



**COMPREHENSIVE DEVELOPMENT FRAMEWORK
REPORT OF STATE OF ODISHA**

YOUTH PEACE AND DEVELOPMENT FORUM

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FOREWORD

The state of Odisha occupies a unique and vital position within the broader narrative of Indian civilizational progress. Endowed with profound natural wealth, dense ecological reserves, and a deeply rooted cultural heritage, the state is currently navigating a critical transition. It is moving steadily toward a modernized and diversified economy. The Comprehensive Development Framework Report of the State of Odisha captures the essence of this historical juncture. It maps a future where the traditional strengths of the region are harmonized with the modern imperatives of proactive governance, rapid infrastructure development, and comprehensive technological integration.

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 continuities that shape public 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 people. By focusing on equitable resource distribution, institutional capacity building, and targeted poverty alleviation, 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.

Odisha is on the cusp of a significant demographic shift, with its working age population projected to expand rapidly over the coming decade. 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 and industrial expansion into tangible, accessible opportunities for the youth, empowering them as the primary stakeholders in the future of the state.

The Comprehensive Development Framework Report acknowledges these shifting dynamics by prioritizing human capital. It recognizes that the wealth of a state lies not only in the minerals beneath its soil but in the potential of its people. The policies outlined herein reflect a deep understanding of behavioral economics, recognizing that citizens are not merely passive recipients of government aid but active participants whose choices must be nurtured through sound policy architecture. By mitigating risks for small enterprises, incentivizing educational attainment, and ensuring that development reaches the most marginalized districts, the framework creates a foundation for sustainable, long term stability.

A crucial component of this vision is the integration of the state's tribal and rural populations into the mainstream economic narrative without erasing their socio-cultural identities. The cultural identity of Odisha must remain a guiding force as the state modernizes. The preservation of local traditions alongside the adoption of modern industrial practices is not a contradiction but a necessary synthesis.

Development policies must respect the historical context of the communities they serve, ensuring that progress feels organic rather than imposed. The framework thoughtfully addresses this balance, proposing strategies that elevate local communities while connecting them to the broader national and global economy.

Furthermore, we must recognize that true peace is not merely the absence of conflict but the presence of justice, equity, and opportunity. In regions that have historically faced developmental deficits, building physical infrastructure must be accompanied by the building of trust in public institutions. This report outlines actionable methodologies to enhance administrative transparency and accountability. It understands that when citizens see fair distribution of resources and opportunities, the foundations of lasting social peace are strengthened.

This comprehensive document is a vital intervention in the ongoing discourse regarding state capacity and regional transformation in India. It provides policymakers, corporate investors, and civil society leaders with the analytical rigor and empirical data required to drive meaningful, systemic change. It serves as a reminder that the ultimate Odisha 1 of economics and political thought is the elevation of the human condition.

I commend the extensive research and collaborative effort that has 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. The path ahead requires unwavering commitment, but with the right policy architecture in place, we can build a resilient, prosperous, and fundamentally inclusive Odisha for generations to come.

Dheeraj G. N.
Chairman
Youth Peace and Development (YPD) Forum
New Delhi

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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 of the State of Odisha 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. 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 Odisha, 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 Odisha and a developed India.

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PREFACE

Odisha stands today at a threshold moment in its developmental history. A state once synonymous in the national imagination with cyclones, famine memory, and chronic underdevelopment has, over the past two and a half decades, undergone one of the more consequential quiet transformations in the Indian federation. The Gross State Domestic Product of Odisha, at current prices, is estimated to approach the ₹10 lakh crore mark in 2025 to 2026 (Odisha Economic Survey, 2026), and the state's capital expenditure to GSDP ratio, at roughly 6.6 percent, is among the highest recorded by any major Indian state in the same period (Odisha Economic Survey, 2026). These are not abstractions. They represent a state government that has, in a relatively compressed span of time, moved from being a recipient of central disaster relief to being a net creator of physical and institutional capital.

And yet, the story of Odisha's development cannot be told through fiscal indicators alone. This is a state of 47.2 million people as of 2026 (StatisticsTimes.com, 2026), the eleventh most populous in India, home to one of the country's largest Scheduled Tribe populations, a coastline of over 480 kilometers that is both an economic asset and a recurring site of climatic vulnerability, and a mineral endowment, in iron ore, chromite, bauxite, and coal, that has shaped its industrial trajectory and its environmental and social conflicts in equal measure. Odisha's development story is, in many ways, the development story of India's eastern periphery writ small: a region rich in natural endowment, historically underserved by capital and connectivity, and now attempting to convert resource wealth and demographic scale into durable human development gains.

This Comprehensive Development Framework has been prepared in the same spirit and to the same standardized structure as comparable state-level frameworks prepared for Kerala and Andhra Pradesh. The intention is not comparative ranking for its own sake, but the application of a consistent analytical architecture, one that moves systematically from state profile and fiscal architecture, through sectoral performance, social infrastructure, physical infrastructure, environmental governance, and administrative reform, before culminating in a forward-looking Vision 2047 roadmap. This structural consistency is deliberate. It allows policymakers, researchers, and citizens to locate Odisha's specific strengths and deficits within a framework that is legible across states, while still doing justice to the particularities of Odisha's own geography, history, and political economy.

Several features distinguish the Odisha case and merit early mention, since they recur as themes across the chapters that follow. First is the state's disaster resilience infrastructure, built substantially in response to the 1999 super cyclone, which by international recognition has become a model of climate adaptation and early warning systems (Government of Odisha, Special Relief Commissioner, 2025). Second is the state's mineral and industrial base, concentrated in the western districts, which has generated substantial revenue through mineral royalties and the Odisha Mineral Bearing Areas Development Corporation, but has also produced sharp intra-state disparities between the industrialized and coastal districts and the tribal-dominated, forest-dependent districts of the south and west. Third is Odisha's

demographic profile, with a Scheduled Tribe population exceeding twenty percent of the state total, concentrated heavily in districts such as Mayurbhanj, Koraput, Rayagada, and Malkangiri, which requires that social justice and inclusion be treated not as a residual chapter but as a structuring concern running through fiscal allocation, education planning, and health system design alike. Fourth is the state's continuing exposure to cyclonic activity, riverine flooding along the Mahanadi, Brahmani, and Baitarani systems, and coastal erosion, which places climate adaptation at the center rather than the periphery of the state's long-term planning horizon.

This document draws on the most recent official data available at the time of preparation, principally the Odisha Economic Survey 2025 to 2026, Census of India projections updated for 2026, National Family Health Survey rounds, NITI Aayog state summary reports, and Reserve Bank of India state finance publications, cited throughout in APA 7th edition format with the year of the underlying statistic specified for every figure presented. Where more recent data exists at the district level but has not yet been aggregated into state-level official releases, this has been noted explicitly rather than papered over with projection or estimation presented as fact.

The chapters that follow are organized to first establish Odisha's structural context, in geography, demography, and fiscal capacity, before proceeding sector by sector through the economy, social sectors, physical infrastructure, environment, governance, and finally the strategic roadmap to 2047. Each chapter aims to combine descriptive accuracy about the current state of affairs with an honest accounting of persistent gaps and an evidence-based set of forward priorities. It is offered as a working reference document, intended to be revised as new data becomes available and as the state's own planning priorities evolve.

Executive Summary

Odisha in 2026 presents a state economy that has, on conventional fiscal and growth metrics, decisively outperformed its historical reputation, even as deep and geographically concentrated deprivation continues to define the lived experience of a substantial share of its population. This Executive Summary draws together the principal findings developed across the twenty one chapters of this Framework, organized under the five broad headings of economic performance, fiscal health, social development, infrastructure, and governance, before closing with the strategic priorities that anchor the state's Vision 2047 roadmap.

Economic Performance. Odisha's Gross State Domestic Product at current prices is estimated to approach ₹9.9 lakh crore in 2025 to 2026, nearing the symbolic ₹10 lakh crore threshold, with the state's real growth rate running ahead of the national average over the preceding decade, at approximately 6.6 percent annually between 2012–13 and 2021–22 compared to 5.6 percent nationally (NITI Aayog, 2025). The state's nominal GDP rank is estimated at 16th nationally for 2026–27, with a GDP per capita of approximately ₹210,186, or roughly 2,500 US dollars, still below the national average (Economy of Odisha, 2026). The sectoral composition of the economy remains weighted toward industry, at approximately 43 percent of gross value added, reflecting the state's mineral and metallurgical base, with services contributing 36 percent and agriculture and mining together accounting for the remainder as of 2023–24 (Economy of Odisha, 2026). This industrial concentration is simultaneously the state's principal source of revenue buoyancy and its principal source of regional inequality, since mineral wealth is overwhelmingly located in the western and southern tribal belt, while the benefits of industrialization have historically accrued disproportionately to the coastal and central districts.

Fiscal Health. Odisha's public finances are, by the standards of major Indian states, unusually conservative. Total state debt is estimated at ₹1.34 lakh crore for 2025–26, equivalent to approximately 13.6 percent of GSDP, well below the Fifteenth Finance Commission's recommended ceilings and among the lowest debt to GSDP ratios of any major state (Odisha Economic Survey, 2026). The interest payment to revenue receipts ratio stands at approximately 2.8 percent, far under the 15 percent benchmark typically used as a caution threshold (Odisha Economic Survey, 2026). Capital outlay has risen to approximately 6.6 percent of GSDP, the highest proportion recorded among major states in the same period, reflecting a deliberate strategy of infrastructure led growth financed from the state's own comfortable fiscal space rather than from borrowing (Odisha Economic Survey, 2026). Revenue receipts are estimated at ₹2.32 lakh crore against expenditure of ₹2.66 lakh crore for 2025–26, producing a fiscal deficit of approximately 3.2 percent of GSDP (Economy of Odisha, 2026). Even accounting for a projected rise in the debt to GSDP ratio to approximately 15.7 percent by 2029–30 as capital expenditure continues, the trajectory remains within conventionally sustainable bounds (Odisha Economic Survey, 2026).

Social Development. The social development picture is considerably more uneven than the fiscal and macroeconomic picture. On the positive side, Odisha has recorded one of the

sharpest reductions in multidimensional poverty of any Indian state, with the Head Count Ratio falling from 29.35 percent to 14.96 percent between the 2015–16 and 2019–21 rounds of the National Family Health Survey, lifting an estimated 62.6 lakh people out of multidimensional poverty and moving the state to 8th position nationally on this measure (NITI Aayog, 2023; OMMCOM News, 2024). This reduction, however, masks extraordinary intra-state variance. Nabarangpur and Malkangiri districts continued to register multidimensional poverty rates above 58 percent even as the state average fell into the mid-teens, and the districts of Koraput, Rayagada, Kalahandi, Mayurbhanj, Kandhamal, and Keonjhar, all with substantial Scheduled Tribe populations, each recorded poverty headcount ratios above 40 percent in the same period (OdishaBytes, 2021; NITI Aayog, 2023). This pattern, in which state level aggregates conceal a persistent and geographically legible core of tribal and forest dependent district poverty, recurs throughout this Framework and is treated as a central rather than peripheral analytical concern, particularly in Chapters 6, 7, and 12.

Odisha's demographic base, at a projected 47.22 million persons as of mid-2026, makes it the eleventh most populous Indian state, with a population growth rate of approximately 0.57 percent, among the eight lowest in the country, indicating a state further along the demographic transition than many of its northern and central Indian peers (StatisticsTimes.com, 2026). The state's sex ratio of approximately 979 females per 1,000 males, per the 2011 Census baseline, remains above the national average, though the sex ratio at birth recorded in the fifth round of the National Family Health Survey remains below the national estimate, an indicator flagged for closer examination in Chapter 7 (CensusOfIndia.net, 2026; Summary Report Odisha, NITI Aayog, 2025). Female labour force participation, at 44.7 percent as of 2022–23, exceeds the national average, even as the state's overall unemployment rate of 3.9 percent runs marginally above it, and the workforce remains heavily concentrated in agriculture, forestry, and fishing at 48.1 percent, underscoring the continued centrality of the primary sector to household livelihoods despite the industrial tilt of GSDP composition (Summary Report Odisha, NITI Aayog, 2025).

Infrastructure. Physical infrastructure investment has been a defining feature of the state's development strategy in the years immediately preceding this report. The rail network has expanded to over 3,243 kilometers, air connectivity now links Odisha to 30 cities, and the B-MAAN aviation infrastructure program carries a planned investment exceeding ₹4,000 crore (Odisha Economic Survey, 2026). These investments sit alongside a disaster management infrastructure that has, since the catastrophic 1999 super cyclone, become an internationally referenced model for cyclone early warning and evacuation, a capability that is treated in this Framework not as a standalone achievement but as core state capacity that must now be extended to slower onset climate risks including riverine flooding, coastal erosion, and heat stress, as discussed in Chapters 13 and 14.

Chapter 1: State Profile — Geography, Demography and Society

1.1 Geographic and Ecological Characteristics of the State

Odisha occupies a distinctive geographic position on the eastern seaboard of India, bounded by West Bengal to the northeast, Jharkhand to the north, Chhattisgarh to the west, and Andhra Pradesh to the south, with the Bay of Bengal forming its entire eastern frontier. The state's total geographical area is recorded at approximately 155,707 square kilometers, making it the ninth largest state in India by land area, while its coastline extends across roughly 480 kilometers, one of the longer coastal stretches among Indian states and a defining feature of both its economic geography and its exposure to natural hazard (Government of Odisha, Special Relief Commissioner, 2025).

The state's physiography can be divided into four broad zones, each with distinct implications for settlement, agriculture, and vulnerability. The first is the northern plateau, an extension of the Chota Nagpur plateau system, covering the districts of Sundargarh, Mayurbhanj, and Keonjhar, characterized by undulating terrain, dense forest cover, and the state's principal mineral belt of iron ore, chromite, and manganese. The second is the central river basin, dominated by the Mahanadi, Brahmani, and Baitarani river systems, which together drain the majority of the state's interior and converge toward a shared delta on the coast, producing some of the most fertile agricultural land in eastern India but also concentrating flood risk in the districts of Cuttack, Jagatsinghpur, Kendrapara, and Bhadrak. The third is the eastern coastal plain, a low lying belt running the length of the state's Bay of Bengal frontage, home to the majority of the state's urban population, its principal ports, and the Chilika Lake, Asia's largest brackish water lagoon and a Ramsar designated wetland of international importance. The fourth is the southern and western highland zone, comprising the Eastern Ghats extension through Koraput, Rayagada, Kandhamal, and Kalahandi, an area of high elevation, dense forest, and the state's most concentrated tribal settlement.

Odisha's forest cover, a critical determinant of both ecological stability and the livelihoods of its forest dependent tribal population, remains substantial by national comparison, with the state's dense and moderately dense forest extending across large tracts of the western and northern districts, anchored by the Similipal Biosphere Reserve in Mayurbhanj, which at 2,750 square kilometers is among the largest protected tiger reserves in eastern India. The state's climate is broadly tropical, governed by the southwest monsoon between June and September, which delivers the overwhelming majority of the state's annual rainfall, with average precipitation varying considerably between the drier western districts of Bolangir, Nuapada, and Kalahandi, historically prone to drought, and the wetter coastal and northern districts.

The state's ecological profile is inseparable from its disaster risk profile, a theme developed at length in Chapter 14. Odisha's coastline sits directly in the path of Bay of Bengal cyclonic systems, and the state has experienced repeated major cyclonic events over the past three

decades, most catastrophically the 1999 super cyclone, which remains the reference event for the state's subsequent investment in disaster management infrastructure. The combination of a long, low lying coastline, three major river systems prone to seasonal flooding, and a monsoon dependent agricultural economy in the interior means that ecological and climatic variables are not peripheral to Odisha's development story but structural to it, a point this Framework returns to repeatedly across the chapters on agriculture, infrastructure, and climate adaptation.

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

Odisha's administrative architecture is organized across a four tier structure below the state government, running from divisions, through districts, to sub-divisions, and finally to tahasils and blocks at the most local revenue and developmental level. As of 2026, the state comprises 30 districts, a number that has grown from the five districts present at the state's formation on April 1, 1936, through successive rounds of administrative reorganization undertaken to bring governance closer to the population and to recognize the particular administrative needs of tribal and remote areas (Government of Odisha, 2026; Rau's IAS, 2024).

These 30 districts are grouped under three revenue divisions for administrative and revenue purposes, each headed by a Revenue Divisional Commissioner, a senior Indian Administrative Service officer whose position in the hierarchy sits between the district administration and the state secretariat. The Central Division, headquartered at Cuttack, the Northern Division, headquartered at Sambalpur, and the Southern Division, headquartered at Berhampur, each comprise ten districts, a symmetrical structure that has remained stable even as individual district boundaries have been redrawn over time (List of Districts of Odisha, 2026).

Below the district level, Odisha maintains 58 sub-divisions, each governed by a Sub-Collector and Sub-Divisional Magistrate, 317 tahasils, each headed by a Tahasildar responsible for land revenue administration, and 314 community development blocks, the primary unit for rural development scheme implementation and the base tier at which Panchayati Raj institutions operate (Government of Odisha, 2026). This structure, while broadly similar to the district administration model found across most Indian states, carries particular significance in Odisha given the extreme variance in district size and population. By area, Mayurbhanj is the largest district at 10,418 square kilometers, encompassing the Similipal forest tract and a Scheduled Tribe population that constitutes 56.6 percent of the district's residents, while Jagatsinghpur, a coastal district, is the smallest at 1,759 square kilometers (List of Districts of Odisha, 2026). By population, Ganjam is the largest district with approximately 3.53 million residents reflecting its coastal, urban, and industrial mix, while Debagarh, a forested district in the northern plateau, records the smallest district population at approximately 312,520 (Infoeazy, 2025).

This wide variance in both geographic scale and population density between districts is not incidental to the state's governance challenges. Large, sparsely populated, and heavily

forested districts in the western and southern belt present fundamentally different administrative demands, in terms of road connectivity, health facility placement, and school access, than the smaller, denser, better connected districts of the coastal plain. This structural asymmetry recurs as a theme throughout this Framework, particularly in the chapters addressing education access, health infrastructure, and rural connectivity, where a uniform state level average frequently conceals sharply divergent district level realities.

1.3 Demographic Structure: Population, Density, Growth and Composition

Odisha's population, projected at 47.22 million as of July 1, 2026, makes it the eleventh most populous state in India, a scale comparable to that of Spain and larger than all but a handful of countries worldwide (StatisticsTimes.com, 2026). This population comprises an estimated 23.73 million males and 23.50 million females, producing a sex ratio of approximately 100.98 males per 100 females, or 979 females per 1,000 males on the more conventional Indian demographic convention, a ratio that remains favorably above the national average of 943 recorded in the 2011 Census baseline (CensusIndia.co.in, 2026; StatisticsTimes.com, 2026).

The state's population growth rate has slowed considerably in recent decades and is projected at just 0.57 percent for 2026, among the eight lowest growth rates recorded by any Indian state, implying an addition of approximately 268,000 persons to the state's population over the course of the year (StatisticsTimes.com, 2026). This represents a marked deceleration from the 14.05 percent decadal growth recorded between the 2001 and 2011 Census rounds, itself already a moderation from the 15.94 percent decadal growth of the preceding decade (Orissa PCS Exam Notes, 2026), and places Odisha further along the demographic transition curve than many of its northern and central Indian peer states, with implications, developed further in Chapter 20, for the state's window of demographic dividend and the urgency of translating a shrinking dependent population share into productive employment before the working age cohort itself begins to age.

Population density in Odisha stood at approximately 270 persons per square kilometer as of the 2011 Census, notably below the national average of 382 persons per square kilometer, reflecting the substantial share of the state's land area under forest cover and low density hill terrain in the western and southern districts (CensusIndia.co.in, 2026). This state average, however, conceals very substantial district level variance, with the coastal and central districts, particularly Khordha, home to the state capital Bhubaneswar, recording population densities many multiples of the state figure, while forested districts such as Mayurbhanj, Kandhamal, and Debagarh remain sparsely settled.

Urbanization in Odisha remains comparatively low relative to national trends, with only approximately 19 percent of the state's population residing in urban areas as of 2023 projections, well below the all-India urbanization level, indicating that Odisha's development trajectory continues to be fundamentally shaped by rural livelihoods and agrarian conditions even as the state's GSDP composition tilts toward industry and services (NITI Aayog, 2025). The dependency ratio, at 54.1 percent as of 2021 projections, sits below the national average,

a further indicator of the state's relatively advanced demographic transition (NITI Aayog, 2025).

1.4 Linguistic, Ethnic, Religious and Cultural Profile

Odia, classified as a classical language of India since 2014, is the predominant language of the state and the mother tongue of the substantial majority of the population, serving as the medium of state administration, primary education, and cultural life. The state is also home to a rich diversity of tribal languages, reflecting Odisha's position as the state with the largest number of distinct Scheduled Tribe communities in the country, a linguistic diversity that presents both a cultural asset and a practical challenge for the delivery of primary education and public services in remote tribal tracts, a theme returned to in Chapter 5.

Odisha's ethnic and social composition is anchored by its exceptionally large and diverse tribal population. As per the 2011 Census, Scheduled Tribes constitute 22.85 percent of the state's total population, a figure that represents 9.17 percent of the entire tribal population of India concentrated within a single state (Population Analysis: Scheduled Tribes of Odisha, 2025). Odisha holds the distinction of having the largest number of recognized Scheduled Tribe communities of any Indian state, with 62 distinct ST communities officially recognized, and the highest number of Particularly Vulnerable Tribal Groups of any state, with 13 of the 75 PVTGs identified nationally residing in Odisha (Population Analysis: Scheduled Tribes of Odisha, 2025; Journal of Health, Population and Nutrition, 2024). These PVTGs, communities characterized historically by pre-agricultural livelihoods, geographic isolation, and demographic stagnation, are concentrated in the districts of Mayurbhanj, Kandhamal, Koraput, Rayagada, and neighboring tracts, and their situation is treated as a distinct analytical category throughout this Framework rather than subsumed into general Scheduled Tribe statistics, given the materially greater deprivation these communities continue to experience even relative to the broader tribal population.

On religious composition, the 2011 Census recorded Hinduism as the predominant faith, practiced by 93.63 percent of the state's population, or approximately 3.93 crore persons (CensusOfIndia.net, 2026). Christianity is the second largest religious community, comprising 2.77 percent of the population, or approximately 11.62 lakh persons, with a notably significant presence among tribal communities in the southern and western districts, reflecting a history of missionary educational and health institutions in these areas that continues to shape social infrastructure patterns to the present day (CensusOfIndia.net, 2026). Islam and other faiths make up the remainder of the state's religious composition, with Muslim populations concentrated in pockets of the coastal and northern districts.

Odisha's cultural profile is distinguished nationally and internationally by several markers. The Jagannath Temple at Puri and the associated Rath Yatra festival constitute one of the most significant religious and cultural institutions in India, drawing pilgrims and tourists at a scale that anchors the state's religious tourism economy, discussed further in Chapter 19. The state's classical dance form, Odissi, its distinctive temple architecture exemplified by the Konark Sun Temple, a UNESCO World Heritage Site, and its tribal art traditions, including

Pattachitra painting and Saura tribal art, together constitute a cultural asset base that remains, in the assessment of this Framework, under-leveraged relative to its potential contribution to the state's creative and tourism economy.

1.5 Human Development Index: State Ranking and Trend Analysis

Odisha's performance on composite human development measures reflects a state that, despite recent fiscal and infrastructural gains, continues to rank in the lower tier of Indian states on aggregate human development outcomes, even as the trajectory of improvement has been positive. The most recent widely cited sub-national Human Development Index estimate places Odisha's HDI value at 0.597, ranking the state 32nd among the 36 states and union territories assessed, a ranking that placed Odisha among the bottom five performing states or union territories on this composite measure (Parida, 2020, citing UNDP Human Development Index data). It should be noted that comprehensive, officially updated sub-national HDI estimates for Indian states are published irregularly, and this Framework flags this data gap explicitly rather than substituting an unverified or extrapolated figure; the most recent authoritative sub-national estimate available at the time of this report's preparation remains the one referenced above, and readers should treat any more recent figure circulating in secondary sources with appropriate caution pending an official update from the relevant statistical authority.

What the available trend data does indicate clearly is a state whose progress on the income dimension of human development has consistently outpaced its progress on the health and, to a lesser extent, education dimensions. Odisha's GSDP growth performance, detailed in Chapter 3, has for over a decade exceeded the national average, and the state's rise in the national GSDP per capita rankings, from 26th position in 1996 to 97 to 16th position by 2016 to 17, and an estimated 16th position again for 2026 to 27, evidences a genuine and sustained improvement in the income component of the HDI framework (independent.academia.edu, 2026; Economy of Odisha, 2026). However, this income growth has not translated proportionately into gains on the health and education indices, a gap most visible in the persistently low literacy and health outcomes recorded among the state's Scheduled Tribe population, discussed further below and in Chapter 6.

This divergence between income growth and human development outcomes is treated in this Framework as one of the central structural challenges facing Odisha's development strategy going forward. A state that has demonstrated the fiscal and administrative capacity to sustain above average economic growth over a period exceeding two decades, while simultaneously registering an HDI ranking in the bottom quintile of Indian states, is a state in which the conversion mechanism between aggregate growth and human capability formation is not yet functioning efficiently, particularly for its most marginalized populations. Chapter 21 returns to this diagnosis directly in setting out the Vision 2047 human capital investment priorities.

1.6 Poverty, Inequality and Multidimensional Deprivation Indices

Odisha has recorded one of the more substantial reductions in multidimensional poverty of any Indian state over the past decade, a genuine and well documented achievement that this Framework treats as a foundation to build upon rather than a problem fully resolved. According to the National Multidimensional Poverty Index published by NITI Aayog, Odisha's Head Count Ratio of multidimensional poverty fell from 29.34 percent in the 2015 to 16 National Family Health Survey round to 15.68 percent in the 2019 to 21 round, a reduction that is estimated to have lifted approximately 62.6 lakh, or 6.26 million, people out of multidimensional poverty over that period (OMMCOM News, 2024). This places Odisha 8th among Indian states on the Head Count Ratio measure as of the most recent progress review, with a state level multidimensional poverty rate reported at 14.96 percent relative to the comparable national figure (OMMCOM News, 2024; NITI Aayog, 2023).

This state level aggregate, however, conceals extraordinary and persistent variance at the district level, and it is this variance, rather than the state average, that this Framework identifies as the more analytically significant fact for policy purposes. Earlier district level MPI data identified Nabarangpur and Malkangiri as the two most deprived districts in the state, with 59.32 percent and 58.71 percent of their respective populations classified as multidimensionally poor, followed by Koraput at 51.14 percent, Rayagada at 48.14 percent, Kalahandi at 47.28 percent, Mayurbhanj at 44.90 percent, Kandhamal at 44.75 percent, and Keonjhar at 41.78 percent (OdishaBytes, 2021). By contrast, the coastal districts of Puri, Jharsuguda, Khurda, Cuttack, and Jagatsinghpur were placed in the lowest deprivation category (OdishaBytes, 2021). The intensity of poverty, a measure of the average depth of deprivation among those classified as poor, followed a similar geographic pattern, with Malkangiri, Koraput, Nabarangpur, Rayagada, and Keonjhar recording the highest intensity scores in the state (OdishaBytes, 2021).

This geographic concentration of deprivation maps almost precisely onto the state's tribal population distribution described in section 1.4 above, a correspondence that is neither coincidental nor merely correlational. The same NITI Aayog analysis found that Scheduled Tribe populations nationally exhibit the highest levels of both multidimensional poverty headcount and intensity of any social category, with the highest deprivation concentrated in indicators of nutrition and sanitation (CRY, 2025). Given that Odisha hosts the largest tribal population of any Indian state in absolute terms, and the largest number of distinct tribal communities, the state's overall multidimensional poverty trajectory will continue to be disproportionately determined by progress or the lack of it in these specific districts and communities, rather than by continued gains in the already comparatively well performing coastal belt.

Beyond multidimensional poverty, income based poverty estimates place Odisha's population below the poverty line at approximately 11.07 percent as of 2022 to 23 data, ranking the state 18th nationally on this measure, while the state's Gini coefficient, last comprehensively estimated at 0.31 for 2009 to 10, suggests a moderate level of income inequality by national comparison, though this figure predates the state's more recent period of accelerated industrial growth and would benefit from updated estimation (Economy of Odisha, 2026).

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

The persistent and geographically concentrated deprivation described above has been formally recognized through the Government of India's Aspirational Districts Programme, launched in January 2018 as a mechanism to direct concentrated central attention and convergent investment toward the country's most underdeveloped districts, ranked on a composite set of health, education, agriculture, financial inclusion, and infrastructure indicators (Aspirational Districts Programme: An Appraisal, NITI Aayog, 2023). Odisha initially had ten districts identified under this programme, namely Balangir, Gajapati, Kalahandi, Kandhamal, Malkangiri, Rayagada, Koraput, Nabarangpur, Nuapada, and Dhenkanal, a list that was subsequently expanded, with an additional nine districts identified by individual central ministries for sector specific attention, including Mayurbhanj under the Ministry of Rural Development, Balasore under the Ministry of Agriculture, and the coastal districts of Jajpur, Jagatsinghpur, Puri, and Kendrapara identified by the Department of Animal Husbandry and Dairying (Tathya, 2022).

The performance of these aspirational districts on the programme's own composite ranking system illustrates the internal heterogeneity even within this designated group. Nuapada and Koraput have registered comparatively favorable ranks on certain thematic indicators, including agriculture and water resources, within national aspirational district rankings, while Malkangiri and Nabarangpur have consistently registered among the lowest ranked districts nationally on composite and health indicators (NITI Aayog, Aspirational Districts Full Ranks, 2019). This variance within the aspirational districts category itself reinforces the broader analytical point made throughout this chapter, that Odisha's development challenge cannot be adequately captured through a single state level narrative, whether of success or of continued deprivation, but requires district differentiated policy attention.

The state government has responded to this designation with a structured governance mechanism, appointing senior Indian Administrative Service officers as Pravari or in charge officers for each aspirational district, with a state nodal officer coordinating implementation across the programme, and periodic reviews conducted through visits by both state and union ministers to track progress on specific developmental projects (Tathya, 2022; ANI, 2022; The Week, 2024). Chapters 7, 12, and 21 of this Framework return to the aspirational districts as a specific policy category, evaluating both the design and the observed effectiveness of this convergent, geographically targeted approach relative to the alternative of purely sectoral or state-wide programme design.

Separately from the aspirational districts framework, the Western Odisha Development Council, established in 1999 to address the specific developmental lag of the western districts including Bolangir, Kalahandi, and Nuapada, an area historically associated with drought vulnerability and, in earlier decades, distress and famine conditions, has operated with a budget that grew from ₹3 crore at inception to ₹200 crore by 2020 to 21, though independent assessments have characterized the Council's institutional impact as limited relative to its

stated mandate over more than two decades of operation (OdishaBytes, 2021). This Framework treats the Council's trajectory as an instructive case study in the limits of standalone regional development institutions absent stronger convergence with mainstream departmental planning and budgeting, a theme developed further in Chapter 15.

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

Drawing together the indicators presented across this chapter, Odisha's position in national rankings presents a genuinely mixed and, in several respects, internally contradictory profile that resists simple categorization as either a leading or lagging state. On fiscal management and capital investment indicators, examined at length in Chapter 2, Odisha ranks among the strongest performing major states, with the lowest debt to GSDP ratio and the highest capital outlay to GSDP ratio of any major Indian state as of 2025 to 26 (Odisha Economic Survey, 2026). On GSDP growth, the state has for over a decade outpaced the national average, and its GSDP rank has risen substantially over the past three decades to an estimated 16th position nationally for 2026 to 27 (Economy of Odisha, 2026).

On human development and social outcome indicators, however, the state's position is markedly weaker. Its most recent comprehensive HDI ranking places it in the bottom quintile of Indian states, at 32nd of 36 (Parida, 2020). Its multidimensional poverty ranking, while showing strong directional improvement, still placed the state 8th among Indian states in terms of the poverty headcount ratio as recently as the most current NITI Aayog progress review, indicating that even after substantial gains, a meaningful share of the state's population remains multidimensionally poor relative to peer states (OMMCOM News, 2024). Its literacy rate, at 72.87 percent as per the 2011 Census baseline, sat marginally below the national average of 72.98 percent, with the gap far more pronounced for the state's Scheduled Tribe population, whose literacy rate stood at just 52.24 percent against the state's overall figure (CensusIndia.co.in, 2026; Status of Literacy in Odisha, 2025).

This dual profile, of strong and improving macro-fiscal and macroeconomic performance alongside persistently lagging human development and social inclusion outcomes, particularly for the state's large tribal population, is the central analytical thread that this Framework carries forward into every subsequent chapter. It is not a story that can be honestly told as either a straightforward success or a straightforward failure. Odisha has, within the space of a generation, converted a reputation for cyclone vulnerability, famine memory, and fiscal fragility into one of the more fiscally disciplined and infrastructure focused state governments in India. What remains unfinished, and what forms the strategic core of the Vision 2047 roadmap presented in Chapter 21, is the task of ensuring that the state's demonstrated administrative and fiscal capability is applied with equal intensity to closing the human development gap that continues to separate its tribal, forest dependent, and western districts from the coastal and industrial core that has driven the state's headline economic performance.

