aggressively, meticulously cultivated at the very foundational stages of the educational continuum, specifically targeting young students across the highly dispersed primary and secondary school networks of the archipelago.

The most effective, highly visible mechanism for igniting this passion for innovation among the island youth is the aggressive, territory-wide rollout of the Atal Tinkering Labs under the auspices of the Atal Innovation Mission. The administration is committing massive, focused capital to ensure that these highly advanced, dedicated innovation workspaces are established not merely in the elite, well-funded schools of the capital city, Port Blair, but also aggressively expanded into the most remote, geographically isolated senior secondary schools of the North and Middle Andaman district and the tribal settlements of the Nicobar district (NITI Aayog, 2026). These specialized, highly equipped laboratories provide young, curious students with unprecedented, hands-on access to advanced, transformative technologies, including 3D printing equipment, basic robotics kits, complex drone assembly components, and Internet of Things sensor arrays. By providing this tactile, experimental exposure, the administration aims to fundamentally transition the learning paradigm from passive, boring rote memorization to dynamic, highly engaging, and complex problem-solving.

However, providing advanced physical hardware is mathematically insufficient without the simultaneous provision of highly skilled, deeply localized mentorship and contextualized problem statements. The challenges that inspire island youth must be directly, intimately relevant to their unique daily realities. The administration is actively designing and promoting highly specific, localized "Archipelago Hackathons" and island-centric innovation challenges. These highly competitive events specifically challenge local students to develop ingenious, low-cost technological solutions for pressing, highly visible local issues, such as designing localized, highly efficient rainwater harvesting purification systems, creating affordable, solar-powered refrigeration units for remote artisanal fishermen, or programming intelligent early warning mobile applications for localized coastal flooding. By focusing young, brilliant minds on solving immediate, visible community challenges, the administration actively fosters a deep, profound sense of civic ownership and demonstrates the immense, tangible power of localized technological intervention.

Furthermore, retaining this young, highly cultivated talent within the territory is a paramount, existential priority. The historical, devastating pattern of the brightest students migrating to the mainland and never returning must be aggressively, permanently broken. The territorial administration must establish highly lucrative, incredibly prestigious "Island Innovation Fellowships" specifically targeted at exceptional local graduates. These elite, highly competitive fellowships would provide massive, sustained financial stipends, unlimited access to localized government data, and highly prioritized, direct access to venture capital networks, specifically empowering young innovators to immediately launch highly scalable, sustainable startups directly within the islands. By systematically constructing a continuous, highly supportive pipeline that safely guides young minds from the initial curiosity of a high school tinkering lab directly to the successful, profitable establishment of a viable commercial enterprise, the Andaman and Nicobar Islands can successfully, permanently secure a dynamic, locally driven innovation ecosystem capable of competing on the global stage.

17.6 Skill Development, Employability and Workforce Alignment

The rapid, aggressive execution of the massive strategic and economic mega-projects within the Union Territory of the Andaman and Nicobar Islands is currently exposing a profound, terrifying, and deeply structural crisis regarding localized skill development, general employability, and overall workforce alignment. In 2026, the massive, unprecedented influx of capital intended to develop the enormous International Container Transshipment Terminal, the complex dual-use greenfield airport, and the sprawling, luxurious eco-tourism enclaves creates a massive, unprecedented demand for a highly specialized, technically proficient modern workforce. However, the existing, localized educational and vocational training ecosystem is fundamentally, deeply misaligned with these rapidly evolving, complex industrial requirements. This massive, severe misalignment ensures that the highly lucrative, technically demanding jobs generated by these massive investments are frequently, inevitably captured by highly skilled, imported migrant labour from the mainland, leaving the local island youth severely disenfranchised, highly frustrated, and chronically underemployed.

The traditional Technical and Vocational Education and Training infrastructure in the territory, primarily consisting of a very limited number of government-run Industrial Training Institutes, is thoroughly antiquated and functionally obsolete. These legacy institutions continue to focus overwhelmingly on delivering basic, generic training in conventional, low-value trades such as basic masonry, simple domestic electrical wiring, and rudimentary carpentry (Ministry of Skill Development and Entrepreneurship, 2026). While these basic, foundational skills are necessary for minor civic maintenance, they are completely, fundamentally inadequate to meet the highly rigorous, complex demands of the proposed modern maritime economy. A local student trained in basic, low-voltage electrical work is completely unequipped to safely maintain the massive, highly complex, high-voltage automated cargo-handling cranes proposed for the Galathea Bay transshipment port. Similarly, generic, low-level hospitality training is entirely insufficient to provide the highly sophisticated, multilingual, premium service standards demanded by ultra-luxury, high-net-worth eco-resorts.

To successfully, permanently resolve this critical, crippling skills deficit, the territorial administration must urgently execute a complete, radical, and massive overhaul of the entire skill development architecture. The overarching strategy must shift decisively and aggressively away from passive, government-dictated training programs toward highly dynamic, closely integrated, industry-led skill development models. The administration must strictly, legally mandate that all massive multinational corporations, major port operators, and luxury hospitality chains operating within the territory actively partner with the local government to establish specialized, world-class Centers of Excellence directly within the islands. These highly specialized, elite centres must offer internationally accredited, highly rigorous certifications in advanced fields such as complex marine logistics management, deep-sea underwater welding, highly specialized renewable energy micro-grid maintenance, and advanced, sustainable scuba diving and marine guiding operations.

Furthermore, the territory must aggressively expand and strictly formalize the apprenticeship ecosystem. Theoretical, classroom-based vocational training must be seamlessly,

compulsorily integrated with extensive, practical, on-the-ground industrial experience. The administration must legally compel all major infrastructure contractors and large commercial entities operating in the archipelago to employ a strict, legally mandated minimum percentage of locally trained apprentices. The government must provide massive, highly attractive financial subsidies and significant tax incentives to these corporations to actively offset the initial costs associated with intensely training inexperienced local youth. By completely, ruthlessly aligning the localized skill development curriculum with the exact, highly specific requirements of the emerging anchor industries, the Andaman and Nicobar Islands can successfully transform its currently underemployed, frustrated youth demographic into a highly specialized, globally competitive, and incredibly valuable maritime workforce, permanently securing the economic prosperity and social stability of the territory for 2047 and beyond.

Chapter 18: Agriculture, Allied Sectors and Food Security

The agricultural framework of the Union Territory of the Andaman and Nicobar Islands represents a highly complex, ecologically constrained, and logistically heavily burdened sector of the regional economy. The fundamental challenge defining agriculture, allied sectors, and food security in this archipelago is the absolute, unyielding tension between the necessity of feeding a growing settler population and the non-negotiable imperative to protect one of the most fragile, biologically diverse, and globally significant ecological reserves on the planet. Unlike the vast, fertile, and contiguous agrarian plains of the Indian mainland, the territory possesses a microscopic proportion of arable land. With over eighty-one per cent of the total geographical area legally locked and heavily protected as primary tropical rainforests, wildlife sanctuaries, and exclusive tribal reserves, the actual spatial footprint available for agricultural cultivation is incredibly restricted. Furthermore, the territory is separated from the Indian mainland by over one thousand and two hundred kilometres of the turbulent Bay of Bengal. This extreme geographical isolation dictates that any deficit in local food production must instantly and inevitably be met through massive, highly expensive, and weather-dependent maritime imports. In the current assessment year of 2026, the territorial administration is executing a profound, highly strategic, and scientifically rigorous transformation of the primary sector. The overarching objective is to rapidly transition away from ecologically damaging, low-yield traditional farming practices and aggressively pivot toward high-value, totally organic, climate-resilient agriculture, while simultaneously unlocking the staggering, globally significant economic potential of the surrounding marine fisheries. This comprehensive, meticulously detailed chapter provides an exhaustive analysis of the territory's cropping patterns, the critical challenges of agricultural water management, the severe logistical frictions in marketing, the absolute necessity of value chain development, the vulnerabilities in animal husbandry, the monumental potential of the blue economy, and the sophisticated financial mechanisms required to secure the livelihoods of the island farmers and artisanal fishermen leading up to the centennial developmental vision of 2047.

18.1 Cropping Pattern, Agricultural Productivity and Input Use

The cropping pattern in the Union Territory of the Andaman and Nicobar Islands is fundamentally dictated by the extremely undulating topography, the highly porous lateritic soils, and the relentless, highly intense tropical monsoon climate. Because the vast majority of the available, non-forest revenue land is situated on steep hill slopes and narrow, fragmented valleys, the cultivation of traditional, water-intensive cereal crops like paddy is severely spatially limited. In 2026, the agricultural landscape of the territory is overwhelmingly dominated by perennial plantation crops, which are biologically and structurally far better suited to the specific geological and climatic realities of the archipelago. Coconut and arecanut constitute the absolute, undisputed backbone of the agrarian economy, covering the vast majority of the total net sown area across both the Andaman and the Nicobar island groups (Department of Agriculture, 2026).

In the South Andaman district and the North and Middle Andaman district, arecanut is the primary, most lucrative commercial cash crop for the diverse settler communities. The high market value of arecanut in the mainland domestic markets provides a vital, sustaining income stream for thousands of smallholder farmers. Conversely, in the legally protected tribal reserves of the Nicobar district, the coconut plantation economy forms the very foundation of the indigenous Nicobarese cultural and economic survival. However, the overall agricultural productivity of these dominant plantation crops remains distressingly sub-optimal when rigorously compared to the national and international benchmarks. The plantations suffer heavily from a high proportion of senile, rapidly aging, and increasingly unproductive palm populations. Furthermore, the historical lack of scientific canopy management, the dense, unscientific spacing of the trees, and the severe vulnerability to endemic pests and specialized fungal diseases systematically suppress the maximum potential yield per hectare, limiting the total wealth generation capacity of the rural island communities (Ministry of Agriculture and Farmers Welfare, 2026).

The cultivation of paddy, which is absolutely critical for the baseline staple food security of the settler populations, is highly restricted to the limited, low-lying flat valleys primarily located in the North and Middle Andaman district, specifically in areas like Diglipur and Mayabunder. During the intense South-West monsoon season, these narrow valleys are utilized for a single, primary crop of rain-fed rice. However, the total, aggregate domestic production of paddy falls catastrophically short of meeting the total consumption demands of the growing island population and the massive, expanding influx of domestic and international tourists. Consequently, the territorial administration is permanently forced to rely on massive, continuous, and highly expensive bulk imports of rice and wheat from the mainland through the Food Corporation of India. This absolute reliance on extended, vulnerable maritime supply chains renders the territory's baseline food security highly susceptible to sudden disruptions caused by severe cyclonic storms, mainland port strikes, or global logistical crises (Department of Civil Supplies and Consumer Affairs, 2026).

The management of agricultural input use in the territory is currently undergoing a massive, highly strategic, and ecologically mandated revolution. Historically, farmers in the Andaman district relied on the importation and application of synthetic chemical fertilizers and highly toxic chemical pesticides to artificially boost their crop yields. However, the highly porous nature of the island soils and the intense, torrential monsoon rainfall guaranteed that these toxic synthetic chemicals rapidly leached out of the agricultural fields and flowed directly into the adjacent, incredibly sensitive coastal creeks and pristine marine environments. This toxic chemical runoff posed a severe, existential, and scientifically documented threat to the globally significant coral reef ecosystems, threatening to destroy the very biological foundation of the territory's fisheries and premium eco-tourism industries.

Recognizing this catastrophic ecological trajectory, the territorial administration in 2026 has officially and aggressively mandated a complete, uncompromising transition toward one hundred per cent organic farming across the entire archipelago. The importation, distribution, and localized sale of synthetic chemical fertilizers and highly hazardous agricultural

pesticides have been strictly, legally banned. The Department of Agriculture is now heavily subsidizing and providing massive technical support for the rapid, localized production of high-quality organic inputs. This involves the aggressive promotion of large-scale vermicomposting units, the widespread adoption of specialized bio-fertilizers, and the utilization of integrated, biological pest management techniques (Ministry of Environment, Forest and Climate Change, 2026). While this mandatory, abrupt transition to purely organic inputs initially caused temporary, localized dips in absolute crop yields as the soils recovered their natural biological vitality, it is the absolute, non-negotiable prerequisite for permanently securing the premium "Andaman Organic" brand identity and absolutely guaranteeing the long-term, flawless ecological health of the surrounding oceanic environment.

18.2 Irrigation and Water Use Efficiency in Agriculture

The management of agricultural water resources and the optimization of irrigation efficiency in the Union Territory of the Andaman and Nicobar Islands present a profound, highly complex, and paradoxical engineering and administrative challenge. The territory receives an incredibly abundant, massive average annual rainfall that consistently exceeds 3,000 millimetres, driven by the intense, overlapping systems of both the South-West and the North-East monsoons. However, despite this staggering volume of annual precipitation, the archipelago suffers from acute, severe, and highly destructive agricultural water scarcity during the extended dry season, which typically lasts from February through May. This hydrological paradox is the direct, unavoidable result of the islands' specific geological composition and their highly fractured, undulating topography (Central Water Commission, 2026).

Because the islands are predominantly characterized by steep, heavily forested hills and extremely narrow coastal plains, there is an absolute, structural absence of the large, perennial river systems and massive, contiguous sedimentary basins that support extensive, gravity-fed canal irrigation networks on the Indian mainland. The natural, rapid surface runoff ensures that the vast majority of the torrential monsoon rainfall is almost instantly discharged directly into the surrounding ocean, rather than being naturally retained within the soil profile or captured in large, natural inland lakes. Furthermore, the underlying volcanic and highly compacted sedimentary rock formations severely limit the natural percolation of water, completely preventing the formation of deep, easily exploitable, high-capacity groundwater aquifers. Consequently, as soon as the monsoon rains definitively retreat, the soil moisture depletes incredibly rapidly, leaving the highly valuable cash crops and the delicate winter vegetable cultivations highly vulnerable to severe, prolonged drought stress (Department of Agriculture, 2026).

To combat this structural, highly damaging seasonal water scarcity, the territorial administration absolutely cannot rely on constructing massive, ecologically destructive concrete mega-dams, as such structures would require the unacceptable, illegal inundation of pristine, legally protected primary rainforests. Instead, the agricultural water management strategy in 2026 is entirely and intensely focused on the aggressive, widespread construction

of highly decentralized, micro-level rainwater harvesting structures. The administration heavily subsidizes and technically directs the manual and mechanized excavation of thousands of specialized, localized farm ponds, the strategic construction of small, effective check dams across minor seasonal streams, and the development of localized percolation tanks within the agricultural valleys of the North and Middle Andaman district. These vital, highly localized micro-structures are designed to carefully capture, retain, and safely store the extreme tail-end runoff of the retreating monsoon, providing a critical, life-saving supplementary water source that enables smallholder farmers to provide protective, essential irrigation to their highly lucrative arecanut, coconut, and spice plantations during the scorching, incredibly stressful peak summer months (Ministry of Jal Shakti, 2026).

However, merely capturing and storing the water is mathematically and agronomically insufficient; the absolute, highest priority must be the extreme, rigorous optimization of water use efficiency. Historically, the limited supplementary irrigation that did occur in the territory relied on highly wasteful, archaic traditional flood or furrow irrigation methods, which resulted in massive, unacceptable evaporative losses and severe, localized soil erosion on the steep, vulnerable agricultural slopes. In 2026, the territorial administration, aggressively leveraging the substantial financial resources and the strategic framework of the Pradhan Mantri Krishi Sinchayee Yojana, is forcing a massive, comprehensive technological revolution in agricultural water application. The government provides massive, near-total capital subsidies to aggressively drive the universal, mandatory adoption of highly advanced, precision micro-irrigation technologies, specifically targeting the widespread installation of highly efficient drip and micro-sprinkler systems (Ministry of Agriculture and Farmers Welfare, 2026).

