REGIONAL DEVELOPMENT AND LOCAL SELF-GOVERNMENT

WHERE ARE WE?

Strengths

- Increasing per capita income; higher share in the national GDP
- Strong clustering near Delhi NCR; rising service sector
- Robust agricultural base
- Improving governance through PPP initiatives
- Financial and administrative empowerment of PRIs
- Effective women empowerment policies

Areas of Improvement

- Uneven regional development (Gurgaon vis-à-vis Nuh)
- Urban slum challenges - Poor sanitation access; health risks from unmanaged waste; weak water management
- Limited mobilisation of own-source financial resources by PRIs
- Complex approval systems
- Gender participation gaps

Opportunities

- One District, One Product
- Digital capacity-building efforts
- Local financial autonomy; smart urban governance
- Efforts towards gender parity
- Green technology adoption
- Marginalised community upliftment
- Tree planting initiatives and improved rural sanitation
- SHGs: Increasing income of households

Threats

- Rapid population growth
- Extreme climate events; air quality deterioration
- Economic inequality tensions; social instability concerns
- Monsoon unpredictability; disease spread in urban zones
- Water scarcity risks - Groundwater overextraction; industrial water pollution

WHERE DO WE WANT TO GO?

VISION

Haryana enjoys **Future-Proofed Human Settlements** through equitable and balanced regional growth, rural and urban environmental harmony, and technological innovation by empowered local self-governments.

MISSION

To ensure that **Future-Proofed Human Settlements** is the foundation for sustainable balanced regional development with a clear mandate for the local self-governments to implement it. For this, the **CCC Approach—Clean, Carbon Negative, and Conducive Environment**—provides a comprehensive framework that aligns environmental sustainability with economic growth and social equity.

GOALS

- Manufacturing Value Added (MVA) as a proportion of GDP at current prices - 18.36%
- Percentage of GSVA in Industries Sectors (at current price) to total GSVA – 30%
- MSME Udyam Registration per 1,00,000 population - > 5,000
- Renewable energy share in total installed capacity - 70%
- Carbon intensity of GSDP (tonnes Co2e/ INR crore) –20
- AI adoption rate in the manufacturing sector – 90%

ASPIRATIONAL FUTURE

Haryana aspires to empower local self-governments to achieve progress in all regions of the state through effective delivery of services and welfare schemes, elevating the standard of living for all in urban and rural areas. This would be achieved through pioneering initiatives in environmental sustainability, such as promoting alternative fuel vehicles, developing bike-sharing infrastructure, managing waste and air pollution and conserving water resources. It will focus on proactive initiatives to increase participation of women and the third gender in the workforce through diverse employment opportunities across sectors, supported by strategic investments in robust infrastructure across all districts.

HOW WILL WE REACH THERE?

Regional Equity and Infrastructure Development: Prioritise high-poverty and peri-urban districts through bottom-up needs assessments and inclusive capital investment plans. Increase infra budgets, build local institutional capacity, and monitor socioeconomic and environmental impact.

Water Security and Management: Ensure safe, reliable water access in cities through participatory planning and water-sensitive urban design. Enforce rainwater harvesting, revive urban waterbodies, and deploy smart metering systems. Mobilise green bonds for infrastructure upgrades and strengthen municipal capacity for data-driven, resilient water governance.

Environmental Sustainability: Improve waste and air quality management by expanding monitoring systems, enforcing policies, and adopting circular economy practices. Promote EVs, green infrastructure, and aim for zero-waste cities with citizen engagement.

Inclusive Development for the Marginalised: Mandate participatory governance and make development plans inclusive. Expand vocational training, ensure digital access, and embed rights-based awareness and mobile service delivery models for equity.

Empowering Local Self-Governance: Boost local financial independence through increased fund transfers, municipal bonds, PPPs and expanding avenues of financing to strengthen community participation and local self-governance. Strengthen governance via training, capacity-building programmes, social audits, legislative power, and policy alignment with SDGs.

Planned Urban Growth and Liveability: Revise urban planning laws using AI tools and digitised records. Promote affordable housing, climate-resilient infrastructure, improved public transport, integrated waste systems, and peri-urban job creation to curb migration pressures.

Improving Quality of Life in Rural Areas: Adopt a holistic rural development strategy focused on basic services, robust infrastructure, and inclusive growth. Ensure access to clean drinking water, sanitation, and quality healthcare; invest in rural connectivity and amenities; generate employment through agri-based and non-farm activities; empower communities; and promote sustainable management of natural resources to address the drivers of urban migration.

3 BIG ACTIONS

01 **Future-First Growth Zones**

02 **Gram Sabha 5.0**

03 **EquiLead**

INTRODUCTION

Haryana has embarked on a remarkable journey of economic growth, marked by a significant expansion in its service sector from 5.0% in 2019-20 to 8.4% in 2024-25[1], and a notable rise in per capita income from INR 2,32,530 to INR 3,53,182 during the same period.[2] The state's strength in industrial clusters, particularly those centred in the NCR, has provided substantial economic output and employment opportunities. A data-driven governance approach has facilitated detailed assessments and targeted interventions.

However, this impressive growth has been accompanied by persistent and stark development imbalances. This is dramatically evidenced by Gurugram's per capita income being nearly eight times that of Nuh, despite their geographical proximity, highlighting profound regional disparities in economic development.

To strategically promote the geographical dispersal of industry and address regional imbalances, the State has categorised its Development Blocks into four distinct groups: A, B, C, and D, based on their level of industrialisation, socioeconomic development, locational advantage (connectivity), infrastructure, and skill development. The state's industrial distribution further underscores this imbalance:

- Industrial Model Townships (IMT) and Industrial Estates (IE): Category A development blocks (highly industrialised, well-connected) account for 35% of IMTs/IEs, followed by Category B (32%), Category C (26%), and Category D (least industrialised, less connected) at only 6%[3].
- Large/Mega Industrial Projects: An even more pronounced concentration is observed with large and mega projects, where Category A blocks host a staggering 76% of such projects, while Category B accounts for 9%, Category C for 13%, and Category D for a mere 2%. This uneven distribution significantly contributes to the disparity in economic output and employment opportunities across the state[4].

Beyond regional economic disparities, Haryana faces other critical challenges. Water scarcity is a growing concern, impacting both agriculture and urban consumption. Environmental degradation, including air and water pollution, continues to be a pressing issue, threatening public health and ecological balance. The marginalisation of vulnerable communities remains a significant challenge, requiring targeted interventions to ensure inclusive growth. Unplanned urban growth continues to strain existing infrastructure and public services, leading to congestion and reduced quality of life in many areas. Furthermore, local self-governance institutions require further strengthening to effectively address community needs and ensure equitable development at the grassroots level.