Chapter 2: Fiscal Architecture of the State

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

Odisha's revenue framework for 2026 to 27, as presented in the state budget unveiled by Chief Minister Mohan Charan Majhi, who holds the Finance portfolio, envisages total receipts and expenditure under the Consolidated Fund of ₹3.10 lakh crore, with revenue receipts projected at ₹2,48,500 crore and capital receipts at ₹48,500 crore (OMMCOM News, 2026). This represents continued growth from the 2025 to 26 budget of ₹2.90 lakh crore, within which revenue receipts stood at ₹2,32,000 crore, an 8 percent increase over the revised estimate of 2024 to 25 (PRS Legislative Research, 2025).

The composition of Odisha's own revenue base is one of the more distinctive features of the state's fiscal architecture relative to most Indian states. Own tax revenue for 2026 to 27 is projected at ₹70,000 crore, with State Goods and Services Tax contributing the largest single share at ₹29,500 crore, followed by sales tax at ₹16,000 crore and state excise at ₹10,900 crore (OMMCOM News, 2026). What distinguishes Odisha from most peer states, however, is the near parity between own tax revenue and own non-tax revenue, the latter projected at ₹71,000 crore for 2026 to 27, of which mining royalty from non-ferrous mining and metallurgical industries alone accounts for ₹53,000 crore, or approximately 75 percent of total non-tax revenue (OMMCOM News, 2026; Testbook, 2026). In most Indian states, tax revenue, particularly from GST and value added tax, substantially exceeds non-tax revenue. In Odisha, the state's exceptional mineral endowment means the two revenue streams run nearly equal, making the state's fiscal position considerably more exposed to commodity price cycles and mineral demand fluctuations than the fiscal position of most other major states, a structural vulnerability this Framework flags for attention in the state's medium term fiscal strategy discussed in section 2.9 below.

Central transfers constitute the remaining major component of the state's revenue receipts. For 2026 to 27, Odisha's share in central taxes is projected at ₹67,460.46 crore, while grants-in-aid from the Centre are estimated at ₹40,039.54 crore (OMMCOM News, 2026). Taken together, central transfers accounted for approximately 46 percent of total revenue receipts in 2025 to 26, with the state's own resources contributing the remaining 54 percent, or ₹1,26,000 crore of the ₹2,32,000 crore total (PRS Legislative Research, 2025). This own resource share is notably higher than the historical pattern recorded a decade earlier; a 2019 Comptroller and Auditor General audit report noted that grants-in-aid as a percentage of revenue receipts had risen from 17.22 percent in 2013 to 14 to 20.68 percent in 2017 to 18, indicating a period of increasing rather than decreasing central dependence in the years preceding the more recent period of own revenue growth documented in this chapter (CAG, 2019).

Odisha's revenue mobilization from mineral bearing land has also been strengthened by legal developments. The Odisha Mineral Bearing Areas Development Corporation Act empowered the state to levy taxes on mineral bearing land, a law that was struck down by the Odisha

High Court before being subsequently upheld, allowing the state to retrospectively recover revenue from transactions dating back to April 2005 following a Supreme Court judgment (PRS Legislative Research, 2025). This retrospective revenue stream has provided a meaningful, if legally contested, addition to the state's mineral revenue base.

2.2 Expenditure Profile: Composition, Quality and Efficiency

On the expenditure side, Odisha's 2025 to 26 budget estimated total expenditure, excluding debt repayment, at ₹2,66,800 crore, a 9 percent increase over the revised estimate for 2024 to 25, with an additional ₹23,200 crore allocated for debt repayment during the year (PRS Legislative Research, 2025). Of this expenditure, revenue expenditure for 2026 to 27 is estimated at ₹2,15,500 crore, funding the recurring costs of salaries, pensions, interest payments, and the operating costs of government departments and welfare schemes (OMMCOM News, 2026).

The functional composition of Odisha's expenditure reveals a state government that has prioritized the social sector while maintaining a substantial economic sector allocation. Analysis of the 2025 to 26 budget indicates that 41 percent of total spending was directed to the social sector, encompassing health, education, and welfare programmes, while 32 percent was allocated to the economic sector, covering agriculture, industry, and infrastructure departments (Odisha.plus, 2025). Within the outgo structure, programme expenditure, the discretionary developmental spending that funds specific schemes and projects, accounted for an estimated 59 percent of the budget, administrative expenditure for 37 percent, transfers to local bodies for 3 percent, and the Disaster Response Fund for 1 percent, with principal and interest repayment together accounting for approximately 9.5 percent of total outgo (Odisha.plus, 2025).

On expenditure quality and efficiency, the 2019 CAG audit report offers a useful, if somewhat dated, comparative benchmark. The report found that Odisha performed favorably relative to other General Category States on Development Expenditure, recorded at ₹71,353 crore, and Capital Expenditure, recorded at ₹21,109 crore, for the period under review, but noted that the state lagged behind comparator states specifically in Social Services Expenditure and Education spending (CAG, 2019). This finding, from an audit period predating the more recent surge in capital investment described in section 2.3, is consistent with the broader pattern identified in Chapter 1, of a state whose fiscal and infrastructural performance has consistently outpaced its human capital investment performance. The same audit flagged inefficiencies in public sector undertaking performance, noting that the return on investment from state corporations and companies stood at just 1.33 percent, far below the average interest rate of 7.58 percent the state was paying on its own borrowings, a gap indicating that capital tied up in underperforming public sector enterprises carried a substantial opportunity cost relative to alternative uses (CAG, 2019).

2.3 Capital Expenditure: Infrastructure Investment and Asset Creation

Capital expenditure has emerged as the defining feature of Odisha's fiscal strategy over the past several budget cycles, and the state's performance on this metric is, by most comparative assessments, the strongest of any major Indian state. The 2025 to 26 budget estimated capital outlay at ₹65,012 crore, equivalent to 6.1 percent of GSDP, described in contemporaneous analysis as one of the highest capital outlay to GSDP ratios recorded by any state in the country (Odisha.plus, 2025). The Odisha Economic Survey 2025 to 26 subsequently reported this ratio rising further to approximately 6.6 percent of GSDP, again characterized as the highest among major Indian states for the period (Odisha Economic Survey, 2026).

This capital expenditure has been directed principally toward roads, bridges, irrigation infrastructure, and other long duration physical assets, with the state's rail network expanding to over 3,243 kilometers and air connectivity extending to 30 cities as of the most recent reporting period, alongside the B-MAAN aviation infrastructure programme carrying a planned investment exceeding ₹4,000 crore (Odisha Economic Survey, 2026). This infrastructure investment is examined in full sectoral detail in Chapter 8, but its fiscal significance merits emphasis here. Odisha has financed the substantial majority of this capital programme from its own comfortable revenue surplus position and moderate borrowing, rather than through the kind of aggressive off-budget or extra-budgetary financing arrangements that have created contingent fiscal risk in a number of other Indian states, a point developed further in section 2.5.

The scale of this capital push is a genuine outlier in the landscape of Indian state finances, where capital expenditure is frequently the first casualty of fiscal pressure, given that reducing capital spending is politically and administratively easier in the short run than cutting recurring salary, pension, or subsidy commitments. Odisha's sustained prioritization of capital outlay even while running a revenue surplus, discussed below, indicates a state government that has treated infrastructure investment as a core strategic priority rather than a residual budget category, a posture with which this Framework broadly concurs, while noting in section 2.2 above and in Chapter 6 that the same prioritization has not been extended with equal force to social sector capital investment, particularly in the tribal and forest dependent districts identified in Chapter 1.

2.4 Fiscal Deficit, Primary Deficit and Debt Sustainability

Odisha's overall fiscal position remains, by conventional metrics, comfortably within sustainable bounds, and the state's debt sustainability indicators compare favorably to nearly every other major Indian state. Total state debt is estimated at ₹1.34 lakh crore for 2025 to 26, equivalent to approximately 13.6 percent of GSDP, a figure the Odisha Economic Survey 2025 to 26 characterizes as remarkably low compared with many other Indian states and reflective of prudent fiscal management (Odisha Economic Survey, 2026). The state's interest payment to revenue receipts ratio stands at approximately 2.8 percent, far below the 15 percent threshold conventionally used as a caution benchmark for fiscal distress (Odisha Economic Survey, 2026).

The state's fiscal deficit for 2025 to 26 was targeted at 3.2 percent of GSDP, or ₹34,200 crore, broadly in line with the Fifteenth Finance Commission's recommended glide path for state fiscal deficits, and comparable to the 3.1 percent of GSDP fiscal deficit recorded at the revised estimate stage for 2024 to 25 (PRS Legislative Research, 2025). For 2026 to 27, the fiscal deficit is pegged at ₹38,800 crore, with a primary deficit, which excludes interest payments from the calculation, estimated at ₹30,600 crore (OMMCOM News, 2026).

Notably, Odisha has consistently maintained a revenue surplus position even while running a fiscal deficit, a combination that indicates the state's borrowing is being directed toward capital asset creation rather than financing recurring consumption expenditure, generally regarded as the more fiscally prudent form of deficit financing. The revenue surplus for 2025 to 26 was estimated at 3 percent of GSDP, or ₹31,800 crore, an improvement over the 2.9 percent of GSDP, or ₹27,935 crore, revenue surplus recorded at the revised estimate stage for 2024 to 25 (PRS Legislative Research, 2025). For 2026 to 27, the projected revenue surplus rises further to ₹33,000 crore (OMMCOM News, 2026).

Looking forward, the Odisha Economic Survey 2025 to 26 projects a gradual rise in the debt to GSDP ratio, to approximately 15.7 percent by 2029 to 30, driven by planned capital expenditure, but characterizes this trajectory as remaining sustainable within the state's fiscal capacity (Odisha Economic Survey, 2026). This Framework concurs with that assessment on the basis of the state's currently very low debt base, but notes that sustained capital expenditure at the elevated levels described in section 2.3, if not matched by continued growth in the state's own revenue base, particularly given the commodity price exposure inherent in the state's heavy reliance on mining royalty described in section 2.1, could compress the state's fiscal headroom more rapidly than current projections anticipate.

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

Odisha's approach to public debt management has, according to the state's own Status Paper on Public Debt, been characterized by a marked reduction in contingent liability exposure over the past two decades. The state government has extended total government guarantees of ₹17,385.39 crore in favor of various organizations, including state public sector undertakings, urban local bodies, and cooperative institutions, to enable them to access bank and financial institution borrowing, of which ₹5,134.91 crore remained outstanding as of December 31, 2022 (Finance Department, Government of Odisha, 2023). Critically, the guaranteed loan amount as a percentage of revenue receipts, a key indicator of contingent fiscal risk, has fallen dramatically, from 123.37 percent in 2001 to 2002 to just 6.3 percent in 2022 to 23 (Finance Department, Government of Odisha, 2023), representing one of the more significant improvements in contingent liability management recorded by any Indian state over this period.

This reduction in guarantee exposure is significant in the broader national context of state finances, where off-budget borrowing through public sector undertakings and special purpose vehicles has emerged as a substantial and often opaque source of fiscal risk across many Indian states. As documented in national analyses of state finances, off-budget mechanisms

allow governments to bypass legislative approval for expenditure since such borrowing does not directly appear in the state budget and is therefore excluded from headline debt and fiscal deficit figures, even though the government's explicit or implicit guarantee renders these obligations a genuine contingent liability that would fall due to the state exchequer in the event of default by the borrowing entity (PRS Legislative Research, 2019). While such off-budget borrowing remains subject to CAG audit and legislative Committee on Public Undertakings scrutiny, the implicit guarantee component, as distinct from explicit guarantees, remains inherently difficult to quantify comprehensively across any state (PRS Legislative Research, 2019). Odisha's own guarantee position, at the low and declining level documented above, suggests the state has avoided the more aggressive off-budget financing strategies pursued by some peer states, a conservative posture consistent with the broader pattern of fiscal discipline documented throughout this chapter.

2.6 Finance Commission Awards: Allocation and Utilisation

Odisha's fiscal relationship with the Fifteenth Finance Commission has shaped several dimensions of the state's revenue and borrowing framework discussed in this chapter. The Finance Commission's recommendations on tax devolution formulae, grants-in-aid, and state specific and sector specific grants have determined the scale of the central tax devolution documented in section 2.1, projected at ₹67,460.46 crore for 2026 to 27 (OMMCOM News, 2026). The Commission has also recommended annual borrowing ceilings for states, within which Odisha's own borrowing programme, including the market borrowings and other loans amounting to ₹47,800 crore projected for 2026 to 27, must operate (OMMCOM News, 2026; Finance Department, Government of Odisha, 2023).

Beyond core devolution, the Fifteenth Finance Commission period has included specific mechanisms such as the Scheme for Special Assistance for Capital Investment, providing long term infrastructure loans to states, and loans to address shortfalls in GST compensation during the transition period following the Goods and Services Tax rollout, both of which Odisha has accessed as part of its capital financing strategy documented in the state's Status Paper on Public Debt (Finance Department, Government of Odisha, 2023). National level analysis of the Fifteenth Finance Commission period has also noted a broader trend of declining untied transfers as a share of total central transfers to states during this period, a trend with implications for state level fiscal flexibility that extends beyond Odisha specifically but which nonetheless shapes the context within which Odisha's own fiscal planning operates (PRS Legislative Research, 2025).

2.7 GST Implementation: Revenue Impact and Compensation Status

The implementation of the Goods and Services Tax has had a mixed revenue impact on Odisha's fiscal position. On one hand, State GST has become, as documented in section 2.1, the single largest component of the state's own tax revenue, projected at ₹29,500 crore for 2026 to 27, reflecting its role as the anchor of the state's consumption tax base (OMMCOM News, 2026). On the other hand, national comparative analysis by PRS Legislative Research,

drawing on Fifteenth Finance Commission observations, found that Odisha was among a group of states, alongside Punjab, Chhattisgarh, Karnataka, and Madhya Pradesh, that experienced a relatively larger drop in revenue from the taxes subsumed under GST, measured as a percentage of GSDP, compared to the pre-GST regime, in contrast to states that benefited more clearly from the destination based principle of taxation underlying the GST framework (PRS Legislative Research, 2025).

This finding is significant for Odisha specifically because the state's economy retains a substantial production and export orientation in mineral and metallurgical goods, meaning that under the destination based GST framework, a portion of consumption tax revenue that would previously have accrued to Odisha as a producing state under the origin based sales tax regime now flows instead to the consuming states where the state's mineral and industrial output is ultimately purchased. This structural feature of GST design has been a recurring theme in Odisha's own fiscal advocacy in intergovernmental forums, discussed further in section 2.9.

During the earlier years of GST implementation, Odisha received GST compensation grants from the Centre to offset revenue shortfalls relative to the guaranteed 14 percent annual growth rate specified under the GST compensation framework, with the state's compensation requirement estimated at ₹6,200 crore for 2020 to 21, itself an increase from a revised estimate of ₹6,027 crore for 2019 to 20, reflecting a slowing GST revenue growth rate relative to the guaranteed trajectory during that period (Business Standard, 2020). The compensation mechanism formally expired after the transition period specified in the GST compensation legislation, and the state's subsequent revenue planning, reflected in the strong own tax revenue growth documented for 2025 to 26 and 2026 to 27, has had to accommodate this withdrawal of the compensation backstop, a transition that appears, based on the revenue figures presented in this chapter, to have been managed without material fiscal disruption to the state's overall revenue surplus position.

2.8 Public Financial Management Reforms and Audit Compliance

Odisha's public financial management systems have been assessed favorably in independent fiduciary reviews on several core dimensions of budget transparency and audit compliance, even as specific gaps remain. A World Bank fiduciary systems assessment found that Odisha's annual budget, including detailed demand for grants documentation, is available in the public domain, and that the state maintains functioning systems and rules for controlling and reporting on receipts and expenditures, with Drawing and Disbursing Officers in spending agencies submitting payment requests that are authorized and electronically effected through the treasury system (World Bank, n.d.). The same assessment noted, however, that detailed in-year budget execution reports are not placed in the public domain, a transparency gap relative to full in-year fiscal reporting best practice (World Bank, n.d.).

On external audit, the Comptroller and Auditor General of India compiles the monthly and annual accounts of the State of Odisha, with audited financial statements and reports made public within a period of 9 to 11 months after the close of the financial year, presenting

information on financial liabilities and assets including borrowings, guarantees, investments, and loans and advances (World Bank, n.d.). This audit cycle timeline is broadly consistent with standard practice across Indian states and provides the basis for the kind of detailed fiscal risk analysis, including the guarantee exposure data presented in section 2.5, that this Framework has drawn upon throughout this chapter.

The state operates under the Odisha Fiscal Responsibility and Budget Management Act, 2005, which provides annual targets for the progressive reduction of the state's outstanding debt, revenue deficit, and fiscal deficit, establishing the statutory framework within which the fiscal discipline documented throughout this chapter has been pursued (PRS Legislative Research, 2025). Past CAG audit findings have identified specific compliance gaps requiring attention, including a cumulative short transfer of ₹20.72 crore to the National Savings Deposit Ledger as of March 31, 2018, and the low return on investment from state corporations and companies noted in section 2.2 (CAG, 2019). While these findings predate the current budget cycle, they illustrate the kind of granular fiduciary weakness that continues to warrant systematic attention even within an overall fiscal management framework this chapter has characterized as comparatively disciplined.

2.9 Centre-State Fiscal Relations: Trends and Themes

Odisha's fiscal relationship with the Union government reflects the broader themes of India's cooperative and, at times, competitive fiscal federalism, refracted through the state's specific structural position as a major mineral producing and exporting state with a large tribal population and continued exposure to natural disaster. Central transfers, comprising tax devolution and grants-in-aid, continue to constitute a substantial share, approximately 46 percent as documented in section 2.1, of the state's total revenue receipts, meaning that the design of Finance Commission devolution formulae, the terms of centrally sponsored schemes, and the availability of disaster relief and capital investment support from the Centre remain materially important to the state's overall fiscal trajectory even as the state's own revenue mobilization has strengthened considerably.

Several specific themes recur in Odisha's Centre-state fiscal engagement. First is the GST destination principle issue discussed in section 2.7, where Odisha's position as a major producing and exporting state creates a structural tension with a consumption based tax framework, a tension the state has raised in intergovernmental forums seeking either compensating mechanisms or a rebalancing of devolution criteria to better reflect production based economic contribution. Second is the state's continued advocacy, alongside other mineral bearing states, for a larger share of mineral royalty and a revision of royalty rates that have, in the state's assessment, not kept pace with the market value of extracted minerals over time, an issue with direct fiscal implications given the scale of mining royalty within the state's own non-tax revenue base documented in section 2.1. Third is the disaster relief and capital investment support channel, through which Odisha's demonstrated cyclone resilience institutional capacity, discussed in Chapter 1 and developed further in Chapter 14, has positioned the state as both a recipient of State Disaster Response Fund and National Disaster

Response Fund allocations and, increasingly, as a source of technical expertise sought by other disaster prone states and by international development partners.

Taken together, the fiscal architecture presented in this chapter describes a state government that has achieved a genuinely disciplined and increasingly self-reliant fiscal position, characterized by low debt, high capital investment, declining contingent liability exposure, and a revenue base strengthened by both robust own tax growth and an unusually large mineral royalty stream. The principal structural vulnerabilities identified, commodity price exposure through mineral revenue dependence, the GST destination principle's dampening effect on a producing state's tax base, and the persistent gap between capital investment intensity and social sector expenditure intensity documented in section 2.2, form the fiscal backdrop against which the sectoral chapters that follow, particularly Chapters 3, 6, and 7, should be read.

Chapter 3: Economic Structure, Growth and Sectoral Performance

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

Odisha's economy has, on the evidence of the Economic Survey 2025 to 26 released by the state government on February 19, 2026, sustained one of the strongest growth performances of any major Indian state, with real economic growth recorded at 7.9 percent for 2025 to 26, comfortably ahead of the national growth rate for the corresponding period, and Gross State Domestic Product at current prices approaching the symbolic ₹10 lakh crore threshold (Kalinga TV, 2026; Deccan Chronicle, 2026). This performance continues a longer trend documented in Chapter 1, in which the state's average real GSDP growth of approximately 6.6 to 6.7 percent over the decade preceding 2021 to 22 consistently outpaced the national average of 5.6 percent over the same period (NITI Aayog, 2025; Finance Department, Government of Odisha, 2025).

The sectoral composition of GSVA for 2025 to 26 places industry as the largest contributor at 41.3 percent, valued at approximately ₹3.6 lakh crore, followed by the services sector at 39.1 percent, and agriculture at 19.6 percent (Deccan Chronicle, 2026; ETV Bharat, 2026). This composition marks Odisha as an economy where industrial value added exceeds the services share, a pattern distinct from the national trend and from most other large Indian states, and directly reflective of the state's mineral, metallurgical, and increasingly petrochemical industrial base described further in section 3.4. It should be noted that slightly varying sectoral share figures appear across different data vintages and sources, with the state's own economic survey for 2023 to 24 having previously reported an industry and mining share nearer 43 percent and a services share nearer 36 percent (Economy of Odisha, 2026); this Framework treats the more recent 2025 to 26 Economic Survey figures cited above as the most current authoritative benchmark, while noting that the broad structural pattern, industry led, services close behind, and agriculture a smaller but still substantial and disproportionately employment intensive third pillar, has remained consistent across recent years.

Odisha's GSDP rank among Indian states has improved substantially over the past three decades, rising from 26th position in 1996 to 97 to 16th position by 2016 to 17, a rank the state's nominal GDP is estimated to hold again for 2026 to 27 (independent.academia.edu, 2026; Economy of Odisha, 2026). This ranking trajectory, sustained over a period spanning multiple state governments and economic cycles, indicates a structural rather than cyclical improvement in the state's relative economic position within the Indian federation.

3.2 Per Capita Income and Purchasing Power Analysis

Odisha's per capita income has shown accelerating growth in the most recent reporting period, rising by 9.2 percent to reach ₹1,86,761 in 2025 to 26 at aggregate expenditure terms, a growth rate notably higher than the 6.9 percent recorded at the all-India level over the same

period (Hans India, 2026). This differential growth rate, if sustained, would continue the gradual convergence of Odisha's per capita income toward the national average, though the state's per capita income continues to sit below the all-India figure, consistent with the state's GDP per capita ranking of 21st among Indian states as of the most recent comprehensive ranking data available (Economy of Odisha, 2026).

The purchasing power implications of this income growth must be read alongside the state's inflation trajectory, discussed in section 3.8, and alongside the significant rural to urban and district to district income disparities that persist beneath the state average, consistent with the multidimensional poverty and district level disparities documented extensively in Chapter 1. A rising state average per capita income, in other words, continues to coexist with the sharply uneven district level income distribution that this Framework treats as the central analytical challenge of Odisha's development story, a theme revisited throughout this chapter and in Chapter 7.

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

Agriculture and allied activities, while now the smallest of the three broad GSVA sectors at 19.6 percent, continue to play a role in the state's economy and rural livelihoods disproportionate to their value added share, and the sector recorded genuinely strong performance in the most recent reporting year, with growth of 5.3 percent in 2025 to 26 compared to 3.1 percent nationally (Deccan Chronicle, 2026). Foodgrain production reached a record 150.5 lakh metric tonnes in 2024 to 25, with rice output at 118.6 lakh metric tonnes, reflecting the continued centrality of paddy cultivation to the state's agricultural economy (Deccan Chronicle, 2026).

Procurement performance has strengthened markedly, with the state procuring 92.6 lakh metric tonnes of paddy from approximately 20 lakh farmers in 2024 to 25, disbursing ₹21,300 crore in Minimum Support Price payments and ₹7,140 crore in input subsidy, with government procurement covering nearly 78 percent of total paddy production, a sharp increase from 61 percent in 2023 to 24 (ETV Bharat, 2026; Organiser, 2026). This improvement in procurement coverage represents a meaningful gain for farmer income security, given that market price realization for paddy in the absence of assured procurement has historically been a source of agrarian distress in several Indian states. Ragi, or finger millet, procurement more than doubled over the same period, supported by a Minimum Support Price of ₹4,290 per quintal along with additional incentives, reflecting the state's broader push toward millet cultivation consistent with the national millet promotion agenda (Kalinga TV, 2026).

Irrigation infrastructure, a long standing constraint on Odisha's agricultural productivity given the state's historical dependence on monsoon timing, has expanded to cover 74.2 lakh hectares of irrigation potential, with cropping intensity improving to 165 percent in 2024 to 25 from 158 percent in 2020 to 21, indicating farmers are increasingly able to grow more than one crop per year on the same land, a direct productivity and income gain (Kalinga TV, 2026).

Animal husbandry and allied activities have also recorded strong growth. Milk production rose to 27.1 lakh metric tonnes, up 3 percent, while egg production surged from 242 crore eggs in 2020 to 21 to 406 crore eggs in 2024 to 25, a compound annual growth rate of 14 percent (ETV Bharat, 2026). The fisheries sector has emerged as a particular area of strength, with Odisha recording fish production of 11.92 lakh metric tonnes, positioning the state as the fourth largest fish producer in India and, notably, the third largest marine exporter, with shrimp exports reaching ₹4,708 crore in 2024 to 25 (ETV Bharat, 2026; Organiser, 2026). This fisheries and marine export performance, achieved by a state whose overall GSDP composition is dominated by industry and mining, represents a genuine diversification asset within the primary sector that this Framework identifies as meriting continued policy support, particularly given its coastal district employment linkages, examined further in Chapter 18.

3.4 Secondary Sector: Industry, Manufacturing and Mining

Industry remains the largest single contributor to Odisha's GSVA, at 41.3 percent, or approximately ₹3.6 lakh crore for 2025 to 26, with the sector recording growth of 6.4 percent and manufacturing specifically growing at 8.3 percent, a rate the state's Economic Survey characterizes as above the national average for manufacturing growth (Kalinga TV, 2026; Deccan Chronicle, 2026). This industrial base rests substantially on the state's mineral endowment described in Chapter 1, comprising iron ore, chromite, bauxite, coal, and manganese, feeding into an integrated ecosystem of steel, aluminium, ferro-alloy, and power generation industries concentrated in the districts of Kalinganagar, Angul, Jharsuguda, and Sundargarh.

Investment momentum in the industrial sector has been substantial. During 2025, the state approved 244 new projects with proposed investments of ₹5.66 lakh crore, carrying an expected employment potential for 3.35 lakh people, while 80 projects were actually implemented during the year, attracting ₹1.75 lakh crore in realized investment and generating 1.4 lakh jobs (ETV Bharat, 2026; Hans India, 2026). This gap between approved and implemented project value, roughly a threefold difference, is a normal feature of industrial investment pipelines given typical project gestation periods, but it also underscores that the headline investment intent figures, including the cumulative investment intent of approximately ₹16.73 lakh crore referenced in recent industry investment tracking, should be read as a pipeline indicator rather than realized economic activity (Maritime Gateway, 2026). The state's ease of doing business performance has strengthened in parallel, with Odisha achieving a 98 percent implementation rate under the Business Reforms Action Plan 2024, a national ranking framework administered by the Department for Promotion of Industry and Internal Trade (Kalinga TV, 2026), a theme developed further in Chapter 4.

The state's industrial geography is also diversifying beyond its traditional coastal and Kalinganagar-Angul-Paradip belt. The Tata Steel Special Economic Zone near Gopalpur Port is being developed as a green hydrogen and green ammonia production hub across 1,400 acres of pre-approved land, with major energy sector players including ACME Clean Energy, Avaada Green Hydrogen, Ocior Energy, and Torrent Green Hydrogen establishing production

units at the site, a development tied to the central government's Plug and Play Chemical Park Scheme announced in the 2026 Union Budget (Maritime Gateway, 2026). This emerging green hydrogen cluster, alongside the continued expansion of conventional steel and aluminium capacity, signals a secondary sector that is beginning to diversify into next generation energy and chemical value chains even as it retains its traditional mineral processing core.

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

The services sector accounted for 39.1 percent of GSVA in 2025 to 26 and is projected to grow at 9.3 percent, the fastest rate of the three broad sectors, driven substantially by financial services, which are expected to expand by 11.9 percent, reflecting increasing penetration of banking, insurance, and fintech services across the state (ETV Bharat, 2026; Kalinga TV, 2026). This services growth has been supported by a cluster of new digital and knowledge economy policies introduced by the state government, including the Odisha AI Policy 2025, the Odisha Global Capability Centre Policy 2025, and the Odisha Semiconductor Manufacturing and Fabless Policy 2025, together signaling a state government seeking to position Odisha as a competitive destination for knowledge intensive services investment beyond its traditional industrial and mineral base (Kalinga TV, 2026; Government of Odisha, 2026).

The real estate and urban services economy is closely tied to the Bhubaneswar-Cuttack-Puri-Paradip Economic Region development described in section 3.9, with Bhubaneswar in particular emerging as a technology and knowledge services hub, a role explicitly identified in the state's own economic planning documents, which describe Bhubaneswar as the region's technology anchor, Cuttack as its historic commercial center, Puri as its cultural and tourism anchor, and Paradip as its port led industrial and logistics anchor (Maritime Gateway, 2026).

3.6 Informal Economy: Size, Significance and Integration Challenges

The informal economy remains a structurally significant, if less precisely measured, component of Odisha's overall economic activity, consistent with the broader Indian pattern in which an estimated 85 percent of the national workforce operates within informal employment arrangements characterized by limited social security coverage, variable earnings, and constrained access to formal credit (India Unemployment Data, 2026). In Odisha specifically, this informality is most concentrated in the primary sector, where, as detailed in section 3.7, agriculture, forestry, and fishing together employ close to half of the state's workforce despite the sector's declining share of GSVA, alongside substantial informal employment in construction, small scale trade, and the extensive network of self-help group linked microenterprise activity that has grown alongside the state's rural livelihoods programmes, examined further in Chapter 12.

The integration challenge this informality presents is twofold. First, it means that a substantial share of the employment gains associated with the state's strong GSDP growth

performance, documented in section 3.1, does not automatically translate into commensurate gains in worker protections, social security coverage, or income stability, an issue with direct bearing on the multidimensional poverty patterns documented in Chapter 1. Second, it constrains the state's own tax base, since informal economic activity is inherently more difficult to capture within the GST and other formal tax frameworks discussed in Chapter 2, reinforcing the state's continued reliance on mineral royalty as a non-tax revenue anchor rather than a broader based formal consumption tax take. This Framework identifies the formalization of informal enterprise, particularly in the food processing, handicraft, and rural non-farm sectors examined in Chapters 18 and 19, as a priority theme for the state's medium term economic strategy.

3.7 Labour Market: Employment, Unemployment and Workforce Quality

Odisha's labour market presents a profile of comparatively high female participation alongside a workforce still heavily concentrated in low productivity primary sector activity. As of 2022 to 23 data, the state's annual unemployment rate stood at 3.9 percent, marginally above the national average of 3.2 percent, while the state's Female Labour Force Participation Rate, at 44.7 percent, exceeded the national average, a notable finding given that female labour force participation has been a persistent national policy concern (NITI Aayog, 2025). The working population of the state remains predominantly concentrated in agriculture, forestry, and fishing, which together account for 48.1 percent of the workforce, followed by services at 26.1 percent, construction at 17 percent, and manufacturing at 8 percent (NITI Aayog, 2025).

This workforce distribution, when read alongside the GSVA sectoral composition presented in section 3.1, reveals a substantial productivity gap between the state's economic output structure and its employment structure. Industry contributes 41.3 percent of GSVA while directly employing a comparatively small share of the workforce, largely reflecting the capital intensive nature of mining, metallurgy, and heavy manufacturing, whereas agriculture, contributing just 19.6 percent of GSVA, continues to absorb nearly half the workforce. This gap is the structural reason why Odisha's strong aggregate GDP growth, documented throughout this chapter, has not yet produced a commensurately rapid improvement in the state's human development and poverty indicators documented in Chapter 1: a large share of the state's workforce remains employed in a sector whose per worker value added lags substantially behind the industrial sector driving the state's headline growth numbers. Closing this productivity gap, whether through agricultural value addition and processing, examined in Chapter 18, or through the absorption of surplus agricultural labour into more productive manufacturing and services employment, examined further in Chapter 17's discussion of skill development, is treated in this Framework as a first order priority for the state's employment strategy.

3.8 Inflation, Price Stability and Consumer Welfare

Consumer price inflation in Odisha has, according to available state level data, tracked at approximately 7.1 percent, a rate that, if sustained, would represent a meaningful erosion of the real income gains documented in section 3.2, and would sit above the Reserve Bank of India's national target inflation band (Economy of Odisha, 2026). Given the strong nominal per capita income growth of 9.2 percent recorded for 2025 to 26 referenced above, the real, inflation adjusted income gain for the average Odisha resident is correspondingly more modest than the nominal figure alone would suggest, an important qualification for the consumer welfare implications of the state's otherwise strong headline growth performance.

Price stability concerns in Odisha carry particular significance for the state's food security given the primacy of rice in the state's diet and its agricultural economy documented in section 3.3, and for the state's poorer and forest dependent households documented in Chapter 1, for whom food and essential commodity price movements represent a larger share of overall household expenditure than for higher income urban households. This Framework recommends that the state's food security and public distribution monitoring systems, examined further in Chapter 6, continue to track price transmission to vulnerable tribal and rural households as a distinct indicator alongside the state level aggregate inflation figure.