These precision micro-irrigation systems are exceptionally, perfectly suited for the highly specific, undulating topography of the islands and the highly localized water requirements of the dominant, widely spaced plantation crops. Drip irrigation networks meticulously deliver highly precise, mathematically calculated volumes of water directly, slowly, and consistently to the active root zones of the coconut and arecanut palms. This targeted application virtually, completely eliminates the massive surface evaporation losses and the deep percolation wastage that characterize traditional irrigation, thereby aggressively maximizing the absolute crop yield per single drop of precious, expensively stored water. Furthermore, these advanced systems seamlessly facilitate the highly efficient process of organic fertigation, allowing the island farmers to deliver liquid bio-fertilizers directly and efficiently to the plants, drastically reducing waste and preventing any harmful nutrient runoff. By intelligently and aggressively merging decentralized, localized rainwater harvesting with highly advanced, precision micro-irrigation technology, the territory can successfully, permanently optimize its agricultural water-use productivity and successfully protect the highly delicate, incredibly vulnerable hydrological balance of the islands.

18.3 Agricultural Marketing, Price Realisation and Farmer Income

The efficient marketing of agricultural produce, the guarantee of fair, equitable price realization, and the ultimate, sustainable enhancement of net farmer income in the Union Territory of the Andaman and Nicobar Islands are severely, systematically crippled by the profound, inescapable logistical nightmares and the extreme geographic isolation of the archipelago. In 2026, the rural agricultural economy remains structurally highly fragmented, chronically disorganized, and deeply vulnerable to intense, localized market exploitation. The smallholder farmers, primarily located in the remote, highly dispersed settlements of the North and Middle Andaman district and the isolated tribal islands of the Nicobar group, operate under a state of permanent, structural economic disadvantage when attempting to monetize their agricultural harvests (Directorate of Economics and Statistics, 2026).

The fundamental, overarching barrier to efficient agricultural marketing is the massive, unavoidable cost and the extreme unreliability of internal, inter-island physical transportation. A farmer cultivating high-value arecanut or organic spices in a remote village in Diglipur must first transport the heavy, bulky produce over poorly maintained, highly vulnerable rural roads to a localized coastal jetty. From there, the produce must be loaded onto a slow, weather-dependent inter-island cargo ferry, shipped across hundreds of kilometres of rough, unpredictable open ocean to the primary, centralized wholesale markets located exclusively in the capital city of Port Blair in the South Andaman district. This highly complex, incredibly slow, and multi-stage internal logistical chain introduces massive, crippling transportation costs, frequently results in severe, unacceptable post-harvest losses due to moisture damage or improper handling, and significantly, mathematically depresses the final net profit margin that the primary producer can realistically achieve (Andaman Public Works Department, 2026).

Because the individual smallholder farmers absolutely lack the financial capacity, the secure storage infrastructure, and the essential logistical means to independently transport their harvests to the central markets in Port Blair or export them to the Indian mainland, they are structurally forced into a position of extreme vulnerability. They become entirely, hopelessly dependent on a highly concentrated, tightly knit network of powerful, localized rural middlemen and specialized wholesale aggregators. These highly organized intermediaries possess the necessary transport vehicles, control the limited local warehouse space, and command the vital access to the maritime shipping lines. Consequently, they possess the overwhelming, unchecked market power to aggressively dictate the farm-gate prices, frequently and systematically offering the desperate, isolated farmers rates that are drastically, unfairly lower than the prevailing, transparent market prices in the capital city or on the mainland. This highly exploitative, asymmetrical market dynamic ensures that the vast majority of the lucrative wealth generated by the territory's agricultural output is permanently captured by the logistical intermediaries, rather than enriching the primary cultivators (Department of Agriculture, 2026).

To fundamentally, aggressively dismantle this exploitative, archaic marketing structure and ensure highly profitable, equitable price realization for the island farmers, the territorial

administration in 2026 is executing a comprehensive, multi-pronged strategic intervention. The absolute, highest priority is the aggressive, heavily subsidized promotion and the professional, rigorous capacitation of formal Farmer Producer Organisations and highly organized agricultural marketing cooperative societies. The administration is providing these vital, community-owned collectives with massive, targeted financial grants, specialized professional management training, and heavily subsidized access to critical physical infrastructure. By actively pooling their highly fragmented, small-volume resources, these empowered Farmer Producer Organisations can successfully achieve the critical economies of scale required to completely bypass the exploitative local middlemen. The collectives can jointly charter dedicated, reliable maritime cargo space, collectively negotiate highly favourable, bulk contracts directly with massive institutional buyers or luxury hotel chains in Port Blair, and aggressively demand significantly higher, fair-market prices for their aggregated, high-quality produce (Ministry of Agriculture and Farmers Welfare, 2026).

Furthermore, the administration is heavily investing in the creation of robust, highly localized, and technologically advanced market infrastructure directly within the remote, peripheral producing districts. The government is rapidly constructing specialized, decentralized rural aggregation centres, highly secure, pest-proof godowns, and vital, high-capacity cold storage facilities directly in major agricultural nodes like Mayabunder, Rangat, and Campbell Bay. These critical, decentralized facilities explicitly allow the local farmers to securely, safely store their valuable produce immediately after the harvest, fiercely protecting it from the devastating tropical moisture and preventing rapid spoilage. Crucially, this secure storage capacity entirely eliminates the desperate, forced necessity for immediate, distressed distress sales, empowering the farmers to patiently wait and strategically sell their high-value crops when the regional market prices are most highly favourable. Additionally, the administration is actively, aggressively attempting to adapt and implement the digital architecture of the National Agriculture Market (e-NAM) specifically for the island context. By leveraging the newly established, high-speed submarine optical fibre connectivity, the territory aims to digitally, seamlessly connect the remote, isolated island agricultural cooperatives directly to the massive, highly lucrative, and transparent national commodity markets on the Indian mainland, fundamentally and permanently transforming the economic trajectory of the rural island communities.

18.4 Food Processing Industry and Value Chain Development

The strategic, highly capitalized development of a robust, modern, and highly sophisticated localized food processing industry is the absolute, most critical missing link in the agricultural economy of the Union Territory of the Andaman and Nicobar Islands. In 2026, the territory suffers from a severe, highly damaging, and economically irrational structural paradox. Despite producing significant, highly valuable quantities of premium organic coconuts, high-grade arecanut, and incredibly rich, exotic tropical spices, the vast, overwhelming majority of this agricultural output is physically exported to the Indian mainland in its absolute raw, completely unprocessed, and heaviest form. Simultaneously, the territory is forced to import virtually all of its highly priced, packaged, and processed food

products, refined cooking oils, and standardized consumer goods back from the mainland at massive, hyper-inflated retail prices. This highly inefficient, extractive economic cycle guarantees that the massive, highly lucrative downstream economic value addition, the significant industrial employment generation, and the massive corporate profit margins are entirely, permanently captured by the processing industries located in mainland states, rather than enriching the local island economy (Ministry of Food Processing Industries, 2026).

The most glaring, highly visible, and economically painful example of this severe value chain deficit involves the massive, foundational coconut economy, which dictates the survival of the Nicobar district and large parts of the Andaman group. Currently, millions of harvested coconuts are simply dried into basic, low-value raw copra using highly inefficient, traditional smoking methods, and then loaded onto massive cargo ships destined for the massive oil extraction mills located in Kerala or Tamil Nadu. The territorial administration is now absolutely, aggressively determined to completely break this highly extractive, low-yield cycle. The strategic industrial policy for 2026 mandates the heavy, highly subsidized promotion and the rapid, widespread establishment of modern, decentralized, and technologically advanced micro and small-scale coconut processing units directly within the producing islands. The explicit, targeted objective is to completely transition from the export of cheap, raw copra to the highly profitable, localized manufacturing and premium export of high-value, specialized end products, specifically including cold-pressed virgin coconut oil, highly sought-after packaged coconut water, premium desiccated coconut powder for the baking industry, and specialized, high-demand coir-based geo-textiles utilized for advanced soil erosion control (Department of Industries, 2026).

The processing and sophisticated value addition of the territory's unique, highly flavorful organic spices and exotic tropical fruits represent another massive, largely untapped, and highly lucrative economic frontier. The Andaman and Nicobar Islands possess the perfect, pristine tropical climate required to cultivate world-class, highly aromatic black pepper, intensely flavorful cloves, cinnamon, and vibrant, exotic fruits like rambutan and dragon fruit. However, due to the absolute lack of certified, modern, and highly hygienic processing and packaging infrastructure, these incredibly valuable products are frequently sold loose in the highly unstructured local markets for a mere fraction of their true global market value. The territorial administration is heavily incentivizing and financially supporting ambitious local entrepreneurs and organized women's Self-Help Groups to urgently establish modern, highly hygienic, and fully mechanized cleaning, precision sorting, scientifically calibrated grading, and attractive, international-standard vacuum packaging facilities. By officially, legally certifying these meticulously processed goods under the premium, exclusive "Andaman Organic" geographical brand, the territory can successfully target the incredibly lucrative, high-margin luxury tourism hospitality sector operating within the islands, and simultaneously access the highly demanding, extremely profitable niche organic export markets in the mainland and international arenas (Agricultural and Processed Food Products Export Development Authority, 2026).

However, the rapid, successful establishment of a viable, highly competitive localized food processing industry faces immense, severe, and uniquely archipelagic structural hurdles. The absolute, most paralyzing constraint is the exorbitant, financially crippling cost and the severe, frequent unreliability of commercial electricity, which is currently generated almost entirely by highly expensive, imported high-speed diesel. Energy-intensive food processing operations, such as running massive industrial dehydrators, continuous cold storage compressors, and high-capacity automated packaging lines, are often rendered entirely commercially unviable by these astronomical, localized power tariffs. Furthermore, the territory critically lacks the highly specialized, certified food testing laboratories absolutely required to officially ensure that the locally processed products strictly meet the rigorous, non-negotiable safety and quality standards mandated by the Food Safety and Standards Authority of India for national and international export (Food Safety and Standards Authority of India, 2026). To effectively, permanently overcome these severe bottlenecks, the territorial administration must urgently provide highly customized, massive capital subsidies specifically for the mandatory installation of captive, highly reliable solar power generation systems for all new, approved food processing units. Additionally, the government must rapidly establish fully accredited, highly advanced, and easily accessible food testing and quality certification infrastructure directly within the capital city of Port Blair, ensuring that the processed products of the islands can seamlessly, legally, and profitably access the highly lucrative global consumer markets by the target year of 2047.

18.5 Animal Husbandry, Dairy and Poultry: Economic Contribution

The animal husbandry, highly specialized dairy, and commercial poultry sectors in the Union Territory of the Andaman and Nicobar Islands currently represent the most critically underdeveloped, structurally weak, and highly dependent segments of the entire primary agricultural economy. In 2026, the territory suffers from a severe, massive, and highly expensive structural deficit in the localized production of absolutely essential, highly nutritious animal protein sources. The domestic, localized production of fresh fluid milk, high-quality poultry eggs, and safe, hygienic meat falls catastrophically, unacceptably short of meeting the massive, daily nutritional consumption demands of the growing, increasingly affluent resident island population and the massive, explosive requirements of the rapidly expanding, premium luxury tourism and hospitality industry. Consequently, the territory is forced into a highly vulnerable, economically draining position of absolute, daily reliance on the massive, continuous, and highly expensive importation of refrigerated liquid milk, millions of eggs, and tons of frozen meat products shipped directly across the ocean from the massive agricultural production hubs in mainland states, primarily Tamil Nadu and West Bengal (Department of Animal Husbandry and Dairying, 2026).

This absolute, highly dangerous reliance on extended, vulnerable, and weather-dependent maritime and aerial supply chains renders the territory's fundamental nutritional security highly precarious and subject to sudden, severe inflationary shocks. The development and rapid scaling of a robust, highly productive localized animal husbandry sector are severely, permanently constrained by profound, unyielding geographical and ecological realities. The

most critical, insurmountable limiting factor for the expansion of the dairy and large ruminant sector is the absolute, total absence of expansive, open natural grazing lands or large, dedicated fodder cultivation areas. Because over eighty-one per cent of the territory's limited landmass is legally locked and fiercely protected as impenetrable forest, there is simply no physical space available to sustain massive, commercial herds of high-yielding dairy cattle. Consequently, the local farmers who do attempt to maintain small, localized dairy operations are forced to rely heavily on the continuous, incredibly expensive importation of massive quantities of concentrated, formulated animal feed transported from the mainland. This massive, inescapable logistical cost premium applied to the imported feed makes the final, localized commercial production of milk in the islands incredibly expensive and highly uncompetitive when compared to the heavily subsidized, massive dairy operations on the mainland (Ministry of Fisheries, Animal Husbandry and Dairying, 2026).

Recognizing these severe, absolute structural and spatial limitations, the territorial administration in 2026 is aggressively and strategically pivoting its primary focus entirely away from large-scale, land-intensive dairy farming and strongly toward the rapid, highly subsidized promotion of specialized, decentralized backyard poultry, highly intensive small-scale goatery, and specialized, integrated piggery operations. These specific, highly targeted allied activities require significantly, mathematically less dedicated physical space, demand substantially lower initial capital investments from the impoverished rural farmers, and importantly, can be highly efficiently, seamlessly integrated directly into the existing, dominant coconut and arecanut plantation ecosystems, operating highly effectively under the existing shade canopies. The administration is heavily, proactively providing massive financial subsidies and highly targeted, intensive technical veterinary training specifically to rural women's Self-Help Groups to rapidly establish small-scale, highly hygienic, and scientifically managed commercial poultry units and specialized goat rearing enclosures, actively recognizing these specific, low-footprint activities as highly potent, incredibly rapid mechanisms for generating vital, supplementary cash income and immediately improving the localized, household-level nutritional security of the most vulnerable rural families (Directorate of Animal Husbandry and Veterinary Services, 2026).

A critical, highly unique, and scientifically fascinating dimension of the animal husbandry strategy in the territory involves the strict, deliberate preservation and the aggressive, highly scientific promotion of unique, highly resilient indigenous livestock breeds, most notably the famous Nicobari fowl and the localized Andaman local pig. Historically, well-meaning but flawed governmental attempts to introduce highly productive, exotic, mainland crossbreeds into the islands frequently resulted in massive, expensive failures. These imported, highly sensitive exotic breeds proved to be highly susceptible to the intense tropical heat, the extreme, crushing humidity, and the unique, localized endemic diseases of the archipelago, requiring massive, unaffordable inputs of specialized veterinary care and highly controlled, air-conditioned environments. Conversely, the ancient, indigenous Nicobari fowl is evolutionarily, perfectly adapted to thrive, forage, and reproduce efficiently in the harsh, highly humid, and demanding local island environment. They exhibit incredibly high, natural resistance to common, deadly tropical avian diseases and require minimal, basic

supplementary feeding, as they are expert natural foragers. The territorial administration is now heavily, exclusively funding highly specialized, localized breeding farms specifically dedicated to multiplying and widely distributing these highly valuable, climate-resilient indigenous genetic breeds to the local farmers, firmly recognizing that true, long-term biological sustainability and food security in the isolated islands must be built absolutely upon locally adapted, evolutionarily proven genetic resources rather than highly vulnerable, imported mainland biology.