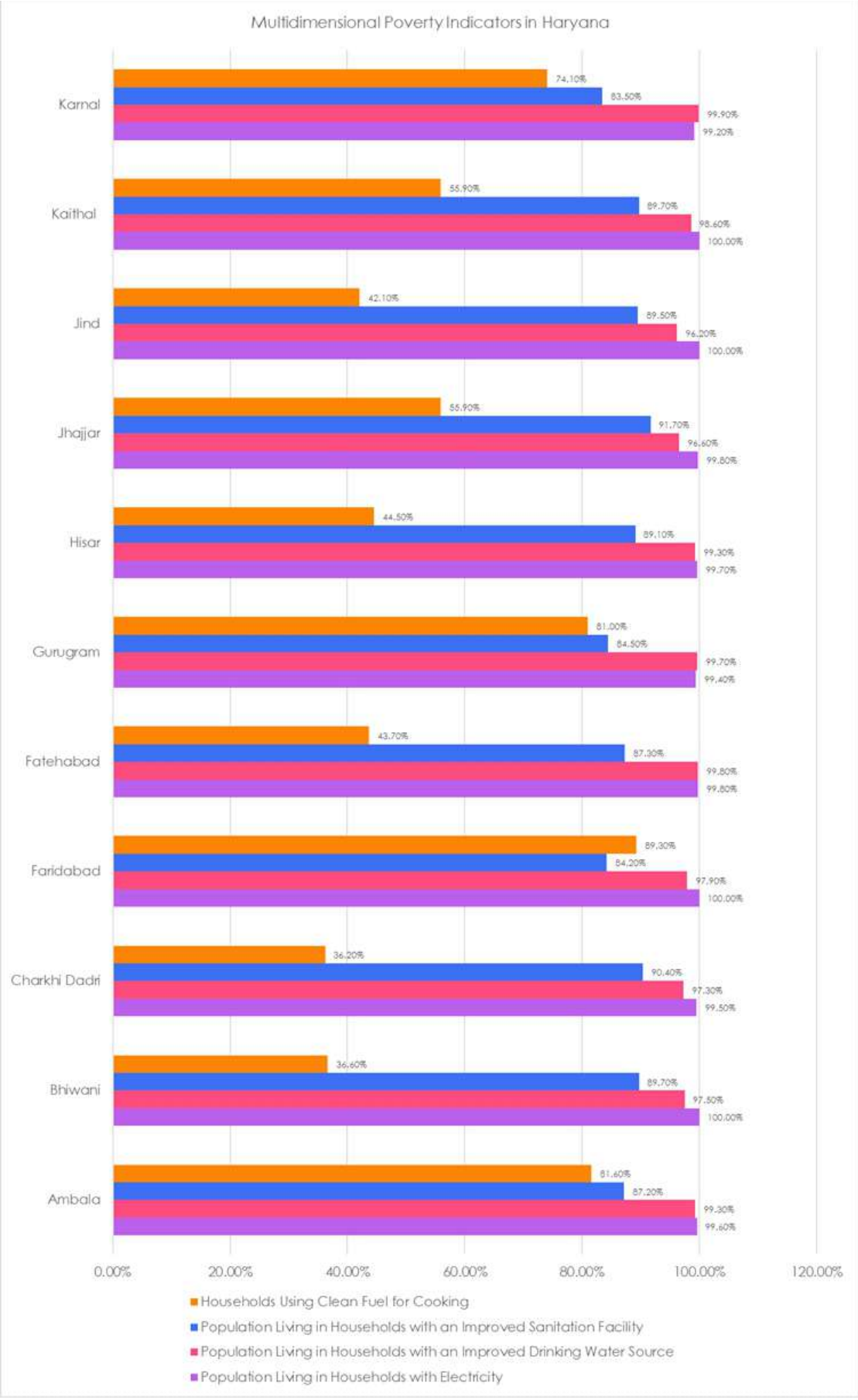
These existing realities present both a strong foundation and a critical challenge for Haryana's journey towards its Vision 2047. This vision is deeply aligned with the principles of equitable and sustainable development and aims to contribute significantly to national and global SDGs, particularly those related to poverty eradication, reduced inequalities, clean water and sanitation, sustainable cities, and climate action.

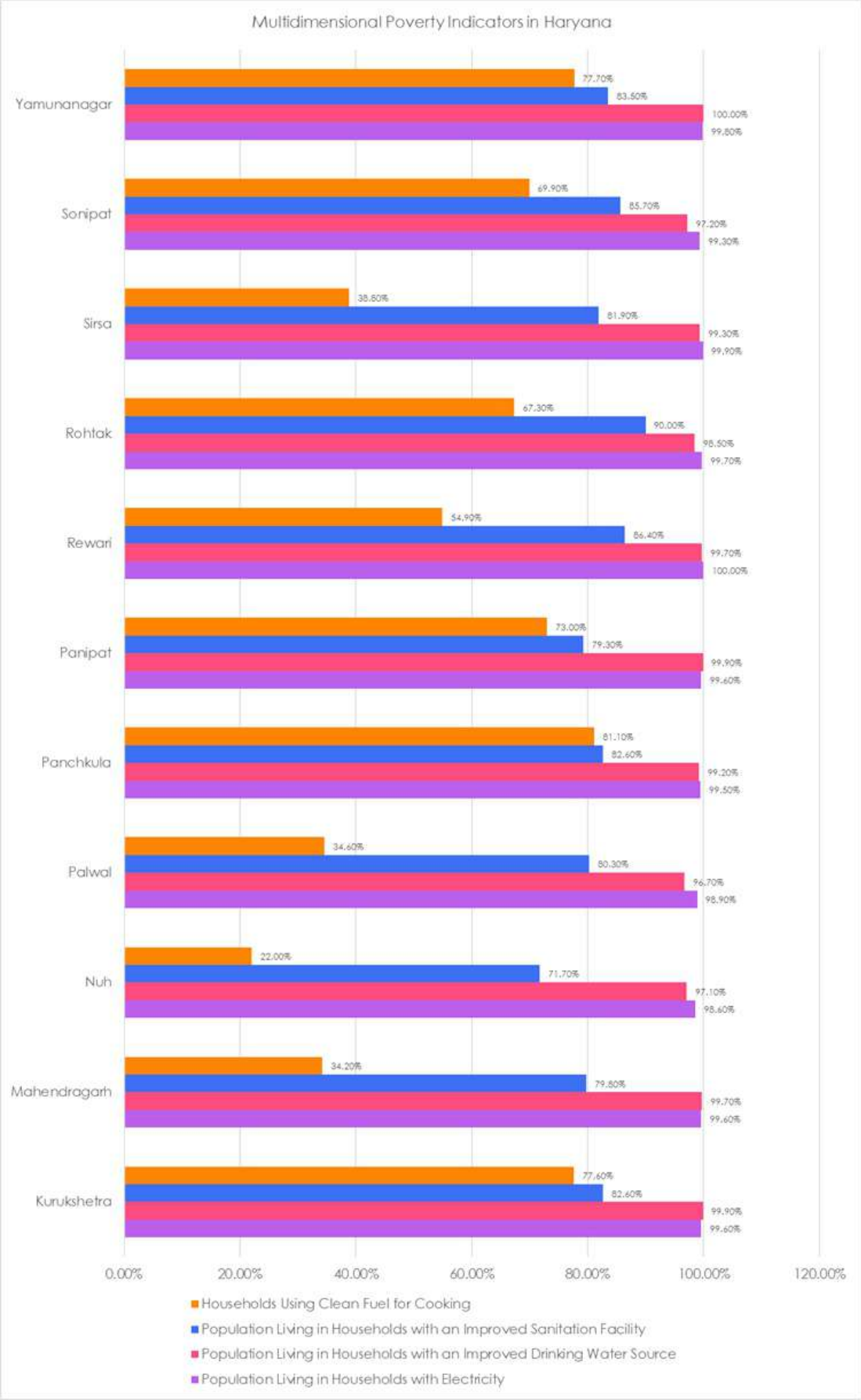
By comprehensively addressing and eliminating these profound regional disparities, Haryana can fully unleash its potential, propelling the state towards its ambitious goal of a trillion dollar plus economy by 2047. This document details the strategic path forward to ensure inclusive prosperity and environmental resilience for all citizens of Haryana.