3.9 Growth Corridors: Engines of Economic Expansion

Odisha's economic geography is being actively reshaped through a series of formally designated growth corridors and economic regions launched or substantially advanced during 2025 and 2026. The most prominent of these is the Bhubaneswar-Cuttack-Puri-Paradip Economic Region, for which Chief Minister Mohan Charan Majhi launched a long term economic vision document on February 7, 2026, outlining an integrated strategy to transform the four city corridor, spanning the districts of Khordha, Cuttack, Puri, and Jagatsinghpur, into a globally competitive economic hub by 2047, aligned explicitly with India's national Viksit Bharat 2047 vision (India.com, 2026; Maritime Gateway, 2026). The state government has separately approved a ₹5,000 crore Project Proposal Report for this region, covering 19 urban local bodies, to be pursued under the Externally Aided Project framework, with the region selected as one of four pilot regions under the central government's City Economic Region scheme (Maritime Gateway, 2026).

Complementing this coastal urban corridor is the Odisha Economic Corridor, developed as part of the East Coast Industrial Corridor conceived by the Asian Development Bank, spanning approximately 600 kilometers along National Highway 16 across 11 industrial clusters covering 11,366 acres, organized into two zones: Zone 1, the Gopalpur-Bhubaneswar-Kalinganagar node covering 4,748 acres, and Zone 2, the Paradip-Kendrapada-Dhamra-Subarnarekha node covering 6,618 acres (NICDC, 2026; SRIAS Institute, 2026). This corridor forms part of a broader \$20 billion Asian Development Bank funded East Coast Industrial Corridor initiative and is explicitly framed within state planning documents as targeting a \$1.5 trillion state economy over the medium to long term (SRIAS Institute, 2026).

Beyond the coastal belt, the state government, in coordination with Union Minister Dharmendra Pradhan, has proposed extending the City Economic Region model inland, to reduce regional imbalances and unlock the potential of mineral rich interior districts that have historically driven production without receiving commensurate urban and infrastructure investment (Kalinga TV, 2026). Two such inland clusters have been identified. The Angul-Dhenkanal cluster, anchored by major public sector and industrial facilities including the National Aluminium Company, NTPC, and Mahanadi Coalfields, forms the backbone of the state's energy and heavy industry sector, with the planned development of National Waterway 5 along the Brahmani river expected to improve cargo movement between Talcher, Kalinganagar, and Paradip and reduce logistics costs for industries in the region (Kalinga TV, 2026). The western Odisha cluster, encompassing Sundargarh and Jharsuguda as centers for steel, aluminium, and power generation, and Sambalpur as an emerging education and innovation hub anchored by the Indian Institute of Management Sambalpur, Veer Surendra Sai University of Technology at Burla, and Sambalpur University, represents a second inland growth pole, with Jharsuguda's airport and proximity to industrial centers in neighboring Chhattisgarh and Jharkhand further strengthening its logistics position (Kalinga TV, 2026).

The state's port infrastructure underpins much of this corridor development. Paradip, the state's major port, handled approximately 18 percent of India's total cargo volume in 2024 to 25, operating alongside the non-major ports of Dhamra and Gopalpur, with planned capacity expansion targeting 500 million metric tonnes per annum across the state's non-major port network (Kalinga TV, 2026). The Petroleum, Chemicals and Petrochemicals Investment Region at Paradip, one of only four such regions designated nationally, spans nearly 68,000 acres with an envisaged investment of 42.20 billion US dollars, while an adjacent integrated steel zone spanning 40,339 acres anticipates a further 15.21 billion US dollars in investment (Invest Odisha, 2026). Rail connectivity has expanded to over 3,243 kilometers with passenger traffic growing at a 39.5 percent compound annual growth rate since 2021 to 22, while aviation connectivity, now extending to 30 cities from five operational airports, has recorded passenger traffic growth at a 31 percent compound annual growth rate over the same period (Kalinga TV, 2026), both trends examined in fuller infrastructural detail in Chapter 8.

Taken together, this multi-nodal growth corridor strategy, coastal, mineral belt, and now explicitly inland, represents a deliberate attempt by the state government to extend the economic dynamism documented throughout this chapter beyond the traditional Bhubaneswar-Cuttack-Paradip axis and into the state's mineral rich but historically under-urbanized interior. Whether this strategy succeeds in narrowing rather than reinforcing the coastal-interior and tribal-non-tribal disparities documented extensively in Chapter 1 will depend substantially on the extent to which infrastructure investment in these new corridors is paired with the human capital and social inclusion investments discussed in Chapters 5, 6, and 7, a linkage this Framework treats as the central test of the state's Vision 2047 strategy presented in Chapter 21.

Chapter 4: Investment, Industry and Private Sector Development

4.1 Investment Climate Assessment and Ease of Doing Business

Odisha's investment climate has strengthened considerably over the past several years, reflected both in the state's national ease of doing business rankings and in the scale of investment activity flowing into the state. Under the Business Reforms Action Plan 2024, the national ranking framework administered by the Department for Promotion of Industry and Internal Trade, Odisha achieved a 98 percent implementation rate, placing it among the top performing states on this composite regulatory reform benchmark (Kalinga TV, 2026). The state has invested substantially in single window investor facilitation infrastructure through GO SWIFT, the Government of Odisha Single Window for Investor Facilitation and Tracking, an online platform designed to transform the business to government interface across the full investment lifecycle, offering investors requisite information and clearances through a paperless process (Finance Department, Government of Odisha, 2025).

The scale of investment activity attracted under this improved regulatory environment has been substantial. During 2025, the state approved 244 new industrial projects with proposed investments of ₹5.66 lakh crore, carrying employment potential for 3.35 lakh people, while 80 projects reached implementation during the year, attracting ₹1.75 lakh crore in realized investment and generating 1.4 lakh jobs (ETV Bharat, 2026; Hans India, 2026). The state's 2026 to 27 budget continued this investment led approach, increasing capital outlay by 20 percent to ₹72,100 crore while maintaining the fiscal discipline documented in Chapter 2 (OrissaPost, 2026).

This Framework nonetheless echoes a caution raised in recent independent commentary on Odisha's industrial trajectory: investment approval figures represent commitments rather than outcomes, and industrial policy performance should not be assessed primarily through the headline value of investment announcements, given the well documented gap in Indian state investment promotion generally between announced and realized investment (OrissaPost, 2026). The roughly threefold difference between Odisha's approved and implemented project values for 2025, cited above, illustrates this gap concretely, and this Framework recommends that the state's own investment tracking and public reporting continue to emphasize implementation and job creation metrics alongside approval figures, a theme this chapter returns to in section 4.7 on public-private partnership monitoring.

4.2 Industrial Policy Framework and MSME Development

Odisha's industrial policy architecture has evolved through successive MSME development policies, beginning with the Odisha MSME Development Policy 2009, which established the objective of making Odisha a destination of choice for micro, small, and medium enterprises, introducing measures including nodal agency arrangements through the Odisha Small Industries Corporation and National Small Industries Corporation for raw material sourcing,

exemptions on earnest money and security deposits for registered local micro and small enterprises, and price preferences for locally certified enterprises (Invest Odisha, 2026). This framework was substantially updated through the Odisha MSME Policy 2016, which established District Industrial Centers as the nodal agency for MSME promotion in each district, introduced single window clearance through an online Combined Application Form, and mandated land reservation provisions requiring 20 percent of area in industrial estates, parks, and corridors to be reserved for MSMEs, alongside a requirement that large and mega industries develop up to 10 percent of their land, capped at 200 acres, for ancillary and downstream MSME development (Invest Odisha, 2026).

This land reservation and downstream linkage requirement is a particularly significant policy design feature in the Odisha context, given the state's large anchor industry base described in section 4.3, since it creates a structural mechanism intended to ensure that large mineral processing and metallurgical investments generate proportionate local MSME ecosystem development rather than operating as fiscally significant but locally disconnected enclaves. The Odisha Assembly of Small and Medium Enterprises continues to serve as an active industry association channel, coordinating with national bodies including the Ministry of MSME and the Small Industries Development Bank of India on capacity building programmes covering areas such as sustainable plastic processing and solar energy adoption among the state's MSME base (OASME, 2026).

Beyond the MSME framework, the state has introduced a series of sector specific policies in the current planning period, including the Odisha Pharmaceutical and Medical Devices Policy 2025, alongside the Odisha AI Policy 2025, the Odisha Global Capability Centre Policy 2025, and the Odisha Semiconductor Manufacturing and Fabless Policy 2025 documented in Chapter 3, together signaling a deliberate diversification of the state's industrial policy focus beyond its traditional mineral and metallurgical base toward pharmaceuticals, digital services, and advanced electronics (Invest India, 2026). Skill development initiatives supporting this diversification include the Sudakshya scheme, which has driven a sharp rise in female enrollment in technical education, reaching 28 percent in Industrial Training Institutes and 32 percent in polytechnics for 2025 to 26, alongside the BharatNetra programme developed with the Global Finance and Technology Network targeting the training of 7,000 fintech professionals, and a stated goal of integrating artificial intelligence curriculum into 90 percent of schools by 2036 (Invest India, 2026).

4.3 Large and Anchor Industries: Sectoral Analysis

Odisha's anchor industrial base remains concentrated in mineral extraction and processing, metallurgy, and power generation, consistent with the industrial sector's 41.3 percent share of GSVA documented in Chapter 3. The state's total installed power generation capacity stood at 8,998.15 megawatts as of September 2025, comprising 2,181.88 megawatts under central utilities, 3,840.52 megawatts under state utilities, and 2,975.75 megawatts under private sector ownership, with thermal generation contributing the majority at 5,902.87 megawatts, followed by hydro at 2,179.23 megawatts and renewable energy at 916.05 megawatts (IBEF,

2026). This generation capacity profile, examined in fuller detail in Chapter 9, underpins the energy intensive metallurgical and mineral processing operations that anchor the state's industrial economy, particularly the steel, aluminium, and ferro-alloy clusters concentrated in Kalinganagar, Angul, Jharsuguda, and Sundargarh described in Chapter 3.

Merchandise exports from Odisha reached ₹89,519 crore, or approximately 10.10 billion US dollars, in fiscal year 2024 to 25, with iron ore, iron and steel, and aluminium and aluminium products accounting for the majority share of this export value, confirming the continued centrality of primary metal and mineral products to the state's external trade profile even as the state's policy focus diversifies (IBEF, 2026).

4.4 Special Economic Zones, Industrial Corridors and Clusters

Odisha's special economic zone and industrial corridor architecture, examined in its growth corridor dimension in Chapter 3, includes the Petroleum, Chemicals and Petrochemicals Investment Region at Paradip, one of only four such investment regions designated nationally, spanning nearly 68,000 acres with an envisaged investment of 42.20 billion US dollars, alongside an adjacent integrated steel zone spanning 40,339 acres anticipating a further 15.21 billion US dollars in investment (Invest Odisha, 2026). The Odisha Economic Corridor, developed under the Asian Development Bank supported East Coast Industrial Corridor framework, spans 11 industrial clusters across 11,366 acres organized into the Gopalpur-Bhubaneswar-Kalinganagar and Paradip-Kendrapada-Dhamra-Subarnarekha nodes documented in Chapter 3.

The Tata Steel Special Economic Zone near Gopalpur Port represents a distinct and forward looking cluster development, converting 1,400 acres of pre-approved land into a green hydrogen and green ammonia production hub, with major energy sector players including ACME Clean Energy, Avaada Green Hydrogen, Ocior Energy, and Torrent Green Hydrogen establishing production capacity at the site, linked to the central government's Plug and Play Chemical Park Scheme introduced in the 2026 Union Budget (Maritime Gateway, 2026). This cluster, alongside the state's continued land banking activity across coastal corridors including Dhamra, positions Odisha to capture an early position in India's emerging green hydrogen and green ammonia value chain, an area this Framework identifies as a genuine diversification opportunity beyond the state's conventional mineral processing base.

4.5 Foreign Direct Investment: Inflows, Sectoral Distribution and Policy

Odisha's foreign direct investment performance remains modest relative to the scale of the state's overall industrial investment activity documented in this chapter, and represents an area of continued policy attention. According to Department for Promotion of Industry and Internal Trade data, cumulative FDI inflows into Odisha stood at ₹1,462 crore, or approximately 190.2 million US dollars, over the period from October 2019 to June 2025 (IBEF, 2026). This figure is notably small relative to the domestic investment commitments documented in section 4.1, indicating that Odisha's recent investment boom has been overwhelmingly domestically financed, whether through central and state public sector

investment, Indian corporate investment from groups such as Tata Steel and Vedanta, or state financed infrastructure, rather than through inbound foreign capital.

This pattern is not necessarily a policy failing in itself, since a domestically anchored investment base can offer greater stability against global capital flow volatility, but it does suggest that Odisha's investment promotion strategy has, to date, been considerably more effective at mobilizing domestic industrial and public capital than at attracting the kind of foreign direct investment that has flowed more heavily into states such as Gujarat, Maharashtra, and Karnataka. The state's investment promotion events, including the Utkarsh Odisha: Make in Odisha Conclave, have begun to record specific sectoral investment commitments with international dimension, including ₹4,349 crore, or approximately 490.58 million US dollars, in healthcare sector investment commitments recorded at the 2025 edition of the conclave, intended to accelerate healthcare infrastructure and biotechnology manufacturing development (IBEF, 2026). Whether this and similar sector specific investment promotion translates into a meaningfully larger foreign direct investment share over the coming Vision 2047 planning period, discussed in Chapter 21, is an area this Framework recommends the state track as a distinct strategic metric separate from aggregate domestic investment approval figures.

4.6 Public Sector Undertakings: Performance and Reform Agenda

Odisha's state public sector undertaking landscape is anchored by four enterprises historically classified in the top tier "gold category" under the state's public enterprise performance classification system: the Odisha Mining Corporation, the Odisha Power Generation Corporation, the Odisha Hydro Power Corporation, and the Industrial Infrastructure Development Corporation of Odisha (Business Standard, 2025). Of these, the Odisha Mining Corporation represents by far the most financially significant enterprise and the clearest illustration of both the strengths and the historical governance challenges characteristic of Odisha's public sector undertaking portfolio.

The Odisha Mining Corporation, established in 1956 as a joint venture between the state and central governments before becoming a wholly state owned corporation, posted its strongest ever operational and financial performance in 2025 to 26, achieving record mineral production of 44.82 million tonnes and record revenue of ₹25,300 crore, provisional figures for the fiscal year (Business Standard, 2026; OMC Limited, 2026). The corporation has announced plans to invest ₹800 crore in a 1.5 million tonne per annum pellet manufacturing plant near its Gandhamardan iron ore mines in Keonjhar district, developed in collaboration with the Bhubaneswar based Institute of Minerals and Materials Technology and South Africa's Mintek, marking the corporation's entry into downstream value added mineral processing beyond conventional extraction (Business Standard, 2026; Odisha TV, 2026). At the corporation's 71st foundation day, Chief Minister Mohan Charan Majhi urged the corporation to expand its scope of operations into mine based activities in other states, drawing a comparison with the Gujarat Mineral Development Corporation's own expansion into mining operations within Odisha (Odisha TV, 2026).

This strong recent performance should, however, be read alongside a documented history of underperformance in the corporation's joint venture investment portfolio. A 2017 Comptroller and Auditor General report on state public sector undertakings found that the Odisha Mining Corporation had invested ₹40.8 billion, or approximately 4,080 crore, into twelve joint venture companies spanning iron ore, bauxite mining, coal extraction, and power transmission, none of which had been commissioned as of the audit review date, with delays attributed to failure to finalize project development agreements, difficulty obtaining forest clearance, and inadequate monitoring by joint venture partners (Business Standard, 2017). The same audit period found the corporation had fallen short of its iron ore and chromite ore production targets, resulting in an estimated foregone revenue opportunity of ₹1,838 crore (Business Standard, 2017). This Framework treats the contrast between the corporation's currently strong operational and revenue performance and its historically weaker joint venture project execution record as an important qualifier: continued strength in core mining operations should not be assumed to extend automatically to more complex diversification and joint venture undertakings without deliberate governance strengthening, a theme with direct relevance to the corporation's newly announced downstream pellet plant investment and its stated ambitions for inter-state expansion.

4.7 Public-Private Partnership Framework and Pipeline

Odisha's public-private partnership activity is most visible in its port and industrial infrastructure sectors, where the non-major ports of Dhamra and Gopalpur, documented in Chapter 3, have been developed and operate under private and public-private structures alongside the centrally administered major port at Paradip. The state's approach to financing its major urban and regional development initiatives has increasingly incorporated externally aided project structures alongside conventional public-private partnership models; the ₹5,000 crore Bhubaneswar-Cuttack-Puri-Paradip city economic region development plan, documented in Chapter 3, is being pursued specifically under the Externally Aided Project framework, following approval by the State Level Project Monitoring Committee chaired by the state's Chief Secretary (Maritime Gateway, 2026).

This Framework notes that Odisha's public-private partnership pipeline, while active in specific infrastructure and industrial verticals, remains less institutionally formalized as a distinct cross-sectoral financing channel than in some other major Indian states, and recommends that the state's planning and finance departments consider developing a more systematically tracked and published public-private partnership project pipeline, particularly as the scale of urban infrastructure investment associated with the Vision 2047 growth corridor strategy described in Chapter 3 continues to expand, to ensure adequate private capital participation and risk sharing discipline is applied consistently across these large regional development initiatives.

4.8 Regional Cooperation: Shared Region and Growth

Odisha's regional and inter-state cooperation architecture operates through several parallel channels, each with direct implications for the state's industrial and investment development trajectory documented throughout this chapter. The Eastern Zonal Council, one of five statutory zonal councils established under the States Reorganisation Act to promote inter-state cooperation, provides the state's principal formal mechanism for coordination with Bihar, Jharkhand, and West Bengal. The 15th meeting of the Council's Standing Committee, hosted in Bhubaneswar and chaired by Odisha's Chief Secretary, addressed 74 agenda items spanning water sharing disputes, flood management, telecommunications, and development scheme coordination, with particular attention to the Subarnarekha Multipurpose Project shared with Jharkhand, while Odisha used the forum to showcase governance innovations including its Ama Sathi WhatsApp chatbot citizen service platform, the Subhadra women's welfare scheme, and a tourism land bank initiative (New Kerala, 2026).

The most consequential and long running inter-state cooperation issue affecting Odisha's regional development, however, is the Mahanadi river water sharing dispute with Chhattisgarh, a nearly decade long dispute before the Mahanadi Water Disputes Tribunal, established in March 2018 under the Inter-State River Water Disputes Act, with the two states unable to reach a mutually agreed settlement despite tribunal review of major basin reservoirs (PW OnlyIAS, 2026). The Mahanadi basin covers approximately 141,600 square kilometers, with roughly 53 percent of the catchment in Chhattisgarh and 46 percent in Odisha, supporting the livelihoods of an estimated 2.18 crore people across the two states, and directly sustaining sixteen Odisha districts through the Hirakud Dam, the world's longest earthen dam, which regulates irrigation, flood control, and hydroelectric generation across large parts of the state (Business Standard, 2026). This asymmetry, an upstream state controlling the majority catchment share while the downstream state depends on the river for a sixteen district irrigation, water supply, and power generation system, has been the structural source of the dispute's persistence.

Recent political developments indicate a genuine shift toward negotiated resolution. Following a July 30, 2026 meeting between Odisha Chief Minister Mohan Charan Majhi, Union Jal Shakti Minister C. R. Patil, and Chhattisgarh Chief Minister Vishnu Deo Sai in New Delhi, both states agreed to pursue an amicable resolution through a joint technical committee headed by the Chairman of the Central Water Commission, with the committee expected to submit its assessment and a mutually beneficial solution to the Mahanadi Water Disputes Tribunal within three months, and Chief Minister Majhi expressing confidence that the dispute could move toward resolution in the near term (Business Standard, 2026). This movement toward what Tribunal proceedings have themselves characterized as "moving beyond litigation" represents a significant potential de-risking of one of the more consequential regional resource governance uncertainties affecting Odisha's long term agricultural, industrial, and hydropower planning, and this Framework recommends the state's water resources and industrial planning departments track the technical committee's findings closely given their direct bearing on the irrigation expansion targets discussed in Chapter 18 and the hydropower generation capacity discussed in Chapter 9.

Beyond river water governance, Odisha's coastal position and port infrastructure, documented in Chapter 3, position the state as a natural participant in Bay of Bengal regional economic cooperation frameworks, including the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, given the state's growing port capacity and its stated ambitions, discussed in section 4.6, for interstate and potentially international mineral and industrial sector engagement. This Framework identifies deeper formal engagement with Bay of Bengal regional trade and connectivity initiatives as a longer horizon opportunity for the state, one that would complement rather than substitute for the more immediate priority of resolving the Mahanadi dispute and deepening Eastern Zonal Council coordination on the shared river, transport, and development scheme issues that most directly affect the state's near term industrial and infrastructure trajectory.

Chapter 5: Education — Access, Quality and Future Readiness

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

Odisha's elementary education system, spanning Classes 1 through 8, has historically achieved comparatively strong access indicators at the primary level while facing more pronounced retention challenges as students progress toward upper primary and beyond. As of 2020 to 21 data, the Gross Enrolment Ratio for primary education in the state stood at 97.4 percent, indicating near universal nominal enrolment at the entry level of schooling, though the corresponding secondary level GER of 84.5 percent already signals the beginning of the attrition pattern that intensifies at later stages (ScienceDirect, 2023). State education department expenditure, on both revenue and capital account, stood at approximately 2.84 percent of GSDP in 2019 to 20, a ratio that empirical analysis has found to be significantly associated with the state's broader economic growth trajectory, reinforcing the human capital investment case this Framework advances throughout its education and health chapters (ScienceDirect, 2023).

The state government has, in the current planning period, launched its most substantial elementary education infrastructure investment in recent years through the Godabarish Adarsha Vidyalaya scheme, approved by the state Cabinet in September 2025 with an outlay of ₹12,000 crore to establish 2,200 model primary schools, one in each gram panchayat, over three years beginning in 2025 to 26 (Careers360, 2025). Named for the Odia poet Godabarish Mishra, the scheme is explicitly framed as aligned with both the National Education Policy 2020 and the state's NIPUN Odisha foundational literacy and numeracy mission, with an estimated per school cost of approximately ₹5 crore, subject to variation based on individual Detailed Project Reports (Careers360, 2025). This represents a genuinely significant capital commitment to primary education infrastructure, consistent with the broader pattern of strong capital expenditure prioritization documented in Chapter 2, and this Framework identifies it as the single most important recent state initiative for elementary education quality improvement, provided its implementation is matched by parallel investment in the teacher recruitment and pedagogical support discussed in section 5.5.

Alongside this infrastructure push, the state has begun implementing the National Education Policy 2020's structural reforms to school education, adopting the 5+3+3+4 curricular and pedagogical structure from the 2025 academic session, and raising the minimum enrolment age for Class 1 to six years, aligning the state's foundational stage entry criteria with the national policy framework (Grokikipedia, 2026). These structural reforms, alongside the GAV infrastructure investment, represent the foundation on which the state's more advanced retention and learning outcome challenges, discussed in the following sections, must ultimately be addressed.

5.2 Secondary and Senior Secondary Education: Transition and Achievement

Odisha's secondary and senior secondary education system exhibits a considerably more acute retention challenge than the elementary level, and the state's own reported data indicates transition losses at this stage among the more severe recorded by any major Indian state in recent years. According to UDISE+ 2021 to 22 data, the dropout rate at the upper primary level in Odisha stood at 7.3 percent against a national average of 3 percent, while the secondary level dropout rate stood at 27.3 percent against a national average of 12.6 percent, more than double the national figure (PIB, 2026, citing UDISE+ 2021-22 data). The gender dimension of this attrition was similarly pronounced, with the dropout rate for girls at the upper primary level recorded at 6.5 percent and at the secondary level at 25 percent, against national averages of 3.3 percent and 12.3 percent respectively (PIB, 2026). Class transition data from the same period reinforced this pattern starkly: of the 6.86 lakh students enrolled in Class 10 in 2020 to 21, only 3.43 lakh transitioned to Class 11 the following year, a net decline of 3.42 lakh students, or 49.9 percent, indicating that close to half of the state's Class 10 cohort did not continue into higher secondary education during that period (PIB, 2026).

This Framework flags this UDISE+ 2021 to 22 figure as the most recent detailed state specific breakdown available at the time of this report's preparation, while noting that national UDISE+ trends for the more recent 2024 to 25 and 2025 to 26 reporting cycles have shown secondary level dropout rates falling nationally, from 8.2 percent to 7 percent between 2024 to 25 and 2025 to 26, alongside rising secondary retention rates, from 47.2 percent to 51.9 percent over the same period (Deccan Herald, 2026). Whether Odisha's own secondary transition performance has improved proportionately alongside this national trend is a data gap this Framework recommends the state's own School and Mass Education Department address through more granular and more current public reporting, given the scale of the gap documented in the 2021 to 22 data relative to the national average.

On the assessment and curriculum front, the Council of Higher Secondary Education, Odisha, has revised the Plus 2 syllabus effective from the 2025 to 26 academic year, and the state government has announced free textbooks for all Class 9 and Class 10 students alongside a stated plan to merge the Class 10 and Class 12 examination boards into a single unified education board structure (Sakshi Education, 2025; Grokipedia, 2026). This board merger proposal, if implemented, would represent a significant institutional restructuring of the state's secondary examination system, and this Framework recommends its implementation be sequenced carefully alongside the broader NEP 2020 structural transition to avoid compounding the already substantial transition attrition documented above with additional institutional disruption during the changeover period.

5.3 Higher Education: Institutional Capacity, Gross Enrolment and Quality

Odisha's higher education sector presents a rural access gap that this Framework identifies as one of the more consequential structural weaknesses in the state's overall education system. According to the CMS Education Survey 2025, rural regions in Odisha recorded a Gross Enrolment Ratio in higher education of just 27.8 percent, a figure the survey characterizes as reflecting a deficiency of colleges in rural areas nationally, with Odisha specifically cited

among the states where this rural higher education access gap is most pronounced (IndiaDataMap, 2026). This rural GER figure sits well below the National Education Policy 2020's target of a 50 percent Gross Enrolment Ratio in higher education nationally by 2035, and given the substantial rural population share documented in Chapter 1, at approximately 81 percent of the state's total population, this rural higher education access gap has implications for a very large share of the state's college age population.

The state has begun implementing the National Education Policy 2020's higher education reforms following formal state level approval on November 12, 2024, and has committed ₹375 crore in higher education infrastructure investment, encompassing modernization and laboratory upgrades intended to improve institutional quality alongside access (Groklopedia, 2026; Invest India, 2026). This investment, while a meaningful start, remains modest relative to the scale of the access and quality gap documented above, and this Framework recommends that the state's higher education expansion strategy give particular priority to establishing degree college capacity within the aspirational and tribal dominated districts identified in Chapter 1, where the rural higher education access gap is likely most acute, rather than concentrating new capacity in the already better served coastal and urban districts.

5.4 Technical, Vocational Education and Training (TVET) Ecosystem

Odisha's technical and vocational education infrastructure, delivered principally through the state's network of government and private Industrial Training Institutes, has received targeted central support through the Skills Strengthening for Industrial Value Enhancement, or STRIVE, scheme, which has channeled funding to the state's ITI network across recent fiscal years to improve training quality and industry linkage (Indiastat, 2026). Building on this base infrastructure, the state's Sudakshya scheme, documented in Chapter 4, has driven a marked increase in female enrolment in technical education, reaching 28 percent in Industrial Training Institutes and 32 percent in polytechnics for the 2025 to 26 academic year, a genuinely significant gender inclusion gain in a training ecosystem that has historically been heavily male dominated across most Indian states (Invest India, 2026).

This TVET expansion is being pursued in direct alignment with the state's industrial diversification strategy documented in Chapters 3 and 4, including the BharatNetra programme developed with the Global Finance and Technology Network to train 7,000 fintech professionals, positioning the state's skill development ecosystem to feed not only its traditional mineral and metallurgical industrial base but also its emerging digital services, financial technology, and advanced manufacturing sectors (Invest India, 2026). This Framework views the TVET sector as a critical linking mechanism between the state's strong industrial investment performance documented in Chapter 4 and its weaker labour market productivity distribution documented in Chapter 3, since expanded and better targeted vocational training offers the most direct policy lever for shifting workers out of low productivity primary sector employment and into the higher value added industrial and services roles the state's investment pipeline is creating.

5.5 Teacher Recruitment, Training and Professional Development

Teacher availability has emerged as a central policy priority for the state government in the current planning period, following recognition that meeting National Education Policy 2020 pupil-teacher ratio and foundational learning requirements will require substantial new recruitment. The state government has committed to recruiting 44,433 teachers over three years, at a rate of approximately 15,000 per year, specifically to meet NEP 2020 requirements (Odisha Govt Exam, 2026). This commitment has begun translating into active recruitment drives: the Odisha School Education Programme Authority released a notification in December 2025 for over 15,000 vacancies spanning Elementary Teachers, Multi-Lingual Education teachers, and Special Educator teachers across primary, upper primary, and secondary levels, with a further notification cycle for Junior Teacher posts, comprising approximately 5,000 primary and 5,000 upper primary positions, following in subsequent months (CareerPower, 2025; Odisha Diaries, 2026; Odisha Govt Exam, 2026). Separately, the Odisha Staff Selection Commission has recruited for 102 Group B Teacher Educator posts under the Directorate of Teacher Education and the State Council of Educational Research and Training, covering subjects including Arts, Science, Political Science, English, Economics, and Geography for government secondary schools (Adda247, 2026).

This recruitment drive is explicitly described in state government communication as addressing a substantial existing vacancy deficit in foundational education, with recruitment specifically prioritized to strengthen academic infrastructure in rural and tribal sectors, a framing consistent with this Framework's broader analytical emphasis on the tribal and rural education access gap documented throughout this chapter (Odisha Diaries, 2026). Beyond core teaching staff, the state's broader education workforce investment includes a commitment to appoint one nurse, an Auxiliary Nurse Midwife, for every 300 students in school hostels, an initiative with direct relevance to the residential school infrastructure serving tribal and remote district students discussed in section 5.7 (Sakshi Education, 2025).

The scale of this recruitment commitment, nearly 45,000 teachers over three years, represents a substantial and welcome response to the vacancy and pupil-teacher ratio pressures that have historically constrained the state's education quality, and this Framework recommends that the state's recruitment process, particularly the merit based two stage selection process involving computer based testing followed by credential verification described in current recruitment notifications, be paired with mandatory placement incentives or requirements directing a proportionate share of newly recruited teachers toward the tribal and remote district schools where vacancy rates have historically been most severe, to ensure the recruitment drive addresses the geographic distribution of teacher shortage rather than only its aggregate scale.

5.6 Digital Education, EdTech Integration and ICT in Schools

Odisha's digital education strategy is being pursued as part of the state's broader digital transformation agenda documented in Chapters 3 and 16, with a stated goal of integrating artificial intelligence curriculum into 90 percent of the state's schools by 2036, part of the

skill readiness agenda linked to the state's AI Policy 2025 (Invest India, 2026). This ambition sits within a broader context of the state's growing information technology infrastructure, including nine government notified IT towers, six private IT towers, and six Software Technology Parks of India centers, the highest STPI count of any Indian state, providing institutional infrastructure that could, over the coming years, support deeper integration of digital learning resources into the state's school system (Invest India, 2026).

At the time of this report's preparation, however, granular state level data specifically quantifying school level digital infrastructure penetration, such as the share of schools with functional computer labs, internet connectivity, or digital learning device access, comparable to the kind of detailed UDISE+ infrastructure indicators available at the national level, was not identified in the sources reviewed for this Framework. This represents a genuine data gap rather than an indication that digital infrastructure gaps do not exist, and this Framework recommends that future editions of this document draw on the state's own UDISE+ submissions and the School and Mass Education Department's digital infrastructure monitoring data, once made more granularly available, to provide a more precise assessment of school level digital readiness, particularly given the likely urban-rural and coastal-tribal disparities in such infrastructure consistent with the patterns documented throughout Chapter 1 and this chapter.

5.7 Special Education: Children with Disabilities and Inclusive Schooling

Odisha's approach to special education has been formally integrated into the state's core teacher recruitment strategy documented in section 5.5, with the December 2025 Odisha School Education Programme Authority notification explicitly including Special Educator Teacher posts within its broader 15,000 plus vacancy recruitment drive, alongside Elementary and Multi-Lingual Education teacher categories (CareerPower, 2025; Odisha Diaries, 2026). The inclusion of Children with Special Needs pedagogy, encompassing identification, learning needs assessment, teaching strategy adaptation, and curriculum adaptation, within the state's teacher training and examination syllabus for primary teacher recruitment indicates that inclusive education competency is being built into the state's mainstream teacher preparation pipeline rather than treated as an entirely separate specialist track (Toppersexam, 2026).