18.6 Fisheries: Inland, Marine and Aquaculture

The fisheries sector constitutes the absolute, undisputed, and most immensely valuable economic crown jewel of the Union Territory of the Andaman and Nicobar Islands. In the strategic, highly crucial assessment year of 2026, the comprehensive, sustainable, and highly technologically advanced development of the fisheries sector is universally recognized by the central government as the primary, most powerful engine capable of driving the entire territory toward massive economic self-reliance and global prominence. The territory is incredibly endowed with an unimaginably vast, highly strategic Exclusive Economic Zone that covers approximately 600,000 square kilometres of the Bay of Bengal and the Andaman Sea. This massive, globally significant oceanic expanse accounts for nearly thirty per cent of the Republic of India's total maritime zone and represents a staggering, largely unexploited, multi-billion-dollar frontier of immense biological wealth. The estimated, scientifically calculated potential yield of marine fisheries in these specific, nutrient-rich waters is incredibly high, famously rich in highly valuable, commercially lucrative, export-oriented pelagic fish species, most notably the highly prized yellowfin tuna, skipjack tuna, massive marlin, and highly sought-after seer fish (Department of Fisheries, 2026).

Despite this staggering, almost incomprehensible natural oceanic wealth, the current, localized exploitation of these incredibly valuable marine resources remains shockingly, unacceptably low, currently hovering at a mere, tiny fraction of the mathematically proven sustainable potential. The local, indigenous fishing industry is heavily, almost entirely dominated by traditional, marginalized artisanal fishermen. These incredibly brave but highly underequipped individuals operate exclusively utilizing small, highly vulnerable, non-motorized or very low-powered traditional wooden crafts. Consequently, their fishing activities are strictly, dangerously confined to the highly shallow, easily accessible near-shore coastal waters and the immediate, fringing coral reef environments. The highly lucrative, massively profitable practice of true, modern deep-sea fishing is virtually, completely non-existent among the local island population. This massive, crippling capability deficit is caused by a severe, systemic lack of access to massive capital investment, the absolute absence of modern, highly mechanized, and technologically advanced deep-sea trawlers, and a critical, highly damaging lack of specialized, modern navigational and sonar training among the local youth (Ministry of Fisheries, Animal Husbandry and Dairying, 2026).

To fundamentally, radically transform this highly underperforming sector and fully unlock the immense, staggering wealth of the sustainable blue economy, the territorial administration,

acting in aggressive, tight alignment with the central government's ambitious Deep Ocean Mission, is executing a massive, comprehensive, multi-billion-dollar structural overhaul. The absolute, highest priority is the rapid, highly engineered construction of modern, world-class, dedicated deep-sea fishing harbours, particularly strategically located in the North and Middle Andaman district and the South Andaman district. These massive, specialized maritime facilities are being heavily, carefully equipped with massive, high-capacity industrial blast freezers, immense, highly reliable cold storage warehouses, modern, hygienic electronic auction halls, and highly efficient, automated processing units strictly capable of meeting the incredibly rigorous, non-negotiable sanitary and export standards demanded by the lucrative, high-paying consumer markets in Japan, the European Union, and the United States. Simultaneously, the administration is providing massive, highly attractive capital subsidies and facilitating specialized, low-interest institutional credit to aggressively encourage ambitious local entrepreneurs and highly organized fishermen's cooperatives to rapidly acquire and safely operate modern, technologically advanced deep-sea longliners and specialized tuna vessels, actively pushing the fishing effort safely and profitably away from the fragile, overstressed near-shore reefs and deep into the incredibly rich, unexploited pelagic zones (Marine Products Export Development Authority, 2026).

Furthermore, the highly scientific, sustainable development of advanced marine aquaculture and specialized coastal mariculture represents a massive, highly lucrative, and rapidly expanding economic frontier for the territory. The incredibly pristine, highly unpolluted, and calm coastal bays and the intricate, protected mangrove creeks provide the absolutely perfect, biologically ideal environment for the highly profitable, controlled cultivation of high-value, export-oriented marine species. The administration is heavily subsidizing and providing intense technical training for the rapid, widespread adoption of specialized open-ocean cage culture for highly prized species like seabass and grouper. Additionally, the government is aggressively promoting the highly sustainable, environmentally beneficial cultivation of valuable marine seaweed and the highly lucrative, careful fattening of specialized mud crabs in the protected coastal enclosures. These specific, highly targeted mariculture activities are explicitly designed to directly empower the marginalized coastal communities, providing a highly reliable, incredibly profitable, and sustainable alternative income stream that actively prevents the destructive over-exploitation of the wild capture fisheries, ensuring the long-term, flawless biological health of the surrounding oceanic ecosystem while generating massive, sustainable wealth for the territory by 2047.

18.7 Horticulture, Floriculture and Medicinal Plants

The highly specialized sectors of advanced horticulture, premium floriculture, and the scientific cultivation of valuable medicinal plants represent an incredibly high-value, immensely promising, and ecologically perfectly aligned avenue for rapid agricultural diversification and massive wealth generation in the Union Territory of the Andaman and Nicobar Islands. In 2026, the territorial administration recognizes that the unique, highly specific climatic conditions of the archipelago—characterized by intense, persistent high humidity, remarkably uniform, warm tropical temperatures, and highly abundant, heavy

annual rainfall—create an absolutely perfect, unparalleled natural greenhouse environment. This specific micro-climate is exceptionally, biologically ideal for the incredibly intensive, highly profitable cultivation of a wide array of premium, exotic tropical spices, highly sought-after rare fruits, and incredibly vibrant, high-value ornamental flowers that simply cannot be successfully or cheaply grown in the vast majority of the Indian mainland states (Department of Agriculture, 2026).

The cultivation of incredibly high-value, premium tropical spices constitutes a major, highly lucrative, and rapidly expanding focus area for the territory's agricultural strategy. The islands have historically demonstrated an incredible, proven capacity to produce world-class, intensely aromatic black pepper, highly pungent cloves, rich nutmeg, and high-quality cinnamon. Because these premium, dried spices possess an incredibly high value-to-weight ratio, they are absolutely, perfectly suited for the specific logistical realities of the isolated island economy. They can be highly efficiently, securely packaged and rapidly, profitably exported to the mainland or lucrative international markets via commercial air freight, completely bypassing the slow, highly degrading, and often unreliable maritime cargo ships that cripple the export of heavier, low-value agricultural commodities. The territorial administration is heavily, aggressively subsidizing the massive, widespread expansion of these highly profitable spice plantations, actively providing farmers with high-yielding, disease-resistant, elite planting material and mandating the strict, uncompromising adoption of one hundred per cent organic cultivation practices to ensure these spices command the absolute highest, premium prices in the highly discerning global luxury and organic markets (Ministry of Agriculture and Farmers Welfare, 2026).

The commercial floriculture sector is experiencing a massive, unprecedented boom, driven directly, entirely by the explosive, relentless expansion of the territory's premium, luxury eco-tourism and hospitality industry. The numerous newly established, high-end luxury resorts, massive five-star hotels, and specialized, high-end event management companies operating in the South Andaman district and Swaraj Dweep generate a massive, continuous, and highly lucrative daily demand for fresh, incredibly high-quality, exotic ornamental flowers. Historically, these incredibly delicate, highly perishable flowers had to be expensively, precariously imported daily via air freight from mainland cities, resulting in massive, unacceptable costs and a massive carbon footprint. To capture this lucrative, captive local market, the administration is aggressively, heavily promoting the localized, highly scientific, greenhouse-controlled cultivation of incredibly vibrant, exotic tropical orchids, specialized anthuriums, and highly sought-after heliconias by local island farmers and highly organized women's Self-Help Groups. By producing these incredibly delicate, high-value flowers directly locally, the territory actively retains massive amounts of wealth that previously leaked to the mainland, creates highly skilled, lucrative rural employment, and significantly reduces the massive, unnecessary logistical burden on the fragile, overstressed aviation cargo network.

Furthermore, the territory possesses an incredibly profound, globally significant, and largely untapped potential in the highly scientific, highly regulated cultivation and ethical

commercialization of rare, incredibly valuable medicinal and aromatic plants. The deep, highly protected primary rainforests of the archipelago act as a massive, unparalleled repository of unique, endemic biodiversity, hosting thousands of rare plant species that possess highly potent, scientifically unmapped medicinal properties. The indigenous tribal populations, particularly the highly knowledgeable Nicobarese, possess ancient, incredibly deep, and highly effective traditional ecological knowledge regarding the highly specific uses of these endemic plants. The administration, operating under the strict, uncompromising, and highly protective legal mandates of the National Biodiversity Authority and the Biological Diversity Act, is initiating highly complex, cautious, and intensely respectful programs to scientifically document, properly cultivate, and highly ethically commercialize these rare medicinal plants. The absolute, non-negotiable prerequisite for this initiative is the strict execution of ironclad, legally binding Access and Benefit Sharing agreements. These complex agreements absolutely guarantee that the massive, multi-billion-dollar commercial profits generated by the global pharmaceutical or cosmetic industries are equitably, fairly shared directly with the indigenous tribal communities, ensuring that the ancient, sacred traditional knowledge of the islands is respectfully, legally monetized without resulting in the exploitative, devastating biopiracy that has plagued other developing regions (Ministry of Environment, Forest and Climate Change, 2026).

18.8 Agricultural Credit, Insurance and Risk Management

The provision of highly accessible, affordable agricultural credit, the implementation of comprehensive, localized crop insurance, and the execution of highly effective, aggressive disaster risk management strategies are the absolute, indispensable financial pillars required to secure and stabilize the highly volatile, severely risk-prone agrarian and fisheries economy of the Union Territory of the Andaman and Nicobar Islands. In 2026, the farmers and artisanal fishermen operating in this remote, isolated archipelago face an incredibly hostile, uniquely terrifying, and highly elevated matrix of existential risks that are virtually unmatched anywhere on the Indian mainland. Their precarious livelihoods are under constant, relentless, and escalating threat from sudden, devastating cyclonic storms, catastrophic, unpredictable oceanic storm surges, highly erratic, climate-altered monsoon patterns, and the ever-present, terrifying geological possibility of massive, destructive tsunamis. Given this incredibly extreme, highly unstable risk profile, creating a robust, reliable, and deeply customized financial safety net is not merely a matter of economic policy; it is the absolute, fundamental prerequisite for ensuring the continued, physical survival of the rural island communities (Directorate of Economics and Statistics, 2026).

Access to formal, affordable institutional credit has historically been a massive, deeply frustrating, and largely unresolved bottleneck for the agricultural development of the territory. The major commercial banks operating within the islands have traditionally exhibited an extreme, highly paralyzing reluctance to disburse vital agricultural and fisheries loans. This deep-seated institutional hesitation is driven directly by the perceived, statistically high risk of complete, catastrophic crop failure due to extreme weather events, and more importantly, by the incredibly complex, highly restrictive land tenure laws unique to the territory. Because

the vast majority of the agricultural land in the islands is subject to strict, unique historical revenue regulations that frequently, legally prohibit the free, unhindered alienation, sale, or transfer of the land to non-islanders or commercial entities, the banks are legally unable to accept the agricultural land as secure, easily liquidable collateral for large loans. Consequently, desperate, capital-starved farmers are frequently, tragically forced to seek incredibly expensive, exploitative credit from informal, highly predatory local moneylenders, trapping them in inescapable, multi-generational cycles of debilitating, crushing debt (Reserve Bank of India, 2026).

To aggressively, permanently break this highly destructive, exploitative financial cycle, the territorial administration, working in close, forceful coordination with the National Bank for Agriculture and Rural Development (NABARD), is executing a massive, territory-wide push to achieve the absolute, one hundred per cent saturation of the highly critical Kisan Credit Card (KCC) scheme. The administration has significantly, structurally expanded the scope and eligibility of the KCC to explicitly, fully encompass not just traditional crop farmers, but also the highly vulnerable artisanal fishermen, the small-scale poultry rearers, and the localized dairy operators. By systematically shifting the rigid banking focus away from demanding impossible, traditional land collateral and instead evaluating loans based on the highly predictable, projected cash flows generated by the fishing boats, the highly productive localized poultry units, and the valuable spice crops, the administration aims to finally unlock massive, affordable, and timely working capital for the primary producers, empowering them to actively invest in modern, high-yield technologies and rapidly escape the suffocating grip of the informal, predatory credit markets (Ministry of Agriculture and Farmers Welfare, 2026).

The critical, absolute necessity for highly customized, island-specific agricultural and fisheries insurance cannot be overstated. Standard, generic national crop insurance schemes, which are heavily designed based on the vast, contiguous agricultural plains and the highly predictable, stable weather patterns of the mainland states, frequently, disastrously fail to accurately capture or compensate for the incredibly localized, hyper-specific micro-climatic disasters that routinely destroy crops in the fragmented archipelago. For instance, a highly localized, incredibly intense squall might completely, devastatingly obliterate an entire, valuable arecanut plantation on one specific, small island, while leaving the weather station located on a neighboring island completely untouched, resulting in the desperate farmer being unfairly, mathematically denied critical, life-saving insurance compensation due to rigid, mainland-centric trigger metrics.

To definitively rectify this severe, systemic flaw, the territorial administration is aggressively, heavily subsidizing the rapid development and widespread implementation of highly advanced, hyper-localized Parametric Weather-Based Crop Insurance schemes. These incredibly sophisticated, modern insurance models rely on a massive, highly dense network of highly advanced, automated weather stations strategically installed across almost every single inhabited island in the territory. The insurance payouts are mathematically, automatically, and instantly triggered by highly specific, pre-agreed, localized meteorological

parameters, such as a localized wind speed exceeding a certain destructive threshold or localized rainfall breaching a specific, flood-inducing limit, entirely removing the agonizingly slow, highly corruptible, and subjective manual damage assessment process. Furthermore, the administration must urgently, absolutely ensure that comprehensive, highly affordable marine insurance is universally available to all artisanal fishermen, actively covering the massive, devastating financial loss of their small boats and specialized fishing gear during the frequent, highly destructive tropical cyclones. By providing a truly robust, highly localized, and mathematically infallible financial safety net, the Andaman and Nicobar Islands can successfully encourage its brave rural population to confidently undertake the higher-risk, immensely high-reward agricultural and deep-sea fishing activities that are absolutely required to drive the territory's economic prosperity leading up to 2047 (Ministry of Fisheries, Animal Husbandry and Dairying, 2026).

Chapter 19: Tourism, Culture and Creative Economy

The Union Territory of the Andaman and Nicobar Islands possesses a geographical, cultural, and ecological profile that positions it as one of the most uniquely endowed regions within the Republic of India. The archipelago functions not merely as a peripheral maritime outpost but as a profound repository of pristine natural beauty, deep historical significance, and vast cultural diversity. In the current strategic assessment year of 2026, the territorial administration and the central government have unequivocally identified the tourism, culture, and creative economy sectors as the absolute, non-negotiable primary engines of future economic prosperity and sustainable wealth generation for the islands. Historically, the territory's economic survival was inextricably linked to extractive forestry, small-scale agriculture, and massive, continuous financial subsidies provided by the central government. However, the absolute necessity of preserving the fragile tropical ecosystem has mandated a complete, aggressive pivot away from extractive industries toward non-consumptive, high-value service sectors. Tourism, when managed with extreme ecological sensitivity and rigorous regulatory oversight, offers the singular most viable pathway to achieving economic self-reliance, generating widespread formal employment, and retaining the highly educated island youth.

19.1 Tourism Asset Inventory: Natural, Heritage, Religious and Adventure

The tourism asset inventory of the Union Territory of the Andaman and Nicobar Islands is staggering in its diversity, its sheer geographical scale, and its unparalleled ecological purity. Unlike mainland tourism destinations that often rely on heavily engineered, artificial attractions, the primary competitive advantage of this archipelago relies entirely on the untouched, raw beauty of its natural environment and the profound, deeply moving historical narratives embedded within its colonial and penal history. A comprehensive, rigorously categorized inventory of these assets is the absolute foundational step required for executing any sustainable destination management strategy in 2026.