WHERE ARE WE?

- Service sector growth: 5.0% (2019-20) to 8.4% (2024-25)[5]
- Highest per capita income (2020-21): Gurugram (INR 9.04 lakh)[6]
- Lowest per capita income (2020-21): Nuh (INR 1.06 lakh)[7]
- Multidimensional poverty rate: 7.07% statewide[8]
- Highest poverty districts: Nuh (39.99%), Palwal (14.71%), Fatehabad (7.51%)[9]
- Lowest poverty districts: Panchkula (1.42%), Charkhi Dadri (2.85%), Rewari (2.91%)[10]
- Sanitation access disparity: Mewat (71.7%) vs. Jhajjar (91.7%)[11]
- Clean cooking fuel access: Mewat (22%) vs. Faridabad (89.3%)[12]
- Service Sector Revenue: Generated INR 65,828 crore in FY 2024–25, a 21% increase from FY 2023–24, with Gurugram as the largest contributor.[13]

As of 2024-25, Haryana's administrtive structure includes 22 districts, 80 sub-divisions, 94 tehsils, 49 sub-tehsils, and 140 blocks. The state has made significant strides in connectivity, with 7,412 villages connected by metalled roads as of 2023-24. Furthermore, the state boasts a 100% average for habitations with access to all-weather roads under the PMGSY in 2024 , and all gram panchayats are equipped with internet connectivity. As of March 2024, the number of youth certified in short-term or long-term training schemes (within the 15-29 age group) across various districts is as follows: Karnal has 106 certifications, Faridabad has 242, Fatehabad has 87, Nuh has 102, Panchkula has 39, and Sirsa has 150. These figures contribute to a state total of 726 youth certifications.


Multidimensional Poverty Indicators in Haryana
Karnal
74.10%
83.50%
99.90%
99.20%
Kaithal
55.90%
89.70%
98.60%
100.00%
Jind
42.10%
89.50%
96.20%
100.00%
Jhajjar
55.90%
91.70%
96.60%
99.80%
Hisar
44.50%
89.10%
99.30%
99.70%
Gurugram
81.00%
84.50%
99.70%
99.40%
Fatehabad
43.70%
87.30%
99.80%
99.80%
Faridabad
89.30%
84.20%
97.90%
100.00%
Charkhi Dadri
36.20%
90.40%
97.30%
99.50%
Bhiwani
36.60%
89.70%
97.50%
100.00%
Ambala
81.60%
87.20%
99.30%
99.60%
0.00%
20.00%
40.00%
60.00%
80.00%
100.00%
120.00%
Households Using Clean Fuel for Cooking
Population Living in Households with an Improved Sanitation Facility
Population Living in Households with an Improved Drinking Water Source
Population Living in Households with Electricity

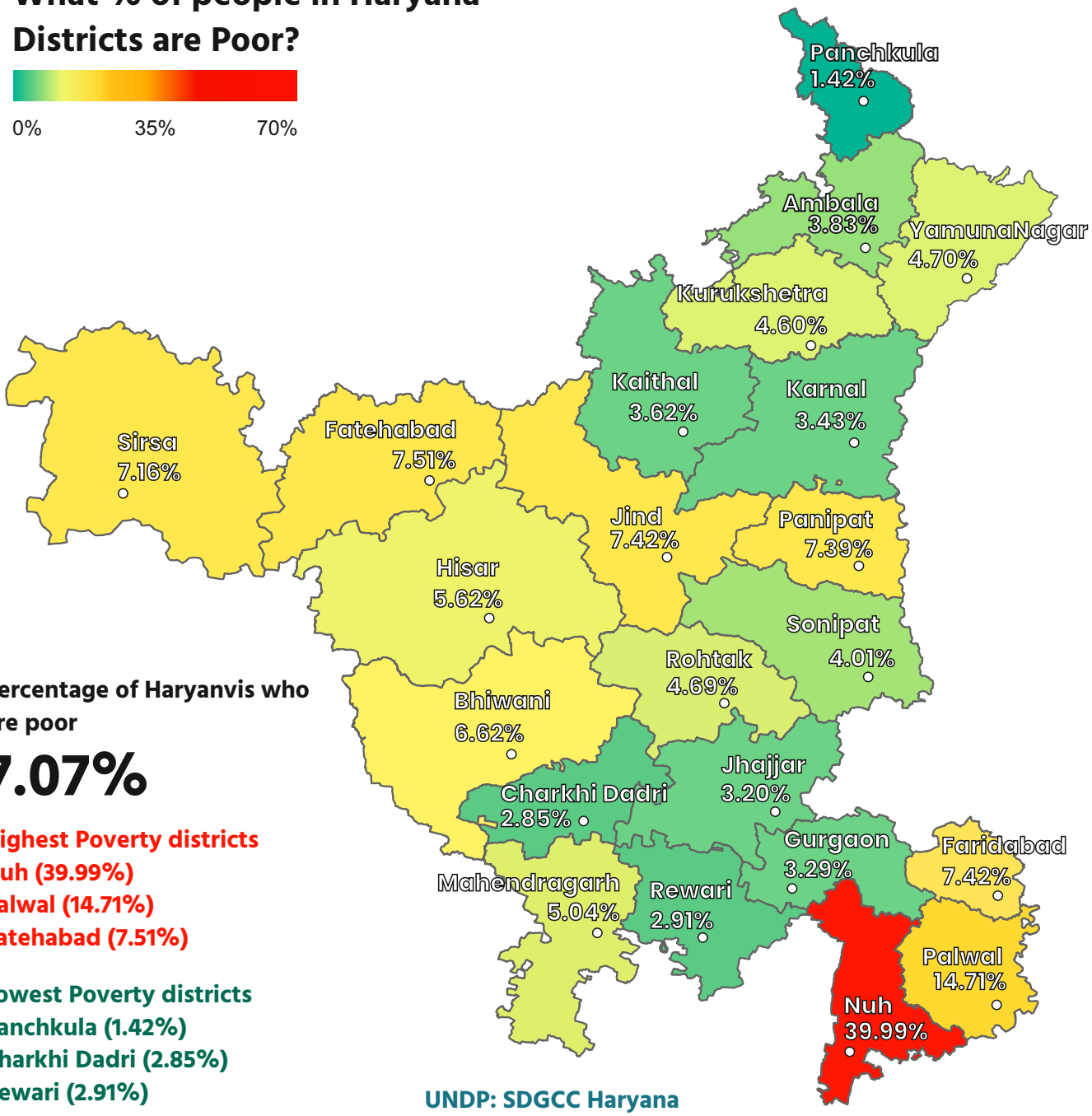


Graph 39 (a) & (b): Multidimensional Poverty Index Indicators in Haryana

(Source: Haryana SDG District Index 2022: Consultative Document)

Source: National Multidimensional Poverty Index: A Progress Review 2023 (NITI Aayog)
https://www.niti.gov.in/sites/default/files/2023-08/India-National-Multidimentional-Poverty-Index-2023.pdf

What % of people in Haryana Districts are Poor?