This integration of special education staffing into the state's broader teacher recruitment expansion is a positive structural feature, though this Framework notes that the scale of dedicated Special Educator positions within the overall 15,000 plus vacancy pool was not separately disaggregated in the sources available for this report, representing a further specific data gap the state's own reporting could usefully address in order to allow independent assessment of whether special education staffing is scaling proportionately to overall teacher recruitment. Given the state's exceptionally large and diverse tribal population documented in Chapter 1, including communities with distinct linguistic backgrounds requiring Multi-Lingual Education support, this Framework treats the effective integration of special education, multilingual education, and mainstream teacher recruitment as a

particularly important design feature for Odisha specifically, relative to states with more linguistically homogeneous populations.

5.8 State-Specific Educational Challenges and Reform Priorities

Drawing together the evidence presented across this chapter, three challenges stand out as specific to Odisha's educational development trajectory and warrant explicit strategic prioritization. First is the severe and well documented gap between Scheduled Tribe literacy and educational attainment and the state average, discussed in Chapter 1, where ST literacy stood at just 52.24 percent against the state's overall literacy rate of 72.87 percent per the 2011 Census baseline, and where more granular studies of Particularly Vulnerable Tribal Group communities in areas such as the Similipal tract of Mayurbhanj district have recorded literacy rates as low as 12.62 percent, with female literacy in such areas as low as 5 percent (Chapter 1 references; Status of Literacy in Odisha, 2025). This gap is not a residual disparity within an otherwise well performing system but a structural feature of the state's education landscape that recurs across every level examined in this chapter, from elementary retention through higher education access, and this Framework treats closing it as the single most consequential education policy priority facing the state.

Second is the severe secondary level transition attrition documented in section 5.2, where close to half of the Class 10 cohort in the most recent detailed state data available did not progress to Class 11, a loss rate that, if it has persisted anywhere close to the 2021 to 22 level documented above, represents a very substantial forfeiture of the human capital investment the state has made at the primary and upper primary levels. Addressing this transition loss requires not only continued expansion of higher secondary school availability, the factor UDISE+ analysis has identified nationally as the primary driver of recent secondary retention improvement, but also targeted economic and social interventions addressing the reasons students, and particularly girls, leave school at this stage, likely including early marriage pressure, household economic need, and distance to the nearest higher secondary institution in rural and tribal areas.

Third is the rural higher education access gap documented in section 5.3, where a rural Gross Enrolment Ratio of 27.8 percent sits far below both the state's likely urban GER and the national NEP 2020 target trajectory. Given that the coastal urban corridor described in Chapter 3 is already the site of the state's most concentrated higher education and knowledge economy investment, including the emerging technology and services growth documented in that chapter, this Framework recommends that the state's higher education expansion strategy deliberately counterbalance this urban concentration by prioritizing new degree college and polytechnic capacity in the rural and tribal districts where the access gap is most severe, ensuring that the state's broader economic diversification strategy does not inadvertently widen rather than narrow its already substantial spatial education disparities.

Taken together, these three challenges, the tribal literacy and attainment gap, secondary transition attrition, and rural higher education access, form the core diagnostic this Framework carries forward into Chapter 21's Vision 2047 human capital investment

priorities, alongside the health sector challenges examined in Chapter 6 and the social inclusion challenges examined in Chapter 7.

Chapter 6: Health, Nutrition and Population

6.1 Public Health Infrastructure: Facilities, Human Resources and Gaps

Odisha's public health infrastructure has expanded substantially over the past two decades, with the state reporting 9,752 public healthcare facilities across rural and urban areas as of 2023 to 24, spanning the state's network of sub-centers, primary health centers, community health centers, sub-divisional and district hospitals, and tertiary care institutions (Invest India, 2026). This infrastructure base underpins the maternal and child health gains documented in section 6.3 and the state's disaster response medical capacity discussed in Chapter 14, and represents a considerable expansion from the infrastructure base that existed at the start of the National Rural Health Mission period in the mid-2000s, when institutional delivery coverage stood at just 28 percent of expected deliveries, a figure that had risen to 72 percent by 2014 to 15 (National Health Mission Odisha, 2026).

Despite this expansion in facility count, the human resource and service quality dimension of the state's health infrastructure continues to present significant challenges, particularly in the tribal and remote districts identified throughout Chapter 1 as facing the state's most acute development deficits. This Framework notes that granular, current district level data on doctor and specialist vacancy rates, comparable to the kind of detailed civil service vacancy data referenced for administrative cadres in Chapter 15, was not identified in the sources reviewed for this report, and recommends that the state Department of Health and Family Welfare's own facility level staffing data be drawn upon in future editions of this Framework to allow a more precise district differentiated assessment of health workforce adequacy, given the well documented national pattern, discussed in section 6.3, of health worker density running lower in higher mortality states, a category that continues to include Odisha.

6.2 Epidemiological Profile: Communicable and Non-Communicable Disease Burden

Odisha's disease burden profile, as most recently captured in the sixth round of the National Family Health Survey, conducted in 2023 to 24 and reported in 2026, reveals a state grappling with a substantial and, on several indicators, worsening burden of lifestyle related risk factors alongside its longer standing communicable disease and nutritional challenges. The NFHS-6 findings indicate that 48.3 percent of men and 22.8 percent of women in Odisha consume tobacco products, while 26.8 percent of adults report alcohol use, with alcohol consumption among women recorded at 3.1 percent (Odisha Connect, 2026). Health experts reviewing these findings have specifically flagged the risk that high tobacco and alcohol consumption will contribute to a growing non-communicable disease burden in the state, including cancer, cardiovascular disease, liver disorders, and diabetes, over the coming years (Odisha Connect, 2026).

On the nutritional and communicable disease front, anemia remains a major public health problem in Odisha, particularly among women and children. The fifth round of the National

Family Health Survey found that 64 percent of children aged 6 to 59 months in Odisha were anemic, a sharp increase from 45 percent recorded in the fourth round of the survey, comprising 32 percent mildly anemic, 31 percent moderately anemic, and 1 percent severely anemic children, with a marginal gender gap showing girls at 65 percent anemia prevalence against boys at 64 percent (DHS Program, NFHS-5 Odisha, 2021). This anemia burden, discussed further in its nutritional dimension in section 6.6, compounds the maternal and child health risks documented in section 6.3, given anemia's well established association with maternal mortality, low birth weight, and impaired child cognitive and motor development.

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

Odisha's maternal and child health trajectory over the past two decades illustrates both genuine, substantial progress and a persistent, troubling gap relative to national and peer state benchmarks that has not yet closed. On infant mortality, the state's own reporting indicates a decline in the Infant Mortality Rate from 75 per 1,000 live births in 2005 to 51 by 2013, described by the state's National Health Mission as the highest rate of improvement recorded by any state during that period, with subsequent data indicating a further decline to 36 per 1,000 live births by 2020 (National Health Mission Odisha, 2026; Invest India, 2026). On maternal mortality, the state's Maternal Mortality Ratio fell from 358 in 2003 to 235 by 2013, and Invest India's most recent state investment profile reports a further improvement to 119 per 100,000 live births by 2020, down from 180 in 2014 (NIHFW, n.d.; Invest India, 2026).

These improvements, however, must be read alongside more recent and more sobering national comparative data. Analysis of the Sample Registration System's Special Bulletin on Maternal Mortality in India for the 2021 to 2023 period found that Odisha reported India's highest Maternal Mortality Ratio among the major states tracked, a finding that places the state, alongside Chhattisgarh, Madhya Pradesh, Uttar Pradesh, and Assam, within the cluster of states characterized by the combination of high maternal mortality, low per capita income, and limited healthcare system access, a cluster in which health worker density has also been found to run systematically lower than in better performing states (Data For India, 2026). This Framework treats the coexistence of documented long run improvement in Odisha's absolute MMR and IMR figures alongside the state's continued position at or near the bottom of the national maternal mortality ranking as consistent with, rather than contradictory to, the broader diagnostic developed throughout this Framework: Odisha has made genuine progress from a very difficult starting point, but the pace of that progress has not been sufficient to close the gap with better performing states, several of which, including Kerala and Andhra Pradesh, have achieved Maternal Mortality Ratios as low as 30 per 100,000 live births over the comparable period (Data For India, 2026).

On child nutrition, the NFHS-6 survey found that stunting, or low height for age reflecting chronic malnutrition, affected 26.8 percent of children in Odisha, an improvement from 31 percent recorded in the previous survey round, a genuinely positive directional finding (Odisha Connect, 2026; The Statesman Bhubaneswar, 2026). This improvement in stunting, however, has been accompanied by a worsening wasting rate, an acute indicator of children

in immediate nutritional distress, alongside a decline in the share of children aged 6 to 23 months receiving an adequate diet, which fell to just 14.9 percent from 20.1 percent recorded in NFHS-5, with the figure for non-breastfed children specifically in rural Odisha recorded at just 6.3 percent (The Statesman Bhubaneswar, 2026). Public health commentary on these findings has characterized this pattern, of improving stunting alongside worsening wasting and declining dietary adequacy, as indicating that macro-level improvements in food security and poverty reduction, documented in Chapter 1's discussion of the state's substantial multidimensional poverty gains, have not yet translated into adequate dietary quality for the state's youngest children, and as pointing to specific gaps in the management of acute malnutrition through the state's Nutrition Rehabilitation Centres and Integrated Child Development Services supplementary feeding programme, discussed further in section 6.6 (The Statesman Bhubaneswar, 2026).

6.4 Universal Health Coverage: State Health Assurance Schemes

Odisha has pursued universal health coverage through the integration of its own state health assurance scheme, Gopabandhu Jan Arogya Yojana, with the central government's Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, a convergence intended to enhance comprehensive healthcare coverage for the state's citizens by combining central and state financed insurance protection into a unified benefit structure (Invest India, 2026). This integration is characterized by the state's own investment promotion materials as a central component of the state's effort to reduce out of pocket healthcare expenditure and financial burden on citizens accessing medical services (Invest India, 2026).

This Framework identifies the effective implementation and utilization of this integrated health assurance coverage, particularly its reach into the tribal and remote districts documented throughout Chapter 1, as a critical determinant of whether the state's continued healthcare infrastructure investment translates into improved health outcomes for its most underserved populations. Given the persistent gap between the state's improving absolute health indicators and its continued lagging position relative to national and peer state benchmarks documented in section 6.3, insurance coverage expansion alone is unlikely to close this gap without parallel investment in the underlying facility, workforce, and nutritional interventions discussed elsewhere in this chapter.

6.5 Mental Health Services: Availability, Access and Stigma Reduction

Mental health service availability and access represents an area of significant data limitation in the sources available for this Framework's preparation, reflecting a broader national and sub-national pattern in which mental health indicators remain less comprehensively tracked through routine health information systems than communicable disease, maternal and child health, and nutrition indicators. This Framework was unable to identify current, Odisha specific data on psychiatric facility availability, mental health workforce density, or population level mental health service utilization comparable to the depth of data available for the other health sub-sectors examined in this chapter.

Given this data gap, this Framework recommends that the state's Department of Health and Family Welfare, in coordination with the National Mental Health Programme, prioritize the systematic collection and public reporting of mental health infrastructure and access indicators in future planning cycles, particularly given the documented burden of alcohol use disorder risk implied by the 26.8 percent adult alcohol consumption rate noted in section 6.2, and given the elevated psychosocial stress documented among populations exposed to repeated climatic disaster events, a population that, as discussed in Chapter 14, constitutes a very substantial share of Odisha's coastal and riverine district residents.

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

Odisha's nutrition programme architecture operates principally through the Integrated Child Development Services scheme, delivering supplementary feeding, health checkups, and early childhood care through the state's Anganwadi Centre network, alongside the national Poshan Abhiyaan, or National Nutrition Mission, intended to strengthen nutritional content, delivery, outreach, and outcomes with a focus on developing practices that nurture health, wellness, and immunity to disease and malnutrition, subsequently expanded into Mission Poshan 2.0 (PIB, 2021). The evidence presented in section 6.3 above, however, indicates that despite this programme architecture, the state continues to face substantial gaps in translating programme presence into adequate dietary outcomes, with the decline in adequate diet coverage among children aged 6 to 23 months from 20.1 percent to 14.9 percent between NFHS-5 and NFHS-6 representing a direct indictment of current programme effectiveness at the complementary feeding stage specifically (The Statesman Bhubaneswar, 2026).

UNICEF's ongoing partnership with the state government has focused specific attention on this complementary feeding gap, introducing a complementary feeding programme in partnership with self-help groups to address the nutritional status of women and adolescent girls, given that poor nutritional status among women and adolescent girls is a well established significant contributor to child stunting, alongside continued support for community based management of acute malnutrition in children under five through Nutrition Rehabilitation Centres and other health institutions (UNICEF India, 2026). This Framework concurs with the public health analysis presented in section 6.3 that closing the specific gap in complementary feeding practice, rather than continued reliance on stunting reduction alone as the primary nutrition programme success metric, should be treated as a distinct and urgent policy priority, given that stunting reduction and adequate complementary feeding coverage have moved in opposite directions in the state's most recent survey data.

6.7 Population Stabilisation and Family Planning

Odisha achieved replacement level fertility, a Total Fertility Rate of 2.1 children per woman, by the Sample Registration System's 2012 round, meeting the Twelfth Five Year Plan's population stabilization goal ahead of the broader national trajectory and reflecting the demographically advanced transition status documented in Chapter 1 (National Health Mission Odisha, 2026; NIHF, n.d.). This fertility decline proceeded steadily from a Total

Fertility Rate of 2.6 in 2001, with contraceptive prevalence rate improvements among currently married women serving as a key underlying driver, though this progress has not been geographically uniform, with district level Total Fertility Rate estimates from the Annual Health Survey ranging as high as 3.5 in Baudh district to as low as 1.9 in the industrialized districts of Angul, Bargarh, and Jharsuguda (NIHFW, n.d.).

The state's sex ratio, discussed in its demographic dimension in Chapter 1, has shown a declining trend over the preceding decade according to state population planning documentation, standing at approximately 978 females per 1,000 males as of the most recent decadal assessment referenced in state family planning literature, a finding that, alongside the sex ratio at birth concern flagged in Chapter 1, this Framework identifies as warranting continued monitoring alongside the state's broader population stabilization achievements, since a favorable aggregate sex ratio at the state level, discussed in Chapter 1, can still coexist with adverse trends in specific demographic sub-indicators such as sex ratio at birth.

6.8 Health System Strengthening and Future Preparedness

Drawing together the evidence presented across this chapter, Odisha's health system presents a genuine paradox that recurs throughout this Framework's broader analytical structure: substantial, well documented, and sustained improvement in absolute health indicators over the two decades since the launch of the National Rural Health Mission, occurring alongside a persistent, and on the maternal mortality indicator specifically a nationally leading, gap relative to better performing Indian states. This Framework's central health system strengthening recommendation follows directly from this paradox: continued incremental improvement in absolute indicators, while valuable, is insufficient as a policy objective in itself, and the state's health system strengthening strategy should instead be benchmarked explicitly against the pace of improvement achieved by comparator states, rather than against Odisha's own historical baseline alone.

Three specific priorities emerge from the evidence presented in this chapter as meriting the most urgent attention. First, the maternal mortality gap documented in section 6.3, where Odisha's position as the state with India's highest reported Maternal Mortality Ratio as of the most recent Sample Registration System bulletin represents an outcome fundamentally inconsistent with the state's fiscal capacity and infrastructure investment performance documented in Chapters 2 and 4, and warrants a dedicated, resourced maternal mortality reduction strategy of the kind the state's own Department of Health and Family Welfare has previously articulated in its state strategy documentation for accelerated reduction of maternal and infant mortality. Second, the child nutrition and complementary feeding crisis documented in sections 6.3 and 6.6, where declining dietary adequacy among the youngest children, even as broader poverty indicators improve, signals a specific programme design and delivery failure within the state's Integrated Child Development Services and Poshan Abhiyaan architecture that requires targeted rather than generic nutrition programming reform. Third, the mental health data and infrastructure gap documented in section 6.5, an

area where the state's own information systems require strengthening before effective policy design and resource allocation can even be undertaken.

Addressing these priorities within the framework of the state's broader universal health coverage push through the integrated Gopabandhu Jan Arogya Yojana and Ayushman Bharat Pradhan Mantri Jan Arogya Yojana scheme documented in section 6.4 will require the same kind of sustained, geographically differentiated investment strategy this Framework has recommended for the education sector in Chapter 5, with explicit prioritization of the tribal, forest dependent, and remote districts identified throughout Chapter 1 as facing the state's most acute development deficits, given the well established national and Odisha specific evidence, presented throughout this chapter, that health system weakness and health outcome deficits concentrate disproportionately in precisely these communities.

Chapter 7: Social Justice, Inclusion and Community Welfare

7.1 Scheduled Castes: Demographic Profile, Deprivation and Development Programmes

Odisha's Scheduled Caste population stood at 71,90,184 persons as per the 2011 Census, constituting approximately 17.13 percent of the state's total population, a share broadly comparable to the national Scheduled Caste population share of 16.6 percent (Sarkari List, 2025). This population is dispersed across the state's 30 districts, generally with less pronounced district level geographic concentration than the Scheduled Tribe population documented in section 7.2, though specific pockets of higher Scheduled Caste density exist in several central and coastal districts.

The most significant recent policy development affecting this community is the Odisha Cabinet's decision, taken on April 4, 2026, to raise the Scheduled Caste reservation quota in higher and technical education from 8 percent to 16.25 percent, a doubling of the prior quota, applicable across universities, affiliated colleges, Industrial Training Institutes, and polytechnics, spanning fields including engineering, medicine, dental sciences, nursing, pharmacy, agriculture, and allied sciences (Careers360, 2026). This reservation enhancement, implemented alongside the Scheduled Tribe quota increase documented in section 7.2 and the new Socially and Educationally Backward Classes reservation documented in section 7.3, represents the most substantial revision to the state's higher education access architecture for historically disadvantaged communities in recent years, and this Framework identifies its effective implementation, alongside adequate seat expansion to accommodate the enlarged reserved category rather than displacement of general category seats, as a critical implementation priority for the state's Department of Higher Education.

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

Odisha's Scheduled Tribe population, documented in its demographic and geographic dimensions in Chapter 1, constitutes 22.85 percent of the state's total population as per the 2011 Census, the largest Scheduled Tribe population share of any major Indian state, comprising 62 distinct recognized tribal communities and 13 of the nation's 75 Particularly Vulnerable Tribal Groups, concentrated substantially in the districts of Mayurbhanj, Koraput, Rayagada, Malkangiri, and Kandhamal (Population Analysis: Scheduled Tribes of Odisha, 2025; Journal of Health, Population and Nutrition, 2024). The multidimensional poverty and deprivation profile of this population, documented extensively in Chapter 1, remains the single most consequential social justice challenge facing the state, with district level poverty headcount ratios exceeding 50 percent in several tribal dominated districts even as the state average has fallen into the mid-teens.

Mirroring the reservation enhancement documented for Scheduled Castes in section 7.1, the state Cabinet's April 2026 decision raised the Scheduled Tribe reservation quota in higher and

technical education from 12 percent to 22.5 percent, nearly doubling the prior allocation and bringing the reserved quota into closer alignment with the community's actual population share, a alignment that had not previously existed given the gap between the prior 12 percent quota and the community's 22.85 percent population share (Careers360, 2026). This Framework views this reservation increase as a necessary, though not sufficient, response to the tribal education access gap documented in Chapter 5, since reservation expansion alone does not address the upstream literacy, retention, and quality gaps at the primary and secondary level that determine whether tribal students are able to complete secondary education and qualify for higher education admission in the first instance, a linkage this Framework urges the state's Scheduled Tribe and Scheduled Castes Development Department and School and Mass Education Department to address through coordinated rather than siloed programme design.

7.3 Other Backward Classes: Identification, Reservation and Social Mobility

Odisha's Socially and Educationally Backward Classes population, the state's terminology for the category more commonly referred to nationally as Other Backward Classes, was the subject of a dedicated state survey conducted in 2023, the findings of which were submitted to the state government on October 3, 2023, but remained unpublished as of May 2025 (2023 Odisha Socially and Educationally Backward Classes Survey, 2026). The survey estimated the SEBC population at approximately 39.31 percent of the state's total population, though some secondary sources have reported a higher figure of 46 percent, with the survey itself motivated by the absence of comprehensive caste based data nationally since the last full caste census conducted in 1931, a data gap that prompted several states including Odisha and Bihar to undertake independent surveys (2023 Odisha Socially and Educationally Backward Classes Survey, 2026).

Notwithstanding the continued non-publication of the full survey findings as of the most recent information available, the state government proceeded to introduce, as part of its April 2026 Cabinet decision on reservation policy, an entirely new 11.25 percent reservation for SEBC students in medical and technical education, a category that had not previously received dedicated reservation protection at the state level (Careers360, 2026). This Framework notes the somewhat unusual policy sequencing here, in which a substantial new reservation category was introduced without the underlying population survey that motivated it having been made public, and recommends that the state government publish the complete 2023 SEBC survey findings to allow independent verification that the reservation quantum introduced is proportionate to the community's actual demographic and socio-educational profile, consistent with the constitutional requirement that reservation policy rest on demonstrated backwardness rather than assumed backwardness.

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

Odisha's approach to gender equity in the current policy period is anchored by the Subhadra Yojana, a flagship direct cash transfer scheme launched by Prime Minister Narendra Modi in Bhubaneswar on September 17, 2024, providing women aged 21 to 60 years with ₹50,000 in financial assistance over five years, disbursed in two annual installments of ₹5,000 each, on Raksha Bandhan and International Women's Day, through Aadhaar linked Direct Benefit Transfer (Wikipedia, Subhadra Yojana, 2026; GovtSchemes.in, 2025). The scheme, operating across all 30 districts and covering an estimated one crore or more women, carries a total programme budget of ₹55,825 crore for the 2024 to 2029 period, with the annual budget allocation rising from ₹10,145.20 crore in 2025 to 26, an 18.85 percent year on year increase (Wikipedia, Subhadra Yojana, 2026). By August 2025, over 1.24 crore women had received the scheme's third installment, with eligibility extended to women covered under the National Food Security Act or State Food Security Scheme, or with family income below ₹2.5 lakh annually, and explicit inclusion provisions for Anganwadi workers, ASHA workers, and Community Resource Persons even where they receive state honoraria (IndianSouls, 2025; Subhadra Yojana Odisha, 2026).

This scheme's design, emphasizing direct, individually held, digitally transferred cash assistance to women rather than household level or in-kind benefits, reflects an explicit financial and digital inclusion objective, with the scheme's own programme design incorporating digital literacy awareness components specifically targeted at women beneficiaries (GovtSchemes.in, 2025). This design feature is consistent with, and this Framework assesses positively against, the broader female labour force participation and economic inclusion data documented in Chapter 3, where Odisha's Female Labour Force Participation Rate of 44.7 percent already exceeded the national average as of 2022 to 23 data, suggesting a state context in which direct financial empowerment programming may find more fertile ground for translating into genuine economic agency than in states with lower baseline female economic participation.

Beyond direct cash transfer, women's educational attainment has shown steady improvement, with female literacy rising from 70 percent in 2017 to 18 to 73.3 percent by 2023 to 24, alongside strong female enrolment at the secondary level, at 74.3 percent, and higher education level, exceeding 58 percent, indicating a broadening female talent base feeding into the skill development and technical education gains documented in Chapter 5's discussion of the Sudakshya scheme (Invest India, 2026).

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

Odisha's child protection architecture includes the Jashoda Scheme, introduced by the state government with an allocation of ₹83 crore specifically to provide financial assistance to orphaned children, part of a broader January 2025 package of social welfare enhancements alongside the elderly and disability pension increase documented in section 7.6 (Business Today, 2025; Outlook Money, 2025). The nutritional dimension of child welfare, examined extensively in Chapter 6, remains a significant continued concern, with the National Family

Health Survey's sixth round finding a troubling divergence between improving child stunting and worsening dietary adequacy indicators among Odisha's youngest children, a finding this Framework treats as directly relevant to the state's broader child rights and protection framework, since adequate nutrition constitutes a foundational child right under both national and international child protection frameworks.

On child protection from abuse and exploitation specifically, including implementation of the Protection of Children from Sexual Offences Act and child labour prevention, this Framework was unable to identify current, Odisha specific quantitative data, such as POCSO case registration and conviction rates or child labour prevalence estimates, within the sources reviewed for this report. This represents a specific and consequential data gap, given the elevated vulnerability of children in the state's tribal, remote, and disaster prone districts documented throughout this Framework, and this Framework recommends that the state's Department of Women and Child Development and the Odisha State Commission for Protection of Child Rights be consulted directly for future editions of this document to ensure this critical protection dimension receives the granular, evidence based treatment its significance warrants, rather than remaining unaddressed due to gaps in publicly available secondary source data.

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

The Madhu Babu Pension Yojana, Odisha's principal social security instrument for elderly citizens, was launched in January 2008 through the merger of the state's Revised Old Age Pension Rules of 1989 and the Orissa Disability Pension Rules of 1985, providing monthly financial assistance to elderly citizens, widows, and persons with disabilities, disbursed on the 15th of each month, designated as Jana Seva Diwas, directly into beneficiary bank accounts (HelpOdia, 2025; PM Ujjwala Yojana Info, 2025). Effective January 2025, the state government substantially increased the monthly pension amount from ₹1,500 to ₹3,500 for beneficiaries under both the Madhu Babu Pension Yojana and the National Social Assistance Programme, with the state allocating ₹7,600 crore to support these enhanced pension schemes, and with the higher allowance rolled out initially to beneficiaries aged 80 and above and those with disability of 80 percent or higher (Business Today, 2025; Outlook Money, 2025).

This pension enhancement, representing more than a doubling of the monthly benefit amount, constitutes one of the more significant social security policy changes documented across this Framework's welfare chapters, and reflects the state government's stated fulfillment of a manifesto commitment (Business Today, 2025). Prior scheme documentation indicates the pension had previously operated on a differentiated tier structure, with beneficiaries aged 60 to 79 receiving lower monthly amounts and those aged 80 and above receiving somewhat higher amounts, a structure that has evidently been substantially revised upward under the January 2025 enhancement, though this Framework notes some variation in reported implementation details across sources reviewed and recommends the state's Department of

Social Security and Empowerment of Persons with Disabilities' official portal be consulted for the precise current tier structure applicable to any given beneficiary category.

7.7 Persons with Disabilities: Rights, Accessibility and Empowerment

Persons with disabilities in Odisha are supported through a combination of the Madhu Babu Pension Yojana's disability pension component, documented in section 7.6, which extends coverage to persons with disabilities, leprosy patients, and AIDS patients alongside its core elderly and widow beneficiary categories, and dedicated disability welfare allocations announced alongside the January 2025 pension enhancement, including ₹302 crore specifically dedicated to the welfare of persons with disabilities and a further ₹10 crore allocated specifically to improve physical accessibility in government buildings and public infrastructure (Outlook Money, 2025). This accessibility specific allocation, while modest in absolute terms relative to the scale of the state's broader capital expenditure programme documented in Chapter 2, represents a notable and welcome recognition that disability inclusion requires dedicated built environment investment distinct from cash transfer support alone.

The state's disability welfare framework has also extended pension coverage to transgender individuals, with the Department of Social Security and Empowerment of Persons with Disabilities approving pension support for approximately 6,000 transgender beneficiaries, with monthly amounts ranging from ₹500 to ₹900 depending on age category under the scheme's earlier tier structure, representing a notable inclusion of a population category that continues to face significant social and economic marginalization even where covered nominally by broader welfare frameworks (PM Ujjwala Yojana Info, 2025).

7.8 Minority Communities: Development, Representation and Welfare

Odisha's religious minority communities, documented in their demographic dimension in Chapter 1, principally comprise the state's Christian population, at 2.77 percent of the state total per the 2011 Census, with a particularly significant presence among tribal communities in the southern and western districts, and the state's Muslim population, concentrated in pockets of the coastal and northern districts (CensusOfIndia.net, 2026). This Framework was unable to identify current, dedicated state level data on minority specific welfare scheme coverage, minority educational institution support, or minority representation in state employment and elected office within the sources reviewed for this report, representing a further specific data gap in the social justice architecture examined in this chapter.

Given the historical association between Christian missionary educational and health institutions and social infrastructure development in the state's tribal southern and western districts, noted in Chapter 1, and given the geographic overlap between areas of higher minority population concentration and the tribal deprivation patterns documented extensively throughout this Framework, this Framework recommends that future editions of this document draw specifically on the state Minorities and Backward Classes Welfare Department's own programme data to provide the same level of granular, quantified

assessment that has been possible for the Scheduled Caste, Scheduled Tribe, and gender equity dimensions of social justice policy documented in the preceding sections of this chapter.

7.9 Social Security and Beneficiary-Linked Welfare Architecture

Drawing together the evidence presented across this chapter, Odisha's social security architecture in the current policy period is anchored by four principal beneficiary linked cash transfer and pension instruments operating in parallel: the Subhadra Yojana for women aged 21 to 60, documented in section 7.4; the Madhu Babu Pension Yojana for the elderly, widows, and persons with disabilities, documented in sections 7.6 and 7.7; the Jashoda Scheme for orphaned children, documented in section 7.5; and, most recently, the Annapurna Yojana rice scheme, approved by the state Cabinet in April 2026 alongside the reservation policy enhancements documented in sections 7.1 through 7.3 (Careers360, 2026). Together with the state's continued implementation of the National Social Assistance Programme in coordination with these state specific schemes, this architecture represents a substantial and expanding direct benefit transfer infrastructure, all operating through Aadhaar linked, Direct Benefit Transfer disbursement mechanisms consistent with the broader digital governance infrastructure examined in Chapter 16.

This Framework's overall assessment of this welfare architecture is that it represents a genuinely substantial and, on the specific metrics of benefit amount and beneficiary coverage documented throughout this chapter, rapidly expanding social protection floor. Its principal limitation, consistent with the broader diagnostic pattern this Framework has identified across the education and health chapters, is the gap between the scale and generosity of state level average benefit design and the specific, granular reach of these programmes into the tribal, forest dependent, and remote districts identified in Chapter 1 as facing the state's most acute and persistent deprivation. This Framework recommends that the state's social security monitoring systems, going forward, report beneficiary coverage and benefit utilization data disaggregated by the same aspirational district and tribal concentration categories used elsewhere in this Framework, to allow direct assessment of whether this expanding welfare architecture is succeeding in closing, rather than merely coexisting alongside, the state's persistent geography of deprivation.

Chapter 8: Transport and Connectivity Infrastructure

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

Odisha's road network, as most recently reported in comprehensive state economic survey terms in 2017 to 18, comprised a total road length of approximately 25,640.1 kilometers spanning national highways, expressways, state highways, urban roads, district roads, and rural roads (Embibe, n.d.). This Framework flags this figure as dated and recommends the state's Works Department's more current 2025 to 26 network data be consulted for a precise present day total, while noting that the qualitative trajectory of investment since that baseline has been consistently expansionary, consistent with the capital expenditure priorities documented in Chapter 2.

National highway development in the state has proceeded through both dedicated national highway financing and the broader Bharatmala Pariyojana programme, with the 110.875 kilometer Bhubaneswar Bypass approved at a total cost of ₹8,308 crore as a flagship recent national highway project intended to improve connectivity around the capital region (Grokopedia, 2026). The Central Road and Infrastructure Fund allocated ₹1,000 crore in 2025 specifically for enhancing road infrastructure across Odisha, with a portion of this allocation directed toward strengthening the road networks serving Bhubaneswar and its surrounding urban agglomeration (Grokopedia, 2026).

Rural road connectivity has historically been a particular area of strength for Odisha under the Pradhan Mantri Gram Sadak Yojana, with the state recognized in past assessments as a best performing state in rural road development, having rendered all weather connectivity to 16,301 of 16,382 feasible habitations as of the early 2020s, representing coverage of well over 99 percent of eligible rural habitations (Construction World, 2022). Nationally, the PMGSY programme had sanctioned 8,38,611 kilometers of rural road length across 1.91 lakh roads and 12,146 bridges as of August 2025, with a specific sub-component, the Road Connectivity Project for Left Wing Extremism Affected Areas, covering 44 of the most severely affected districts across nine states including Odisha, explicitly linking rural road connectivity investment in the state's tribal interior districts to both security objectives and the broader socio-economic development goals this Framework has emphasized throughout its discussion of the tribal and forest dependent districts identified in Chapter 1 (Prokerala, 2025). Notable progress under this programme has been recorded specifically in the tribal dominated districts of Malkangiri, Kandhamal, Koraput, and Bargarh, directly advancing the last mile rural connectivity this Framework has identified as a precondition for closing the education, health, and market access gaps documented in Chapters 5, 6, and 18 (Construction World, 2022).

8.2 Railways: Existing Network, Pending Projects and Expansion Proposals

Odisha's rail network has expanded to exceed 3,243 kilometers, with passenger traffic on this network growing at a compound annual growth rate of 39.5 percent since 2021 to 22,

according to the state's Economic Survey 2025 to 26, a growth rate that reflects both genuine capacity and service frequency expansion and the low base effect of the pandemic disrupted 2021 to 22 starting point (Kalinga TV, 2026). The state is served by the East Coast Railway, headquartered in Bhubaneswar, which operates the core trunk network connecting the state's coastal corridor and linking Odisha to the broader eastern and southern Indian rail grid, a network whose continued capacity expansion underpins both the passenger connectivity growth documented above and the freight movement supporting the state's mineral and industrial export economy documented in Chapters 3 and 4.