The natural assets of the territory constitute its most globally recognized and heavily marketed attraction. The archipelago boasts hundreds of kilometres of pristine, white sandy beaches that are consistently ranked among the finest in the Asian continent. Radhanagar Beach on Swaraj Dweep, historically known as Havelock Island, serves as the ultimate, iconic flagship destination, drawing hundreds of thousands of visitors annually to its expansive, crescent-shaped shoreline and crystal-clear, azure waters. Beyond Swaraj Dweep, the territory possesses a massive inventory of equally spectacular, though less heavily trafficked, natural assets. Shaheed Dweep, formerly Neil Island, offers stunning natural rock formations and incredibly rich, shallow coral ecosystems perfectly suited for snorkeling. In the North and Middle Andaman district, the twin islands of Ross and Smith, connected by a highly unique, naturally occurring sandbar that completely disappears during high tide, present an extraordinary, highly exclusive ecological attraction. The territory also features highly unique geological anomalies, including the only active stratovolcano in South Asia

located on the highly remote Barren Island, the fascinating, bubbling mud volcanoes found in the dense jungles of Baratang Island, and the incredibly complex, vast limestone cave networks that require specialized, highly regulated eco-tours to explore safely (Ministry of Tourism, 2026).

The marine environment constitutes a completely separate, incredibly vast category of natural assets. The extensive, incredibly diverse fringing coral reefs surrounding the islands provide critical habitats for thousands of species of colorful tropical fish, majestic manta rays, massive sea turtles, and the highly endangered dugong. These marine assets form the absolute bedrock of the territory's massive potential as a premier global destination for underwater exploration. Furthermore, the dense, ancient primary rainforests that cover over eighty-one per cent of the territory offer unparalleled opportunities for specialized ornithological tourism, botanical research expeditions, and highly controlled, low-impact trekking experiences, specifically targeting high-net-worth nature enthusiasts and global ecological researchers.

The heritage assets of the Andaman and Nicobar Islands are profoundly moving, deeply somber, and completely unique within the context of the Indian independence movement. The absolute architectural and historical epicentre of the territory is the Cellular Jail, located in the capital city of Port Blair. This colossal, radiating, brick-built colonial prison is recognized globally as a deeply revered National Memorial. It serves as a vital, permanent monument honoring the immense physical suffering, the psychological torture, and the ultimate, triumphant sacrifices of the Indian freedom fighters who were incarcerated there. The Cellular Jail is not merely a historical building; it is a sacred pilgrimage site for domestic tourists, featuring a highly evocative, technologically advanced light and sound show that meticulously narrates the harrowing history of the penal settlement. Adjacent to this, Netaji Subhash Chandra Bose Island, formerly Ross Island, offers a haunting, completely different historical experience. Serving historically as the exclusive, highly opulent administrative headquarters of the British colonial government, the island is now a unique, deeply atmospheric cultural landscape where the extensive ruins of Victorian architecture, including a grand church and a commissioner's residence, are slowly, dramatically being reclaimed by the dense, aggressive roots of the tropical banyan and peepal trees (Archaeological Survey of India, 2026). Viper Island, the site of the original, pre-Cellular Jail gallows, provides another somber, highly significant layer to the territory's penal heritage inventory.

Religious tourism, while less heavily marketed internationally, forms a highly significant, unifying component of the domestic tourism flow and the local cultural fabric. The territory is a spectacular model of demographic pluralism, and its religious assets reflect this deep, historically unbroken communal harmony. Port Blair hosts beautifully constructed, highly significant places of worship representing every major faith. The Murugan Temple, exhibiting exquisite, classical Dravidian architecture, draws massive crowds during annual festivals. Historic mosques, established during the early penal settlement days, and incredibly beautiful colonial-era churches add to the rich, diverse religious inventory. These sites not only serve the spiritual needs of the diverse local settler communities but also attract a steady,

continuous stream of domestic tourists who are fascinated by the peaceful, deeply syncretic religious environment that flourishes in extreme geographic isolation.

The adventure tourism inventory is currently experiencing a massive, explosive, and highly lucrative phase of rapid expansion. The territory possesses the absolute perfect, pristine topographical and oceanic conditions required to become the undisputed adventure sports capital of South Asia. Scuba diving is the primary, most heavily commercialized adventure asset. The incredibly clear, warm coastal waters, the diverse underwater topography featuring dramatic drop-offs and sunken shipwrecks, and the staggering biodiversity of the coral reefs attract thousands of international and domestic diving enthusiasts seeking advanced certifications and specialized underwater photography experiences. Beyond scuba diving, the territory's adventure inventory includes world-class, highly regulated game fishing and deep-sea angling, explicitly targeting massive pelagic species like marlin and yellowfin tuna on a strict catch-and-release basis. The extensive, calm mangrove creeks provide perfectly sheltered, incredibly scenic environments for specialized kayaking, stand-up paddleboarding, and low-impact bird watching. The territorial administration is aggressively working to formally map, legally certify, and safely operationalize these diverse adventure assets, ensuring that safety protocols are strictly enforced without dampening the immense thrill of exploring one of the world's last remaining pristine frontiers (Directorate of Information and Publicity, 2026).

19.2 Tourism Infrastructure: Hotels, Connectivity and Facilitation

The absolute, non-negotiable prerequisite for successfully monetizing the territory's vast inventory of natural and heritage assets is the establishment of a robust, highly resilient, and globally competitive tourism infrastructure network. In 2026, the hospitality and connectivity infrastructure of the Andaman and Nicobar Islands is undergoing a profound, capital-intensive, and highly complex transformation. The overarching strategic objective of the territorial administration is to permanently transition the destination away from the ecologically destructive, low-margin model of unregulated backpacker mass tourism, and pivot aggressively toward a highly lucrative, sustainable, premium eco-tourism model. However, executing this infrastructural transformation within a highly isolated, environmentally fragile archipelago presents immense, deeply structural logistical and engineering challenges that continuously test the fiscal capacity and the regulatory agility of the government and private investors.

The hospitality sector, specifically the availability and quality of hotel and resort accommodations, is the most visible indicator of the territory's tourism capacity. Currently, the accommodation inventory is heavily polarized. Port Blair, functioning as the primary transit hub, possesses a large, highly congested inventory of budget and mid-tier business hotels. Conversely, popular destinations like Swaraj Dweep feature a growing cluster of high-end, luxury boutique resorts. To attract the targeted demographic of high-net-worth international and domestic travellers, the central government, spearheaded by the NITI Aayog, is actively auctioning prime, pristine coastal land on previously undeveloped islands to major global luxury hospitality conglomerates. These massive, multi-million-dollar

investments are strictly mandated to adhere to the highest possible global standards of ecological sustainability. New luxury eco-resorts must be completely, flawlessly integrated into the natural forest canopy, utilizing advanced, sustainable architectural designs that minimize concrete usage and maximize natural ventilation to reduce energy consumption (Ministry of Tourism, 2026).

However, the construction and daily operation of these premium hospitality assets are severely hampered by the extreme, unavoidable "island premium." Every single bag of cement, piece of structural steel, and specialized interior fixture required to build a luxury resort must be expensively imported via maritime shipping from the mainland. Furthermore, the operational logistics of running a five-star property on a remote island are staggering. Because the localized municipal power grids are frequently erratic and heavily dependent on expensive, imported diesel, resorts are forced to incur massive capital expenditures to install their own captive, advanced solar-battery hybrid micro-grids. Similarly, the acute, severe seasonal freshwater scarcity requires every major resort to construct and operate incredibly expensive, highly energy-intensive seawater reverse osmosis desalination plants to guarantee a continuous water supply for their guests. The territorial administration strictly enforces a zero-liquid-discharge mandate, requiring hotels to install sophisticated, high-capacity sewage treatment plants to completely recycle all wastewater, ensuring that absolutely no raw effluent is discharged into the pristine, highly sensitive coral reef ecosystems (Andaman and Nicobar Pollution Control Committee, 2026).

Connectivity infrastructure, both aerial and maritime, forms the absolute, vital circulatory system of the island tourism economy. The monumental, recent operationalization of the spectacular New Integrated Terminal Building at the Veer Savarkar International Airport in Port Blair has fundamentally revolutionized the territory's inbound capacity. This massive, highly modern facility, equipped with automated baggage systems and advanced aero-bridges, is fully capable of handling over five million passengers annually, effectively eliminating the severe congestion that previously plagued arriving tourists. The installation of advanced night landing facilities and precision approach radars has allowed commercial airlines to maximize aircraft utilization and operate round-the-clock, significantly increasing the total volume of daily flights from major mainland hubs like Delhi, Mumbai, Chennai, and Kolkata.

However, the true, complex logistical bottleneck lies in the execution of seamless inter-island connectivity. Once tourists arrive in Port Blair, transporting them safely, quickly, and comfortably to the premier beach destinations on Swaraj Dweep, Shaheed Dweep, or the remote northern islands is a massive operational challenge. The administration and the private sector operate a fleet of modern, air-conditioned, high-speed catamaran ferries that navigate the turbulent ocean straits. Yet, during the extended, intense tropical monsoon season, rough seas frequently force the cancellation of these ferry services, stranding thousands of frantic tourists on outer islands and causing massive, highly damaging logistical chaos that severely damages the destination's premium brand reputation (Directorate of Shipping Services, 2026).

To permanently resolve this severe inter-island connectivity crisis, the administration is heavily investing in the diversification of transit modes. The aggressive expansion of civil aviation under the national UDAN scheme has led to the successful establishment of scheduled, fixed-wing commercial flights connecting Port Blair directly to the military airfield at Shibpur in North Andaman, drastically slashing travel times to the northern eco-tourism nodes. Furthermore, the territory is actively pioneering the highly lucrative, premium sector of heli-tourism and seaplane operations. By constructing specialized, low-impact water aerodromes and expanding the fleet of modern passenger helicopters, the administration aims to offer high-net-worth tourists rapid, incredibly scenic, and weather-resilient transfers directly from the international airport to the helipads of luxury resorts, completely bypassing the unpredictable, time-consuming maritime ferry network (Ministry of Civil Aviation, 2026). Ultimately, the success of the tourism infrastructure strategy relies on the flawless, highly digitized integration of these diverse transport modes, ensuring a seamless, frictionless, and luxurious facilitation experience from the moment a tourist lands in Port Blair to the moment they depart.

19.3 Domestic and International Tourist Flows: Trends and Targets

Analyzing, predicting, and actively managing the complex dynamics of tourist flows into the Union Territory of the Andaman and Nicobar Islands is a highly sophisticated, data-driven administrative imperative. In the crucial evaluation year of 2026, the territory is experiencing a massive, post-pandemic resurgence in visitor numbers, but the fundamental composition, the seasonal distribution, and the spatial concentration of these tourist flows present significant, deeply structural challenges that must be addressed to ensure long-term economic and ecological sustainability. The administration's strategic targets are no longer focused solely on maximizing absolute, raw arrival numbers, but are intensely focused on optimizing the economic yield per visitor while strictly, scientifically enforcing the finite ecological carrying capacity of the fragile archipelago.

The overwhelming, dominant characteristic of the tourist flow into the territory is its almost complete reliance on the domestic Indian market. Domestic tourists, primarily originating from the affluent, rapidly growing middle and upper-middle classes of mainland metropolitan cities like Delhi, Mumbai, Bengaluru, and Chennai, constitute well over ninety per cent of the total annual visitor arrivals. The territory has successfully positioned itself within the domestic consciousness as the ultimate, premium, aspirational honeymoon destination and a highly sought-after, safe location for affluent family vacations. These domestic flows provide a massive, highly reliable, and continuous baseline of revenue for the local hotel industry, the private ferry operators, and the extensive network of local tour guides and taxi drivers (Ministry of Tourism, 2026).

However, the flow of international tourists remains disproportionately, stubbornly low when compared to the globally recognized, breathtaking quality of the territory's natural assets. Despite possessing beaches and coral reefs that rival or exceed those found in the Maldives, the Seychelles, or Southeast Asia, the Andaman and Nicobar Islands capture a shockingly minuscule fraction of the lucrative global tropical tourism market. This severe international

deficit is primarily driven by deeply entrenched, historical regulatory barriers and a critical lack of direct international aviation connectivity. Historically, foreign nationals were subjected to incredibly stringent, highly bureaucratic Restricted Area Permit regulations, which necessitated complex, discouraging paperwork and severely restricted their movement within the archipelago due to overarching national security and tribal protection concerns. While the central government has recently, progressively relaxed many of these archaic permit requirements to stimulate international arrivals, the deeply ingrained global perception of the islands as a difficult, highly restricted, and heavily militarized destination continues to linger and actively deter international tour operators. Furthermore, the absolute absence of direct, scheduled commercial flights connecting Port Blair to major international transit hubs like Singapore, Bangkok, or Dubai forces foreign tourists to endure long, exhausting, and expensive layovers in mainland Indian cities, significantly reducing the destination's global competitiveness.

The seasonal distribution of tourist flows presents another massive, highly disruptive economic challenge. The tourism industry in the territory is exceptionally, severely seasonal. The vast majority of arrivals are heavily concentrated in the dry, pleasant winter months spanning from October to April. During the extended, intense tropical monsoon season, which pounds the islands from May through September, tourist footfalls absolutely plummet. The rough seas force the cancellation of scuba diving operations, beach activities are severely curtailed, and the persistent threat of cyclonic disruptions deters travel planning. This extreme seasonality creates a highly unstable, boom-and-bust economic cycle for the local population. Small business owners, informal sector workers, and seasonal hospitality staff frequently face acute financial destitution and cyclical unemployment during the long monsoon months. To combat this destructive seasonality, the administration is aggressively attempting to rebrand the destination, heavily promoting specialized "monsoon tourism" packages that focus on holistic wellness retreats, indoor cultural exhibitions, highly specialized indoor spa therapies, and the spectacular, dramatic beauty of the rainforest during the rains (Directorate of Information and Publicity, 2026).

The paramount, overriding strategic target for the territorial administration leading up to 2047 is the strict, legally mandated enforcement of a "High Value, Low Volume" tourism model. The administration explicitly recognizes that the fragile, highly sensitive coral reef ecosystems, the extremely limited freshwater aquifers, and the finite solid waste management capacities of the islands simply cannot physically sustain limitless, unchecked exponential growth in mass tourist arrivals. Unregulated mass tourism would inevitably lead to catastrophic, irreversible ecological collapse, destroying the very natural assets that generate the economic wealth. Therefore, the administration is aggressively utilizing complex pricing mechanisms, instituting substantial ecological entry fees for highly sensitive marine parks, and actively restricting the issuance of new hotel licenses to ensure that visitor numbers remain strictly within scientifically determined environmental limits. By aggressively targeting ultra-high-net-worth individuals, promoting extended-stay luxury itineraries, and actively discouraging cheap, high-impact backpacker tourism, the Andaman and Nicobar

Islands aim to maximize their tourism revenue while fiercely, uncompromisingly protecting their pristine, irreplaceable natural heritage.

19.4 Cultural Heritage Preservation and Institutional Framework

The preservation of the immense, highly complex, and deeply layered cultural heritage of the Union Territory of the Andaman and Nicobar Islands constitutes a profoundly sensitive, historically significant, and incredibly complex administrative responsibility. The cultural landscape of this archipelago is not a monolith; it is a fascinating, deeply moving mosaic composed of somber, brutal colonial penal history, the incredibly rich, ancient traditions of isolated indigenous tribal populations, and the vibrant, highly diverse, syncretic culture forged by the modern, multi-ethnic settler communities. In 2026, the institutional framework tasked with managing this diverse heritage operates under the intense pressure of a rapidly modernizing economy, extreme, highly corrosive climatic conditions, and the complex ethical imperatives of anthropological protection. Ensuring that the territory's rapid economic ascent does not result in the tragic, irreversible erasure of its profound historical memory is a paramount, non-negotiable priority for the Government of India.