Percentage of Haryanvis who are poor

7.07%

Highest Poverty districts
Nuh (39.99%)
Palwal (14.71%)
Fatehabad (7.51%)

Lowest Poverty districts
Panchkula (1.42%)
Charkhi Dadri (2.85%)
Rewari (2.91%)

UNDP: SDGCC Haryana

Division Hisar	HCR 2021	HCR 2023
Hisar	9.71%	5.62%
Fatehabad	11.02%	7.51%
Jind	9.16%	7.42%
Sirsa	14.52%	7.16%

Division Rohtak	HCR 2021	HCR 2023
Rohtak	13.72%	4.69%
Jhajjar	5.82%	3.20%
Charkhi Dadri	-	2.85%
Bhiwani	12.78%	6.62%
Sonipat	6.35%	4.01%

Division Gurugram	HCR 2021	HCR 2023
Gurugram	10.39%	3.29%
Mahendragarh	6.29%	5.04%
Rewari	11.08%	2.91%

Division Ambala	HCR 2021	HCR 2023
Ambala	1.99%	3.83%
Panchkula	2.47%	1.42%
Yamunanagar	4.47%	4.70%
Kurukshetra	6.42%	4.60%

Division Rohtak	HCR 2021	HCR 2023
Karnal	6.40%	3.43%
Panipat	8.12%	7.39%
Kaithal	7.83%	3.62%

Division Faridabad	HCR 2021	HCR 2023
Faridabad	10.70%	7.42%
Palwal	26.98%	14.71%
Nuh	60.50%	39.99%

Figure 5: Percentage of Haryanvis who are poor
(Source: National Multidimensional Poverty Index 2023)

FUTURES TRIANGLE

(*Refer to page number 28 for an in-depth overview of the Futures Triangle.)

The Futures Triangle methodology provides a powerful analytical framework for understanding the complex interplay of forces shaping Haryana's regional development trajectory. The tables below detail the positive and negative aspects within each dimension, highlighting the multifaceted nature of Haryana's development context. This analysis serves as a foundation for identifying strategic interventions that can amplify positive forces while mitigating constraining factors, ultimately helping to navigate toward the desired future vision for balanced regional development by 2047.

Pushes of the Present

Positive	Negative
Smooth service delivery through **Parivar Pehchan Patra initiative**	**Imbalanced regional development** exacerbating socioeconomic inequalities
Housing schemes addressing inequality through **Pradhan Mantri Awas Yojana**	**Self-segregated spaces** based on class, caste, and religion
Reservation policies fostering inclusivity for marginalised communities	**Poor urban environments** with overcrowded slums and sanitation concerns
Women empowerment through creche policies and SHGs	**Water scarcity** exacerbated by unpredictable monsoons and increased demand
Environmental protection through tree cultivation and green belts	Threat to public health from **industrial waste** in water bodies
Air Pollution Reduction through Clean Mobility Solutions by promoting Evs, bike-sharing, e-rickshaws, and solar-powered farm equipment in both urban and rural areas.	

Pull of the Future

Positive	Negative
Diversified employment opportunities across regions	**Population growth and unsustainable resource management** leading to water scarcity

Positive

Balanced industrial development via One District, One Product scheme

Leveraging **technology for capacity building** in diverse sectors

Water misuse prevention through regulations and technology-driven solutions

Enhanced **access to economic opportunities** for marginalised communities

Targeted **interventions for gender parity** in workforce participation

Promoting effective governance through **financial autonomy** to local bodies

Negative

Increased population density raising the risk of **communicable diseases**

Urbanisation-led **extreme weather events** and climate change impacts

Economic inequality leading to **increased social instability**

Weights of the Past

Positive

Introduction of **PRIs** strengthening local governance

Proximity to Delhi boosting industry and infrastructure investment

Fertile land and strong agricultural base from **Green Revolution**

Negative

Industrial clustering leading to uneven regional development

Water-intensive crop cultivation depleting groundwater reserves

Social disparities resulting in unemployment and limited opportunities

Limited financial autonomy and complex approval processes for local bodies

WHERE DO WE WANT TO GO?

VISION 2047

By 2047, our vision is to ensure that every district and community in Haryana lives in a Future-Proof Climate and Environment which thrives through equitable growth, environmental harmony, and technological innovation. Through collaborative governance and empowered local bodies, we envision a state that not only meets the current needs but also anticipates and shapes a prosperous future for all its citizens.

- Enhance regional equity and bridge the development gap across districts by leveraging technology and innovative governance models.
- Strengthen local self-government by empowering PRIs with more autonomy and resources.
- Implement comprehensive water management and environmental protection strategies to ensure sustainability and quality of life.
- Drive inclusive growth by integrating marginalised communities into the mainstream development process and improving access to essential services.
- Foster a culture of innovation and skill development to capitalise on the demographic dividend and bolster the state's position in the national economy.

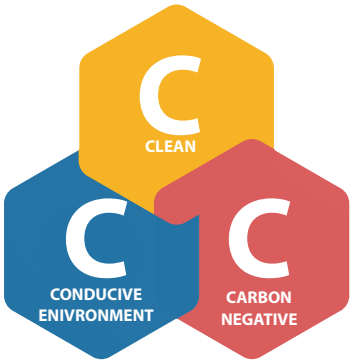
STRATEGIC MISSION*

Future-Prepared Human Settlements – The CCC Approach

Haryana's vision for 2047 recognises that sustainable regional development must be built upon resilient and inclusive human settlements. The CCC Approach—**Clean, Carbon Negative, and Conducive Environment**—provides a comprehensive framework that aligns settlement sustainability with economic growth and social equity. This integrated approach addresses the challenges of urbanisation, rural transformation, and resource management identified in previous sections while creating opportunities for innovation, livelihood generation, and improved quality of life across all districts. By embedding settlement-focused considerations into all aspects of planning and governance, this approach ensures that development activities enhance rather than strain land, water, and infrastructure systems, creating a virtuous cycle of sustainability that supports balanced regional development.