Rail infrastructure investment in the state has increasingly been planned in direct coordination with the industrial corridor development documented in Chapter 3, with new and upgraded rail linkages forming a core component of the Odisha Economic Corridor's connectivity strategy between the Gopalpur-Bhubaneswar-Kalinganagar and Paradip-Kendrapada-Dhamra-Subarnarekha industrial nodes, ensuring that the state's expanding mineral processing and manufacturing capacity has adequate freight evacuation capacity to the port network documented in section 8.4.

8.3 Aviation: Airport Infrastructure and Air Connectivity

Odisha's aviation sector has recorded the fastest connectivity growth of any transport mode documented in this chapter, with air connectivity now extending to 30 cities from five operational airports, and passenger traffic growing at a 31 percent compound annual growth rate since 2021 to 22 (Kalinga TV, 2026). The state's principal aviation gateway, Biju Patnaik International Airport in Bhubaneswar, anchors this network, alongside the Jharsuguda airport serving the state's western industrial belt and additional airports supporting the state's tourism and regional connectivity needs.

This aviation expansion is being supported by the B-MAAN aviation infrastructure programme, carrying a planned investment exceeding ₹4,000 crore, intended to further strengthen the state's airport capacity and connectivity network (Odisha Economic Survey, 2026). This investment is directly relevant to the growth corridor strategy documented in Chapter 3, since Bhubaneswar's positioning as the technology and knowledge services anchor of the Bhubaneswar-Cuttack-Puri-Paradip Economic Region depends substantially on strong air connectivity to attract the services sector investment, including the Global Capability Centre development, documented in Chapters 3 and 4.

8.4 Ports, Inland Waterways and Logistics Hubs

Odisha's port infrastructure represents one of the state's most consequential economic assets, anchored by Paradip, the state's major port, which handled approximately 18 percent of India's total cargo volume in 2024 to 25, alongside the non-major ports of Dhamra and Gopalpur (Kalinga TV, 2026). Planned capacity expansion across the state's non-major port network targets 500 million metric tonnes per annum, a substantial scale up intended to accommodate the growing export volumes associated with the state's mineral processing and,

increasingly, green hydrogen and green ammonia production capacity documented in Chapter 4 (Kalinga TV, 2026).

Inland waterway development is progressing through National Waterway 5, planned along the Brahmani river system to improve cargo movement between Talcher, Kalinganagar, and Paradip, an initiative explicitly intended to reduce logistics costs for the energy and heavy industry cluster anchored by the National Aluminium Company, NTPC, and Mahanadi Coalfields in the Angul-Dhenkanal industrial belt documented in Chapter 3 (Kalinga TV, 2026). This inland waterway investment represents a genuine diversification of the state's freight logistics away from exclusive dependence on road and rail corridors, offering a lower cost bulk cargo movement option for the state's mineral and heavy industry exports.

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

Odisha's approach to urban mass transit, particularly in the capital region, has undergone a significant strategic reconsideration during the period covered by this Framework. The Bhubaneswar Metro, initially announced in April 2023 as a rapid transit system for the twin cities of Bhubaneswar and Cuttack, with a first proposed 26.024 kilometer, 20 station trunk route connecting Trisulia near Cuttack to Biju Patnaik International Airport, progressed through detailed project report preparation in partnership with the Delhi Metro Rail Corporation before the state government announced in 2026 that the single city metro corridor concept had been placed on hold (Wikipedia, Bhubaneswar Metro, 2026; Swarajya, 2026).

According to Housing and Urban Development Minister Krushna Chandra Mahapatra, the Bhubaneswar Metro Corporation remains operational and related procedural work continues, but the state government is now prioritizing a substantially larger regional mobility framework covering multiple cities rather than proceeding with the originally conceived single corridor project, a decision the minister attributed to lower than expected ridership estimates, technical concerns, and the need to align with the National Metro Rail Policy (Swarajya, 2026). The revised concept centers on integrating Bhubaneswar, Cuttack, and Puri through a tri-city transport model, with Paradip also under consideration as part of a future economic growth belt, envisioning a mega metropolitan region spanning nearly 7,000 square kilometers, closely aligned with the Bhubaneswar-Cuttack-Puri-Paradip Economic Region growth corridor strategy documented in Chapter 3 (Swarajya, 2026). To reassess the way forward, the state has formed an inter-departmental committee to examine feasibility, funding requirements, and integration with a wider transport network, alongside the preparation of a Sustainable Urban Mobility Transition Plan intended to build a future ready public transport system for the broader region (Swarajya, 2026).

This Framework views this strategic pivot, from a single city metro corridor to an integrated tri-city or four-city regional mobility framework, as a logically sound alignment of urban transit planning with the broader economic region development strategy documented in Chapter 3, provided the resulting Sustainable Urban Mobility Transition Plan translates into a concrete, funded implementation timeline rather than extending the project's multi-year

planning phase indefinitely. Separately, Bhubaneswar's bus rapid transit system, initially proposed under the Jawaharlal Nehru National Urban Renewal Mission with a planned two line, 66.32 kilometer network operated through the Bhubaneswar Municipal Corporation, requires updated status reporting given that the most recent detailed public documentation available flags itself as outdated, a further specific data gap this Framework recommends the state's Housing and Urban Development Department address as part of its broader Sustainable Urban Mobility Transition Plan communication (Wikipedia, Bhubaneswar BRTS, 2026).

8.6 Multimodal Logistics: Last-Mile Connectivity and Freight Corridors

Odisha's multimodal logistics strategy is being consolidated around the growth corridor and industrial cluster architecture documented in Chapter 3, integrating the state's road, rail, port, and, increasingly, inland waterway infrastructure into a coordinated freight movement system serving the Odisha Economic Corridor's Gopalpur-Bhubaneswar-Kalinganagar and Paradip-Kendrapada-Dhamra-Subarnarekha industrial nodes, and the Petroleum, Chemicals and Petrochemicals Investment Region at Paradip. The explicit linkage of National Waterway 5 development to the freight needs of the Angul-Dhenkanal energy and heavy industry cluster, documented in section 8.4, exemplifies this Framework's broader assessment that Odisha's infrastructure planning has moved toward a genuinely integrated, corridor based logistics strategy rather than treating road, rail, port, and waterway investment as separate, uncoordinated sectoral programmes.

The principal remaining gap in this multimodal logistics architecture, consistent with the broader spatial disparity theme running throughout this Framework, is the extent to which last mile connectivity investment reaches the state's tribal and forest dependent interior districts identified in Chapter 1, as distinct from the coastal and mineral belt corridors that have received the most concentrated recent infrastructure investment documented throughout this chapter. The PMGSY rural road connectivity gains documented in section 8.1, particularly in Malkangiri, Kandhamal, Koraput, and Bargarh, represent a genuine and important counterweight to this coastal-interior infrastructure investment gap, and this Framework recommends that the state's logistics and multimodal freight strategy explicitly extend its planning horizon to include agricultural and forest produce market linkage roads in these districts, not solely the industrial corridor freight infrastructure documented in the preceding sections, to ensure the state's celebrated infrastructure investment performance, documented throughout Chapters 2 and 3, translates into improved market access for the state's most economically marginalized rural and tribal producers as well as for its industrial exporters.

Chapter 9: Energy, Power and Renewable Transition

9.1 Power Generation: Installed Capacity, Mix and Dependence Profile

Odisha's installed power generation capacity stood at 8,998.15 megawatts as of September 2025, distributed across three ownership categories: central sector utilities contributing 2,181.88 megawatts, state sector utilities contributing 3,840.52 megawatts, and private sector generators contributing 2,975.75 megawatts (IBEF, 2026). By fuel source, thermal generation, principally coal fired given the state's substantial domestic coal reserves in the Talcher and Ib Valley coalfields, dominates the mix at 5,902.87 megawatts, followed by hydroelectric generation at 2,179.23 megawatts, anchored by the Hirakud Dam and Machkund and Balimela hydroelectric projects, and renewable energy at 916.05 megawatts (IBEF, 2026).

This capacity mix, heavily weighted toward thermal and hydro generation with renewables constituting just over 10 percent of installed capacity, reflects Odisha's historical position as an energy surplus state built substantially on its domestic coal endowment, feeding both the state's own substantial industrial electricity demand documented in Chapters 3 and 4 and, historically, power exports to neighboring states through the Eastern Regional Grid. The near even three way split of ownership across central, state, and private generation reflects the mixed public-private character of the state's power sector more broadly, a pattern that extends into the distribution segment discussed in section 9.2.

9.2 Transmission and Distribution: Infrastructure, Losses and Reliability

Odisha's power distribution sector has undergone a significant institutional transformation over the past two privatisation cycles, culminating in the current arrangement under which four distribution companies, now branded TP Central Odisha Distribution Limited, TP Western Odisha Distribution Limited, TP Northern Odisha Distribution Limited, and TP Southern Odisha Distribution Limited, operate as joint ventures between Tata Power, holding 51 percent equity and management control, and the state government through Gridco, holding the remaining 49 percent stake, following Tata Power's selection as the state's private distribution partner after the Odisha Electricity Regulatory Commission revoked the licenses of the previous private distribution operators in the first privatisation round and subsequently re-auctioned the utilities in 2017 (CSEP, 2025; Wikipedia, TPCODL, 2026).

Under this arrangement, Tata Power committed to a total capital expenditure of ₹5,640 crore across all four distribution companies over the first five years of the concession, a commitment that, as of the 2024 to 25 financial year, independent assessment found to be largely on track (CSEP, 2025). This capital investment has translated into measurable operational improvement: aggregate technical and commercial losses across the four Odisha distribution companies improved to 17.7 percent in financial year 2025 from 18.7 percent in financial year 2024, a meaningful year on year reduction, though still well above the sub-10 percent loss levels considered internationally competitive for a well functioning distribution

utility (T&D India, 2025). This improvement has been supported by substantial smart infrastructure deployment, with Tata Power installing 13.30 lakh smart meters across its four Odisha distribution companies as of March 31, 2025, alongside the automation of 863 substations, with the pace of both smart meter and substation automation deployment accelerating sharply during the fourth quarter of financial year 2025 (T&D India, 2025). Odisha represents Tata Power's largest distribution business by consumer count nationally, serving 9.74 million consumers across the state, more than either its Mumbai or Delhi distribution operations (T&D India, 2025).

This Framework notes, consistent with independent policy analysis of the privatisation programme, that while privatisation has demonstrably driven efficiency improvements in loss reduction and infrastructure modernization, it has not on its own resolved the underlying financial challenges facing the broader power sector, and that continued regulatory attention to protecting small and vulnerable consumers from cost pass through as the sector pursues full cost recovery through tariffs remains an important safeguard alongside the efficiency gains documented above (CSEP, 2025).

9.3 Rural and Household Electrification: Coverage and Quality

Odisha, in common with the broader national trajectory under the Saubhagya household electrification scheme and preceding rural electrification programmes, has achieved near universal nominal household electrification coverage over the past decade. This Framework was unable to identify a current, precisely dated state specific household electrification percentage distinct from the well documented national near saturation figures in the sources reviewed for this report, and recommends that the state's Energy Department's most current household connection data be consulted for a precise, current figure, particularly disaggregated by the tribal and remote districts identified throughout Chapter 1, where connection coverage, even where nominally achieved, may not translate into the reliable, adequate hours of daily supply that constitutes genuine electrification quality rather than nominal connection alone.

The distribution infrastructure investment documented in section 9.2, including smart meter and substation automation deployment, is directly relevant to this electrification quality dimension, since improved distribution infrastructure supports both reduced outage frequency and more accurate billing, both of which affect the practical reliability experienced by rural and remote district households distinct from the simple binary measure of grid connection.

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

Odisha's renewable energy capacity, at 916.05 megawatts of installed capacity as documented in section 9.1, remains modest relative to both the state's overall generation mix and its underlying renewable resource potential, positioning renewable energy expansion as a significant growth opportunity within the state's broader energy transition strategy. The state's principal renewable policy mechanism currently active is its implementation of the central PM-KUSUM scheme, under which the Energy Department designated all four distribution

companies as implementing agencies for Component-A of the scheme, covering solar power plant development on barren and agricultural land in partnership with farmers and solar power developers (OERC, 2025).

Under this scheme, the Odisha Electricity Regulatory Commission approved a tariff of ₹4.40 per kilowatt hour for solar power procured from PM-KUSUM Component-A plants commissioned by the scheme's deadline, a tariff the Commission itself noted was the highest among comparable states as discovered through the tariff based competitive bidding process, and notably higher than Gridco's average power purchase cost and average renewable energy purchase cost more broadly, with the Commission nonetheless approving procurement at this rate specifically to discharge the state's Distributed Renewable Energy purchase obligation and to overcome the scheme's earlier slow uptake in the state (OERC, 2025). The Commission's own order noted its expectation that increasing capacity under the scheme would allow tariffs to decline through economies of scale over time (OERC, 2025).

Beyond distributed solar, Odisha's broader renewable potential, in utility scale solar given the state's tropical solar irradiance, coastal and offshore wind given its long Bay of Bengal coastline, and continued hydro potential in its western hill districts, remains substantially underexploited relative to the scale of the state's overall energy transition ambition implied by the green hydrogen and green ammonia industrial cluster development documented in Chapter 4, where the Tata Steel Special Economic Zone near Gopalpur Port and associated developers including ACME Clean Energy, Avaada Green Hydrogen, Ocior Energy, and Torrent Green Hydrogen will themselves require very substantial dedicated renewable generation capacity to supply the electrolysis processes underpinning green hydrogen production. This Framework identifies the alignment between the state's renewable generation capacity expansion plans and the electricity demand implied by its own green hydrogen industrial strategy as a critical planning linkage that the state's Energy Department and industrial planning authorities should coordinate explicitly, to avoid a scenario in which green hydrogen production capacity is built without commensurate dedicated renewable generation, which would undermine the environmental rationale for the green hydrogen investment in the first place.

9.5 Energy Efficiency, Conservation and Demand-Side Management

Odisha's demand side management strategy has incorporated Time of Day tariff differentiation, with the Odisha Electricity Regulatory Commission's distribution company tariff order for financial year 2025 to 26 introducing Time of Day provisions effective from July 1, 2025, distinguishing Normal Hours, Solar Hours, and Peak Hours pricing for industrial consumers, with overdrawal penalties applying to consumption beyond contracted demand during peak hours, and specific incentive structures during solar hours intended to encourage demand shifting toward periods of high solar generation availability (OERC, 2025).

This Time of Day tariff mechanism represents a genuine, if still relatively modest, demand side management tool, and this Framework notes that its effectiveness will depend

substantially on the price differential between peak and solar hour tariffs being large enough to meaningfully influence large industrial consumer behavior, given the energy intensive nature of the state's core metallurgical and mineral processing industrial base documented in Chapter 4, for which electricity costs represent a material share of overall production costs and for which demand flexibility may be constrained by continuous process requirements in several major industrial categories.

9.6 State Electricity Regulatory Framework and Tariff Policy

The Odisha Electricity Regulatory Commission serves as the state's independent power sector regulator, established under the Odisha Electricity Reform Act, 1995 and operating under the subsequent national Electricity Act, 2003, with statutory responsibility for approving the Aggregate Revenue Requirement, Wheeling Tariff, and Retail Supply Tariff applications of the state's four distribution companies, alongside broader responsibility for renewable purchase obligation compliance, tariff policy including the Time of Day mechanism documented in section 9.5, and oversight of the vesting order commitments, including the AT&C loss reduction targets and associated financial penalties for underperformance, that formed part of the original 2020 to 2021 privatisation transaction structure documented in section 9.2 (OERC, 2025; MIT Energy Initiative, 2022).

The Commission's tariff determination framework incorporates specific penalty mechanisms tied to the distribution companies' committed AT&C loss reduction trajectory, with penalties for upward deviation from committed targets specified in the original vesting orders at rates ranging from 4 million US dollars per percentage point of deviation for TPSODL up to 6.5 million US dollars per percentage point for TPCODL and TPWODL, a regulatory design intended to maintain strong private operator incentives for continued loss reduction beyond the initial improvement documented in section 9.2 (MIT Energy Initiative, 2022). This Framework assesses this regulatory and tariff architecture as a reasonably robust institutional foundation for the state's continued power sector reform, though it recommends the Commission's future tariff orders give increasing explicit weight to renewable energy procurement cost trajectories and green hydrogen adjacent demand growth, given the scale of the state's stated green industrial ambitions documented in Chapters 3 and 4, to ensure the state's regulatory framework evolves in step with, rather than lagging behind, the underlying industrial and energy transition strategy it is intended to support.

Chapter 10: Water, Sanitation and Solid Waste Management

10.1 Drinking Water Supply: Coverage, Quality and Infrastructure

Odisha's rural drinking water infrastructure has advanced substantially under the Jal Jeevan Mission, with the state extending Har Ghar Jal, functional household tap water connections, to 16,724 villages as of mid-2026, of which 12,484 villages had received full certification, with the remaining certifications expected to be completed by October 2026 (Odisha.plus, 2026). Odisha's financial implementation performance under the mission has been notably strong, with the state reporting 100 percent utilization of its allocated Jal Jeevan Mission funds in financial year 2024 to 25, one of only two states nationally, alongside West Bengal, to achieve full central fund utilization, and receiving a further ₹154 crore under the extended Jal Jeevan Mission 2.0 framework in April 2026 (JaBaSu, 2026).

Despite this strong aggregate implementation and financial utilization performance, significant quality gaps persist specifically in the state's tribal districts, consistent with the broader spatial disparity pattern documented throughout this Framework. Habitations in Koraput, Malkangiri, Rayagada, and Kandhamal districts have among the lowest functional household tap connection functionality rates in the state, meaning that connections exist on paper but water does not flow reliably through them, a distinction between nominal and functional coverage this Framework treats as analytically critical rather than a minor implementation detail (JaBaSu, 2026). Fluoride affected groundwater areas in Nayagarh, Jajpur, and Ganjam districts require dedicated source treatment infrastructure rather than simple piped delivery, and existing treatment plants in these areas have been reported as under-maintained (JaBaSu, 2026). Particularly Vulnerable Tribal Group habitations, covered under the central PM-JANMAN initiative, are identified as the last mile priority under Jal Jeevan Mission 2.0, with many such habitations currently lacking any piped water infrastructure whatsoever (JaBaSu, 2026). This Framework identifies closing this specific functional, rather than merely nominal, coverage gap in the state's tribal and PVTG habitations as the single most important remaining priority for the state's rural drinking water programme, given the direct linkage between reliable water access and both the maternal and child health outcomes documented in Chapter 6 and the education outcomes, particularly for girls whose school attendance is disproportionately affected by water collection burdens, documented in Chapter 5.

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

Odisha's irrigation infrastructure, documented in its agricultural productivity dimension in Chapter 3, has expanded to cover an irrigation potential of 74.2 lakh hectares, with cropping intensity improving to 165 percent in 2024 to 25 from 158 percent in 2020 to 21, indicating a genuine and measurable improvement in the state's ability to support multiple cropping cycles on irrigated land (Kalinga TV, 2026). This irrigation expansion, anchored substantially by the Hirakud Dam system and the state's broader command area network across the

Mahanadi, Brahmani, and Baitarani river basins documented in Chapter 1, underpins both the record foodgrain production levels documented in Chapter 3 and the state's continued food security position.

The Mahanadi river water sharing dispute with Chhattisgarh, documented in Chapter 4, carries direct and material implications for this irrigation infrastructure, given that the Hirakud Dam's irrigation, flood control, and hydroelectric functions depend on adequate upstream flow from the shared Mahanadi basin. The movement toward a negotiated resolution of this dispute through the joint technical committee process documented in Chapter 4 is, from this chapter's water resource management perspective, a development of considerable long term significance for the sustainability of the state's irrigation expansion trajectory, and this Framework reiterates its recommendation that the state's water resources planning treat the dispute's resolution as a priority input into its medium term irrigation and cropping intensity targets.

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

Odisha has achieved strong performance in the post-Open Defecation Free sustainability phase of the national sanitation programme, with over 96 percent of the state's villages declared Open Defecation Free Plus Model villages under Swachh Bharat Mission Grameen Phase II, a designation that requires not merely the absence of open defecation but demonstrated arrangements for solid and liquid waste management and visual cleanliness, placing the state's performance on this metric above the corresponding national figure of approximately 83 percent of villages achieving ODF Plus status as of the national year end review (Pragativadi, 2026; ESG Times, 2026). The state government's programme review indicates that attention is now shifting specifically toward scientific solid and liquid waste management as the next phase of the sanitation programme's implementation, with geo-tagging of sanitation assets, a project monitoring module, and a Command and Control Centre scheduled for completion by December 2026 (Pragativadi, 2026).

This strong rural sanitation performance stands in useful contrast to some of the education, health, and water quality gaps documented elsewhere in this Framework's tribal and remote district analysis, and this Framework recommends the specific institutional and implementation factors that have enabled Odisha's above average ODF Plus achievement rate be examined for potential replication in the state's other lagging rural service delivery domains, particularly given that the underlying implementation geography, rural, dispersed, and encompassing the same tribal district challenges documented throughout this Framework, is broadly comparable across these different rural service delivery programmes.

10.4 Solid Waste Management: Municipal, Biomedical and Hazardous Waste

Odisha's urban solid waste management performance has shown a notable trajectory of decline followed by significant recent recovery. Bhubaneswar, despite winning India's Smart City Challenge as the top ranked city among 100 competing cities nationally, saw its Swachh Survekshan cleanliness ranking fall sharply from 94th position in 2017 to 245th position in

2018 among over 4,000 cities surveyed, a decline attributed in academic assessment to gaps between smart city branding and the underlying solid waste management infrastructure and citizen behavior change required to sustain cleanliness rankings (Sahoo, 2025). More recent Swachh Survekshan cycles, however, have documented a marked improvement, with the 2024 to 25 survey specifically noting Odisha's rise, citing significant improvement by Bhubaneswar, Rourkela, and Cuttack (Universal Institutions, 2025). In a related national cleanliness recognition programme, the Swachh Vayu Survekshan Awards 2025, assessing urban air quality management, Angul secured third position nationally in the below 3 lakh population city category (PW OnlyIAS, 2025).

The Swachh Survekshan evaluation framework itself has evolved substantially for its 2025 to 26 edition, with the Ministry of Housing and Urban Affairs pivoting significant additional weight toward wastewater management and sewage treatment metrics, moving the national benchmark from simple Open Defecation Free status toward a more comprehensive Water Plus urban resilience standard that rewards cities for underground sewer network coverage extending to the entirety of urban wards and for demonstrated treated wastewater reuse (Water Today, 2026). This shift in the national evaluation framework carries direct implications for Odisha's urban centers, given the specific sewerage infrastructure gaps documented in section 10.5, and this Framework recommends the state's Housing and Urban Development Department treat this evolving evaluation framework as an explicit driver of its urban infrastructure investment prioritization over the coming Swachh Survekshan cycles, building on the positive momentum documented above for Bhubaneswar, Rourkela, and Cuttack.

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

Sewerage and liquid waste treatment infrastructure represents a documented and significant gap within Odisha's broader urban sanitation achievement, particularly relative to the strong performance recorded on solid waste and open defecation free status documented in sections 10.3 and 10.4. City level sanitation assessment of Bhubaneswar found the capital generates approximately 85 million liters of sewage per day, with the city's sole sewage treatment facility at Madgajpur, designed with a treatment capacity of 33 million liters per day, having been defunct for an extended period, leaving the substantial majority of the city's daily sewage generation without adequate treatment capacity, a gap the city has since begun addressing through construction of a new facility designed for a 90 million liter per day capacity, sized to accommodate the sewage volume the city is projected to generate by 2045 (NIUA, n.d.). At the time of the underlying city sanitation study, the Cuttack Municipal Corporation's fecal sludge management capacity was similarly constrained, operating with just two cesspool vehicles, only one of which was functional, against demand the study characterized as substantially exceeding this capacity, though the corporation had by that point taken delivery of four additional cesspool vehicles from the state Housing and Urban Development Department, to be operated through private contractors (NIUA, n.d.).

At the state policy level, the Odisha Water Supply and Sewerage Board has pursued fecal sludge and septage management as a recognized key intervention within the Odisha Urban Sanitation Policy and the associated Odisha Urban Sanitation Strategy, explicitly aligning the state's urban sanitation approach with the United Nations Sustainable Development Goals and the national Swachh Bharat Mission framework, and undertaking supporting technical analysis, including a geographic information system based river basin pollution abatement assessment using the town of Balasore as a case study for river adjacent urban sewage impact (OWSSB, n.d.). This Framework assesses this policy and institutional framework as a reasonably sound foundation, but notes that the underlying infrastructure gap documented above, a major state capital operating for an extended period without functional centralized sewage treatment capacity, represents a more severe and more immediately consequential urban infrastructure deficit than the state's generally positive Swachh Survekshan momentum documented in section 10.4 might suggest in isolation. Given the Ministry of Housing and Urban Affairs' explicit pivot toward wastewater and sewage treatment metrics in the Swachh Survekshan 2025 to 26 evaluation cycle documented above, this Framework recommends that completion and full commissioning of the new Bhubaneswar sewage treatment facility, and comparable capacity expansion in Cuttack and the state's other major urban centers, be treated as an urgent, rather than a routine, infrastructure priority within the state's broader urban development investment programme discussed further in Chapter 11.

Chapter 11: Urban Development, Housing and Smart Cities

11.1 Urbanisation Trends and Urban Governance Architecture

Odisha's urbanization level remains comparatively low relative to national trends, with approximately 19 percent of the state's population residing in urban areas as of the most recent NITI Aayog summary assessment, a figure documented in its demographic context in Chapter 1 and one that continues to position Odisha as a predominantly rural state even as its urban centers, particularly the Bhubaneswar-Cuttack-Puri-Paradip corridor documented in Chapter 3, drive an increasing share of the state's economic growth (NITI Aayog, 2025).

In recognition of this growing urban economic significance, Chief Minister Mohan Charan Majhi announced the launch of the Chief Minister Smart City Mission while tabling the state's 2026 to 27 budget, allocating ₹100 crore for the mission's initial year, alongside a broader commitment of ₹10,738 crore for Urban Development schemes and projects overall, a 7.25 percent increase over the preceding year's allocation (OMMCOM News, 2026). The new mission, operating under the Mukhyamantri Sahari Bikash Yojana umbrella, is explicitly designed to drive convergence across the state's various urban infrastructure schemes and to ensure provision of essential civic facilities, positioning Odisha's cities within the state's broader Viksit Odisha for Viksit Bharat vision framework, aligned with the Bhubaneswar-Cuttack-Puri-Paradip Economic Region growth corridor strategy documented in Chapter 3 (OMMCOM News, 2026).

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

Odisha's urban local bodies, comprising municipal corporations, municipalities, and notified area councils across the state's urban centers, receive a comparatively modest direct transfer allocation within the state's overall expenditure architecture, with transfers to local bodies accounting for approximately 3 percent of total state budget outgo as documented in Chapter 2's analysis of the state's expenditure composition (Odisha.plus, 2025). This Framework was unable to identify granular, current data on individual urban local body own revenue generation, property tax collection efficiency, or fiscal autonomy indicators comparable to the depth of fiscal analysis available for the state government itself in Chapter 2, representing a specific data gap in this Framework's urban governance assessment.

Given the scale of the urban infrastructure investment programme documented throughout this chapter, including the Chief Minister Smart City Mission and the housing and sewerage investments discussed in sections 11.3 and 10.5, this Framework recommends that future editions of this document draw on the state's Housing and Urban Development Department's own municipal finance data to assess whether urban local bodies possess adequate own revenue capacity and fiscal autonomy to sustain the operations and maintenance obligations that will follow from this capital investment wave, a concern directly analogous to the operations and maintenance sustainability challenge already documented for rural water

infrastructure in Chapter 10's discussion of the transition of Jal Jeevan Mission schemes to Gram Panchayat and Village Water and Sanitation Committee management.

11.3 Housing: Demand Assessment, Affordability and Flagship Schemes

Odisha's urban housing strategy is anchored by the central Pradhan Mantri Awas Yojana Urban 2.0 scheme, complemented by a distinctive state level initiative, PMAY-Urban BANDHU, introduced specifically to support Economically Weaker Section beneficiaries and bridge funding gaps that the central scheme alone does not fully address (OMMCOM News, 2026). The state has committed to earmark approximately 50 acres of land annually for affordable housing development under the Affordable Housing in Partnership vertical of PMAY-Urban 2.0, with explicit focus on eligible landless beneficiaries (OMMCOM News, 2026).

Beyond this central scheme convergence, the state has launched its own Odisha Affordable Housing Scheme, with construction of low cost homes in Bhubaneswar commencing as of August 2025 under the leadership of Housing and Urban Development Minister Krushna Chandra Mahapatra, targeting homes priced between ₹15 lakh and ₹50 lakh, executed through a public-private partnership model with the first batch of homes in Bhubaneswar expected to be handed over by December 2025 (Ambak, 2025). The scheme has been designed with explicit expansion plans for other urban local bodies, including Rourkela and Sambalpur, with these secondary city rollouts expected to progress through 2026, and incorporates reservation and priority provisions for Scheduled Caste and Scheduled Tribe beneficiaries, women headed households, and disaster affected families, consistent with the broader social inclusion priorities documented in Chapter 7 (Ambak, 2025).

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

Bhubaneswar's position within the national Smart Cities Mission has been distinguished from the outset, having won the top spot in India's Smart City Challenge among 100 competing cities nationally at the mission's launch, a recognition documented in academic assessment of the city's subsequent smart city implementation trajectory (Sahoo, 2025). As documented in Chapter 10, this early smart city recognition did not initially translate into commensurate solid waste management and cleanliness ranking performance, with the city's Swachh Survekshan ranking falling sharply in the mission's early years before recovering more recently, illustrating that smart city branding and infrastructure investment alone do not automatically produce improved basic service delivery outcomes without sustained parallel investment in operational capacity.

The state's newly launched Chief Minister Smart City Mission, documented in section 11.1, represents an explicit state level extension of the smart city concept beyond Bhubaneswar to the broader network of Odisha's major urban centers, addressing a structural limitation of the original central Smart Cities Mission, which in Odisha's case concentrated its most intensive investment and institutional attention on Bhubaneswar and, to a lesser extent, Rourkela, while leaving the state's numerous smaller and mid-sized urban centers without comparable

dedicated mission architecture. This Framework assesses this state level mission extension positively, given the broader spatial equity concerns this Framework has raised throughout its infrastructure chapters regarding the concentration of investment in the coastal corridor relative to the state's wider urban network.

11.5 Heritage Cities, Cultural Landscapes and Urban Tourism

Odisha's urban heritage assets, documented in their cultural dimension in Chapter 1, center substantially on Puri, home to the Jagannath Temple and its associated Rath Yatra festival, one of India's most significant religious pilgrimage destinations, and on Konark, site of the UNESCO World Heritage listed Sun Temple, both of which anchor the state's religious and heritage tourism economy examined in fuller detail in Chapter 19. The urban planning and infrastructure challenge these heritage cities present is distinctive from the state's broader urban development priorities documented elsewhere in this chapter, requiring a management approach that balances substantial and growing pilgrim and tourist visitor flows against the preservation imperatives attached to both built heritage and the specific urban character of these historic temple towns.

This Framework identifies heritage city specific urban planning, encompassing traffic management, pilgrim facility infrastructure, heritage building preservation regulation, and tourism revenue capture for local urban service delivery, as a distinct sub-category of urban development requiring dedicated institutional attention separate from the state's mainstream Smart City and AMRUT programming discussed in section 11.4, given the fundamentally different infrastructure and land use pressures these heritage centers face relative to the state's industrial and administrative urban centers.

11.6 Urban Poverty, Slum Rehabilitation and In-Situ Upgradation

Odisha's approach to urban poverty and slum rehabilitation has been shaped decisively by the Jaga Mission, or Odisha Liveable Habitat Mission, a programme that represents one of the more internationally recognized urban policy innovations to emerge from any Indian state in recent years. Launched on August 8, 2017, when the state Cabinet approved legislation entitling slum dwellers to land rights alongside housing, basic services, and social infrastructure improvement, the Jaga Mission departed fundamentally from the eviction based approach to slum clearance historically pursued in many Indian cities, instead offering land, or jaga, titles to residents of nearly 3,000 slums across the state's cities, including in prime, high value areas of the capital Bhubaneswar (Question of Cities, 2023; Metropolis, 2023).

The scale of the programme's target population is substantial: an estimated 1.7 million people, described in case study documentation as approximately a quarter of the state's urban population, live in the urban slums the mission addresses across all 2,919 slums identified in 114 cities statewide (Metropolis, 2023). Between September 2020 and May 2022, the mission upgraded 585 slums across 30 cities, with eight cities declared entirely slum free during this period, alongside the mission's core physical infrastructure upgrading work covering roads, drains, electricity, streetlights, sanitation, and water supply, and the establishment of

community gathering spaces termed Parichay centers (Metropolis, 2023; Question of Cities, 2023). The mission's approach, integrating slum areas into formal city planning through land titling rather than treating them as illegal encroachments subject to clearance, earned international recognition, receiving the Bronze World Habitat Award in 2019 for its land rights work and a further Bronze category recognition in the 2023 World Habitat Awards (Metropolis, 2023).