The absolute, most visible, and heavily managed component of the territory's cultural preservation efforts revolves around its massive colonial and penal architectural heritage. The Department of Art and Culture, operating in close, seamless coordination with the Archaeological Survey of India, bears the immense, incredibly expensive responsibility of physically conserving the monumental Cellular Jail and the extensive, sprawling Victorian ruins located on Netaji Subhash Chandra Bose Island. The physical conservation of these massive brick and stone structures is an endless, highly technical battle against the extreme, relentless forces of the tropical maritime environment. The exceptionally high salinity of the oceanic air, the crushing, perpetual humidity, and the torrential, driving monsoon rains rapidly accelerate the chemical degradation of historical mortar, cause severe, deep-seated structural spalling in ancient bricks, and promote the highly destructive, rapid overgrowth of aggressive tropical vegetation. The institutional framework requires the continuous, highly funded deployment of specialized conservation architects, the rigorous application of highly advanced, breathable chemical sealants, and the meticulous, historically accurate structural stabilization of crumbling masonry to ensure that these sacred national monuments survive intact for future generations to witness and revere (Archaeological Survey of India, 2026).

Beyond the monumental brick-and-mortar structures, the preservation of the territory's indigenous tribal heritage represents an entirely different, incredibly complex, and highly scrutinized dimension of cultural management. The indigenous tribes, particularly the Nicobarese community, possess incredibly rich, ancient, and orally transmitted cultural traditions, including highly specific, sustainable architectural designs adapted perfectly to tsunami-prone environments, complex, intricate traditional boat-building techniques, and profound, deeply ingrained traditional ecological knowledge systems. The Anthropological Survey of India plays a highly critical, continuous role in the respectful, rigorous, and completely non-intrusive academic documentation of these endangered cultural practices.

The institutional framework explicitly and aggressively prohibits any form of exploitative cultural commodification. The administration maintains absolute, strictly enforced legal bans against the horrific, globally condemned practice of "human safaris," ensuring that insensitive, intrusive tourism is never permitted to encroach upon or degrade the dignity, privacy, and cultural sovereignty of the isolated tribal reserves (Ministry of Tribal Affairs, 2026).

The cultural preservation of the diverse, modern settler communities is equally vital for maintaining the territory's celebrated, unbroken social harmony. The administration actively, heavily funds and promotes the comprehensive celebration of diverse regional festivals, classical performing arts, and diverse linguistic traditions brought to the islands by migrants from Tamil Nadu, West Bengal, Kerala, and other mainland states. The Department of Art and Culture operates numerous public libraries, supports localized cultural societies, and aggressively funds the maintenance of the territory's excellent anthropological and maritime museums. These museums serve as highly critical, climate-controlled repositories for incredibly rare indigenous artifacts, historical colonial documents, and vital maritime history exhibits, providing essential, accessible educational resources for both the local youth population and the visiting tourists.

To ensure the long-term, robust sustainability of this highly complex cultural preservation effort leading up to 2047, the institutional framework must undergo significant, proactive capacity building. The administration must urgently establish a highly specialized, dedicated Island Heritage Conservation Institute in Port Blair. This proposed academic and technical institution would focus exclusively on pioneering advanced, highly localized conservation techniques specifically adapted to combat extreme, corrosive tropical maritime climates, reducing the territory's expensive reliance on external mainland conservation consultants. Furthermore, the administration must aggressively leverage advanced digital technologies, heavily investing in the creation of highly detailed, comprehensive virtual reality archives and meticulous 3D digital scans of all highly vulnerable heritage structures. This massive digital preservation effort ensures that even if physical structures are tragically compromised by inevitable, severe seismic events or devastating cyclones, the profound historical memory, the intricate architectural details, and the deep cultural significance of the Andaman and Nicobar Islands will remain permanently, immutably preserved within the secure digital domain for all future generations.

19.5 Creative Industries: Handicrafts, Performing Arts and Cultural Economy

The strategic development, aggressive promotion, and commercial modernization of the creative industries within the Union Territory of the Andaman and Nicobar Islands represent a highly vital, completely underutilized pathway for achieving sustainable, inclusive economic growth and deeply embedding rural empowerment. In a heavily constrained geographical environment where massive, heavy manufacturing is legally prohibited and environmentally disastrous, the localized creative economy offers a perfectly aligned, low-impact, high-value alternative for large-scale wealth generation. The territory's unique cultural amalgamation, its access to highly specific, exquisite natural raw materials, and the

massive, captive market provided by the booming tourism industry create an incredibly fertile, highly promising landscape for the rapid expansion of artisanal handicrafts, dynamic performing arts, and a vibrant, overarching cultural economy. In 2026, the territorial administration recognizes that transitioning the local artisan from a marginalized, struggling producer into a globally connected, highly profitable creative entrepreneur is an absolute, fundamental economic imperative.

The absolute cornerstone of the territory's localized creative economy is its highly distinctive, nature-based handicrafts sector. Local island artisans possess incredible, generationally transmitted skills in meticulously crafting exquisite, high-value products from locally sourced, sustainable materials. The most iconic and highly prized creations are meticulously carved from the legendary, highly durable, and intensely colorful Andaman Padauk timber. However, because commercial logging is strictly and legally banned, artisans rely entirely on legally auctioned, highly restricted quotas of salvaged timber or driftwoods, making these specific wooden handicrafts incredibly rare and highly valuable premium luxury items. Furthermore, the coastal communities exhibit extraordinary, delicate craftsmanship in creating intricate, beautiful jewelry, complex decorative items, and specialized utility products from legally procured, highly polished sea shells, sustainably harvested coconut shells, and versatile bamboo and cane resources (Directorate of Industries, 2026).

Despite the undeniable, exceptionally high quality and the unique, exotic appeal of these local handicrafts, the sector historically suffered from severe, crippling structural and commercial weaknesses. Rural artisans located in the remote outer islands lacked any direct, reliable access to the lucrative tourist markets in Port Blair. They were completely bereft of modern design intervention, lacked adequate, affordable working capital, and were entirely unequipped to manage commercial packaging or branding. Consequently, they were frequently, heavily exploited by localized middlemen who purchased their exquisite products for a mere fraction of their true retail value. To completely dismantle this exploitative, inefficient system, the administration heavily relies on the operations of the Sagarika Government Emporium. This massive, centrally located, government-run retail institution acts as the primary, highly ethical commercial aggregator, purchasing high-quality handicrafts directly from registered rural artisans and organized women's Self-Help Groups at fair, highly remunerative, government-guaranteed prices, and subsequently marketing them directly to the massive influx of domestic and international tourists.

In 2026, the administration is aggressively pushing the creative industries beyond the physical confines of the government emporium and directly into the global digital marketplace. The transformative, incredibly powerful operationalization of the high-speed submarine optical fibre cable has fundamentally leveled the commercial playing field. The Department of Industries is executing massive, highly subsidized digital literacy and e-commerce training programs, specifically targeting young rural artisans and women-led cooperatives. By empowering these local creators to seamlessly list their highly unique, authentic island products directly on massive national and international e-commerce platforms, the administration entirely bypasses the geographical tyranny of the ocean,

instantly connecting marginalized island artisans directly with highly discerning, affluent global consumers willing to pay massive premiums for authentic, handcrafted tropical products (Ministry of Micro, Small and Medium Enterprises, 2026).

Furthermore, the rigorous, legal protection of the territory's unique creative intellectual property is an absolute, non-negotiable priority. The market is frequently flooded with cheap, mass-produced, highly inferior counterfeit souvenirs imported from the mainland or foreign countries, deceptively marketed to tourists as authentic Andaman crafts. This fraudulent practice severely damages the local economy and degrades the territory's premium brand reputation. The administration is aggressively assisting localized artisan cooperatives in formally securing highly coveted Geographical Indication tags for specific, unique island products, such as Nicobari mats and specialized shell crafts. Additionally, the cultural economy is being actively expanded through the heavy promotion of localized performing arts. The administration provides substantial, continuous financial grants to local cultural societies to organize high-quality, professional, and frequent cultural festivals, showcasing the vibrant, incredibly diverse classical and folk traditions of the settler communities, thereby actively enhancing the nighttime entertainment options for tourists and creating a deeply sustainable, highly lucrative, and profoundly vibrant creative ecosystem that directly enriches the local population.

19.6 Film, Media and Content Industries as Economic Drivers

The strategic, aggressive cultivation of the film, media, and digital content creation industries within the Union Territory of the Andaman and Nicobar Islands represents a massive, highly innovative, and incredibly lucrative new frontier for economic diversification and global brand positioning. Historically, the breathtaking, incredibly pristine visual aesthetics of the archipelago were severely underutilized by the mainstream national and international entertainment industries. The staggering logistical nightmares of transporting massive, heavy film crews and highly sensitive camera equipment via slow cargo ferries, combined with the historically crippling lack of reliable internet connectivity for transmitting high-resolution daily footage, made shooting major commercial projects in the islands prohibitively expensive and highly risky for major production houses. However, in the highly connected, digitally transformed landscape of 2026, the territorial administration has fundamentally eliminated these historical barriers, actively recognizing that the global media industry can serve as an incredibly powerful, low-impact catalyst for massive economic growth, high-skilled youth employment, and unparalleled international destination marketing.

The sheer, unmatched visual majesty of the territory provides an absolutely perfect, globally competitive natural canvas for high-end cinematic production. The endless stretches of pristine, untouched white sand beaches, the incredibly dense, foreboding primary tropical rainforests, the haunting, highly atmospheric colonial ruins of Ross Island, and the spectacular, crystal-clear underwater environments offering unparalleled scuba diving visibility present incredibly diverse, highly sought-after locations for major feature films, high-budget international nature documentaries, and premium global advertising campaigns. To aggressively capitalize on this massive visual potential, the territorial administration has

formulated and launched a highly progressive, aggressively pro-business, and incredibly comprehensive Film Tourism Policy. This advanced policy framework is explicitly designed to completely obliterate historical bureaucratic red tape, instituting a highly efficient, fully digitized, single-window clearance mechanism. This system guarantees that major national and international production houses can seamlessly, rapidly secure all necessary, highly complex permissions, including mandatory environmental clearances, specific tribal area proximity approvals, and vital aerial drone filming permits, within a strictly mandated, highly compressed timeframe (Directorate of Information and Publicity, 2026).

The transformative operationalization of the high-speed, high-capacity Chennai to Andaman and Nicobar Islands submarine optical fibre cable serves as the absolute, non-negotiable technological backbone enabling this media revolution. Secure, high-speed, multi-gigabit broadband connectivity allows massive, data-heavy film productions to instantly, securely transmit massive volumes of ultra-high-definition, uncompressed daily footage directly to post-production and editing studios located on the mainland or internationally, completely eliminating the historical, terrifying risk of physical data loss during complex maritime transit. Furthermore, this robust digital infrastructure aggressively empowers the explosive growth of the localized, highly dynamic digital content creation economy. Highly educated, technologically proficient local island youth are increasingly, highly successfully establishing lucrative, independent careers as professional travel vloggers, specialized aerial drone cinematographers, and highly skilled underwater wildlife photographers. They are leveraging global social media platforms to aggressively, beautifully monetize the unique, visually stunning island environment, creating a highly resilient, completely decentralized, and incredibly profitable digital micro-economy that is entirely immune to the high costs of physical shipping logistics (Ministry of Information and Broadcasting, 2026).

However, the sustained, long-term success and ultimate global competitiveness of the territory's media and content industries depend entirely on the aggressive, systematic development of a highly skilled, specialized local supporting ecosystem. The administration must ensure that major, incoming film productions are not forced to expensively import their entire support crews from the mainland. The government is heavily, actively investing in establishing specialized, highly advanced vocational training programs directly in Port Blair. These focused programs are explicitly designed to rapidly upskill the local island youth in highly technical, lucrative fields such as complex cinematic set construction, highly advanced underwater camera operation, sophisticated digital video editing, and specialized, high-end hospitality logistics catering specifically to demanding celebrity clientele. By aggressively establishing an annual, highly prestigious Andaman International Film and Documentary Festival to formally showcase the island's immense capabilities, the territory aims to permanently cement its reputation not merely as a beautiful, passive backdrop, but as a highly sophisticated, technologically advanced, and incredibly welcoming global hub for premier cinematic and digital media production, driving unparalleled economic prosperity leading into 2047.

Chapter 20: Cross-Cutting Themes and Integrated Policy Imperatives

The formulation and execution of a comprehensive developmental trajectory for the Union Territory of the Andaman and Nicobar Islands cannot be successfully achieved through isolated, compartmentalized sectoral interventions. The extreme geographical fragmentation of the archipelago, the profound ecological sensitivity of the tropical maritime environment, and the highly complex demographic composition of the settler and indigenous populations necessitate a highly integrated, holistic approach to public administration and economic planning. As the territory aggressively targets the centennial developmental vision of 2047, it must simultaneously navigate the immediate, pressing realities of the assessment year of 2026. The unique structural challenges of the islands demand that certain overarching principles and strategic themes are systematically embedded into the very fabric of every single government department, every infrastructure project, and every social welfare initiative. These cross-cutting themes act as the essential connective tissue that binds disparate administrative efforts into a cohesive, synergistic strategy capable of delivering sustainable prosperity.

This comprehensive chapter provides an exhaustive, highly detailed, and rigorous analysis of these integrated policy imperatives. It meticulously explores the localized implementation and unique challenges of the Sustainable Development Goals within a fragile island ecosystem. It critically evaluates the absolute necessity of rigorous gender mainstreaming across all economic and social sectors. Furthermore, the chapter deeply analyzes the strategic youth policy required to successfully realize the fleeting demographic dividend, the complex, highly sensitive dimensions of internal and international migration, and the transformative potential of science, technology, and innovation. Finally, it highlights the absolute, foundational requirements of strengthening the statistical system for flawless evidence-based policymaking and aggressively fostering deep, continuous public participation to drive sustained behavioural change among the island communities. Addressing these cross-cutting themes with uncompromising administrative dedication is the absolute prerequisite for ensuring that the Andaman and Nicobar Islands evolve into a resilient, globally competitive, and highly equitable maritime territory.

20.1 Sustainable Development Goals of the state

The localization, rigorous implementation, and continuous monitoring of the United Nations Sustainable Development Goals represent a highly complex, multi-dimensional governance challenge for the Union Territory of the Andaman and Nicobar Islands. In 2026, the territory operates under a unique paradigm where the pursuit of aggressive economic growth and strategic infrastructure development frequently clashes directly with the absolute, non-negotiable imperative of environmental conservation. The NITI Aayog SDG India Index for 2026 highlights the territory's fluctuating performance, revealing profound successes in specific ecological metrics alongside persistent, severe deficits in industrial and macroeconomic indicators (NITI Aayog, 2026). The successful realization of the 2030 Agenda for Sustainable Development within this archipelago requires highly specialized,

localized adaptations of the global goals, ensuring that national targets are meticulously calibrated to respect the absolute carrying capacity of the fragile island ecosystems.

Sustainable Development Goal 14, Life Below Water, is unequivocally the most critical, dominant, and economically significant goal for the territory. The surrounding Exclusive Economic Zone, covering approximately 600,000 square kilometres of the Bay of Bengal and the Andaman Sea, constitutes the ultimate natural and economic asset of the islands. The administration must ensure the flawless, uncompromising protection of the incredibly diverse fringing coral reefs, the extensive coastal mangrove bio-shields, and the highly valuable pelagic fish stocks. In 2026, achieving this goal requires the aggressive, heavily funded expansion of Marine Protected Areas, the strict, technologically enforced regulation of commercial deep-sea fishing quotas, and the absolute elimination of land-based marine pollution, particularly untreated municipal sewage and agricultural chemical runoff (Ministry of Environment, Forest and Climate Change, 2026). The territory's entire transition toward a highly lucrative, sustainable blue economy is fundamentally predicated on the successful, scientifically rigorous achievement of Sustainable Development Goal 14.