*Aligned Departments: Forests, Environment, Renewable Energy, Industries & Commerce, Agriculture, Horticulture, Animal Husbandry, Fisheries, Cooperation, Food & Supplies

1. CLEAN: Restoring Air, Water, Soil, and Rivers



Clean and well-managed human settlements form the foundation of balanced regional development, ensuring safe living conditions while supporting economic prosperity and social well-being. Haryana's approach to settlement renewal focuses on comprehensive pollution control and ecosystem rehabilitation across all districts. Drawing inspiration from successful initiatives like the Namami Gange programme and China's Air Pollution Control Action Plan, the state will implement advanced treatment technologies for industrial and municipal waste, enforce stringent emission standards, promote natural/organic farming practices to restore soil health, and undertake large-scale riverbank restoration. These efforts will be supported by regulatory reforms, market-based mechanisms, and extensive community participation programmes that cultivate shared responsibility for clean living spaces. By restoring the basic elements of healthy human settlements—air, water, and soil—Haryana will create the foundation for sustainable growth across all regions.

2. CARBON NEGATIVE: Sustainable Infrastructure and Behaviour Change

Haryana aims to move beyond **carbon neutrality** to become a net carbon sink by 2047, demonstrating that human settlements can thrive while reducing their climate footprint. This transformation will require fundamental shifts in energy systems, built infrastructure, transport networks, and citizen lifestyles. Following models like carbon-negative Bhutan and drawing from India's LIFE Campaign (Lifestyle for Environment), Haryana will adopt a comprehensive carbon management strategy that integrates renewable energy, energy-efficient building codes, sustainable transport systems, and circular economy practices within settlements. Agricultural linkages will be leveraged to support carbon sequestration without compromising food security, while afforestation and green belts around cities and villages will strengthen natural carbon sinks. Equally vital will be nurturing behavioural change through awareness programmes, incentives, and community engagement that enable citizens to make climate-positive choices in their homes, mobility, and consumption. This holistic approach recognises that carbon-negative settlements require both innovative infrastructure and inclusive social transformation.

3. CONDUCIVE ENVIRONMENT: Sustainable Cities and Disaster Preparedness

A **conducive environment** is one that enhances quality of life while building resilience to risks and future uncertainties. As Haryana rapidly urbanises and rural areas adapt to shifting climate patterns, creating such settlements becomes critical for sustainable development. Drawing inspiration from Singapore's integrated waste and water management models and Rajasthan's Great Green Wall of Aravalli initiative, Haryana will implement settlement planning frameworks that integrate green infrastructure, efficient resource cycles, and disaster preparedness. Cities will be redesigned with extensive green corridors, water-sensitive urban design, and circular material flows, while villages will benefit from landscape-level interventions that prevent land degradation, conserve biodiversity, and ensure resource security. Early warning systems, climate-resilient housing, and community-based disaster management programmes will strengthen preparedness for floods, heatwaves, and other hazards. This pillar recognises that safe, resilient, and conducive settlements are essential for long-term prosperity and must be embedded into the core of urban and rural development planning.

GOALS

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Income disparity ratio (highest to lowest district)	8.52:1 (Gurugram vs Nuh)	Economic Survey of Haryana	5:1	4:1	3:1	Benchmarked against OECD regional disparity standards; reduction targets based on successful models from South Korea and China in reducing regional inequalities
Multidimensional Poverty Rate	7.07% statewide	NITI Aayog	< 3%	2%	0%	Aligned with SDG 1 (No Poverty) and national poverty elimination targets; follows trajectory of successful poverty reduction in states like Kerala
High-poverty districts rate (Nuh, Palwal, Fatehabad)	39.99%, 14.71%, 7.51% respectively	Haryana SDG District Index 2022	< 15%, < 7%, < 3% respectively	< 9.7%, < 4.5%, 3.9% respectively	0% across all districts	Based on targeted interventions following SDG 1 implementation trajectory; benchmarked against global best practices in poverty elimination
Urban population with access to safe, affordable public transport	45% (estimated)	Department of State Transport, Haryana	70%	77%	90%	Benchmarked against global sustainable mobility standards and UN-HABITAT recommendations for accessible urban transportation

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Percentage of Gram Panchayats with own source revenue > 25% of total budget	15% (estimated)	Development & Panchayats Department, Haryana	40%	52%	75%	Benchmarked against high-performing states in fiscal decentralisation (Kerala at 28%); aligned with 15th Finance Commission recommendations on local body self-sufficiency
Women-owned MSMEs as percentage of total registered businesses	14% (estimated)	Department of Industries & Commerce, Haryana	25%	30%	40%	Based on global gender equality standards in entrepreneurship and successful models from Nordic countries; aligned with national women entrepreneurship goals

POSSIBLE FUTURE SCENARIOS

BUSINESS AS USUAL FUTURE

- Weak financial systems in local bodies will lead to poor revenue collection and inaccurate records. PRIs will stay dependent on central and state funds, limiting local decision-making and development.
- Industrial growth will stay limited to NCR cities like Gurugram and Faridabad, while other regions will miss out on development.
- Socioeconomic gaps between districts will widen, with backward areas like Nuh falling further behind developed ones like Gurugram.
- If groundwater overuse continues, water resources will shrink and pollution from industries will worsen water quality and harm the environment.
- The increasing waste generation will contribute to environmental degradation and public health risks. Without improved waste management practices, improper disposal will contaminate land, water, and air, adversely impacting agriculture, water resources, and public health.

POSITIVE DISRUPTIVE FUTURE (OPPORTUNITIES)

- The Haryana Enterprises and Employment Policy 2020, together with the Haryana Development and Regulation of Urban Areas (Second Amendment) Act, 2023, and the Haryana Municipal Urban Built-Plan Reform Policy 2023, drive balanced regional growth through strategic infrastructure investments.
- Development of Metropolitan Authorities in cities like Panchkula, Sonipat, and Hisar focuses on augmenting essential services and infrastructure, promoting urban development while preserving environmental integrity.
- Inclusive Tech tools and mechanisms like PPP and Jan Sahayak App make government schemes more effective.
- Urban-SVAMITVA scheme enhances property ownership and benefits, while strategic investments from the Haryana Urban Development Fund support development works in newly regularised colonies.
- The amendment of the Haryana Panchayati Raj Act reserves 50% of seats for women, promoting gender equality. A dedicated engineering wing in each Zila Parishad reflects significant improvements in rural infrastructure management.
- Goals to increase the utilisation of treated wastewater to over 900 MLD by December 2025 and achieve full reuse by December 2028 shows Haryana's commitment to sustainable water use.

NEGATIVE DISRUPTIVE FUTURE (RISKS)

- As cities expand, land use conflicts will increase, forcing rural communities to relocate and lose their livelihoods.
- Uneven growth will widen social and economic gaps, leading to more exclusion, inequality, and unrest in society.