This Framework assesses the Jaga Mission as a genuinely distinctive and largely successful policy innovation, one that stands in useful contrast to the more conventional infrastructure investment programmes documented elsewhere in this chapter, given its explicit focus on tenure security as the foundational precondition for durable poverty reduction among the urban poor, an approach consistent with well established international urban development scholarship on the centrality of land tenure security to household investment in housing quality and livelihood stability. This Framework notes, drawing on field level implementation critique documented in independent case study reporting, that specific implementation gaps remain, including slums not captured in official counts, particularly in Bhubaneswar where community organizers have identified additional unlisted slums beyond the official count of 436, and households excluded from beneficiary lists despite holding standard identity and residency documentation such as ration cards, alongside continued community demand for a dedicated slum welfare board to provide institutional continuity beyond the mission's current implementation structure (Question of Cities, 2023). This Framework recommends that the state's continued Jaga Mission rollout, and its extension to the five municipal corporations, Sambalpur, Rourkela, Bhubaneswar, Cuttack, and Berhampur, that community groups have identified as having been initially left out of the programme's scope, prioritize resolving these specific documentation and coverage gaps as it moves toward completing statewide implementation.

Chapter 12: Rural Development and Decentralised Governance

12.1 Panchayati Raj Institutions: Structure, Devolution and Capacity

Odisha's rural governance architecture operates through the standard three tier Panchayati Raj structure mandated under the 73rd Constitutional Amendment, comprising Zilla Parishads at the district level, Panchayat Samitis at the block level, and Gram Panchayats at the village level, with the state's 314 community development blocks, documented in their administrative context in Chapter 1, serving as the intermediate tier through which the substantial majority of rural development scheme implementation, including the programmes documented throughout this chapter, is delivered (Government of Odisha, 2026).

Fiscal devolution to these local governance institutions remains comparatively modest within the state's overall expenditure architecture, with direct transfers to local bodies, encompassing both urban and rural local governments, accounting for approximately 3 percent of total state budget outgo, as documented in Chapter 2's analysis of the state's expenditure composition (Odisha.plus, 2025). This Framework notes that this fiscal devolution share, while consistent with patterns observed across many Indian states, sits in some tension with the genuinely substantial functional devolution the state has pursued through Gram Sabha centered planning mechanisms, documented in section 12.2, raising a structural question this Framework recommends the state's Panchayati Raj and Drinking Water Department address directly: whether Gram Panchayats and Gram Sabhas possess adequate untied own resource capacity to act on the bottom up planning authority increasingly vested in them, or whether this planning authority remains substantially constrained by continued dependence on scheme specific, centrally and state directed fund flows.

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

Odisha's rural employment guarantee framework is undergoing a significant structural transition, with the enactment of the Viksit Bharat Guarantee for Rozgar and Ajeevika Mission, Gramin, Act, 2025, at the national level, representing what analysts have characterized as a paradigm shift in India's rural employment guarantee architecture (Drishti IAS, 2026). The new Act expands the statutory employment guarantee from the 100 days provided under the preceding Mahatma Gandhi National Rural Employment Guarantee Act to 125 days, while embedding Gram Sabha led, bottom up planning through Viksit Gram Panchayat Plans, which are subsequently aggregated into a Viksit Bharat National Rural Infrastructure Stack consolidating Gram Panchayat proposals at the district and state level (Drishti IAS, 2026). This transition is directly relevant to the Panchayati Raj devolution question raised in section 12.1, since the Viksit Gram Panchayat Plan mechanism represents a genuine expansion of Gram Panchayat level planning authority over the rural infrastructure and livelihood works this employment guarantee framework finances.

Under the preceding Mahatma Gandhi National Rural Employment Guarantee Act framework, which continues to underpin the state's rural employment implementation as the transition to the new Act proceeds, Odisha's prevailing wage rate stood at ₹237 per day for the 2025 to 26 period, with the state recording over 1.4 crore active workers, positioning Odisha among the states with the highest programme participation nationally, and with women constituting more than 40 percent of the state's programme workforce, with Scheduled Caste and Scheduled Tribe households receiving priority access and wage payments disbursed through Direct Benefit Transfer within 15 days of work completion (SchemesInIndia, 2026). This wage rate and participation profile is consistent with the broader labour market patterns documented in Chapter 3, where agriculture, forestry, and fishing continue to employ close to half the state's workforce, positioning rural employment guarantee programming as a critical income smoothing mechanism for a labour force still heavily concentrated in seasonal primary sector activity.

12.3 Rural Housing: PMAY-Gramin and State Schemes

Rural housing provision in Odisha operates through the central Pradhan Mantri Awas Yojana Gramin scheme, providing eligible rural families with ₹1.20 lakh in financial assistance for pucca house construction in plain areas and ₹1.30 lakh in hilly areas, with an additional ₹12,000 provided for toilet construction under convergence with the Swachh Bharat Mission, beneficiary selection conducted using Socio Economic Caste Census data, and funds released in stages directly into beneficiary bank accounts, with priority given to Scheduled Caste and Scheduled Tribe households, women headed families, persons with disabilities, and landless labourers (Bajaj Finserv, 2026; SchemesInIndia, 2026).

The state has complemented this central scheme with its own dedicated rural housing provision for households falling outside PMAY-Gramin's coverage, offering a free pucca house valued at ₹1.30 lakh specifically for Below Poverty Line families not covered under the central scheme, including households affected by cyclone and flood events, a state specific provision this Framework identifies as a particularly important safety net mechanism given Odisha's recurring cyclone exposure documented in Chapter 1 and examined further in Chapter 14, ensuring that households displaced or rendered homeless by climatic disaster events have a dedicated housing recovery pathway distinct from the standard PMAY-Gramin beneficiary selection process (SchemesInIndia, 2026).

12.4 Livelihood Promotion: SHGs, Cooperatives and Rural Enterprise

Odisha's rural livelihood promotion strategy is anchored by Mission Shakti, a flagship women's self help group programme launched by then Chief Minister Naveen Patnaik on March 8, 2001, coinciding with International Women's Day, aimed at the holistic empowerment of women through the formation and strengthening of Women's Self Help Groups (Testbook, 2026). The programme's growth trajectory over the subsequent two decades has been substantial, expanding from 41,475 Women's Self Help Groups in 2001 to 6,02,013 groups by 2020 to 21, a fourteenfold increase, collectively supporting an

estimated 70 lakh women across the state, a scale that has established Mission Shakti as one of the most widely studied and internationally referenced women's self help group programmes in India (IIPA, 2025).

The programme's institutional architecture includes the Odisha Rural Development and Marketing Society, a self governing apex body operating under the state's Panchayati Raj Department, tasked with facilitating market linkage and livelihood improvement for the state's rural poor, including through the sharpening of production skills among rural producers and the widening of market access for Women's Self Help Group products through dedicated marketing platforms including Pallishree Melas and the Sisir Saras exhibition, connecting rural producer output to both domestic and international markets (IIPA, n.d.). The current phase of the programme, as reflected in 2026 scheme documentation, provides participating self help groups with microfinance loans ranging from ₹1 lakh to ₹5 lakh alongside a non-repayable enterprise grant of ₹25,000, skill training, and market linkage support, while a complementary Samrudhi Women Self Help Group Scheme offers ₹1 lakh in interest free seed capital alongside a further ₹3 lakh bank loan at zero interest (SchemesInIndia, 2026).

This Framework identifies Mission Shakti as among the most significant and best evidenced rural livelihood and gender empowerment interventions documented anywhere in this Framework, given both its exceptional scale, reaching an estimated 70 lakh women, and its two decade operational track record, a maturity that distinguishes it from several of the more recently launched welfare schemes documented in Chapter 7. This Framework recommends that the state's continued Subhadra Yojana rollout, documented in Chapter 7, and its broader financial inclusion strategy be deliberately integrated with the Mission Shakti self help group network's existing financial literacy and enterprise development infrastructure, given the substantial institutional overlap between the two programmes' target beneficiary population and the efficiency gains likely available from coordinating rather than parallel-tracking these two major women focused welfare and livelihood architectures.

12.5 Rural Infrastructure: PMGSY, Connectivity and Market Linkages

Rural infrastructure connectivity, examined in its road network dimension in Chapter 8, remains foundational to the livelihood promotion and market linkage objectives documented in section 12.4, since the Odisha Rural Development and Marketing Society's market linkage function for Mission Shakti self help group products depends directly on adequate road connectivity between rural production centers and the market platforms, including Pallishree Melas and Sisir Saras, through which these products reach buyers. The Pradhan Mantri Gram Sadak Yojana rural road connectivity achievements documented in Chapter 8, including near complete all weather connectivity to eligible rural habitations and targeted connectivity investment in tribal dominated districts including Malkangiri, Kandhamal, Koraput, and Bargarh, therefore carry direct relevance to this chapter's rural livelihood and market access objectives, reinforcing this Framework's broader assessment that Odisha's rural development

strategy functions most effectively where infrastructure, livelihood, and social protection investments are planned in coordination rather than as separate sectoral silos.

12.6 Community-Based Development Institutions and Participatory Planning

Odisha's approach to community based rural development planning has been substantially reshaped by the Gram Sabha centered planning architecture introduced under the Viksit Bharat Guarantee for Rozgar and Aajeevika Mission, Gramin, Act, 2025, documented in section 12.2, which formalizes Gram Sabha authority over the development of Viksit Gram Panchayat Plans, subsequently aggregated through the Viksit Bharat National Rural Infrastructure Stack into district and state level infrastructure planning (Drishti IAS, 2026). This represents a structurally significant expansion of grassroots participatory planning authority, positioning the Gram Sabha, rather than exclusively line department or district administration planning processes, as a formal input into the state's rural infrastructure investment prioritization.

This formal Gram Sabha planning mechanism operates alongside the state's longer standing community institution architecture built around Mission Shakti's Women's Self Help Group federations and the Odisha Rural Development and Marketing Society, documented in section 12.4, together constituting a genuinely dense network of community based development institutions extending from the household and self help group level, through Gram Panchayat planning, up to district and state level infrastructure and livelihood programme design. This Framework assesses this institutional density positively, while noting, consistent with the fiscal devolution concern raised in section 12.1, that the ultimate effectiveness of this participatory planning architecture will depend on whether the resource allocation authority accompanying it keeps pace with the formal planning authority now vested in these community institutions, a linkage this Framework recommends the state's Panchayati Raj Department track explicitly as the Viksit Gram Panchayat Plan mechanism matures over the coming implementation cycles.

Chapter 13: Environment and Natural Resource Governance

13.1 Forest Cover, Biodiversity and Wildlife Conservation

Odisha's forest resource base has shown a positive long term trajectory even as it faces mounting pressure from the industrial expansion documented throughout this Framework. According to the India State of Forest Report 2023, the most recent comprehensive national forest assessment, Odisha's forest cover stood at 52,433.56 square kilometers, with total forest and tree cover reaching 58,597.01 square kilometers, representing an increase of 558.57 square kilometers since the 2021 assessment round (Odisha Forest Department, 2024). Over the longer term, the state has gained more than 5,492.56 square kilometers of forest cover since 1997, a substantial cumulative gain attributed to sustained plantation programmes and protection measures undertaken jointly by the Forest Department and local communities (Odisha Forest Department, 2024). By legal classification, Reserved Forests account for 36,049 square kilometers, or 58.90 percent of the state's forest estate, Protected Forests for 25,133 square kilometers, or 40.75 percent, and Unclassed Forests for a residual 22 square kilometers, or 0.35 percent (Odisha Forest Department, 2025).

This aggregate positive trend, however, masks a geographically uneven pattern consistent with the broader spatial disparity theme running throughout this Framework: the same India State of Forest Report data indicates that 12 districts, primarily tribal areas, experienced an actual decline in forest cover even as the state total increased, meaning the aggregate gain has been driven substantially by plantation and afforestation activity concentrated outside the state's most forest dependent tribal districts, precisely the areas where forest access carries the greatest livelihood significance documented in Chapter 1 (Odisha Forest Department, 2025). Independent ecological assessment has further cautioned that the state's headline forest cover statistic, at approximately 37 percent of total geographic area inclusive of monoculture plantations, may obscure underlying degradation in forest structural quality, since plantation forest typically lacks the structural complexity of natural forest needed to support the shade adapted flora and specialist fauna dependent on unbroken canopy cover, with documented fragmentation pressure, expanding edge zones and contracting intact forest cores, specifically identified in districts such as Sundargarh (Grokopedia, Flora and Fauna of Odisha, 2026).

The state achieved a landmark conservation milestone on April 24, 2025, when Chief Minister Mohan Charan Majhi approved the declaration of Similipal as India's 107th National Park, covering 845.70 square kilometers and becoming Odisha's second National Park after Bhitarkanika and the largest National Park in the state, a designation that had first been proposed in 1980 and remained pending for over four decades before finally being fulfilled (Government of Odisha, Forest, Environment and Climate Change Department, 2025). This designation was framed explicitly by the state government as both a biodiversity protection measure and a recognition of the ecological knowledge and stewardship of the forest dwelling tribal communities who have inhabited the Similipal landscape across generations (Government of Odisha, Forest, Environment and Climate Change Department, 2025).

Notwithstanding this positive designation, Similipal Tiger Reserve continues to face a serious poaching threat that this Framework identifies as a significant unresolved conservation governance gap. Between 2014 and 2023 to 24, eight Royal Bengal tigers and 57 leopards were confirmed killed within the reserve, with poaching identified alongside habitat conflict as a primary cause, and within the more recent period from 2022 to 23 through early 2025 specifically, two tigers and 12 leopards were poached, alongside 103 recorded wildlife crime cases and 255 arrests, a pattern independent assessment attributes to organized poaching networks exploiting enforcement gaps including demoralized field staff and inadequate surveillance capacity (Grokikipedia, Flora and Fauna of Odisha, 2026). Similipal's ecological integrity has also faced acute episodic threats, most notably the extensive forest fires that affected the biosphere reserve during March and April 2021, causing widespread damage to the reserve's forest ecosystem, wildlife habitat, and adjoining community livelihoods (Wikipedia, 2021 Similipal Forest Fires, 2026).

13.2 Land Use Change, Soil Degradation and Land Resource Management

Land use change pressure in Odisha is most acute in the districts documented throughout this Framework as sites of concentrated industrial and mining activity, where the expansion of mineral extraction, metallurgical processing, and associated infrastructure has driven measurable forest fragmentation, as documented in section 13.1's discussion of Sundargarh district specifically. This Framework was unable to identify comprehensive, current state level quantitative data on soil degradation extent, land use transition rates between forest, agricultural, and industrial categories, or systematic land resource management planning comparable to the depth of data available for the state's forest cover and biodiversity indicators documented in section 13.1, representing a specific data gap this Framework recommends the state's Revenue and Disaster Management Department and Forest, Environment and Climate Change Department address through more comprehensive and more current public land use change reporting, particularly given the direct relevance of such data to the industrial corridor and growth region planning documented extensively in Chapter 3.

13.3 Water Bodies, Wetlands and River Ecosystem Health

Odisha's wetland resources are anchored by Chilika Lake, designated as India's first Ramsar Convention listed wetland of international importance in 1981, covering approximately 116,500 hectares across the districts of Puri, Khordha, and Ganjam, and constituting Asia's largest brackish water lagoon as documented in its geographic context in Chapter 1, with fringing mangrove and forested shoreline habitat supporting substantial avian and aquatic biodiversity (Grokikipedia, Forests in Odisha, 2026). This ecologically significant wetland faces mounting pressure from the expansion of shrimp aquaculture in and around the lagoon, which independent ecological assessment has linked to nutrient overload and chemical pollutant introduction, degrading water clarity and promoting algal blooms that reduce dissolved oxygen levels, placing particular stress on species including the fishing cat, which depends on the lagoon's fringe habitat (Grokikipedia, Flora and Fauna of Odisha, 2026).

The state's broader river systems, encompassing the Mahanadi, Brahmani, Rushikulya, Subarnarekha, Budhabalanga, Kolab, Vansadhara, and Nagabali rivers, are subject to systematic water quality and biological health monitoring by the State Pollution Control Board across 21 monitoring stations, alongside dedicated surface water quality assessment programmes targeting specific industrial contamination risks, including hexavalent chromium contamination monitoring at nine stations along the Damasala river in the Sukinda chromite mining area, and periodic water quality assessment during high footfall religious bathing events such as Kartika Purnima at major bathing ghats along the Mahanadi and Kathajodi rivers in the Cuttack area (State Pollution Control Board Odisha, 2021). This monitoring infrastructure represents a reasonably systematic institutional foundation for river health assessment, though this Framework was unable to identify current, publicly summarized trend data from this monitoring programme indicating whether river water quality has been improving, stable, or deteriorating over the recent reporting period, a further specific data gap this Framework recommends the State Pollution Control Board address through more accessible public trend reporting.

13.4 Mining and Mineral Resource Governance

Odisha's mineral resource governance framework, documented in its fiscal and industrial dimensions in Chapters 2 and 4, centers on the state's exceptional endowment of iron ore, chromite, bauxite, coal, and manganese, extracted principally through the Odisha Mining Corporation and a substantial private mining sector, generating the mineral royalty revenue stream that constitutes the largest single component of the state's own non-tax revenue documented in Chapter 2. This Framework's environmental assessment of this mineral governance framework identifies a genuine and unresolved tension between the state's continued industrial and fiscal expansion strategy and its environmental protection objectives, a tension made explicit in recent policy developments during 2025, when the state introduced eased forest restrictions specifically to facilitate ecotourism development alongside expanded mining lease allocation, with independent ecological assessment characterizing associated policy drafts as prioritizing immediate economic output over biodiversity preservation, including provisions that would permit certain infrastructure development within sensitive protected zones such as national parks (Grokikipedia, Flora and Fauna of Odisha, 2026).

This Framework treats this tension as a structural feature of Odisha's development model rather than an incidental policy inconsistency, given that the same mineral endowment documented in Chapter 1 as concentrated substantially in the state's forested western and southern districts, which also host the majority of the state's Scheduled Tribe population and protected forest area documented in section 13.1, means that continued mineral revenue growth and continued forest and biodiversity protection are likely to remain in at least partial tension for the foreseeable future, absent a substantially more rigorous environmental clearance and post extraction land restoration regime than current policy trajectory, as documented above, appears to be pursuing.

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

Air pollution has emerged as one of the most acute and well documented environmental governance challenges facing Odisha in the current reporting period, with the state's Angul-Talcher industrial belt recording air quality readings among the worst in India during the winter months of the 2025 to 26 reporting period. Talcher recorded an Air Quality Index of 380 in early January 2026, the highest recorded anywhere in India during that period and surpassing even Delhi's contemporaneous readings, with Central Pollution Control Board data showing readings between 355 and 380 across the town in the early weeks of January 2026, categorized within the "Very Poor" to "Severe" range (Deccan Chronicle, 2026; OMMCOM News, 2026). Angul recorded comparably severe readings, with an Air Quality Index of 346, while five further Odisha towns, Balasore, Baripada, Bhubaneswar, Cuttack, and Keonjhar, also registered "Very Poor" air quality during the same period, with readings of 318, 312, 317, 324, and 311 respectively (OMMCOM News, 2026). The Angul-Talcher industrial belt has been specifically identified in independent environmental research as one of the world's largest Nitrogen Dioxide emission hotspots, a designation environmentalists attribute to the concentrated presence of open cast coal mining operated by Mahanadi Coalfields Limited, thermal power generation from both National Thermal Power Corporation facilities and private operators, aluminium smelting at the National Aluminium Company's facilities, and multiple steel manufacturing units operating within a geographically concentrated industrial cluster (SRIAS Institute, 2026; Odisha TV, 2026).

Local environmental advocates, including Dr. Jayakrushna Panigrahi of the Orissa Environmental Society and Jagadananda Pradhan, convener of the Talcher-Angul Banchao Andolan, or Save Talcher-Angul Movement, have specifically attributed the deteriorating air quality to unregulated mining activity in local coalfields, unchecked carbon emissions from the region's thermal power plant concentration, and what they characterize as inadequate enforcement of existing environmental norms by district administration and state regulatory authorities, with several operational coal mines alleged to be violating environmental compliance requirements with limited accountability (Deccan Chronicle, 2026). The state's response to acute pollution episodes has included emergency measures such as construction activity halts during peak pollution periods, though this Framework notes, consistent with the environmental advocates' own assessment, that such episodic response measures do not address the underlying structural emission sources driving the region's status as a persistent, rather than merely episodic, national pollution hotspot (SRIAS Institute, 2026).

The State Pollution Control Board maintains a systematic ambient air quality monitoring infrastructure spanning 36 stations across 17 major towns and industrial areas, including Angul, Balasore, Berhampur, Bhubaneswar, Bonaigarh, Cuttack, Jharsuguda, Kalinganagar, Keonjhar, Konark, Paradeep, Puri, Rayagada, Rajgangpur, Rourkela, Sambalpur, and Talcher, tracking core pollutants including PM₁₀, PM_{2.5}, sulphur dioxide, and nitrogen oxides, with an expanded parameter set including ammonia and ozone monitored in select cities and a more comprehensive eight parameter assessment conducted at heritage and pilgrimage sensitive locations in Bhubaneswar, Puri, and Konark (State Pollution Control Board Odisha,

2021). This Framework assesses this monitoring infrastructure as reasonably comprehensive in scope, but notes that comprehensive monitoring alone has evidently not translated into effective emission control in the Angul-Talcher belt specifically, and recommends that the state's environmental regulatory response move beyond monitoring and episodic emergency measures toward sustained, enforced emission reduction requirements for the specific industrial and mining operators identified by both official monitoring data and independent environmental advocacy as the principal sources of the region's pollution burden.

13.6 Coastal and Marine Resource Management

Odisha's coastal and marine ecosystem, anchored by the 480 kilometer Bay of Bengal coastline documented in Chapter 1, encompasses two of the state's most ecologically significant protected areas beyond the Chilika Lake wetland documented in section 13.3. The Bhitarkanika mangrove ecosystem, located in the estuarine region of the Brahmani and Baitarani rivers in the northeastern corner of Kendrapara district, spans 650 square kilometers as a Ramsar designated wetland since August 19, 2002, and constitutes the second largest mangrove ecosystem in India, supporting 71 species of mangroves and mangrove associate plants (Wikipedia, Bhitarkanika Mangroves, 2026; Odisha Environmental Society, 2019). Within this broader mangrove landscape, Bhitarkanika National Park, notified over 145 square kilometers in September 1998, and the surrounding Bhitarkanika Wildlife Sanctuary, notified over 672 square kilometers in April 1975, together support the country's largest population of estuarine, or saltwater, crocodiles, numbering 1,742 individuals as of the January 2019 census, alongside 271 species of resident and long distance migratory birds, the Indian monitor lizard, Indian python, king cobra, and aquatic mammals including the Irrawaddy dolphin and bottlenose dolphin (Wikipedia, Bhitarkanika National Park, 2026; Odisha Environmental Society, 2019).

This coastal ecological asset base sits in direct proximity to, and in some tension with, the substantial port and industrial corridor development documented in Chapters 3, 4, and 8, particularly the Paradip industrial and port cluster, which independent environmental assessment has characterized as a severely polluted industrial cluster, with untreated discharges affecting water quality and the benthic invertebrate populations critical to the coastal food chain that ultimately supports the fisheries sector documented in Chapter 3 (Grokikipedia, Flora and Fauna of Odisha, 2026). This Framework identifies the effective enforcement of Coastal Regulation Zone provisions and marine pollution control standards around the state's expanding port and petrochemical infrastructure as a critical safeguard against the erosion of the same coastal ecological assets, Chilika, Bhitarkanika, and the broader marine fishery base documented in Chapter 3, that themselves constitute economically significant state assets through tourism, documented in Chapter 19, and marine export revenue. The state's continued expansion of port capacity toward the 500 million metric tonne per annum target documented in Chapter 8, and its parallel green hydrogen and petrochemical industrial expansion documented in Chapter 4, make this coastal environmental safeguard an increasingly urgent, rather than a merely precautionary, governance priority over the coming Vision 2047 planning period discussed in Chapter 21.

Chapter 14: Climate Change and Ecological Security

14.1 State Climate Vulnerability and Risk Profile

Odisha's climate vulnerability is structurally embedded in the same geographic features documented throughout this Framework: a 480 kilometer Bay of Bengal coastline directly exposed to cyclonic systems, three major river basins, the Mahanadi, Brahmani, and Baitarani, prone to seasonal flooding, and a substantial rural population still heavily dependent on rainfed agriculture. The state's Strategic Action Plan for Climate Change and Human Health documents that approximately 80 to 85 percent of the state's population is rural and depends on agriculture, with almost 60 percent of agricultural land under rainfed cultivation, and rice, the state's dominant crop documented in Chapter 3, particularly vulnerable to climatic variability, while coastal paddy fields face frequent erosion, salinization, and inundation risk (National Centre for Disease Control, 2024). Climate projections referenced in this state health and climate planning document indicate that drier interior areas are expected to become drier while already flood prone areas face increased flooding intensity, a bifurcating risk pattern that compounds rather than averages across the state's varied agro-climatic zones (National Centre for Disease Control, 2024).

This climate exposure interacts directly with the socioeconomic vulnerability patterns documented throughout this Framework. The state's own Phase-II Climate Change Action Plan explicitly identifies the combination of a poverty rate that has historically remained above the national average, a high proportion of indigenous communities with substantial natural resource dependency documented in Chapter 1's discussion of the state's tribal population, and a rapidly growing but still developing economy, as jointly rendering Odisha extremely vulnerable to climate change impacts, even as the state's rapid urbanization and above average economic growth documented in Chapter 3 simultaneously pose distinct climate change mitigation challenges (Climate Change Cell Odisha, 2018).

Beyond the state's well documented cyclone and flood exposure, examined in sections 14.3 and 14.4, Odisha faces an increasingly significant and comparatively under-addressed lightning risk, having recorded the highest number of lightning related deaths of any Indian state in 2021, with 20 of the state's 30 districts identified as being at elevated lightning risk, and 213 lightning deaths recorded in the reporting period examined, a hazard disproportionately affecting agricultural workers exposed during daytime thunderstorm activity and residents of unsafe or inadequately protected housing during nighttime events (Scribd, Framework, 2026). This Framework identifies lightning risk as a climate hazard that has historically received less institutional and public attention than cyclone risk, documented in section 14.4, despite its comparably severe mortality toll, and recommends the state's disaster management authorities extend the same systematic early warning and community preparedness investment to lightning risk mitigation that has proven successful in the cyclone risk domain.

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

Odisha was among the first Indian states to prepare a comprehensive and genuinely consultative State Action Plan on Climate Change, undertaking a multi-stakeholder consultation process in 2013 to 14 that produced the state's first Climate Change Action Plan covering the 2010 to 2015 period, organized around eleven sectoral missions, each overseen by a dedicated working group chaired by the relevant departmental secretary, under the overall coordination of a high level committee headed by the state Chief Secretary (Climate Change Cell Odisha, 2018; CANSA, 2026). Following a formal review of this first phase convened by the Chief Secretary on September 4, 2014, the state developed a second generation State Action Plan on Climate Change, Phase-II, formally launched in 2018 and covering the 2018 to 23 period, intended to more systematically address the underlying drivers of climate change, prepare for the state's projected climate impacts, and establish concrete goals and implementation timetables (Climate Change Cell Odisha, 2018).

Despite this comparatively early and sustained institutional engagement with climate planning, this Framework notes, consistent with independent assessment, that Odisha has not adopted a formal net zero emissions commitment, a gap independent analysis attributes substantially to the state's continued heavy dependence on its domestic coal reserves to sustain the industrial growth trajectory documented throughout Chapters 3, 4, and 9 (ICSF, 2026). This tension, between the state's genuinely pioneering climate adaptation planning process and its continued reliance on coal fired thermal generation and coal based industrial processes for its core growth model, is one this Framework has already identified in Chapter 9's discussion of the state's still heavily thermal dominated generation mix, and independent assessment has explicitly framed the resolution of this tension in "just transition" terms, cautioning that any move toward decarbonization must be conducted with explicit attention to the inequitable burden such a transition could otherwise place on the state's already vulnerable communities, including the coal mining and thermal power dependent workforce concentrated in the Angul-Talcher belt documented in Chapter 13's discussion of the region's severe air pollution burden (ICSF, 2026).

14.3 Disaster Risk Profile: Hazard, Exposure and Vulnerability Mapping

Odisha's formal disaster risk profile, as characterized by the state's own disaster management authority, identifies cyclone, flood, tsunami, and drought as the state's principal natural hazard categories, a profile directly consistent with the geographic exposure documented in section 14.1 (Odisha State Disaster Management Authority, 2026). The foundational event shaping the state's contemporary disaster risk institutional architecture, examined in section 14.4, remains the 1999 super cyclone, which struck the Odisha coast in close succession with a preceding severe cyclonic storm, together causing nearly 10,000 deaths and affecting an estimated 18 million people, devastating the state's economy and exposing the near total absence of coordinated early warning systems, resilient community shelters, and effective relief mechanisms at the time (World Bank, 2023; Grokipedia, OSDMA, 2026).

The state's disaster risk profile has continued to manifest through a succession of major cyclonic events in the subsequent quarter century, including Cyclone Phailin in 2013, characterized as the strongest cyclone to strike India since the 1999 super cyclone, Cyclone Fani in 2019, and, most recently, Cyclone Montha, which placed the state on high alert in late October 2025 (World Bank, 2023; News on Air, 2025). This recurring exposure pattern, rather than diminishing over time, is broadly consistent with the climate change intensification trends documented in section 14.1, reinforcing this Framework's assessment that cyclone risk management must be treated as a permanent, rather than episodic, feature of the state's core governance and infrastructure planning function.

14.4 Disaster Risk Reduction: Institutional Mechanisms and Preparedness

Odisha's institutional response to the disaster risk profile documented in section 14.3 constitutes one of the most consequential and internationally recognized governance transformations documented anywhere in this Framework. In direct response to the 1999 super cyclone, the state established the Odisha State Disaster Management Authority on December 29, 1999, registered as a society under the Societies Registration Act, 1860, making Odisha the first Indian state to establish dedicated disaster management institutional infrastructure, predating the establishment of the National Disaster Management Authority under the national Disaster Management Act by six years (Groklopedia, OSDMA, 2026; World Bank, 2023).

The state's subsequent "zero casualty" strategic objective has been pursued through a multi-layered institutional and infrastructure investment programme. This includes the Odisha Disaster Rapid Action Force, a specialized state disaster response force; a comprehensive Early Warning Dissemination System covering 1,205 villages across 22 blocks in the six most cyclone and flood exposed coastal districts, Balasore, Bhadrak, Jagatsinghpur, Kendrapara, Puri, and Ganjam, using Geographic Information System technology to site early warning towers for complete coastal coverage with minimum infrastructure redundancy, constructed substantially using spun concrete towers specifically selected to resist corrosion from the region's saline coastal climate (Odisha State Disaster Management Authority, 2026); and the National Cyclone Risk Mitigation Project, implemented under a World Bank funded Adaptable Programme Loan through the International Development Association, with OSDMA serving as the state's Project Implementing Unit under overall national coordination by the National Disaster Management Authority, running from 2011 through formal closure in 2019 (Odisha State Disaster Management Authority, 2026).

Beyond this technical and physical infrastructure, the state's disaster risk reduction model has been distinguished internationally by its explicit emphasis on community centered implementation, training a volunteer cadre exceeding 100,000 individuals, including at the Gram Panchayat level and through the Women's Self Help Group network documented in Chapter 12's discussion of Mission Shakti, to lead local risk reduction, evacuation, and relief operations, an approach independent assessment has identified as central to the model's

demonstrated effectiveness, alongside continued international technical partnership, including collaboration with the UN registered Regional Integrated Multi-Hazard Early Warning System based in Thailand for decision support system development (World Bank, 2023; Odisha State Disaster Management Authority, 2026). This Framework assesses Odisha's disaster risk reduction institutional architecture as a globally referenced model, and one of the clearest examples anywhere in this Framework of sustained, multi-decade institutional capacity building translating into measurably improved outcomes, a template this Framework recommends the state consider deliberately extending, with appropriate adaptation, to the lightning risk and heat wave hazard categories documented in section 14.1, where comparable systematic institutional investment appears less developed.

14.5 Post-Disaster Response, Relief and Reconstruction Framework

Odisha's post-disaster response capability, built on the institutional foundation documented in section 14.4, has demonstrated measurable and repeated effectiveness across the state's major cyclone events of the past decade and beyond. During Cyclone Phailin in 2013, the state successfully evacuated close to one million people ahead of the storm's landfall, an operation independent assessment has characterized as among the most successful large scale disaster evacuation efforts recorded globally (World Bank, 2023). During Cyclone Fani in 2019, the state evacuated approximately 1.2 million people based on predictive early warning analysis, again achieving fatality outcomes that remained in the single digits despite the storm's severity, consistent with the state's zero casualty objective (World Bank, 2023; Grokipedia, OSDMA, 2026).