Equally paramount is the pursuit of Sustainable Development Goal 15, Life on Land. With over eighty-one per cent of the total geographical landmass legally classified as protected primary tropical rainforests, the territory serves as a vital, globally significant carbon sink and an irreplaceable repository of endemic biodiversity. However, the aggressive push for massive infrastructural modernization, most notably the Great Nicobar Holistic Development Project initiated by the central government, introduces massive, unprecedented pressures on these terrestrial ecosystems. The administration must navigate the incredibly delicate, highly controversial balance between necessary land diversion for strategic maritime ports and the absolute requirement to prevent catastrophic habitat fragmentation. The stringent enforcement of compensatory afforestation protocols, the aggressive eradication of highly destructive invasive alien species, and the absolute protection of the designated tribal reserves are critical, non-negotiable components of localizing Sustainable Development Goal 15 in the islands (Forest Survey of India, 2026).

Furthermore, the territory must urgently accelerate its performance regarding Sustainable Development Goal 7, Affordable and Clean Energy. As detailed extensively in the energy analysis of this report, the archipelago's historical, crippling reliance on imported high-speed diesel for base-load electricity generation completely contradicts the principles of environmental sustainability and climate mitigation. In 2026, the administration is legally and morally bound to execute a rapid, massive transition toward utility-scale renewable energy, heavily prioritizing advanced solar photovoltaic arrays, decentralized micro-grids, and sophisticated battery energy storage systems (Ministry of New and Renewable Energy, 2026). Achieving clean energy independence is not merely an environmental target; it is the absolute fiscal prerequisite for reducing the territory's massive operational subsidies and enabling the sustainable growth of the premium eco-tourism and marine processing sectors.

The eradication of poverty and the reduction of inequalities, encapsulated in Sustainable Development Goal 1 and Sustainable Development Goal 10, require highly specific,

geographically nuanced interventions. While extreme, starvation-level poverty is effectively mitigated by the comprehensive Public Distribution System, the territory suffers from acute, rising spatial inequalities. The immense concentration of economic opportunities, quality healthcare, and higher educational institutions in the capital city of Port Blair leaves the remote agricultural settlements of the North and Middle Andaman district and the isolated tribal communities of the Nicobar district severely marginalized. The territorial administration must ensure that the immense wealth generated by the new maritime infrastructure and the luxury tourism sector is equitably distributed. This requires massive, targeted capital investments in rural maritime connectivity, the establishment of decentralized, localized agricultural processing hubs, and the fierce protection of indigenous land rights, ensuring that the developmental trajectory of the Andaman and Nicobar Islands genuinely leaves no citizen behind by the centennial milestone of 2047.

20.2 Gender Mainstreaming Across Sectors

The systematic, aggressive, and comprehensive integration of gender mainstreaming across all administrative departments, economic sectors, and developmental policies is an absolute, fundamental prerequisite for achieving true social equity and maximizing the human capital potential of the Union Territory of the Andaman and Nicobar Islands. The demographic and cultural landscape of the archipelago presents a highly unique context for gender policy. While the modern settler communities generally exhibit highly progressive indicators regarding female literacy and foundational maternal health, these positive social metrics are severely contradicted by a chronically low, structurally entrenched Female Labour Force Participation Rate. In 2026, the territorial administration formally recognizes that treating gender equity merely as a peripheral social welfare issue is a catastrophic economic failure. True gender mainstreaming requires the deliberate, legally mandated inclusion of female perspectives, requirements, and economic empowerment mechanisms into the very core of maritime infrastructure planning, agricultural modernization, and tourism development (Ministry of Women and Child Development, 2026).

The most glaring, urgent challenge necessitating immediate gender mainstreaming is the severe economic disenfranchisement of highly educated women within the territory. The local educational system successfully produces thousands of capable female graduates annually. However, because the localized private sector is severely stunted and the traditional avenues of employment are frequently restricted to physically demanding logistics or low-wage hospitality roles, these women are structurally excluded from the formal cash economy. The administration must aggressively pivot its economic strategy to explicitly generate high-value, safe, and intellectually stimulating employment opportunities for women. This involves establishing highly specialized, heavily subsidized vocational training centres dedicated exclusively to equipping women with advanced skills in digital information technology, specialized marine biology research, sustainable aquaculture management, and premium eco-tourism administration. By deliberately creating clear, accessible pathways into the emerging, lucrative sectors of the blue economy, the territory can fundamentally

transform its underutilized female demographic into a highly potent engine of macroeconomic growth (Ministry of Labour and Employment, 2026).

The absolute vanguard of grassroots female economic empowerment in the rural and peri-urban islands is the Andaman and Nicobar Islands Rural Livelihood Mission. This highly successful framework relies on the aggressive, systematic mobilization of women into organized, financially literate Self-Help Groups. However, in 2026, gender mainstreaming requires that these groups evolve beyond basic micro-finance and small-scale artisanal crafts. The administration is heavily directing capital subsidies and specialized technical support to ensure that these women-led collectives can scale their operations into formidable, highly competitive commercial enterprises. This includes empowering women's groups to directly manage decentralized, advanced organic food processing facilities, operate lucrative, sustainable marine cage culture farms, and exclusively manage profitable community-based eco-tourism ventures. By providing these groups with direct, unhindered access to national digital marketing platforms and fiercely protecting their intellectual property, the government ensures that rural women transition from passive welfare recipients into highly powerful, financially independent commercial stakeholders.

Furthermore, gender mainstreaming must be strictly, legally applied to the physical design and execution of all public infrastructure and civic spaces. The historical planning of inter-island maritime transport, public sanitation facilities, and localized agricultural markets frequently ignored the specific safety, hygiene, and accessibility requirements of women. In 2026, the territorial administration mandates rigorous gender audits for all major civil engineering projects. The procurement and design of new passenger ferries must incorporate safe, well-lit, and hygienic designated spaces for female travellers and nursing mothers. The development of urban smart city infrastructure in Port Blair must prioritize the installation of comprehensive, intelligent street lighting and highly responsive emergency communication networks to guarantee absolute physical security for women navigating the city after dark. The built environment of the islands must explicitly reflect and accommodate the presence, safety, and dignity of its female citizens (Ministry of Housing and Urban Affairs, 2026).

Finally, the administration must ensure the robust, continuous, and highly influential participation of women in all tiers of political decision-making and environmental governance. While the constitutional reservations within the Panchayati Raj Institutions have successfully ensured numerical female representation at the local grassroots level, true gender mainstreaming requires that these elected women are provided with the intensive, specialized capacity building necessary to exert genuine administrative authority. The government must conduct continuous, high-level leadership training programs for female Panchayat members, empowering them to aggressively direct localized public expenditure toward critical community priorities such as safe drinking water infrastructure, specialized early childhood education, and localized climate disaster resilience. In the highly sensitive context of the Nicobar district, the administration must respectfully and carefully encourage the greater participation of indigenous women within the traditional tribal councils, ensuring that the

unique, vital perspectives of tribal women are centrally integrated into all policies concerning forest resource management and indigenous community welfare.

20.3 Youth Policy and Demographic Dividend Realisation

The strategic, holistic management of the youth demographic and the urgent, aggressive realization of the highly fleeting demographic dividend constitute the most critical, time-sensitive socio-economic challenges confronting the Union Territory of the Andaman and Nicobar Islands. The territory currently possesses a highly favourable demographic profile, characterized by a large, incredibly dynamic, and highly educated youth population. However, this immense potential demographic advantage is currently severely threatened by a profound, deeply entrenched structural economic crisis. The phenomenon of educated unemployment in 2026 has reached highly alarming, unacceptable levels. The local educational infrastructure consistently produces thousands of secondary and tertiary graduates whose academic qualifications are fundamentally, tragically misaligned with the highly specialized, technical requirements of the emerging modern maritime and tourism sectors. Consequently, the administration faces the terrifying prospect of squandering its most valuable human resource, leading to massive, involuntary out-migration of the brightest minds and the potential for significant, localized social unrest driven by deep economic frustration (Ministry of Skill Development and Entrepreneurship, 2026).

To fundamentally arrest this destructive trajectory and successfully harness the demographic dividend, the territorial administration is currently formulating and aggressively executing a comprehensive, radical, and highly futuristic Andaman and Nicobar Youth Policy. The absolute, non-negotiable core of this policy is the complete, ruthless overhaul of the archaic Technical and Vocational Education and Training ecosystem. The government officially recognizes that generic, outdated degrees in traditional arts and commerce are mathematically insufficient to secure lucrative employment in a highly competitive, twenty-first-century island economy. The new youth policy heavily mandates and aggressively subsidizes the immediate establishment of world-class, highly specialized Centres of Excellence directly within the territory. These elite, industry-partnered institutions must focus exclusively on delivering internationally accredited certifications in highly lucrative, relevant fields such as advanced marine engineering, complex deep-sea navigation, sustainable, high-yield aquaculture management, specialized digital logistics, and premium luxury hospitality operations (Department of Higher Education, 2026).

Furthermore, the youth policy aggressively prioritizes the systematic cultivation of a vibrant, risk-taking, and highly supported entrepreneurial culture among the island youth. The administration acknowledges that the saturated government sector can no longer serve as the primary engine of formal employment. The future of job creation relies entirely on the successful establishment of dynamic, youth-led private enterprises. The government has established a dedicated, highly capitalized Island Innovation Fund, explicitly designed to provide easily accessible, collateral-free seed capital, vital technological incubation, and expert mainland mentorship to young local entrepreneurs. The policy specifically targets and

heavily incentivizes highly innovative startups operating in the green and blue economies, such as youth collectives developing artificial intelligence applications for predictive marine weather modeling, establishing zero-waste organic agricultural processing units, or launching localized, digital eco-tourism aggregation platforms. By deliberately transforming job seekers into aggressive job creators, the territory can fundamentally restructure its economic foundation.

The psychological well-being, physical health, and social integration of the youth demographic require equally intense, specialized administrative focus. The profound geographic isolation of the archipelago, combined with the intense, crushing pressure of high unemployment, generates severe, unique psychosocial stressors that heavily impact the mental health of the island youth. The phenomenon of "island fever," characterized by deep feelings of claustrophobia and lack of upward mobility, frequently leads to dangerous increases in substance abuse and severe clinical depression. The youth policy of 2026 mandates the massive, localized expansion of dedicated, highly accessible youth counselling centres and advanced, confidential mental health tele-medicine services across all major educational institutions and rural blocks. Furthermore, the administration is heavily investing in the creation of world-class, highly accessible sports infrastructure, modern recreational facilities, and vibrant cultural hubs to ensure that the island youth possess constructive, healthy, and highly engaging avenues for physical and social development (Ministry of Youth Affairs and Sports, 2026).

Ultimately, the successful realization of the demographic dividend requires the complete, flawless integration of the youth perspective into the highest levels of territorial governance and strategic planning. The administration must establish a permanent, legally empowered Youth Advisory Council, comprising diverse, highly accomplished young leaders representing all three districts of the archipelago. This council must be granted statutory authority to formally review, actively critique, and directly influence all major governmental policies concerning environmental conservation, localized infrastructure development, and long-term economic strategy. By actively ensuring that the policies shaping the future of the Andaman and Nicobar Islands are co-authored directly by the very demographic that will inherit the consequences, the territory can absolutely guarantee a resilient, highly prosperous, and incredibly dynamic developmental trajectory leading up to the centennial vision of 2047.

20.4 Migration: Internal, Inter-State and International Dimensions

The complex, continuous, and highly sensitive dynamics of migration constitute a profound, deeply historical, and incredibly volatile administrative challenge for the Union Territory of the Andaman and Nicobar Islands. The very demographic foundation of the modern settler society in the archipelago is the direct, intentional result of successive, massive waves of historical migration, beginning with the brutal establishment of the colonial penal settlement, followed by the highly organized, government-sponsored post-independence resettlement of East Bengali refugees and mainland ex-servicemen. In 2026, the administration must navigate incredibly complex, multi-dimensional migratory pressures. The government is

forced to perform a highly precarious balancing act: it must actively facilitate the importation of essential, highly skilled mainland labour required for massive strategic mega-projects, while simultaneously preventing the unregulated, explosive influx of economic migrants that threatens to completely overwhelm the fragile island ecology and fatally disrupt the carefully balanced demographic harmony of the territory (Ministry of Home Affairs, 2026).

The most immediate, highly visible, and infrastructurally taxing dimension of migration is the massive, continuous inter-state influx of transient and semi-permanent workers originating from the economically depressed regions of mainland states such as West Bengal, Bihar, Jharkhand, and Tamil Nadu. The rapid, explosive expansion of the premium tourism sector, the continuous requirements of municipal maintenance, and the massive, ongoing execution of strategic civil engineering projects create a voracious, unyielding demand for cheap, manual, and semi-skilled labour. Because the highly educated local island youth are largely unwilling to engage in these physically arduous, low-wage sectors, the territory is absolutely, structurally dependent on this mainland workforce. However, the continuous arrival of these migrant workers exerts massive, unsustainable pressure on the severely constrained civic infrastructure of Port Blair and the major tourist islands. The complete lack of affordable, formal housing forces these vulnerable migrant populations into creating precarious, highly unsafe, and unsanitary informal slum settlements on the vulnerable, steep peripheries of the capital city, severely exacerbating the territory's solid waste and localized public health crises (Ministry of Housing and Urban Affairs, 2026).

To regulate and safely manage this massive inter-state migration, the territorial administration relies heavily on a complex, highly debated system of localized administrative restrictions and specialized legal frameworks. Unlike the unrestricted freedom of movement guaranteed across the mainland states, entry and extended residency in the Andaman and Nicobar Islands are subject to specific, localized scrutiny. While Indian citizens can freely visit the accessible islands for tourism, acquiring permanent residency, securing formal local government employment, and critically, purchasing revenue land are restricted by a complex web of local regulations designed specifically to protect the original islander communities from being demographically and economically swamped by superior mainland capital. The administration in 2026 is aggressively utilizing advanced digital platforms, specifically the e-Shram portal, to rigorously register, continuously track, and formally regulate the entire migrant workforce. This absolute digital visibility is necessary to ensure that migrant workers receive basic humanitarian protections and legal occupational safety nets, while allowing the government to accurately calculate the true demographic load placed on the finite freshwater and healthcare resources of the islands (Ministry of Labour and Employment, 2026).

Internal, intra-territory migration presents a separate, equally critical, and highly disruptive demographic challenge. There is a continuous, unidirectional, and highly detrimental migration of population from the remote, agrarian, and economically stagnant islands of the North and Middle Andaman district directly into the heavily congested, urbanized core of the South Andaman district. Driven entirely by the desperate search for advanced higher education, specialized medical care, and the elusive promise of formal employment in the

tourism and administrative sectors, this internal migration is systematically hollowing out the northern agricultural settlements and dangerously hyper-concentrating the population in Port Blair. To successfully reverse this destructive internal migration, the administration must aggressively decentralize economic opportunity. This requires massive, targeted capital investments in establishing modern, localized agricultural processing hubs, specialized decentralized tertiary healthcare facilities, and highly advanced, digital educational institutions directly within the northern district, thereby creating compelling, sustainable economic incentives for the population to remain in and develop the peripheral islands.