ASPIRATIONAL FUTURE

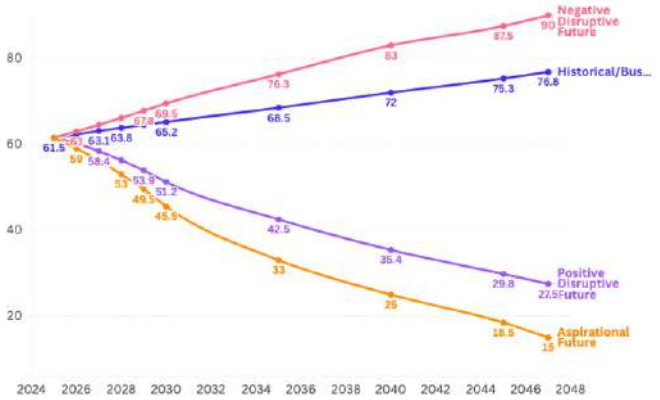
- The upcoming 10 new Industrial Model Townships (IMTs) will support industrial expansion, create jobs, and promote balanced regional development across the state.

NEGATIVE DISRUPTIVE FUTURE (RISKS)

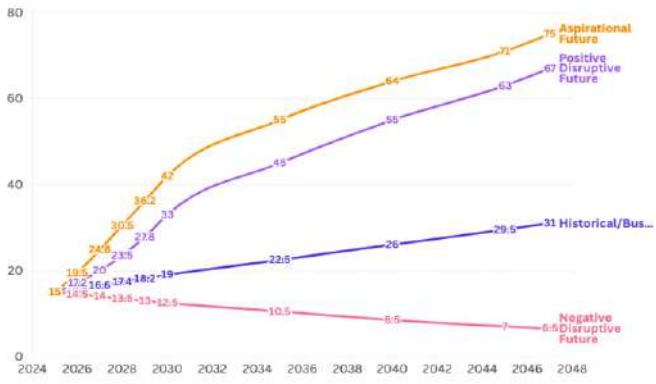
- Unpredictable weather and droughts will hurt farming, water supplies will shrink, and air pollution will worsen—especially in NCR cities.
- Poor sanitation, drainage, and transport systems will struggle to meet the growing needs of urban areas.
- Overuse of groundwater will cause serious water shortages, affecting both farming and daily household needs.
- Urban healthcare systems will become overwhelmed, unable to handle rising health problems, leading to more sickness and deaths.
- More frequent heatwaves and floods will put extra pressure on disaster response systems, increasing the state's vulnerability.
- Weak solid waste management (SWM) will lead to more pollution and health issues, making it harder to manage waste in both cities and villages.

ASPIRATIONAL FUTURE

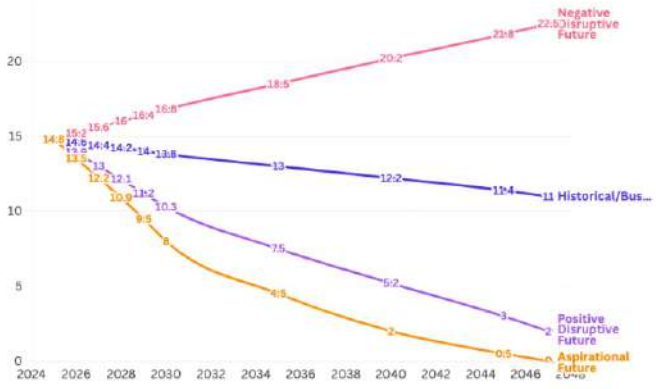
- The Haryana AI Mission will promote data-driven policymaking, digital governance, and advanced training. Dedicated AI hubs in Gurugram and Panchkula will train over 50,000 youth and professionals, preparing them for future job markets.
- Big projects like the Haryana Orbital Rail Corridor and Delhi-Panipat RRTS boost regional connectivity, helping people travel faster and reducing the gap between developed and underdeveloped areas.
- The Global City in NCR sets a new example of modern urban living—blending business, sustainability, and smart design to attract top global companies and talent.
- With over 6200+ Gram Panchayats connected through fibre optics, digital inclusion reaches every corner, bringing the internet and digital services to even the most remote villages.
- Smart water systems and greywater recycling help manage water better—ensuring clean and fair water access for homes, farms, and industries, while also protecting the environment.



Graph 40 (a): Groundwater Exploitation (Percentage of blocks categorised as over-exploited)



Graph 40 (b): Local Governance Financial Autonomy (Percentage of Gram Panchayats with own source revenue > 25% of total budget)



Graph 40 (c): Urban Slum Population (Proportion of urban population living in slums)

HOW WILL WE REACH THERE?

Transforming Haryana's regional development landscape requires addressing complex, interconnected challenges through coordinated multi-stakeholder approaches. The primary challenges include severe regional disparities, unsustainable water resource management, environmental degradation, exclusion of marginalised communities, weak local governance capacity, and unplanned urbanisation.

To overcome these challenges, we must balance economic growth with environmental sustainability and social equity. This requires strengthening local governance institutions with greater financial autonomy and decision-making powers, investing in sustainable infrastructure that prioritises disadvantaged regions, implementing comprehensive water management systems, developing circular economy approaches to waste management, and ensuring inclusive policies that reach the most vulnerable populations.

Effective governance is key, relying on transparent and accountable frameworks. This requires dedicated funding to ensure resources are distributed fairly, and it depends on engaging communities in planning. Success also hinges on building strong partnerships between the government, private sector, non-profits, and academic institutions. By focusing on these specific goals and taking action across various sectors, Haryana can achieve a model of balanced, sustainable, and inclusive growth by 2047.

Issues

- Unbalanced Regional Development – Increasing District Disparities
- Water Scarcity/Impurity, Water Management
- Clean Environment – Waste Management, Air
- Last Mile Reaching the Marginalised and Excluded
- Strengthening Local Self-Government
- Unplanned Growth and Urban Migration

ISSUE 1: UNBALANCED REGIONAL DEVELOPMENT

Haryana exhibits stark regional disparities, with economic prosperity concentrated primarily in districts surrounding the NCR, while other regions lag significantly behind. This development imbalance is most dramatically evidenced by Gurugram's per capita income being nearly eight times that of Nuh, despite their geographical proximity. To address such imbalances, the Haryana Government has initiated targeted interventions in less-developed areas, including the launch of an action plan for Morni Hills in Panchkula. Focused on promoting eco-tourism and adventure tourism, this plan includes the development of Tikkar Taal and the Adventure Park as key attractions. These initiatives aim to enhance the natural and cultural appeal of the region while catalysing local economic activity. However, despite such efforts, regional disparities have persisted and even widened over time, challenging conventional economic convergence theories and creating serious social, financial, and infrastructural challenges that require sustained strategic intervention.

Graph 41: District Disparities between Gurugram, Nuh, Panchkula and Sirsa SDGCC and SJHIFM.