This operational capability has continued into the most recent reporting period: as Cyclone Montha approached the state's southern and coastal districts in late October 2025, the state government deployed multiple teams of fire services personnel alongside the Odisha Disaster Rapid Action Force and National Disaster Response Force to the affected areas, while simultaneously coordinating power restoration planning, medical supply distribution, anti-venom availability given the elevated snake encounter risk associated with flooding events, and waterlogging management, with an estimated 35,612 people from low lying areas planned for relocation to cyclone shelter centers within a 24 hour preparedness window (News on Air, 2025). This Framework identifies this consistent, multi-decade operational track record, spanning three major named cyclone events with broadly comparable evacuation scale and consistently minimal fatality outcomes, as strong empirical validation of the institutional model documented in section 14.4, and recommends this operational reconstruction and relief framework's specific protocols, particularly its integrated approach combining evacuation with parallel public health and utility restoration planning, be documented as a formal replicable template for other Indian states and international disaster prone coastal regions facing comparable cyclone exposure.

14.6 Green Economy Transition: Opportunities and Structural Challenges

Odisha's green economy transition trajectory presents the same fundamental tension documented in section 14.2 between the state's emerging low carbon industrial ambitions and its continued core dependence on coal fired thermal generation and coal based heavy industry. The state's green hydrogen and green ammonia industrial cluster development, documented in Chapters 4 and 9, anchored by the Tata Steel Special Economic Zone near Gopalpur Port and developers including ACME Clean Energy, Avaada Green Hydrogen, Ocior Energy, and Torrent Green Hydrogen, represents a genuine and potentially significant green economy diversification opportunity, one that could, if paired with the substantially expanded dedicated renewable generation capacity this Framework identified as a critical missing link in Chapter 9, position Odisha as an early mover in India's emerging clean hydrogen value chain.

This opportunity, however, must be weighed against the structural reality documented throughout Chapters 3, 4, 9, and 13: Odisha's core industrial and fiscal model, including the mineral royalty revenue stream that constitutes the largest component of the state's own non-tax revenue documented in Chapter 2, remains deeply embedded in coal extraction, coal fired power generation, and energy intensive mineral processing, precisely the activities identified in Chapter 13 as driving the severe and persistent air pollution crisis afflicting the Angul-Talcher industrial belt. A genuine green economy transition for Odisha, consistent with the "just transition" framing independent assessment has applied to the state's climate trajectory, would need to address not only the addition of new green industrial capacity alongside the existing coal dependent industrial base, but the more difficult question of managed transition away from the existing base itself, including the livelihood and fiscal revenue implications for the mining and thermal power dependent workforce and state revenue base documented throughout this Framework. This Framework identifies this unresolved tension, between green economy addition and genuine economic transition, as the central strategic question the state's Vision 2047 planning, discussed in Chapter 21, must confront directly rather than allow to remain implicit within otherwise genuinely impressive individual green industrial project announcements.

Chapter 15: Administrative Governance Reform

15.1 Structure of State Administration and Inter-Departmental Coordination

Odisha's state administration operates under the Council of Ministers headed by Chief Minister Mohan Charan Majhi, with the Chief Secretary serving as the state's senior most civil servant and coordinating point across the state's departmental structure, supported by the three tier revenue division and district administrative architecture documented in Chapter 1, comprising the Central, Northern, and Southern Divisions headquartered at Cuttack, Sambalpur, and Berhampur respectively, and administered day to day through the state's 30 districts, 58 sub-divisions, 317 tahasils, and 314 community development blocks.

Inter-departmental coordination on major cross-cutting initiatives documented throughout this Framework, including the Bhubaneswar-Cuttack-Puri-Paradip Economic Region development discussed in Chapter 3, has been formally structured through mechanisms such as the State Level Project Monitoring Committee chaired by the Chief Secretary, documented in Chapter 4, indicating an administrative architecture that, at least for the state's flagship strategic initiatives, has moved toward centrally coordinated, Chief Secretary level oversight rather than leaving cross-departmental coordination to informal arrangement between line departments.

15.2 Anti-Corruption Framework: Lokayukta, Vigilance and Enforcement

Odisha's anti-corruption institutional architecture centers on the Vigilance Directorate, one of the longer standing anti-corruption enforcement organizations among Indian states, originally created in 1944 as an anti-corruption enforcement body under the Supply and Transport Department, renamed from Anti-Corruption to Vigilance in August 1957, and reorganized into a centralized structure in 1961 with the establishment of divisional offices at Cuttack, Sambalpur, and Berhampur, subsequently expanded with additional divisions at Balasore in 1987 and Bhubaneswar in 1997 (Vigilance Directorate Odisha, 2026). The Directorate operates in coordination with the office of the state Lokayukta, the statutory anti-corruption ombudsman, with recent annual performance data indicating the Vigilance Directorate received 20 cases referred by the Lokayukta for enquiry during the reporting period, submitting 13 enquiry reports following thorough investigation, and registering 13 criminal cases with 9 investigation reports completed under Lokayukta direction, with the quality of these enquiries and investigations specifically noted as having received appreciation from the Lokayukta (Vigilance Directorate Odisha, 2026).

Beyond case specific enforcement, the Vigilance Directorate performs a substantial preventive and clearance function, issuing vigilance clearance certificates for 40,189 public servants during the reporting period in response to 5,360 formal requests from government departments, district offices, and public sector undertakings, required for personnel actions including promotion, voluntary retirement, pension processing, and passport issuance (Vigilance Directorate Odisha, 2026). The Directorate's Forest Wing has also played an active

enforcement role specifically relevant to the environmental governance concerns documented in Chapter 13, conducting 101 joint raids during the reporting period that resulted in the seizure of illegally sourced timber, machinery, and vehicles valued at over ₹4.28 crore (Vigilance Directorate Odisha, 2026). Individual enforcement actions documented in the Directorate's public reporting include the detection of a Block Development Officer in Kalahandi district found in possession of assets disproportionate to known income sources valued at ₹5,40,000, alongside action against an elected Sarapanch in the same district, illustrating that the Directorate's enforcement reach extends across both the bureaucratic administrative cadre and elected local government representatives (Vigilance Directorate Odisha, 2026).

15.3 Legal and Judicial Administration: Pendency, Access and Reform

The Orissa High Court, the state's apex judicial institution, was established on July 26, 1948, seated at Cuttack, with a current sanctioned strength of 33 judicial positions comprising 24 permanent and 9 additional judgeships, and currently headed by Chief Justice Harish Tandon, who assumed office on March 26, 2025 (Wikipedia, Orissa High Court, 2026). The High Court has pursued several notable procedural modernization initiatives in the recent reporting period, including e-Filing Rules for District Courts and Tribunals introduced in 2024, Live Streaming of Court Proceedings Rules dating to 2021, and dedicated Guidelines for Recording Evidence of Vulnerable Witnesses and the Functioning of Vulnerable Witnesses Deposition Centres introduced in 2024, reflecting a genuine institutional commitment to both procedural transparency and victim sensitive judicial process reform (Orissa High Court, 2026).

This Framework was unable to identify current, precisely quantified Odisha specific case pendency statistics, judicial vacancy rates, or average case disposal time data disaggregated to the state level within the sources reviewed for this report, representing a specific and consequential data gap given that the national India Justice Report 2025 has documented rising five year case pendency nationally as of January 2025, alongside increasing numbers of trial court cases pending beyond three years, and significant judicial and police vacancy rates as a persistent nationwide justice sector challenge (The Broken Window, 2025). This Framework recommends that the Orissa High Court's own published Case Pendency Report, maintained as a standing feature of the Court's public information architecture, be consulted directly and incorporated into future editions of this document to provide the state specific quantitative detail this chapter's judicial administration assessment currently lacks.

15.4 Police Modernisation and Internal Security Management

Odisha's police administration has faced documented public confidence challenges in the recent reporting period, with independent policy commentary identifying a pattern of unresolved high profile cases carried over from the preceding two and a half decades of state government, including the murders of Mamita Meher and Soumya Ranjan, cases in which public commentary has alleged that politically connected individuals received protective

treatment and that police investigations proceeded sluggishly or remained inconclusive, contributing to a documented decline in public trust in police conduct (Odisha.plus, 2025). Separate commentary has documented allegations of political interference in police station level decision making, including specific claims that political figures directed the release of individuals in custody, though this Framework notes these specific allegations remain unverified and are presented here as documented public perception rather than established fact (Odisha.plus, 2025). The state government has responded to at least one specific incident with a formal inquiry led by a retired High Court judge, indicating institutional willingness to pursue independent review of specific police conduct concerns, even as independent assessment characterizes this response as insufficient to fully address the broader pattern of public trust erosion documented above (Odisha.plus, 2025).

On specialized policing capacity, the state's Cyber Crime Police Station, operational since 2006, has handled a growing caseload of digital crime including fake website fraud and online scams, reflecting the state's engagement with the cybercrime enforcement challenges documented more broadly in Chapter 16's discussion of the state's digital governance and cybersecurity institutional architecture (Odisha.plus, 2025). This Framework was unable to identify comprehensive, current public reporting on broader police modernization metrics, including police to population ratios, forensic infrastructure capacity, or systematic community policing programme evaluation, comparable to the depth of assessment available for the Vigilance Directorate's anti-corruption enforcement documented in section 15.2, and recommends the state's Home Department and Director General of Police's office be consulted directly to close this specific assessment gap in future editions of this Framework.

15.5 Regulatory Governance: Quality, Consistency and Independence

Odisha's sectoral regulatory architecture, examined in its specific institutional manifestations elsewhere in this Framework, includes the Odisha Electricity Regulatory Commission, documented in Chapter 9 as maintaining a reasonably robust independent tariff determination and vesting order enforcement framework for the state's privatized power distribution sector, and the state's investment facilitation regulatory reform programme, documented in Chapter 4, which achieved a 98 percent implementation rate under the national Business Reforms Action Plan 2024, one of the stronger state performances nationally on this composite regulatory quality benchmark. This Framework's overall assessment, drawing on the sector specific regulatory analysis conducted throughout this document, is that Odisha's regulatory governance quality varies meaningfully by sector, with the electricity and investment facilitation regulatory functions showing comparatively mature independent institutional capacity, while the environmental regulatory enforcement function, documented in Chapter 13's discussion of the State Pollution Control Board's response to the Angul-Talcher air pollution crisis, shows a more significant gap between monitoring infrastructure sophistication and actual enforcement effectiveness.

15.6 Reduction of Red-tapism: Simplification and Way Forward

Odisha's administrative simplification efforts, documented in their investment facilitation dimension in Chapter 4, center on the GO SWIFT single window investor facilitation platform, providing paperless, digitally tracked clearance processes across the investment project lifecycle, complemented by the state's broader digital citizen service infrastructure, including the Ama Sathi WhatsApp chatbot platform documented in Chapter 4's discussion of the state's Eastern Zonal Council governance innovation showcase, which the state has specifically highlighted as an example of simplified, accessible citizen service delivery reducing the procedural burden traditionally associated with in-person government service access.

This Framework assesses these digital simplification initiatives positively as genuine steps toward reduced administrative friction, while noting, consistent with the broader spatial disparity theme running throughout this document, that the practical benefit of digital simplification tools depends substantially on the underlying digital infrastructure and digital literacy access documented in Chapter 16, meaning that red-tapism reduction gains from these platforms are likely to accrue unevenly across the state's coastal, urban population relative to its more remote tribal and rural districts absent parallel digital inclusion investment.

15.7 Civil Service Strength: Vacancy Rates and Training Institutions

Odisha's civil service recruitment has proceeded at a substantial pace in the recent reporting period, with the state government reporting the filling of approximately 40,000 government posts over the 18 months preceding January 2026, a recruitment tempo consistent with the broader pattern of active state recruitment documented throughout this Framework, including the nearly 45,000 teacher recruitment commitment documented in Chapter 5 (Careers360, 2026). Despite this substantial aggregate recruitment activity, the state's core civil service recruitment process experienced a notable public controversy in late 2025, when the Odisha Public Service Commission's December 31 notification for the Odisha Civil Services Examination 2025 covered just 314 vacancies across seven services, explicitly excluding the Odisha Administrative Service, Odisha Finance Service, and Odisha Revenue Service from the notified vacancy pool, a scope limitation that generated substantial resentment among job aspirants (Careers360, 2026). Of the 314 originally notified posts, 104 were reserved for women, with the sole Group A service included, the Odisha Police Service, carrying just 12 vacancies, while Group B services including the Odisha Taxation and Accounts Service and Odisha Labour Service carried 176 and 98 vacancies respectively (Careers360, 2026).

Following this public backlash, Chief Minister Mohan Charan Majhi personally intervened, directing the Odisha Public Service Commission to conduct examinations for an additional 151 vacant posts, including 14 positions in the Odisha Administrative Service itself, 113 in the Odisha Revenue Service, 16 in the Odisha Transport Service, and 8 in the Odisha Welfare Service, with the Chief Minister's Office explicitly citing the need to address aspirant resentment as the basis for this intervention (Careers360, 2026). This episode, while resolved through direct executive intervention, illustrates a structural civil service recruitment

planning gap this Framework identifies as warranting attention: the initial notification's exclusion of the state's core Group A administrative, finance, and revenue services from a headline civil service examination cycle suggests either an underlying vacancy accounting or examination cycle planning weakness that allowed a materially incomplete recruitment notification to reach public release before requiring high level political correction. Separately, the Odisha Public Service Commission's broader 2025 recruitment cycle notified 200 vacancies with a preliminary examination held on October 12, 2025, representing the Commission's standard annual recruitment cadence operating alongside the civil service examination controversy documented above (Groklopedia, Government of Odisha, 2026).

This Framework was unable to identify comprehensive, current public data on the state's civil service training institution capacity and throughput, beyond the specific forestry sector training infrastructure documented in Chapter 13, including the Ranger's Training College at Angul and forester and forest guard training schools at Champua, G. Udaygiri, and Bhubaneswar. This represents a further specific data gap this Framework recommends the state's General Administration and Public Grievance Department address in future public reporting, given the direct relevance of adequate induction and in-service training capacity to the effectiveness of the substantial recruitment volumes documented throughout this section and across this Framework's education, health, and administrative recruitment discussions.

Chapter 16: Technology-Enabled Service Delivery

16.1 Digital Infrastructure: Broadband, Optical Fibre and Connectivity Coverage

Odisha's rural digital infrastructure is undergoing its most substantial expansion to date through the amended BharatNet Phase-III programme, formalized through a tripartite agreement signed in mid-2026 between Digital Bharat Nidhi, the Department of Telecommunications, Bharat Sanchar Nigam Limited, and the state's Electronics and Information Technology Department, carrying a central investment commitment of ₹3,384.82 crore (Business Standard, 2026; Odisha.plus, 2026). The programme is designed to connect all 6,799 gram panchayats across the state's 314 blocks through a carrier grade Internet Protocol Multi-Protocol Label Switching network built in a ring topology architecture, chosen specifically for its reliability and resilience against single point network failures, extending Fibre-to-the-Home connectivity directly to rural households and establishing data exchange centers at both block and gram panchayat levels (OdishaBytes, 2026; Odisha.plus, 2026). Bharat Sanchar Nigam Limited has been designated the Single Project Management Agency for implementation, with Creative Newtech Private Limited serving as the Project Implementing Agency, and the initiative is projected to extend internet access to more than 50,000 villages across the state (OMMCOM News, 2026; OdishaBytes, 2026).

This rural connectivity expansion complements the state's existing urban and institutional digital infrastructure base, documented in Chapter 5, comprising nine government notified IT towers, six private IT towers, and six Software Technology Parks of India centers, the highest STPI center count of any Indian state, positioning Odisha's institutional digital infrastructure as comparatively well developed even as its rural last mile connectivity, addressed by the BharatNet Phase-III rollout documented above, has historically lagged (Invest India, 2026). This Framework identifies the successful and timely completion of the BharatNet Phase-III rollout, targeted for completion within three years of the 2026 agreement signing, as directly relevant to closing several of the specific rural service delivery gaps documented elsewhere in this Framework, including the digital education infrastructure data gap flagged in Chapter 5, the telemedicine and digital health service extension potential relevant to Chapter 6's rural health access challenges, and the agricultural market information access relevant to the rural livelihood promotion strategy documented in Chapter 12.

16.2 e-Governance Architecture and Digital Public Infrastructure

Odisha's overarching governance philosophy in the current administrative period is structured around the state's distinctive 5T framework, built on five core principles: Transparency, Technology, Teamwork, Time, and Transformation, an approach the state government has positioned as its central organizing philosophy for translating digital and administrative reform into measurable citizen outcomes (IJCRT, 2024). This framework has been operationalized through institutional mechanisms including the 5T Secretary Conclave, a forum bringing together senior bureaucrats, civil society organizations, and private sector

representatives to facilitate cross-sectoral knowledge sharing and collective problem solving on complex governance challenges (IJCRT, 2024).

Concrete digital public infrastructure deliverables developed within this 5T framework include the e-Abhijoga portal, the state's centralized citizen grievance redressal platform, and the Mo College portal, which digitizes and centralizes higher education admissions processing across the state's college network, both cited in academic assessment as exemplifying the state's application of technology toward streamlined administrative processes, reduced bureaucratic inefficiency, and improved citizen accessibility to government services (IJCRT, 2024). This Framework assesses the 5T framework as a coherent and genuinely distinctive governance philosophy among Indian states, one that provides a useful organizing lens for the otherwise disparate digital governance initiatives documented throughout this chapter, though this Framework notes it was unable to identify comprehensive, quantified outcome data, such as citizen grievance resolution rates or turnaround times through the e-Abhijoga platform, that would allow independent verification of the framework's practical service delivery impact beyond its institutional design.

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

Odisha's citizen facing digital service delivery architecture includes the Ama Sathi WhatsApp based chatbot platform, documented in Chapter 4's discussion of the state's Eastern Zonal Council governance showcase, which the state has specifically highlighted to peer states as an example of accessible, low friction citizen service delivery operating through a messaging platform with very high existing household penetration, avoiding the need for citizens to download or navigate a dedicated government application. This mobile first, messaging platform based approach to citizen service delivery represents a pragmatic design choice given the digital literacy and smartphone application familiarity constraints likely to affect significant portions of the state's rural and tribal population documented throughout this Framework, though this Framework was unable to identify specific usage volume or citizen satisfaction data for the Ama Sathi platform to assess its practical reach and effectiveness quantitatively.

Complementing this messaging based citizen interface, the state's Common Service Centre network, operating as the standard national last mile digital service delivery access point across rural India, provides in-person assisted digital service access for citizens without personal internet access or digital literacy, a service delivery channel whose effectiveness will be directly strengthened by the BharatNet Phase-III connectivity expansion documented in section 16.1, given that reliable, high speed connectivity is a basic operational precondition for Common Service Centre functionality.

16.4 Data Governance, Open Data Policy and Privacy Framework

This Framework was unable to identify a dedicated, current Odisha state level data governance, open data publication, or citizen data privacy policy framework comparable in specificity to the sector specific policy architecture documented elsewhere in this Framework,

such as the state's AI Policy 2025 or Semiconductor Manufacturing and Fabless Policy 2025 discussed in section 16.6. This represents a notable data and policy gap given the scale of citizen data the state's expanding digital service delivery infrastructure, documented throughout this chapter, is generating and will continue to generate as BharatNet Phase-III connectivity extends digital service access to an additional 50,000 villages.

This Framework recommends the state's Electronics and Information Technology Department develop and publish a dedicated state data governance and privacy framework, addressing both open data publication standards for non-sensitive government datasets, which would directly support the kind of granular, disaggregated public reporting this Framework has repeatedly recommended across its education, health, and social welfare chapters, and citizen data protection standards governing the personal data collected through platforms including Ama Sathi, e-Abhijoga, Mo College, and the state's various Direct Benefit Transfer linked welfare schemes documented in Chapters 7 and 12, given the substantial volume of Aadhaar linked personal and financial data these platforms collectively process.

16.5 Cybersecurity: State-Level Institutional Mechanisms

Odisha's cybersecurity institutional capacity has been substantially reinforced through a formal partnership between the Odisha Computer Application Centre and the Centre for Development of Advanced Computing, signed alongside the BharatNet Phase-III agreement in mid-2026, explicitly encompassing collaboration on cybersecurity solutions alongside artificial intelligence, high performance computing, quantum computing, and language technology development, with the partnership specifically framed as supporting faster, more secure, and more transparent government service delivery (OdishaBytes, 2026; OMMCOM News, 2026). This partnership represents a meaningful upgrade to the state's cybersecurity technical capacity, building on the foundational law enforcement infrastructure documented in Chapter 15's discussion of the state's Cyber Crime Police Station, operational since 2006 and responsible for addressing digital fraud including fake website operations and online scams.

This Framework identifies the coordination between this newly formalized technical cybersecurity capacity building partnership and the state's existing law enforcement cybercrime infrastructure as an important implementation detail warranting continued attention, given that effective state level cybersecurity requires both the technical defensive capacity the C-DAC partnership is intended to build and the investigative and enforcement capacity already resident, if under-resourced according to the police modernization assessment in Chapter 15, within the state's Cyber Crime Police Station.

16.6 Emerging Technologies: AI, Geospatial Systems and Smart Governance

Odisha's emerging technology strategy has advanced substantially through the sector specific policy architecture documented in Chapters 3 and 4, comprising the Odisha AI Policy 2025, the Odisha Global Capability Centre Policy 2025, and the Odisha Semiconductor Manufacturing and Fabless Policy 2025, collectively signaling a deliberate state strategy to

position Odisha as a competitive destination for advanced technology investment and adoption, complementing rather than replacing the state's traditional industrial and mineral economic base. The state's stated ambition, documented in Chapter 5, to integrate artificial intelligence curriculum into 90 percent of schools by 2036, reflects a genuinely long horizon commitment to building broad based AI literacy across the state's education system rather than confining AI policy attention to industrial and investment promotion alone.

The OCAC-C-DAC partnership documented in section 16.5 extends this emerging technology strategy into direct government technical capacity building, explicitly targeting artificial intelligence, high performance computing, and quantum computing collaboration alongside cybersecurity and language technology development, with language technology collaboration carrying particular relevance to Odisha given the state's exceptional linguistic diversity documented in Chapter 1, encompassing Odia as the state's primary administrative and educational language alongside the numerous distinct tribal languages spoken across the state's 62 recognized Scheduled Tribe communities. This Framework identifies natural language processing and AI translation technology development, specifically targeting these tribal languages, as a potentially high value application of this emerging technology partnership, one that could directly support the multilingual education integration challenge documented in Chapter 5's discussion of the state's teacher recruitment strategy for Multi-Lingual Education positions, and the broader citizen service accessibility challenge for tribal communities documented throughout this Framework's social justice and inclusion analysis in Chapter 7.

Chapter 17: Innovation, Research and Knowledge Economy

17.1 State Innovation Ecosystem: Startups and Accelerators

Odisha's startup ecosystem has recorded steady growth under the central Startup India initiative, with 4,123 entities formally recognized as startups by the Department for Promotion of Industry and Internal Trade as of June 30, 2026, according to information provided by Union Minister of State for Commerce and Industry Jitin Prasada to the Rajya Sabha (OMMCOM News, 2026). This ecosystem operates under Startup Odisha, the state's nodal agency for startup and innovation ecosystem development, housed within the Micro, Small and Medium Enterprises Department, which administers the state's dedicated Startup Policy alongside the broader MSME development framework documented in Chapter 4 (Startup Odisha, 2026).

The state's Startup Policy sets out explicit quantitative targets, aiming to create an enabling environment and supporting ecosystem that facilitates at least 5,000 startups within five years of the policy's notification, alongside the stated ambition of developing a world class Startup Hub in Odisha, backed by an initial infrastructure development corpus of ₹25 crore (Startup Odisha, 2026; Invest Odisha, 2026). The policy explicitly incorporates skill based entrepreneurship training provisions and encourages major companies operating in Odisha to integrate startup skill and infrastructure development into their Corporate Social Responsibility activity, reflecting a deliberate attempt to mobilize the state's substantial corporate and industrial presence, documented in Chapter 4, toward startup ecosystem development rather than treating industrial investment and innovation policy as separate tracks (Startup Odisha, 2026). Physical incubation infrastructure supporting this ecosystem includes the Odisha Startup Incubation Centre, known as O-HUB, located on the SEZ Road in Chandaka, Bhubaneswar, providing subsidized incubation space, a Fabrication Laboratory, Centres of Excellence, and modular manufacturing capacity with a stated capacity for 400 participating enterprises (Naraway, 2026). A distinctive and notable feature of Odisha's startup ecosystem, highlighted by Union Minister Dharmendra Pradhan at the launch of the IIT Bhubaneswar 100-Cube initiative documented in section 17.5, is that women lead 40 percent of the state's startups, a gender participation rate in entrepreneurship that substantially exceeds typical national benchmarks (Careers360, 2024).

17.2 Research and Development: Academic-Industry Linkages

Odisha's academic-industry research linkage infrastructure has strengthened considerably through the establishment of dedicated cluster and incubation institutions bridging research institutions, industry, and government. The Bhubaneswar City Knowledge Innovation Cluster, established as a Section 8 not-for-profit company on February 18, 2022, operates as a flagship initiative of the Office of the Principal Scientific Adviser to the Government of India, guided by the Prime Minister's Science, Technology, and Innovation Advisory Council, with an explicit mission to create seamless connections among research institutions, academia, industry partners, startups, MSMEs, non-governmental organizations, and

government and international bodies, organized around thematic verticals including affordable healthcare (Naraway, 2026).

The IIT Bhubaneswar Research and Entrepreneurship Park, established in 2017 and spanning 60,000 square feet, functions as a dynamic innovation hub nurturing early stage startups and research across technology, engineering, and social entrepreneurship domains, offering incubation infrastructure, laboratories, networking space, funding access, mentorship, and industry connections organized through dedicated Centres of Excellence (IIT Bhubaneswar Research and Entrepreneurship Park, 2026). Complementing this technical research focused incubation infrastructure, the KIIT Technology Business Incubator has achieved recognition as India's top ranked bio-incubator in NITI Aayog's assessment of private sector incubation institutions, implementing more than fifteen government innovation programmes including the Biotechnology Industry Research Assistance Council's BIRAC BIG scheme, the Ministry of Electronics and Information Technology's GENESIS programme, the SAMRIDH 2.0 healthcare startup support initiative, and the Department of Science and Technology's NIDHI Centre of Excellence programme (Naraway, 2026). This Framework identifies the specialization pattern across these institutions, technical and engineering research at IIT Bhubaneswar, biotechnology and healthcare innovation at KIIT-TBI, and broad cross-sectoral cluster coordination at BCKIC, as a genuinely complementary rather than duplicative institutional ecosystem, a coordination pattern that stands in useful contrast to some of the more fragmented institutional landscapes documented elsewhere in this Framework's discussion of state programme architecture.

17.3 Intellectual Property: Awareness, Registration and Commercialisation

This Framework was unable to identify comprehensive, current state specific data on patent filing rates, trademark registration volumes, or intellectual property commercialization outcomes attributable to Odisha's research and innovation ecosystem, comparable to the detailed startup recognition and incubation infrastructure data presented in sections 17.1 and 17.2. Given the scale of research activity now underway across the institutional network documented in section 17.2, particularly the biotechnology and healthcare innovation pipeline running through KIIT-TBI's BIRAC and DST supported programming, this Framework recommends that the state's Department of Science and Technology, in coordination with Startup Odisha, develop and publish dedicated intellectual property awareness, registration support, and commercialization tracking metrics as a distinct component of the state's innovation ecosystem reporting, to allow assessment of whether the state's substantial incubation and research infrastructure investment is translating into protected, commercially viable intellectual property output at a pace commensurate with the ecosystem's institutional growth.

17.4 Knowledge Institutions as Engines of Development

Odisha's higher education landscape includes several institutions of genuinely national and, in specific cases, international academic standing that function as anchor knowledge

institutions for the state's broader innovation ecosystem. KIIT University in Bhubaneswar has achieved recognition as India's first QS five star rated university, ranked number one in Eastern India by the Times Higher Education Asia rankings for 2026 and number one within Odisha specifically in the QS Asia 2026 rankings, with its Law, Medical, Dental, Engineering, and Research programmes featuring among India's top fifty ranked programmes in the National Institutional Ranking Framework 2025, alongside global sustainable development goal recognition including a 46th place global ranking on Peace, Justice, and Strong Institutions, the United Nations Sustainable Development Goal 16 (KIIT, 2026).

Alongside KIIT, Odisha's knowledge institution base includes the Indian Institute of Technology Bhubaneswar, anchoring the technical research and startup incubation ecosystem documented in section 17.2; the Indian Institute of Information Technology Bhubaneswar, contributing specifically to the state's information technology and software sector talent pipeline; and, in the state's western industrial belt documented in Chapter 3, the Indian Institute of Management Sambalpur and Veer Surendra Sai University of Technology at Burla, positioned as anchors of the emerging Sambalpur education and innovation hub within the state's western Odisha growth corridor strategy. This Framework assesses this institutional network, spanning management, technical engineering, information technology, and now, through KIIT's own recognition, world class multidisciplinary higher education, as a genuinely substantial knowledge economy asset base, one whose full economic development potential depends on the continued strengthening of the industry linkage, commercialization, and intellectual property infrastructure documented in sections 17.2 and 17.3.

17.5 Building a Youth Innovation and Research Ecosystem

Odisha's youth innovation ecosystem has been substantially advanced through the IIT Bhubaneswar Research and Entrepreneurship Park's 100-Cube initiative, launched by Union Minister Dharmendra Pradhan on February 12, 2024, with the explicit ambition of nurturing 100 startups each valued at ₹100 crore by 2036, drawing participation from students, faculty, and, notably, school children, extending the innovation ecosystem's reach below the undergraduate level into secondary education (Careers360, 2024; IIT Bhubaneswar Research and Entrepreneurship Park, 2026). At the initiative's launch, Minister Pradhan characterized innovation as being "in the DNA of Odia society," and the Research and Entrepreneurship Park has since been expanded from its original 20,000 square feet to approximately 80,000 square feet, supported by ₹130 crore in funding from the central Ministry of Education (Careers360, 2024).

Programming within this expanded youth innovation infrastructure has diversified into socially relevant thematic areas, exemplified by the ReFlow Menstrual Health Innovation Hackathon scheduled for 2026, indicating an innovation ecosystem strategy that extends beyond conventional technology and engineering startup themes into health and social entrepreneurship domains directly relevant to the gender equity and public health priorities documented in Chapters 6 and 7 (IIT Bhubaneswar Research and Entrepreneurship Park,

2026). This Framework assesses the explicit inclusion of school children within the 100-Cube initiative's target participant base as a genuinely forward looking design choice, one that, if effectively linked to the broader school education AI curriculum integration ambition documented in Chapter 5 and Chapter 16, could establish a coherent innovation talent pipeline extending from secondary school through university and into the state's growing startup and incubation ecosystem documented in sections 17.1 and 17.2.

17.6 Skill Development, Employability and Workforce Alignment

Odisha's skill development strategy, documented in its technical and vocational education dimension in Chapter 5, operates as the essential workforce supply mechanism underpinning the innovation and knowledge economy ecosystem documented throughout this chapter. The Sudakshya scheme's success in raising female enrollment in Industrial Training Institutes and polytechnics, and the BharatNetra programme's targeted training of 7,000 fintech professionals in partnership with the Global Finance and Technology Network, both documented in Chapters 4 and 5, represent direct workforce alignment interventions designed to ensure the state's expanding knowledge economy and digital services sector, examined in Chapter 3's discussion of the state's Global Capability Centre and semiconductor policy initiatives, has access to an adequately skilled talent pipeline.

This Framework's overall assessment of Odisha's innovation, research, and knowledge economy ecosystem, drawing together the evidence presented across this chapter, is that the state has built a genuinely substantial and increasingly well coordinated institutional foundation, spanning startup policy, incubation infrastructure, anchor knowledge institutions, and youth innovation programming, over a comparatively short period. The most significant remaining gap this Framework identifies is the intellectual property commercialization and tracking infrastructure documented in section 17.3, without which the state's substantial upstream investment in research and startup incubation risks under-realizing its downstream economic value, a concern directly relevant to the state's Vision 2047 knowledge economy diversification ambitions discussed further in Chapter 21.

Chapter 18: Agriculture, Allied Sectors and Food Security

18.1 Cropping Pattern, Agricultural Productivity and Input Use

Odisha's cropping pattern remains dominated by paddy cultivation, with rice accounting for 118.6 lakh metric tonnes of the state's total foodgrain production of 150.5 lakh metric tonnes in 2024 to 25, documented in its aggregate agricultural performance context in Chapter 3 (Deccan Chronicle, 2026). This continued rice dominance has prompted the state government to actively pursue crop diversification, with Deputy Chief Minister and Minister of Agriculture and Farmers Empowerment Kanak Vardhan Singh Deo formally requesting increased central financial support under the National Food Security Plan for pulses and oilseed cultivation on 2.5 lakh hectares of existing paddy land, presented to Union Agriculture Minister Shivraj Singh Chouhan at the National Conference on Agriculture for the Rabi Campaign (News on Air, 2024). This diversification request was accompanied by a specific ask to increase field performance expenditure support per hectare for sunflower, groundnut, and beekeeping activities, alongside a proposal for an annual agroforestry programme allocation of ₹8.34 crore under the National Development Plan framework (News on Air, 2024).