The international dimension of migration and trans-border movement in the Andaman and Nicobar Islands is primarily defined by acute, escalating national security concerns and the absolute necessity of rigorous maritime border defense. The territory's extreme physical proximity to the coastlines of Myanmar, Thailand, and Indonesia makes it highly vulnerable to sophisticated, transnational illegal activities. The most persistent, highly damaging threat is the continuous, aggressive infiltration of organized, highly mechanized foreign poachers targeting the incredibly lucrative, rare marine resources located within the territory's Exclusive Economic Zone. Furthermore, the archipelago sits near highly volatile, international maritime human smuggling and trafficking routes. The Andaman and Nicobar Command and the localized Marine Police Force must maintain continuous, highly aggressive, and massively expensive aerial and maritime surveillance to instantly intercept, apprehend, and prosecute these illegal international incursions. Ensuring the absolute, impenetrable security of the maritime borders while simultaneously protecting the profound, existential isolation of the indigenous tribal reserves from any unauthorized external contact remains the most critical, non-negotiable migration and security imperative for the Government of India in the region (Ministry of Defence, 2026).

20.5 Science, Technology and Innovation for Development

The strategic, comprehensive, and aggressive integration of advanced science, cutting-edge technology, and localized innovation is the absolute, indispensable catalyst required to propel the Union Territory of the Andaman and Nicobar Islands beyond the crippling limitations of its isolated geography. In the incredibly demanding operational environment of 2026, the territorial administration universally recognizes that traditional, archaic mainland engineering and standard administrative methodologies are fundamentally incapable of solving the unique, extreme challenges of the archipelago. The territory must function as a dynamic, highly advanced living laboratory, eagerly adopting, aggressively testing, and successfully scaling highly customized technological solutions to secure its energy independence, protect its hyper-fragile ecology, and guarantee the absolute physical safety of its coastal communities. Transitioning the islands into a hub of scientific excellence is the ultimate prerequisite for achieving the ambitious, complex developmental targets established for 2047.

The most critical, heavily funded, and intensely researched application of science and technology in the territory focuses on the massive, urgent transition toward sustainable, resilient renewable energy. The historical, toxic, and economically disastrous reliance on

imported high-speed diesel for electricity generation must be permanently eradicated. The administration, operating in tight, seamless collaboration with premier national institutions such as the National Institute of Ocean Technology and the Ministry of New and Renewable Energy, is aggressively pioneering the deployment of highly advanced, decentralized power solutions (Ministry of Earth Sciences, 2026). Because the severe lack of available landmass strictly prohibits the construction of massive, conventional solar parks, the territory is heavily investing in the complex engineering required for large-scale floating solar photovoltaic arrays situated on existing freshwater reservoirs. Furthermore, the islands are serving as the primary national testing ground for the highly experimental, incredibly promising technology of Ocean Thermal Energy Conversion. By scientifically harnessing the massive, continuous temperature differential between the warm surface waters and the freezing deep ocean currents surrounding the islands, the territory aims to eventually unlock an infinite, completely clean, and uninterrupted source of baseload power capable of sustaining the massive energy demands of the proposed international transshipment terminal.

In the crucial realm of marine resource management and absolute ecological conservation, the deployment of highly sophisticated, advanced technological systems is an absolute, non-negotiable necessity. The vast, incredibly rich Exclusive Economic Zone cannot be effectively monitored or sustainably managed using traditional, manual maritime policing methods. The administration is aggressively deploying massive, highly integrated networks of advanced oceanic sensors, autonomous underwater gliders, and high-resolution, continuous satellite surveillance systems provided by the Indian Space Research Organisation (Department of Space, 2026). These incredibly complex technological networks provide massive volumes of real-time, highly granular data regarding minute shifts in sea surface temperatures, the precise, localized progression of ocean acidification, and the exact physical tracking of both highly valuable, migratory pelagic fish stocks and illegal, foreign poaching vessels. This absolute, comprehensive technological visibility empowers the administration to execute highly precise, mathematically optimized, and profoundly sustainable coastal zone management and marine biodiversity protection strategies.

The integration of advanced science and technology is equally vital for revolutionizing the territory's disaster risk reduction framework and ensuring absolute climate resilience. The archipelago is perpetually, extremely vulnerable to catastrophic tectonic events, devastating tsunamis, and highly intense tropical cyclones. The administration has heavily invested in the establishment of a state-of-the-art, highly automated, and fail-safe early warning infrastructure. This system utilizes a highly dense, localized network of sensitive seismic sensors, advanced deep-ocean tsunami buoys, and highly sophisticated artificial intelligence-driven meteorological predictive models to provide instantaneous, highly accurate alerts directly to the isolated coastal communities (National Disaster Management Authority, 2026). Furthermore, the application of advanced material sciences and complex, specialized structural engineering is explicitly mandated for all new civil construction. The development and deployment of highly resilient, lightweight, cyclone-proof building materials and advanced, corrosion-resistant concrete formulas specifically designed to withstand the extreme, harsh maritime environment are strictly required to ensure that the

massive new infrastructure investments survive the accelerating, terrifying impacts of global climate change.

To successfully, permanently sustain this high level of scientific integration, the territory must urgently and aggressively cultivate a profound, robust, and highly localized ecosystem of innovation. The administration must fundamentally transform the local higher educational institutions from passive teaching centres into aggressive, dynamic hubs of applied scientific research. The government has initiated the heavily subsidized establishment of highly specialized marine biotechnology incubators and advanced tropical engineering research cells directly within Port Blair. These localized research centres are explicitly mandated to forge deep, highly productive collaborative partnerships with the emerging private maritime logistics and premium eco-tourism sectors. By aggressively incentivizing highly ambitious local youth and brilliant domestic researchers to develop innovative, patented technological solutions specifically tailored to the unique, extreme logistical and ecological challenges of the archipelago, the Andaman and Nicobar Islands can successfully, permanently transition from being a passive consumer of imported mainland technology to a highly respected, globally recognized exporter of specialized, advanced island resilience innovation.

20.6 Statistical System Strengthening and Evidence-Based Policymaking

The formulation, successful execution, and precise, objective evaluation of highly complex developmental policies within the Union Territory of the Andaman and Nicobar Islands demand an absolutely robust, highly agile, and meticulously accurate statistical system. In an archipelagic environment characterized by extreme demographic diversity, profound spatial disparities, and highly fragile ecological boundaries, relying on broad, generalized assumptions or outdated, inaccurate data inevitably leads to massive, catastrophic misallocations of incredibly scarce public financial resources. In 2026, the territorial administration officially and universally recognizes that true, flawless evidence-based policymaking is the absolute, foundational prerequisite for achieving the ambitious, highly complex objectives of the 2047 developmental vision. However, the current statistical architecture of the territory suffers from severe, deeply entrenched structural deficits, immense logistical data collection barriers, and a critical, urgent need for massive digital modernization.

The primary, most crippling challenge facing the statistical system is the extreme, unprecedented difficulty of executing rigorous, continuous primary data collection across a highly fragmented geography encompassing hundreds of dispersed, isolated islands. The Directorate of Economics and Statistics, acting as the absolute nodal agency for the territory, struggles immensely to deploy trained enumerators and field surveyors to the highly remote agricultural settlements of the North and Middle Andaman district and the legally restricted, deeply isolated tribal hamlets of the Nicobar district (Directorate of Economics and Statistics, 2026). During the extended, violent monsoon season, physical access to these peripheral populations is completely severed, resulting in massive, unacceptable temporal gaps and severe, frustrating inaccuracies in vital, high-frequency data streams related to acute rural

unemployment, localized agricultural crop yields, and urgent, emerging public health crises. This massive spatial data deficit frequently results in highly skewed, inaccurate territory-wide statistical averages that overwhelmingly, incorrectly reflect the dominant, easily accessible realities of the capital city, Port Blair, while dangerously, completely masking the severe, acute developmental distress occurring in the invisible maritime periphery.

To fundamentally and completely obliterate these massive geographical barriers to data collection, the territorial administration is aggressively executing a massive, comprehensive technological overhaul of its entire statistical machinery. The absolute, unyielding priority is the complete, forced transition away from slow, error-prone, paper-based field surveys toward highly secure, real-time digital data capture methodologies. The administration is heavily equipping all peripheral administrative offices, localized rural Anganwadi centres, and remote primary health clinics with robust, highly secure mobile data entry devices explicitly designed to function flawlessly offline and instantly, automatically synchronize with the centralized state servers the moment intermittent network connectivity is restored (Ministry of Electronics and Information Technology, 2026). Furthermore, the territory is aggressively, heavily leveraging the massive, transformative power of advanced geospatial technology and high-resolution satellite imagery provided by the Indian Space Research Organisation. By utilizing incredibly complex, artificial intelligence-driven algorithms to analyze this continuous spatial data, the administration can now remotely, accurately, and mathematically estimate localized agricultural output, precisely monitor the terrifying, rapid progression of coastal erosion, and scientifically track the health of the coral reefs without requiring impossible, massive deployments of physical human surveyors.

The successful, effective utilization of this massive, newly generated volume of highly granular data requires the urgent establishment of highly sophisticated, incredibly powerful analytical infrastructure. The administration is currently constructing a highly secure, centralized, and advanced State Data Dashboard. This dynamic, real-time analytical platform is explicitly designed to seamlessly, automatically integrate immense, complex datasets sourced from diverse, previously siloed departments, including health, public works, local policing, and rural tribal welfare. This high-level, comprehensive digital integration empowers senior policymakers and the Lieutenant Governor to execute complex, multi-dimensional analyses, highly accurately identify emerging, localized socioeconomic trends, and instantly, precisely monitor the real-time, financial execution of massive, centrally funded mega-infrastructure projects (Ministry of Statistics and Programme Implementation, 2026).

However, the ultimate, long-term success of this massive statistical strengthening initiative depends entirely on a profound, fundamental cultural shift within the localized bureaucracy. The administration must aggressively, ruthlessly enforce absolute data transparency and mandate the strict, non-negotiable use of objective, mathematical evidence in all administrative decision-making processes. Government departments must be legally compelled to publish their granular, anonymized operational data on public open-data portals, allowing independent academic researchers, sharp local civil society organizations, and the

general public to independently, rigorously scrutinize government performance and actively, intelligently participate in the policy formulation process. By successfully building a highly transparent, technologically supreme, and rigorously objective statistical ecosystem, the Andaman and Nicobar Islands can absolutely ensure that its future developmental trajectory is not driven by political guesswork or bureaucratic convenience, but is guided firmly and perfectly by the indisputable, mathematical reality of the island environment.

20.7 Public Participation: Behavioural Change and Citizen Engagement

The ultimate, long-term sustainability and the profound, enduring success of any comprehensive developmental framework in the Union Territory of the Andaman and Nicobar Islands depend absolutely, entirely, and unequivocally on the active, genuine, and legally empowered participation of the general public. In a highly unique, ecologically delicate archipelagic environment, top-down, aggressively enforced bureaucratic mandates formulated in Port Blair or New Delhi frequently, inevitably fail to achieve their intended objectives if they lack the deep, genuine understanding, the willing acceptance, and the active, enthusiastic ownership of the highly diverse local island communities. In 2026, the territorial administration officially recognizes that managing the massive, compounding challenges of severe climate change adaptation, executing complex solid waste management in a closed system, and fiercely protecting the fragile, incredibly valuable marine biodiversity requires a fundamental, profound, and permanent behavioural change across all strata of society. Fostering this massive, territory-wide societal transformation demands highly innovative, culturally respectful, and incredibly robust mechanisms for continuous, deep citizen engagement.

The most critical, urgent arena demanding massive, immediate public participation and profound behavioural modification is the realm of environmental conservation and municipal solid waste management. The islands function as a perfectly closed, highly constrained ecological system with absolutely zero surplus land for massive, mainland-style waste dumping. The administration's aggressive, highly technological efforts to implement comprehensive, scientific solid waste processing infrastructure are completely, mathematically futile without the absolute, unyielding, daily cooperation of every single resident, commercial business, and transient tourist. The government is executing massive, relentless, and highly localized Information, Education, and Communication campaigns strictly mandated to enforce the absolute necessity of rigorous, flawless waste segregation at the household source, aggressively discourage the use of toxic single-use plastics, and heavily promote the widespread adoption of decentralized, localized organic composting (Ministry of Housing and Urban Affairs, 2026). To ensure that these campaigns transcend mere superficial awareness and translate into permanent, embedded behavioural change, the administration must heavily leverage the immense social influence of local religious leaders, deeply respected community elders, and the highly organized, powerful networks of women's Self-Help Groups to champion these critical environmental initiatives directly at the absolute grassroots level.

Effective, meaningful citizen engagement requires the establishment of highly accessible, genuinely powerful, and deeply democratic institutional platforms where the public can voice their severe grievances, aggressively propose localized solutions, and hold the powerful executive bureaucracy strictly, legally accountable. In the settler-dominated areas of the Andaman district, the administration must urgently, forcefully revitalize the institution of the Gram Sabha. Historically suffering from low public attendance and deep-seated civic apathy, these fundamental democratic assemblies must be actively transformed into incredibly dynamic, highly empowered forums for genuine, localized participatory planning. The administration must strictly, legally mandate that a highly significant, guaranteed percentage of the local developmental budget is allocated entirely, exclusively based on the direct, explicit, and democratic resolutions passed by the residents during these vital Gram Sabha meetings (Ministry of Panchayati Raj, 2026). Furthermore, the territory must aggressively, comprehensively expand the deployment of advanced, user-friendly digital grievance redressal portals and highly responsive, localized mobile governance applications, allowing the citizens to instantly, securely report critical civic infrastructure failures, highlight environmental violations, and monitor the real-time progress of their specific complaints with total, unprecedented transparency.

In the highly sensitive, legally protected Nicobar district, the paradigm of public participation and citizen engagement must operate under fundamentally different, incredibly respectful, and highly culturally specific protocols. The administration must absolutely avoid the forceful, highly disruptive imposition of standardized, mainland-style democratic structures that could fatally undermine or violently conflict with the incredibly robust, ancient, and highly effective authority of the traditional, indigenous tribal councils. Any proposed developmental initiative, massive infrastructure project, or complex disaster management protocol planned for the tribal reserves must be meticulously, extensively negotiated and explicitly, formally approved by the respected village headmen and the powerful Chief Captains. The administration must deploy highly trained, deeply empathetic, and culturally fluent liaison officers who possess a profound, respectful understanding of the Nicobarese languages and complex social structures to facilitate this continuous, delicate, and vital dialogue (Ministry of Tribal Affairs, 2026).

Ultimately, achieving deep, enduring public participation requires the territorial administration to fundamentally, permanently shift its entire operational philosophy from one of paternalistic, top-down governance to one of genuine, respectful, and highly collaborative partnership with the island citizenry. By actively, continuously involving the public in the highly complex, difficult decision-making processes regarding critical natural resource management, sustainable tourism development, and local disaster preparedness, the government builds immense, unbreakable civic trust and deep, unshakeable community resilience. It is only through this mobilized, highly informed, and deeply empowered populace that the Andaman and Nicobar Islands can successfully, triumphantly navigate the incredibly complex, unprecedented challenges of the twenty-first century and successfully realize its highly ambitious, globally significant developmental vision for the centennial milestone of 2047.

Chapter 21: Vision 2047 — Strategic Priorities and Development

The culmination of this comprehensive development framework for the Union Territory of the Andaman and Nicobar Islands is crystallized in the State Vision 2047 roadmap. As the Republic of India approaches the centenary of its independence, this strategic blueprint outlines the definitive path for transforming the archipelago into a globally significant, ecologically secure, and economically self-sustaining maritime and strategic hub. The journey from the current baseline of 2026 to the horizon year of 2047 requires an unprecedented convergence of visionary central leadership, disciplined territorial administration, robust private sector partnership, and the unwavering commitment of the island citizenry. This final chapter provides a rigorous, exhaustive, and highly structured synthesis of the long-term vision, medium-term milestones, innovative financing strategies, enhanced federal partnerships, inter-state and international collaborations, and rigorous monitoring architectures necessary to turn this grand developmental vision into an undeniable reality.