(Source: Haryana District Index 2022 Consultative Document)

Current Status

- 11.16% of Haryana's population living below the national poverty line[14]
- Multidimensional poverty headcount ratio: 7.07%[15]
- Highest poverty districts: Nuh (39.99%), Palwal (14.71%), Fatehabad (7.51%)[16]
- Lowest poverty districts: Panchkula (1.42%), Charkhi Dadri (2.85%), Rewari (2.91%)[17]

Factors Influencing the Issue

Governance quality and administrative effectiveness significantly impact regional development, as inefficient processes and misaligned priorities can exacerbate disparities. Crucially, the quality and scope of community

representation within local governance bodies like the Zila Parishad directly influence equitable resource allocation and responsive policy-making, especially for marginalised areas. Economic forces, including market concentration, agglomeration benefits, and industrial clustering, naturally favour already-developed areas, creating self-reinforcing growth cycles. Social factors such as educational and healthcare inequalities contribute to differing development trajectories, while environmental vulnerabilities disproportionately affect economically marginalised regions. Legal frameworks governing land use, resource allocation, and business regulations further shape the development landscape, collectively creating complex challenges that require multidimensional solutions.

Impacts of the Issue

Direct Impact	Indirect Impact
• Migration towards more developed centres • Infrastructure burden in developed centres • Employment challenges in less developed areas	• Environmental degradation in air quality, water depletion, and waste management • Increased per capita income gap between regions • Higher unemployment rates and limited economic mobility in disadvantaged areas

Global Learnings

Global Best Practice

Brazil – Novo PAC[18]: Brazil's Novo Programa de Aceleração do Crescimento (Novo PAC) prioritises projects in transportation, energy, sanitation, and urban development, with a focus on underserved areas such as the Amazon and semi-arid regions. By combining public funding with private sector partnerships, Novo PAC aims to enhance connectivity, improve public services, and advance sustainable development in historically marginalised districts.

Disruptive Technologies - Blockchain for Transparent Governance

Implementing blockchain technology for transparent and secure record-keeping in governance processes can enhance accountability and reduce corruption. Smart contracts can automate various administrative processes, ensuring efficiency and reducing bureaucratic hurdles. Dubai, UAE, has launched the "Dubai Blockchain Strategy," aiming to use blockchain technology for all government documents to create the world's first fully digitised government by 2021.[19]

Possible Pathways

Short-Term Pathway (2030)

Assess Needs in High-Poverty Districts

- Conduct bottom-up assessments with PRIs, ULBs, CSOs, and officials
- Use findings to guide local policy
- Strengthen community representation in Zila Parishads to serve as direct conduits for these bottom-up assessments, ensuring findings truly reflect local realities and guide responsive local policy

Formulate Rural-Urban Transition Policy

- Support peri-urban areas facing urban pressures

Develop Capital Investment Plans (CIPs)

- Setting up of dedicated new sector-specific regional hubs, similar to Global City, enabling easy access to research, innovation and skilled workforce - Fintech, IoT, AI, etc
- Leverage PPPs to stimulate infrastructure development in the underdeveloped areas to facilitate private investments without overburdening state finances

Ensure Inclusive, Sustainable Infrastructure

- Address the needs of marginalised groups and environmental standards
- Leverage community representatives in Zila Parishads to provide direct input on specific infrastructure needs that benefit underserved populations and ensure projects are culturally and environmentally sensitive

Increase Infra Budget for Target Areas

- Allocate higher state funds for focus regions
- Dispersal of industries to less developed areas of the State, supported by the development of New Integrated Industrial Townships & Industry Clusters

Support Local Enterprises:

- Launch tailored schemes for small businesses and entrepreneurs
- New Regional Hubs: Small Industrial Parks under PADMA scheme & ODOP

District Investment Facilitation Cell

- Establish District Investment Facilitation Cells as single-window platforms to provide comprehensive support to MSMEs and local start-ups by offering guidance, approvals, and financial linkages. These Cells would be closely aligned with Haryana's MSME and startup promotion policies and would also address the challenge of many entrepreneurs registering their ventures in neighbouring states like Delhi instead of Haryana, thereby strengthening the state's startup ecosystem and ensuring greater local enterprise growth

District Competitiveness Index:

- Introduce the District Competitiveness Index to benchmark and monitor district-level performance in areas such as employment generation, innovation capacity, and overall business readiness
- Engage Zila Parishad members with strong community ties to identify and promote local entrepreneurial talent and ensure schemes are adapted to specific regional contexts

Build Capacity of Local Institutions:

- Partner with CSOs and academia for training PRI and ULB staff
- Focusing on Science, Technology, Engineering, and Mathematics (STEM) courses with next-gen skills (AI/ML/Blockchains), Driving Innovation
- Integrate training for community representatives within Zila Parishads on effective governance, financial oversight, and development planning to enhance their impact

Ensure Transparency through Social Audits

- Regular audits to build public trust and accountability

Invest in Digital Governance Systems:

- Upgrade tech infrastructure for innovation in governance

Long-Term Pathway (2047)

Monitor and Evaluate Infrastructure Progress

- Track implementation and performance in target areas

Assess Development Impact

- Conduct socioeconomic and environmental impact studies

Strengthen Local Governance Capacity

- Continue training on governance and financial management
- Reinforce the role of Zila Parishads, ensuring diverse community representation to sustain bottom-up planning and oversight for balanced growth across all regions.

Expand Focus to New Peri-Urban Areas

- Scale infrastructure planning to emerging transition zones
- Driving balanced regional growth with industry as the key economic anchor
- Creating a vibrant support ecosystem for MSMEs, particularly in the peri-urban area
- Dispersal of industries to less developed areas of the State, supported by the development of New Integrated Industrial Townships (Industrial & Residential usages), Incentives & Ease of Doing Business support

District Growth Plan

- Efforts can be directed toward reinforcing local governance and integrated planning processes. Each district ought to develop a District Growth Plan that capitalises on its specific economic strengths be it agriculture, industry, tourism, or services. These localised plans should remain aligned with the overarching framework of Haryana's Future Department, ensuring that district level initiatives contribute cohesively to the state's long-term vision.

ISSUE 2: WATER SCARCITY/IMPURITY, WATER MANAGEMENT

Haryana is currently confronting a critical water security challenge, driven by intensive agricultural practices, rapid urbanisation, expanding industrial operations, and increasingly erratic monsoon patterns. With groundwater extraction at 135.74%[20] of its extractable resources, the state faces a highly unsustainable trajectory, risking significant aquifer depletion over the next two decades. The predominance of water-intensive crops such as paddy and sugarcane has exacerbated pressure on surface and groundwater reserves, demanding urgent, systemic intervention.

To address this, the state has prioritised agricultural diversification as a strategic response, promoting a gradual shift from water-intensive crops to less water-demanding alternatives such as pulses, oilseeds, fruits, vegetables, and fodder. This approach balances agro-ecological sustainability with improved farm incomes and soil health. The 'Mera Pani Meri Virasat' initiative has been pivotal in driving this transition by offering financial incentives, advisory services, and institutional support to farmers in over-exploited groundwater zones willing to adopt alternate cropping patterns.

In parallel, Haryana is expanding the deployment of micro-irrigation systems, including drip and sprinkler technologies, to enhance water-use efficiency in agriculture. These initiatives optimise resource utilisation and contribute to reducing input costs, strengthening climate resilience, and promoting sustainable agricultural growth. Together, these integrated interventions—crop diversification, water-efficient technologies, and enabling policy frameworks—constitute a comprehensive strategy to safeguard Haryana's water resources while supporting resilient and inclusive rural livelihoods.