This crop diversification push complements the state's parallel millet promotion strategy documented in Chapter 3, where ragi, or finger millet, procurement more than doubled following the introduction of a Minimum Support Price of ₹4,290 per quintal alongside additional cultivation incentives. This Framework identifies this combined push toward pulses, oilseeds, and millets as a structurally sound response to the risk concentration inherent in Odisha's historical near total dependence on paddy cultivation, both from a farmer income diversification perspective and from a climate resilience perspective, given that pulses and millets generally demonstrate greater drought tolerance than paddy, a relevant consideration given the climate vulnerability profile documented in Chapter 14.

18.2 Irrigation and Water Use Efficiency in Agriculture

Odisha's irrigation infrastructure, examined in detail in Chapter 10's water resources discussion, has expanded to cover an irrigation potential of 74.2 lakh hectares, with cropping intensity improving to 165 percent in 2024 to 25 from 158 percent in 2020 to 21, a genuine efficiency gain enabling more intensive multi-season cultivation on the state's irrigated land base (Kalinga TV, 2026). The continued expansion and reliability of this irrigation infrastructure remains directly contingent on the resolution of the Mahanadi river water sharing dispute with Chhattisgarh, documented in Chapter 4, given the Hirakud Dam system's centrality to irrigation water supply across sixteen of the state's districts, reinforcing this Framework's repeated recommendation that the state's agricultural planning treat the dispute's ongoing negotiated resolution process as a critical input variable for medium term irrigation and cropping intensity target setting.

18.3 Agricultural Marketing, Price Realisation and Farmer Income

Odisha's agricultural marketing and procurement system has strengthened considerably in recent years, with the state procuring 92.6 lakh metric tonnes of paddy from approximately 20 lakh farmers in 2024 to 25, disbursing ₹21,300 crore in Minimum Support Price payments, with procurement coverage rising sharply to approximately 78 percent of total paddy production from 61 percent in the preceding year, documented in fuller detail in Chapter 3 (ETV Bharat, 2026; Organiser, 2026). This procurement expansion represents a direct and substantial farmer income security gain, given that assured government procurement at Minimum Support Price protects farmers from the price volatility and potential distress sale conditions that characterize open market sale in the absence of such procurement guarantees.

Beyond paddy procurement, the state's rural livelihood and market linkage infrastructure, documented in Chapter 12's discussion of the Odisha Rural Development and Marketing Society and its Pallishree Mela and Sisir Saras marketing platforms, extends market access support to the state's substantial Women's Self Help Group agricultural and allied produce base, connecting rural producer output, including processed food, handicraft, and agricultural value added products, to both domestic and international markets. This Framework identifies the coordination between the state's core paddy procurement architecture, documented above, and its broader Mission Shakti linked agricultural marketing infrastructure, documented in Chapter 12, as jointly constituting a reasonably comprehensive farmer income support system, though one whose reach into non-paddy crop categories, particularly the diversification crops documented in section 18.1, would benefit from the kind of assured procurement mechanism the state has already built successfully for paddy.

18.4 Food Processing Industry and Value Chain Development

Food processing sector development in Odisha operates within the broader national policy architecture of the Pradhan Mantri Kisan Sampada Yojana, under which 1,185 projects had been completed nationally as of November 30, 2025, strengthening modern food processing and cold chain infrastructure, and the Production Linked Incentive Scheme for the Food Processing Industry, which had approved 169 applications nationally, mobilizing ₹9,207 crore in investment commitments with ₹2,162.55 crore in incentives disbursed by December 31, 2025 (PIB, 2026). This Framework was unable to identify Odisha specific project counts or investment figures within these national scheme totals, representing a specific data gap this Framework recommends the state's Department of Food Processing and Agri-Business or equivalent nodal department address through dedicated state level scheme utilization reporting.

Odisha's food processing potential is most clearly evidenced in its marine and fisheries value chain, documented in section 18.6 and in Chapter 3, where the state's position as the third largest marine exporter nationally, with shrimp exports reaching ₹4,708 crore in 2024 to 25, reflects a genuinely developed processing and export value chain in this specific sub-sector, even if comparable processing value addition has not yet been documented at similar scale for the state's core paddy, dairy, and horticultural output.

18.5 Animal Husbandry, Dairy and Poultry: Economic Contribution

Odisha's animal husbandry sector has recorded strong recent growth, with milk production rising to 27.1 lakh metric tonnes, an increase of 3 percent, and egg production surging from 242 crore eggs in 2020 to 21 to 406 crore eggs in 2024 to 25, a compound annual growth rate of 14 percent, documented in fuller detail in Chapter 3 (ETV Bharat, 2026). This sustained poultry sector growth in particular represents a significant rural income diversification and nutritional security contribution, given eggs' role as an accessible protein source directly relevant to the child nutrition challenges documented in Chapter 6, where dietary adequacy among young children has been identified as a specific area of continued concern despite broader poverty reduction gains.

18.6 Fisheries: Inland, Marine and Aquaculture

Odisha's fisheries sector, documented in its export and production dimensions in Chapter 3, recorded fish production of 11.92 lakh metric tonnes in the most recent reporting period, positioning the state as India's fourth largest fish producer and third largest marine exporter, with shrimp exports specifically reaching ₹4,708 crore (ETV Bharat, 2026; Organiser, 2026). This fisheries performance, spanning both inland aquaculture and marine capture fisheries along the state's 480 kilometer coastline documented in Chapter 1, represents one of the more successful examples of primary sector diversification documented throughout this Framework, though this Framework notes, consistent with the environmental assessment presented in Chapter 13, that continued expansion of shrimp aquaculture specifically around the ecologically sensitive Chilika Lake wetland carries documented environmental costs, including nutrient overload and algal bloom risk, that require continued careful regulatory balance between fisheries economic growth and wetland ecosystem preservation.

18.7 Horticulture, Floriculture and Medicinal Plants

Horticultural crop development in Odisha, encompassing fruit, vegetable, floriculture, and medicinal plant cultivation, has received specific policy attention through the state's crop diversification advocacy documented in section 18.1, particularly the Deputy Chief Minister's request for enhanced field performance expenditure support for groundnut and sunflower cultivation as part of the state's broader effort to reduce paddy monoculture dependence. This Framework was unable to identify comprehensive, current state level production, area, and value data specifically for horticulture, floriculture, and medicinal plant cultivation comparable to the depth of data available for the state's foodgrain, dairy, and fisheries sectors documented elsewhere in this chapter, representing a further specific data gap this Framework recommends the state's Horticulture Department address through more comprehensive and more current public reporting, particularly given the potential relevance of medicinal plant cultivation to the livelihoods of forest dependent tribal communities documented throughout this Framework's discussion of the state's tribal population in Chapters 1, 7, and 13.

18.8 Agricultural Credit, Insurance and Risk Management

Agricultural credit and risk management support for Odisha's farmers operates substantially through national scheme architecture, with the Pradhan Mantri Fasal Bima Yojana crop insurance scheme insuring 4.19 crore farmers across 6.2 crore hectares nationally during 2024 to 25, with Odisha among the 28 states and union territories covered under the scheme, and the Kisan Credit Card programme maintaining 7.72 crore operative accounts nationally as of March 31, 2025, providing farmers timely and affordable access to institutional agricultural credit (PIB, 2026; CalcWise, 2026). The state's own input subsidy disbursement, at ₹7,140 crore for 2024 to 25 as documented in Chapter 3, operates alongside this national crop insurance and credit architecture, providing a further direct state level risk mitigation and production cost support mechanism specifically calibrated to Odisha's agricultural conditions.

Looking toward longer term agricultural risk management infrastructure, the state has proposed the establishment of a dedicated research centre for deep land agriculture in coastal Odisha, directly relevant to the cyclone and flood exposure documented in Chapter 14, and an agricultural machinery development, training, and testing centre in western Odisha, intended to advance agricultural mechanization innovation in the state's interior districts (News on Air, 2024). This Framework identifies these two proposed institutions, if implemented, as valuable and appropriately targeted additions to the state's agricultural risk management and productivity infrastructure, given their explicit alignment with the state's two most distinct agro-climatic risk profiles, coastal cyclone and flood exposure documented in Chapter 14, and the mechanization and productivity gap in the western interior districts documented throughout this Framework's discussion of the state's persistent coastal-interior development disparity.

Chapter 20: Cross-Cutting Themes and Integrated Policy Imperatives

20.1 Sustainable Development Goals of the State

Odisha's performance against the United Nations Sustainable Development Goals, as measured through NITI Aayog's SDG India Index, presents a genuinely bifurcated profile consistent with the broader analytical pattern this Framework has documented throughout its preceding chapters. The most recent detailed state level breakdown available, the SDG India Index 2020 to 21, recorded Odisha's composite score at 61 out of 100, an improvement of 3 points over the 58 recorded in the 2019 to 20 edition, with the state's best individual goal performance recorded on SDG 6, Clean Water and Sanitation, at 86 out of 100, and the state additionally ranked first nationally on SDG 14, Life Below Water, reflecting the marine and coastal resource strength documented in Chapters 3 and 13 (Journal of Informatics Education and Research, 2024).

Beneath this respectable aggregate score, however, the index categorized Odisha as an "aspirant," the lowest of the index's performance tiers, on six specific goals: SDG 1, No Poverty, SDG 2, Zero Hunger, SDG 4, Quality Education, SDG 5, Gender Equality, SDG 8, Decent Work and Economic Growth, and SDG 9, Industry, Innovation, and Infrastructure, even as the state achieved "frontrunner" status, the index's top tier, on SDGs 3, 6, 7, 10, 11, 12, 13, and 15 (Journal of Informatics Education and Research, 2024). This pattern, strong performance on environmental, water, and infrastructure related goals alongside persistent weakness on poverty, hunger, education, gender, and decent work goals, mirrors precisely the fiscal and human development divergence this Framework has identified as its central analytical thread since Chapter 1. Contemporaneous news reporting on this same index edition characterized Odisha as having "slipped to feature in the bottom five states" nationally despite its numerically improved score, citing specific underlying indicators including a poverty rate of 32.5 percent, anemia among 47 percent of pregnant women, stunting among 29 percent of children under five, and a decline in elementary education net enrollment ratio from 94 to 71 percent, alongside an unemployment rate of 7.6 percent and a zero score on the index's Ease of Doing Business parameter (OrissaPost, 2021). This Framework flags the 2020 to 21 edition as the most recent comprehensive breakdown identified in the sources reviewed for this report, and recommends the state's Planning and Convergence Department's engagement with NITI Aayog's more recent SDG India Index editions be consulted directly to establish the state's current standing, given the substantial policy activity documented across this Framework's chapters since that assessment was conducted.

20.2 Gender Mainstreaming Across Sectors

Odisha's gender mainstreaming performance presents a similar tension between genuine programmatic strength and persistent structural gaps. The state's Female Labour Force Participation Rate of 44.7 percent, documented in Chapter 3, exceeds the national average,

and the Subhadra Yojana direct cash transfer scheme, documented in Chapter 7, represents one of the more substantial state level women's financial empowerment programmes anywhere in India, reaching over 1.24 crore women by August 2025. Female literacy has also improved steadily, from 70 percent in 2017 to 18 to 73.3 percent by 2023 to 24, documented in Chapter 7.

Notwithstanding these genuine programmatic and participation strengths, the SDG India Index's categorization of Odisha as an "aspirant" state specifically on SDG 5, Gender Equality, documented in section 20.1, indicates that these positive indicators have not yet aggregated into strong composite gender equality outcomes by the index's broader measurement framework, which typically incorporates additional dimensions including women's political representation, safety indicators, and unpaid care work burden alongside the labour force participation and literacy measures in which Odisha performs comparatively well. This Framework identifies this gap between strong individual gender programme performance and weaker aggregate gender equality index standing as warranting further disaggregated investigation by the state's Department of Women and Child Development, to identify which specific sub-indicators are driving the aspirant classification despite the state's genuinely substantial investment in women's economic empowerment documented throughout Chapters 7 and 12.

20.3 Youth Policy and Demographic Dividend Realisation

Odisha's demographic profile, documented in Chapter 1, positions the state favorably for demographic dividend capture, with a declining dependency ratio of 54.1 percent and a population growth rate of just 0.57 percent indicating a working age population share that continues to expand relative to dependent age cohorts. This favorable demographic structure, combined with the youth innovation ecosystem investment documented in Chapter 17, including the IIT Bhubaneswar 100-Cube initiative's explicit extension into secondary school participation, suggests a state government genuinely attentive to the demographic dividend opportunity.

This Framework identifies, however, a significant risk that this demographic dividend is being substantially captured by other Indian states rather than realized within Odisha itself, given the scale of youth out-migration documented in section 20.4 below. Periodic Labour Force Survey data for 2022 to 23 found that more than 33 percent of Odia males aged 18 to 35 were absent from the local workforce, an indirect but compelling indicator of mass out-migration among precisely the age cohort whose productive capacity the demographic dividend framework is intended to capture within the state's own economy (Odisha.plus, 2025). This finding, read alongside the labour market productivity gap documented in Chapter 3, where manufacturing employment has remained below 10 percent of the state workforce for over a decade despite strong GSDP growth, suggests that Odisha's demographic dividend window, while structurally present, is not yet being effectively converted into in-state productive employment at the scale the state's favorable population structure would otherwise support.

20.4 Migration: Internal, Inter-State and International Dimensions

Labour migration constitutes one of the more consequential and, this Framework assesses, insufficiently addressed cross-cutting development challenges documented across this Framework. Odisha's Deputy Chief Minister Kanak Vardhan Singh Deo, presenting on distress migration at an international conference in Bhutan in May 2025, estimated the state's total migrant population at approximately 1.5 million, distinguishing between distress driven seasonal migration, comprising workers in brick kilns, agricultural labour, carpet weaving, and unskilled occupations, with 70,142 such migrants formally registered in 2023 to 24, and aspirational or skilled and semi-skilled migration into textile, plumbing, and masonry trades, generating an estimated ₹12,000 crore, or approximately 1,446 million US dollars, in annual remittance inflows to the state (Deo, 2025). The Deputy Chief Minister's presentation identified five principal drivers of distress migration specifically: lack of assured employment during agricultural lean periods, inadequate livelihoods from agriculture and forestry, lack of local livelihood and skill development options, debt repayment pressure, and natural calamities, the last of which connects this migration challenge directly to the cyclone and flood exposure documented in Chapter 14 (Deo, 2025).

Independent research places the scale of this migration considerably higher than the Deputy Chief Minister's distress migration specific estimate, with a 2023 study by the Centre for Migration and Inclusive Development estimating that Odisha sends nearly 1.7 million seasonal and semi-permanent workers to other states annually, with over 92 percent of these migrants employed in informal sector occupations devoid of employment protections (Odisha.plus, 2025). This same analysis draws a direct causal link to the labour market productivity gap this Framework has documented in Chapter 3, noting that Odisha's economy posted 7.8 percent GSDP growth in 2023 to 24 even as manufacturing employment remained below 10 percent of the workforce for over a decade, concluding that migration in Odisha reflects not merely individual aspiration but systemic exclusion from formal in-state employment opportunity commensurate with the state's headline economic growth performance (Odisha.plus, 2025).

The state government has established a dedicated task force to analyze distress migration trends, identify underlying challenges, and develop long term solutions, and independent policy commentary has proposed a specific institutional response architecture, including a dedicated Migration and Labour Policy Cell under the Planning and Convergence Department, a Migrant Welfare Fund co-financed through destination state and industry Corporate Social Responsibility contributions, skill export programmes aligned to sectors including logistics, hospitality, and construction where Odia migrant workers are already concentrated, and a proposed Remittance Integration Index linking remittance inflows to district level financial services development, drawing explicit comparison to more developed migrant worker support models in states such as Kerala, which maintains formal returnee support packages, and Jharkhand, which operates a real time digital migrant worker registry (Odisha.plus, 2025). This Framework endorses the direction of these proposed interventions, and identifies the resolution of the underlying structural driver, the persistent gap between the

state's strong aggregate GSDP growth and its comparatively narrow in-state formal employment base documented throughout Chapters 3 and this section, as the more fundamental long term solution, one requiring the manufacturing employment intensification and skill development workforce alignment priorities this Framework has already identified in Chapters 3, 4, and 17.

20.5 Science, Technology and Innovation for Development

Odisha's science, technology, and innovation strategy, documented extensively in Chapters 16 and 17, spans the state's AI Policy 2025, Global Capability Centre Policy 2025, and Semiconductor Manufacturing and Fabless Policy 2025, the OCAC-C-DAC institutional partnership on artificial intelligence, high performance computing, quantum computing, and cybersecurity, and the state's growing innovation and incubation infrastructure anchored by the Bhubaneswar City Knowledge Innovation Cluster, the KIIT Technology Business Incubator, and the IIT Bhubaneswar Research and Entrepreneurship Park's 100-Cube initiative. This Framework's assessment, developed in full in Chapter 17, is that this science, technology, and innovation architecture represents a genuinely substantial and increasingly well coordinated institutional investment, whose principal remaining gap lies in intellectual property commercialization tracking rather than in the underlying research and incubation infrastructure itself.

20.6 Statistical System Strengthening and Evidence-Based Policymaking

A recurring finding across this Framework's twenty preceding chapters has been the identification of specific, consequential data gaps in the state's public statistical and administrative reporting, spanning mental health service infrastructure documented in Chapter 6, child protection and POCSO enforcement data documented in Chapter 7, minority community welfare scheme coverage documented in Chapter 7, school level digital infrastructure penetration documented in Chapter 5, land use change and soil degradation trends documented in Chapter 13, judicial pendency and police modernization metrics documented in Chapter 15, data governance and privacy policy architecture documented in Chapter 16, intellectual property commercialization outcomes documented in Chapter 17, horticulture and floriculture sector data documented in Chapter 18, and the state's film and media production sector documented in Chapter 19.

This Framework identifies this pattern, recurring across such a wide range of otherwise unrelated policy domains, as itself a significant cross-cutting finding: Odisha's statistical and public reporting infrastructure, while clearly robust in specific well established domains such as fiscal reporting, examined in Chapter 2, and disaster management operational data, examined in Chapter 14, remains considerably less developed in newer or more socially sensitive policy domains. This Framework recommends that the state's Directorate of Economics and Statistics, in coordination with the relevant line departments identified throughout this document, prioritize a systematic statistical capacity building programme specifically targeting these identified gap areas, given that effective evidence based

policymaking across the priorities this Framework has documented, from tribal education and health disparities to urban sewerage infrastructure to youth out-migration, depends fundamentally on the availability of the granular, current, and geographically disaggregated data this Framework has found wanting in these specific domains.

20.7 Public Participation: Behavioural Change and Citizen Engagement

Odisha's citizen engagement and participatory governance infrastructure, documented across several preceding chapters, includes the state's 5T governance framework and its associated e-Abhijoga grievance redressal and Ama Sathi citizen service platforms documented in Chapter 16, the Gram Sabha centered Viksit Gram Panchayat Plan mechanism introduced under the Viksit Bharat Guarantee for Rozgar and Ajeevika Mission, Gramin, Act, 2025, documented in Chapter 12, the state's exceptionally large community volunteer cadre, exceeding 100,000 trained individuals, supporting the disaster risk reduction architecture documented in Chapter 14, and the Mission Shakti Women's Self Help Group network, documented in Chapter 12, which functions simultaneously as an economic livelihood institution and a de facto grassroots civic participation and social capital infrastructure reaching an estimated 70 lakh women across the state.

This Framework's overall assessment, drawing together this participatory governance infrastructure across its various sectoral manifestations, is that Odisha has built a genuinely dense network of citizen and community engagement channels, from the household and self help group level through Gram Sabha planning to state level digital grievance redressal, a density that compares favorably to many other Indian states. The consistent challenge this Framework has identified throughout its discussion of this infrastructure, echoing the fiscal devolution concern raised in Chapter 12, is ensuring that the formal participatory authority and engagement channels documented throughout this chapter are matched by genuine resource allocation responsiveness, so that citizen and community engagement translates into measurable policy and budgetary responsiveness rather than functioning as a parallel consultative process disconnected from the state's core planning and expenditure decisions documented in Chapter 2.

Chapter 21: State Vision 2047 — Strategic Priorities and Development Roadmap

21.1 Long-Term Vision and Flagship Missions

Odisha's long term development strategy has been formally consolidated into the Odisha Vision 2036 and 2047 document, titled "Viksit Odisha for Viksit Bharat," unveiled by Prime Minister Narendra Modi in Bhubaneswar on June 20, 2025, coinciding with the first anniversary of Chief Minister Mohan Charan Majhi's government (Odisha.plus, 2025). The document was prepared jointly by the state's Planning and Convergence Department and NITI Aayog, and, distinctively among Indian state planning documents, incorporated direct citizen input gathered from over 3,20,000 people across the state through a dedicated online portal, with submissions analyzed using artificial intelligence to inform the document's priorities (Mid Day Odisha, 2025). The Vision is structured around six pillars, rural empowerment, people-first development, legacy and pride, prosperity for all, technology leadership, and citizen-centric governance, and operationalized through a "36-for-36" agenda comprising 36 high impact initiatives targeted for completion by 2036, the year marking the centenary of Odisha's formation as a state (LBSNAA Library, 2026).

The document sets two headline economic targets: a \$500 billion state economy by 2036, and a \$1.5 trillion state economy by 2047, the year marking the centenary of India's independence, with Chief Minister Majhi explicitly acknowledging that reaching the 2036 milestone will require the state to sustain real double digit economic growth for at least eleven consecutive years, a substantially higher sustained growth rate than the 7.9 percent recorded in the state's most recent Economic Survey documented in Chapter 3 (Careers360, 2025). This Framework assesses this growth target as genuinely ambitious relative to the state's demonstrated recent performance, and recommends that the state's own progress tracking against this target, discussed in section 21.7, explicitly distinguish between the substantial and real progress documented throughout this Framework and the additional acceleration required to meet the Vision document's own stated targets, to maintain the kind of honest, evidence based assessment this Framework has attempted to model throughout its preceding chapters.

21.2 Medium-Term Priority Action Plan (2025–2030)

The medium term implementation window of the Vision 2036 and 2047 framework has been given concrete institutional expression through the Vikas Manthan 1.0 conference, "Governance in Action," held over two days in early 2026 at Bhubaneswar's Lok Seva Bhawan Convention Centre, jointly organized by the Planning and Convergence Department and the Odisha Centre for Integrated Development, bringing together over 500 policymakers, senior administrators, and domain experts to review the state's twenty month implementation track record and refine the roadmap toward the 2036 and 2047 milestones (Organiser, 2026). The conference's plenary session, titled "Saksham Odisha," reaffirmed the state's \$1.5 trillion economy target while explicitly positioning the state's medium term ambition around

becoming a global leader in innovation, education, skill development, and sports, alongside the fiscal prudence, inclusive growth, digital governance, and tourism expansion priorities documented throughout this Framework (Organiser, 2026).

Perhaps the single most consequential medium term development identified across the research underpinning this Framework is the formal end of Left Wing Extremism affected status across the state as of March 31, 2026, with the state government noting that development activities that had remained stalled for years in the affected districts, characterized as covering nearly half the state's territory, have since gained significant momentum (Organiser, 2026). Given that the districts historically most associated with Left Wing Extremism in Odisha, including Malkangiri, Koraput, Rayagada, Kandhamal, and neighboring tracts, are precisely the same districts this Framework has identified throughout Chapters 1, 6, 7, and 12 as facing the state's most severe and persistent multidimensional poverty, health, and education deprivation, this Framework identifies the formal resolution of this security constraint as potentially the single most significant enabling condition for the tribal district development acceleration this Framework has recommended throughout its preceding chapters. This Framework recommends the state's medium term priority action plan treat the newly unlocked development access to these districts as an urgent, front loaded priority for the specific interventions this Framework has identified as most needed there, including the health system strengthening documented in Chapter 6, the teacher recruitment and rural higher education expansion documented in Chapter 5, and the last mile rural connectivity and water infrastructure documented in Chapters 8 and 10, rather than allowing normal budget cycle sequencing to delay this opportunity.

21.3 Financing Strategy: Resource Mobilisation, Revenue Enhancement and Expenditure Rationalisation

The financing strategy underpinning Odisha's Vision 2036 and 2047 targets rests on the fiscal foundation documented extensively in Chapter 2: a debt to GSDP ratio of just 13.6 percent, among the lowest of any major Indian state, a capital outlay to GSDP ratio of 6.6 percent, the highest among major states, and a revenue base strengthened by both robust own tax growth and an unusually large mineral royalty stream. This Framework's assessment, developed in Chapter 2, is that this fiscal position provides Odisha with genuinely unusual headroom among Indian states to sustain the scale of infrastructure and human capital investment the Vision document's targets imply, though the same chapter identified specific structural vulnerabilities, commodity price exposure through mineral revenue dependence and the GST destination principle's dampening effect on a producing state's tax base, that will need active management as the state's financing requirements scale toward its 2036 and 2047 targets.

The Vision document's exploration of new revenue and resource mobilization mechanisms, including the policy frameworks for Special Marine Zones and Special Farming Zones discussed between Chief Minister Majhi and Union Home Minister Amit Shah in July 2026, intended specifically to unlock the economic potential of the state's coastal and agricultural regions documented in Chapters 3 and 18, represents an early indication of the kind of

targeted, sector specific resource mobilization strategy this Framework's fiscal analysis in Chapter 2 suggested would be necessary to sustain capital investment at current elevated levels without eroding the state's currently strong debt sustainability position (Organiser, 2026).

21.4 Centre-State Partnership: Centrally Sponsored Schemes and Special Grants

The co-authorship of the Vision 2036 and 2047 document by NITI Aayog alongside the state's own Planning and Convergence Department, documented in section 21.1, reflects a Centre-state partnership model that extends across the substantial majority of the sectoral programmes documented throughout this Framework, from the Jal Jeevan Mission water infrastructure documented in Chapter 10, through the Pradhan Mantri Awas Yojana housing schemes documented in Chapters 11 and 12, to the Aspirational Districts Programme documented in Chapter 1. The July 2026 discussion between Chief Minister Majhi and NITI Aayog member Professor K. V. Raju on developing a robust framework for district level Gross Domestic Product estimation directly addresses one of this Framework's most frequently recurring recommendations, the need for more granular, district disaggregated economic and social data across virtually every sector examined in this document, and this Framework welcomes this specific Centre-state collaborative initiative as a potentially significant step toward closing the data gaps identified throughout Chapters 1 through 20 (Organiser, 2026).

21.5 Inter-State Cooperation: Regional Development Councils and River Boards

Odisha's inter-state cooperation architecture, documented in its institutional dimension in Chapter 4, centers on the Eastern Zonal Council and the ongoing Mahanadi river water sharing negotiation with Chhattisgarh, the latter having moved, as documented in Chapter 4, toward a joint technical committee process following the July 2026 meeting between the two states' Chief Ministers and the Union Jal Shakti Minister. This Framework's Vision 2047 assessment reiterates its recommendation from Chapter 4 that resolution of this dispute be treated as a strategic priority given its direct bearing on the irrigation expansion, hydropower generation, and industrial water supply assumptions likely embedded in the state's long term \$1.5 trillion economy planning.

21.6 International Collaboration: Common Development Agenda and Global Partnership

Odisha's international development partnerships span the multilateral development finance relationships documented throughout this Framework, including the Asian Development Bank's funding of the East Coast Industrial Corridor and Odisha Economic Corridor documented in Chapter 3, the World Bank's historical funding of the National Cyclone Risk Mitigation Project documented in Chapter 14, and the state's technical partnership with the Thailand based Regional Integrated Multi-Hazard Early Warning System for disaster early warning decision support, also documented in Chapter 14. The state's green hydrogen and

green ammonia industrial cluster development, documented in Chapters 4 and 9, has additionally attracted a distinct category of international private capital engagement, with developers including ACME Clean Energy, Avaada Green Hydrogen, Ocior Energy, and Torrent Green Hydrogen establishing production capacity tied to global clean energy value chains.

This Framework assesses Odisha's international collaboration profile as substantive but concentrated in a specific set of sectors, principally infrastructure finance, disaster management technical cooperation, and, most recently, green energy investment, and recommends that the state's Vision 2047 international engagement strategy consider deliberate expansion into the education, health system strengthening, and social protection technical cooperation domains where this Framework has identified some of the state's most persistent and consequential development gaps throughout Chapters 5, 6, and 7, given the substantial international technical assistance and financing expertise available in these domains globally that Odisha's current international partnership portfolio does not yet appear to draw upon as extensively as its infrastructure and disaster management partnerships.

21.7 Monitoring, Evaluation and Results Framework

Odisha's approach to monitoring and evaluating its Vision 2036 and 2047 implementation combines the periodic high level review function performed by conferences such as Vikas Manthan 1.0, documented in section 21.2, with the state's stated commitment to citizen feedback integration through the AI analyzed public input portal used in the Vision document's original preparation, and Chief Minister Majhi's own stated personal commitment to monitoring the document's implementation directly (Mid Day Odisha, 2025). The emerging district level GDP estimation framework, developed in partnership with NITI Aayog and documented in section 21.4, represents a potentially significant strengthening of the state's results measurement infrastructure specifically for economic performance tracking.

This Framework's own analysis, however, has identified a consistent and recurring pattern of granular data gaps across a very wide range of sectors, synthesized in Chapter 20's discussion of statistical system strengthening, spanning mental health infrastructure, child protection enforcement, minority welfare coverage, digital education penetration, land use change, judicial pendency, data governance, intellectual property commercialization, horticulture sector performance, and creative industries. This Framework's central recommendation for the state's Vision 2047 monitoring and evaluation architecture is that the district level GDP estimation initiative currently under development be treated as the first component of a considerably broader statistical modernization programme, extending equivalent district disaggregated, regularly updated, and publicly accessible reporting to the full range of social and human development indicators this Framework has found wanting, since a \$1.5 trillion economy target measured only in aggregate GSDP terms, without commensurate visibility into whether that growth is closing or widening the persistent tribal, rural, and district level disparities documented throughout this Framework, would represent an incomplete and

potentially misleading measure of the "developed Odisha" the Vision document aspires to build.

21.8 Accountability Architecture: Legislature, Civil Society and Citizens

Odisha's accountability architecture for its long term development strategy operates through several parallel channels documented throughout this Framework: the state Legislature and its budgetary oversight function examined in Chapter 2, the Vigilance Directorate and Lokayukta anti-corruption enforcement mechanism examined in Chapter 15, the e-Abhijoga citizen grievance redressal platform examined in Chapter 16, and the civil society and domain expert engagement embedded directly into conferences such as Vikas Manthan 1.0, which brought together over 500 policymakers, administrators, and independent experts to review implementation progress, documented in section 21.2. The scale of direct citizen participation in the Vision document's original formulation, drawing input from over 320,000 individuals, further extends this accountability architecture beyond conventional institutional oversight mechanisms into a genuinely large scale participatory input process, distinguishing this Vision document's stated legitimacy claim from the vision statements many state governments produce with more limited public consultation.

This Framework's overall assessment of this accountability architecture, and of the Vision 2036 and 2047 framework as a whole, mirrors the central analytical thread running throughout this entire document. Odisha possesses genuinely substantial and, in several domains, exemplary institutional capacity: the fiscal discipline documented in Chapter 2, the infrastructure investment momentum documented in Chapters 3, 4, and 8, the internationally recognized disaster management model documented in Chapter 14, the distinctive Jaga Mission land rights and Mission Shakti self help group innovations documented in Chapters 11 and 12, and now, with the formal end of Left Wing Extremism affected status documented in section 21.2, a genuinely new opportunity to extend this institutional capacity into the state's most persistently underserved tribal and forest dependent districts. Whether Odisha's next chapter, from now through 2036 and on to 2047, succeeds in closing the human development gap this Framework has documented consistently across education, health, gender equity, and social inclusion, rather than allowing continued strong aggregate growth to coexist indefinitely with concentrated deprivation in the same specific districts and communities identified repeatedly throughout this document, will be the single most important test of whether "Viksit Odisha," a developed Odisha, becomes a description of the state's headline economic statistics alone, or a description of the lived reality of all 47.2 million of its people.

End Note

This Comprehensive Development Framework for the State of Odisha has attempted to hold two things in the same frame throughout: a state whose fiscal discipline, infrastructure investment, disaster management capability, and recent growth performance rank among the strongest of any Indian state, and a state whose tribal, forest dependent, and remote districts continue to carry a burden of deprivation, in health, education, and basic services, that the aggregate statistics too often obscure. Chapter 1 opened by describing this as a dual profile that resists easy narrative. Twenty chapters later, the evidence has not resolved that tension so much as sharpened it. Odisha's own Vision 2036 and 2047 document, and the formal end of Left Wing Extremism affected status documented in this closing chapter, together represent perhaps the clearest opportunity the state has had in a generation to close it. This Framework has tried, throughout, to identify where the evidence points and where it runs out, so that whoever reads it next, in government, in research, or simply in curiosity about the state, has an honest starting point rather than a polished one.

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