21.1 Long-Term Vision and Flagship Missions

The long-term vision for the Union Territory of the Andaman and Nicobar Islands for the year 2047 is anchored in the harmonious synthesis of sovereign national security, absolute ecological preservation, and vibrant, ocean-driven economic prosperity. The territory is envisioned as India's premier gateway to the Indo-Pacific, balancing the strategic necessity of forward defense with the dynamic execution of a sustainable blue economy and world-class eco-tourism. To systematically realize this ambitious vision, the territorial administration, in close coordination with the central government and the NITI Aayog, has conceptualized and structured a series of flagship missions designed to drive structural transformation across every sector of the island economy over the next two decades.

The first flagship mission is the Maritime Logistics and Transshipment Mission, centred on the full realization and operationalization of the Great Nicobar Holistic Development Project. By 2047, the International Container Transshipment Terminal at Galathea Bay is envisioned to be a fully automated, high-capacity global maritime hub that successfully captures a massive share of the international container trade transiting through the adjacent Malacca Strait. This mission encompasses the comprehensive development of supporting free trade zones, advanced ship-repair facilities, and green bunkering infrastructure, positioning the southern node of the archipelago as a dominant economic force in global shipping.

The second flagship mission is the Green Archipelago and Carbon Neutrality Mission. This initiative codifies the territory's commitment to achieving absolute carbon neutrality and one hundred per cent renewable energy independence by 2040, providing a seven-year buffer leading up to 2047. It mandates the complete, permanent elimination of imported high-speed diesel for power generation, replacing it with utility-scale floating solar arrays, advanced ocean thermal energy conversion systems, and robust battery energy storage grids. Concurrently, it enforces strict, uncompromising green building codes across all urban and

rural developments, ensuring that the physical expansion of the territory operates in absolute harmony with the primary rainforests and sensitive coral reef ecosystems.

The third flagship mission is the Premium Eco-Tourism and Marine Biodiversity Sanctuary Mission. This mission shifts the territory away from low-value mass tourism toward an exclusive, high-yield, low-impact model. By restricting visitor numbers through dynamic pricing and ecological carrying capacity limits, while massively upgrading luxury hospitality infrastructure and marine conservation protocols, the territory aims to become a global benchmark for sustainable island tourism. This mission explicitly links the economic prosperity of the tourism sector directly to the active, scientific protection of the surrounding coral reefs and marine protected areas.

21.2 Medium-Term Priority Action Plan (2025-2030)

To ensure that the grand long-term vision for 2047 remains actionable and does not dissolve into abstract rhetoric, the territorial administration has formulated a highly rigorous, time-bound Medium-Term Priority Action Plan covering the critical window from 2025 to 2030. This intermediate phase serves as the indispensable foundation upon which all subsequent structural transformations will be built, focusing intensely on closing critical infrastructure deficits, stabilizing administrative governance, and removing the severe logistical bottlenecks that currently hinder economic dynamism.

The primary focus of the 2025-2030 action plan is the aggressive completion and operationalization of foundational mega-infrastructure. This includes accelerating the construction phases of the Great Nicobar transshipment terminal, upgrading the inter-island ferry fleet with modern, high-speed vessels, and finalizing the critical surface transport linkages such as the remaining sea-bridges along the Andaman Trunk Road. In the sphere of digital infrastructure, the medium-term plan mandates the complete, flawless extension of the high-speed optical fibre network from coastal landing stations to every single rural school, primary health centre, and Common Service Centre across the outer islands.

The second major priority for this medium-term phase is the radical overhaul of the human capital pipeline through targeted educational and vocational reforms. By 2030, the administration aims to establish the foundational campuses of the proposed specialized higher educational institutions, shifting the curriculum away from generic arts toward advanced marine sciences, maritime logistics, and sustainable hospitality management. Concurrently, the regional Technical and Vocational Education and Training ecosystem will be heavily restructured in direct partnership with emerging industry leaders to eliminate the severe skills mismatch and combat youth unemployment.

The third priority within the 2030 action plan is the systematic strengthening of decentralized municipal and panchayat governance and the aggressive rollout of localized climate adaptation measures. This involves implementing comprehensive Geographic Information System-based property tax mapping for the Port Blair Municipal Council to enhance own-source revenue, expanding decentralized sewage treatment plants under AMRUT 2.0,

and establishing fully equipped, highly responsive District Disaster Management Authorities across all three districts to protect vulnerable coastal settlements against escalating extreme weather events.

21.3 Financing Strategy: Resource Mobilisation, Revenue Enhancement and Expenditure Rationalisation

The financing of the massive capital investments, infrastructural upgrades, and expansive social welfare programs required to achieve the Vision 2047 roadmap presents a monumental fiscal challenge. Given that the Union Territory of the Andaman and Nicobar Islands lacks a local legislative assembly and possesses a severely constrained, narrow own-source revenue base, the territory has historically operated under an absolute dependence on central government budgetary grants and financial transfers. To successfully execute the ambitious projects outlined in this framework without imposing an unsustainable burden on the national exchequer, the territory must adopt a highly sophisticated, diversified, and aggressive financing strategy.

The first critical pillar of this financing strategy is aggressive domestic and regional revenue enhancement. The administration must systematically modernize its own-source tax collection mechanisms, particularly by reforming the property tax administration in the Port Blair municipal area through Capital Value-based valuations and digital mapping. Furthermore, the territory must optimize non-tax revenues by capturing the immense economic potential of the tourism sector through carefully calibrated, premium ecological entry levies, port berthing fees, and commercial land lease concessions within designated eco-tourism zones. Broadening the local tax base by actively fostering clean, value-added MSMEs in fisheries and coconut processing will gradually reduce the perilous reliance on volatile UTGST collections from tourism alone.

The second pillar involves the strategic, widespread deployment of Public-Private Partnerships to mobilize massive private sector capital for capital-intensive infrastructure projects. Recognizing that the territorial and central budgets cannot finance every single developmental requirement directly, the administration is structuring world-class concession agreements—such as the Landlord Port model utilized for the Great Nicobar transshipment terminal and long-term lease models for luxury eco-resorts. By offering targeted Viability Gap Funding, sovereign-backed power purchase agreements, and transparent single-window clearances, the territory can attract risk-tolerant domestic and foreign direct investment to fund ports, renewable energy micro-grids, and modern cold-chain logistics.

The third pillar is rigorous expenditure rationalization and fiscal discipline within the territorial administration. To free up scarce financial resources for vital capital asset creation, the government must aggressively target the reduction of non-merit subsidies, particularly the massive, unsustainable financial outlays required to maintain the diesel-dependent power grid and inefficient shipping operations. The rapid, successful transition toward utility-scale solar energy and corporatized, streamlined maritime transport will systematically eliminate these massive operational drains. Furthermore, the rigorous implementation of the Public Financial

Management System and real-time digital auditing will ensure that public funds are utilized with absolute efficiency, completely eradicating administrative leakages and project cost overruns.

21.4 Centre-State Partnership: Centrally Sponsored Schemes and Special Grants

The realization of the Andaman and Nicobar Islands' developmental potential is inextricably bound to the nature and intensity of its partnership with the central government in New Delhi. Because the territory is administered directly as a Union Territory, this relationship transcends standard federal fiscal arrangements, functioning as a direct, vital lifeline. As the strategic importance of the archipelago in the Indo-Pacific region continues to escalate, the Centre-Territory partnership is undergoing a profound evolution from basic administrative subsidization to high-priority, strategic co-investment.

The effective drawdown and localized adaptation of Centrally Sponsored Schemes represent a primary mechanism for funding grassroots development across the islands. Programs such as the Jal Jeevan Mission, the Pradhan Mantri Awas Yojana, the Swachh Bharat Mission, and the Mahatma Gandhi National Rural Employment Guarantee Act provide the essential financial resources required to build rural and urban infrastructure. However, as documented throughout this framework, standard mainland-centric scheme guidelines frequently clash with the unique logistical and ecological realities of the archipelago. The central government must institutionalize a specialized "Island Adaptation Protocol" within these national schemes, permitting flexible funding formulas, enhanced subsidy ceilings to account for the massive "island premium" on construction materials, and extended implementation timelines that accommodate the disruptions caused by the prolonged monsoon season.

Furthermore, the territory requires dedicated, special financial grants outside the standard budgetary allocations to fund mega-scale, highly complex projects that carry profound national security and macroeconomic significance. The central ministries—specifically the Ministry of Home Affairs, the Ministry of Ports, Shipping and Waterways, and the Ministry of Environment, Forest and Climate Change—must maintain a continuous, highly coordinated funding stream to support the immense capital costs of environmental mitigation, advanced seismic engineering, and coastal protection infrastructure. This strengthened partnership ensures that the burden of securing a vital national frontier is shared equitably by the entire nation, rather than resting unfairly on the shoulders of the local island administration.

21.5 Inter-State Cooperation: Regional Development Councils and River Boards

While the Andaman and Nicobar Islands operate as a physically isolated archipelagic entity, their long-term economic prosperity and strategic security are deeply intertwined with the broader macroeconomic and geopolitical dynamics of peninsular India and the wider Bay of Bengal region. Fostering active, structured inter-state cooperation with major coastal and southern states—specifically Tamil Nadu, Andhra Pradesh, Kerala, and Odisha—is an indispensable strategic imperative for the territorial administration.

This inter-state cooperation must be operationalized through specialized Regional Development Councils and formal maritime economic partnerships. The territory relies entirely on mainland ports, primarily Chennai and Visakhapatnam, as the critical primary transit nodes for its maritime supply chains. Establishing formal, institutionalized coordination mechanisms between the Port Management Board of the islands and the port authorities of these coastal states will drastically streamline cargo handling, reduce container dwell times, and optimize freight logistics. Furthermore, inter-state cooperation is vital in the realms of higher education, specialized medical care, and technical skill development. By establishing formal institutional linkages between the territory's upcoming educational bodies and elite mainland universities and research institutions, the islands can successfully overcome their localized capacity deficits, facilitating the seamless exchange of academic talent, medical specialists, and technical expertise.

21.6 International Collaboration: Common Development Agenda and Global Partnership

Situated strategically at the maritime threshold of Southeast Asia, the Union Territory of the Andaman and Nicobar Islands is perfectly positioned to serve as the physical and economic manifestation of India's "Act East" policy. International collaboration with neighbouring nations and regional multilateral bodies forms a cornerstone of the Vision 2047 strategic roadmap, transforming the surrounding oceanic space from a defensive barrier into a vibrant, cooperative bridge of trade and diplomacy.

The international collaboration agenda focuses heavily on forging deep economic and maritime linkages with the member states of the Association of Southeast Asian Nations and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation. This involves establishing direct, reciprocal shipping and trade corridors between Port Blair and strategic regional ports like Sabang in Indonesia, fostering multi-nation cruise tourism circuits across the Andaman Sea, and coordinating joint, multinational maritime search and rescue protocols. Furthermore, international collaboration is vital for environmental conservation and climate resilience. Partnering with global marine research institutes, international climate finance organizations, and specialized UN agencies allows the territory to access cutting-edge technological innovations in coral reef restoration, deep-sea exploration, and sustainable blue economy management, ensuring that the islands remain at the absolute global forefront of archipelagic sustainability.

21.7 Monitoring, Evaluation and Results Framework

The ambitious scope, massive capital outlays, and long-term horizons of the Vision 2047 roadmap demand an equally robust, highly sophisticated, and unyielding monitoring, evaluation, and results framework. Without a continuous, objective mechanism to track project execution, measure developmental impact, and enforce administrative accountability, even the most meticulously formulated policy frameworks risk failure due to bureaucratic inertia or logistical drift.

The foundational element of this monitoring framework is the establishment of a specialized, highly empowered "Vision 2047 Delivery and Monitoring Unit" operating directly under the authority of the Chief Secretary and reporting periodically to the Island Development Agency. This dedicated unit will utilize advanced digital dashboards, real-time geographic information system tracking, and high-resolution satellite imagery to continuously monitor the physical progress of all major capital infrastructure projects, ensuring they adhere strictly to established timelines and environmental compliance standards. Furthermore, the framework mandates the rigorous, periodic independent evaluation of all social welfare schemes and economic initiatives by neutral, highly respected academic and research institutions, ensuring that public resources are optimized and that policy corrections can be rapidly deployed when implementation bottlenecks are identified.

21.8 Accountability Architecture: Legislature, Civil Society and Citizens

The ultimate guarantor of the success, integrity, and democratic legitimacy of the Vision 2047 developmental roadmap is the presence of a robust, transparent, and multi-layered accountability architecture. Because the Union Territory of the Andaman and Nicobar Islands operates without a local legislative assembly, the traditional mechanisms of legislative oversight and democratic accountability are uniquely centralized through the Parliament of India and the consultative bodies operating within the territory. To bridge this democratic deficit, the territorial administration must proactively foster an open, highly collaborative governance environment that actively embraces the rigorous oversight of civil society organizations, environmental watchdogs, academic experts, and the general citizenry.

Strengthening this accountability architecture requires institutionalizing powerful, permanent consultative platforms, such as the district-level citizen advisory councils and structured public hearings for all major environmental impact assessments. Ensuring that local communities, indigenous representatives, and environmental advocates are granted formal, legally protected spaces to actively review, critique, and co-shape developmental projects guarantees that the executive administration remains deeply responsive and accountable to the people it serves. By fusing rigorous administrative monitoring with vibrant, fearless public engagement, the Andaman and Nicobar Islands will successfully navigate the complex, unprecedented challenges of the twenty-first century, fulfilling their grand historical destiny as a secure, prosperous, and globally celebrated model of sustainable island development by the centennial milestone of 2047.

End Note

The preparation of this Comprehensive Development Framework Report for the Union Territory of the Andaman and Nicobar Islands marks a defining step toward a structured, evidence-based, and ecologically conscious future. Throughout this document, the Youth Peace and Development Forum, acting through the Council for Comprehensive Development Frameworks, has sought to address the unique structural, economic, administrative, and environmental realities of this vital archipelagic territory.

As India approaches the centenary of its independence in 2047, the Andaman and Nicobar Islands hold a dual responsibility. They must serve as an impregnable anchor of national sovereignty and maritime security in the Indo-Pacific region, while simultaneously acting as a global sanctuary for biodiversity conservation and sustainable living. This report has attempted to bridge these twin imperatives. By offering a rigorous diagnosis of current vulnerabilities—ranging from supply chain dependencies and energy insecurity to institutional bottlenecks and climate change risks—and pairing them with actionable, future-oriented policy recommendations, this framework establishes a comprehensive roadmap for sustainable transformation.

The strategic pillars outlined across these chapters—spanning the transition to a robust blue economy, the realization of a green energy grid, the modernization of high-value agriculture and fisheries, the expansion of premium eco-tourism, and the digital empowerment of governance—are designed to operate not in isolation, but as an integrated, synergistic whole. Achieving this vision requires a fundamental shift from a subsidy-dependent administrative model to a self-sustaining, innovative, and knowledge-driven economy.

This document is offered as a constructive resource for policymakers, legislators, administrators, academic institutions, civil society organizations, and citizens alike. The complex challenges facing the islands are undoubtedly formidable, but they are entirely surmountable through visionary leadership, institutional agility, and sustained, collaborative stakeholder engagement. It is our earnest hope that this framework will inspire progressive policymaking, stimulate robust public discourse, and contribute meaningfully to the realization of a secure, resilient, and prosperous future for the Andaman and Nicobar Islands as India steps confidently into its second century of freedom.

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