Current Status

- 97.7% of rural population receives safe drinking water through piped supply[21]
- 99.99% of rural population has access to improved drinking water sources[22]
- 135.74% groundwater withdrawal against availability[23]
- 60% of blocks are over-exploited for water[24]
- The State of Haryana has also undertaken proactive measures for flood control and effective urban drainage management. Drainage infrastructure across ULBs has been systematically mapped and maintained. Out of a total 2,116 km of municipal drains, 2,030 km are actively maintained by Municipal Corporations.

  As part of pre-monsoon preparedness and year-round upkeep, 943.68 km of drains have been cleaned, and 201 dewatering pumps have been deployed in vulnerable zones to ensure timely evacuation during extreme rainfall.[25]
- These measures are embedded within an integrated urban flood management approach, aligned with smart city planning, infrastructure upgrades, and monsoon action plans, with an emphasis on desilting, real-time monitoring, and interdepartmental coordination.[26]

Factors Influencing the Issue

Demographic trends, including population growth, urbanisation, and changing consumption patterns, are driving increased water demand across all sectors. Legal and policy frameworks determine water allocation priorities, rights, and conservation requirements, often struggling to balance competing interests. Economic development trajectories, particularly industrial expansion and agricultural intensification, significantly impact water consumption patterns and sustainability. Technological factors, including irrigation efficiency, water treatment capabilities, and monitoring systems, present both challenges and opportunities for addressing scarcity. Environmental conditions, including climate change impacts, rainfall variability, and ecosystem health, directly affect water availability and quality, creating complex interdependencies that require integrated management approaches.

Impacts of the Issue

Direct Impact	Indirect Impact
• Limited access to safe drinking water and sanitation. • Reduced availability for agriculture and industry. • Environmental degradation from pollution. • Disproportionate burden on marginalised communities.	• Increased waterborne diseases and public health infrastructure burden. • Economic losses to farmers and water-dependent industries. • Long-term ecological imbalances and sustainability challenges. • Limited educational and economic opportunities, especially for women.

Global Learnings

Global Best Practice

Singapore – NEWater[27]: Advanced Water Reuse for Urban Resilience: Singapore's NEWater initiative illustrates a comprehensive approach to water sustainability by recycling treated wastewater into ultra-clean, high-grade reclaimed water. Utilising a rigorous three-step purification process—microfiltration, reverse osmosis, and ultraviolet disinfection—NEWater meets and surpasses WHO standards for drinking water.

Disruptive Technologies - Decentralised Water Management Systems

Implementing decentralised water management systems, including rainwater harvesting, wastewater recycling, and smart water metering, can enhance water security and resilience to droughts and other water-related challenges. Australia's city of Adelaide has implemented decentralised stormwater harvesting systems, collecting rainwater for non-potable uses like irrigation and industrial processes, reducing strain on centralised water supplies.[28]

Possible Pathways

Short-Term Pathway (2030)

Enhance Groundwater Replenishment and Source Sustainability

- Construct dedicated borewell recharge structures for every drinking water source, subject to land availability

Strengthen Industrial and Domestic Water Regulation

- Review and enforce stricter anti-pollution policies
- Enforce strict compliance with pollution control laws regarding industrial and sewage effluent discharge

Possible Pathways

Short-Term Pathway (2030)

Strengthen Water Governance and Coordination

- Constitute the Committee chaired by the Chief Minister for coordination as suggested by the Haryana Water Resources Authority
- Implement the Integrated Water Resources Plan with adjustments aligned to the Viksit Haryana Document timeframes
- Issue a Government Order to designate the State Water and Sanitation Mission, chaired by the Chief Secretary, as the state-level coordination platform (as per Jal Jeevan Mission [JJM] guidelines)
- Designate, through a Government Order, District Water and Sanitation Mission chaired by the District Magistrate/Collector/Deputy Commissioner as district level platform for coordination. This should include all Departments as per JJM guidelines
- Integrate Village Water & Sanitation Committees, Water User Associations, watershed committees, Atal Bhujal Yojana committees, and FPOs at GP, block, and district levels for local water decision-making

Develop Operations, Maintenance & Technology Policies

- Develop an Operation & Maintenance policy for rural/urban water supply, sanitation, resource assets, and micro-irrigation systems
- Establish a state-level committee, chaired by a Senior State Scientist, to empanel innovative technologies with departmental representation

Conduct Participatory Water Needs Assessment

- Identify gaps in water access and quality with community involvement

Formulate Water Conservation Policies

- Promote rainwater harvesting, drip irrigation, and blue-green infrastructure
- Launch targeted interventions for water table replenishment through managed aquifer recharge (MAR) techniques, check dams, recharge wells, and rejuvenation of traditional water bodies
- Map and prioritise regions affected by waterlogging and salinity, and initiate pilot interventions like subsurface drainage systems and salt-tolerant crop promotion
- Mandate rooftop rainwater harvesting systems in all government buildings and new urban housing projects in water-stressed districts like Mahendragarh, Bhiwani, and Rewari

Restore Traditional Water Infrastructure

- Undertake de-silting of minor irrigation canals using MGNREGS Natural Resource Management funds
- Rejuvenate water bodies owned by Gram and Block Panchayats
- Identify inlet channels to water bodies and initiate encroachment removal
- Restore inlet channels and water bodies maintained by the Water Resources/Irrigation Departments

Ensure Financial Support for Execution

- Leverage central/state grants and explore green bonds/credits

Invest in Water Research

- Increase the budget for innovative water treatment technologies

Short-Term Pathway (2030)

Modernise Monitoring and Infrastructure

- Install bulk-water metres at Gram Panchayat and town levels, and at entry points in major urban centres (1 MLD+ supply)
- Test all drinking water sources for chemical and bacteriological contamination as per JJM and AMRUT standards
- Conduct leak detection in water supply pipelines and reduce treatment losses as per Central Public Health and Environmental Engineering Organisation (CPHEEO) standards
- Establish adequate National Accreditation Board for Testing and Calibration Laboratories (NABL)-accredited water quality testing labs as per JJM protocols

Mandate Water-Saving and Reuse Practices

- Complete rainwater harvesting systems in all public buildings
- Mandate micro-irrigation for sugarcane crops
- Reuse treated wastewater from Sewage Treatment Plants (STPs) for 25% of horticultural irrigation needs

Introduce Annual Incentives for PRIs/ULBs

- Recognise water conservation efforts through fiscal rewards

Train Farmer Collectives on Conservation

- Partner with CSOs and KVKs for grassroots training

Build PRI/ULB Capacity in Water Governance

- Complete the training of Nal Jal Mitras in every Gram Panchayat under JJM
- Develop training on Detailed Project Reports (DPRs), budgeting, and implementation processes

Long-Term Pathway (2047)

Modernise Irrigation and Improve Efficiency

- Build institutional capacity of ULBs/PRIs to access green bonds
- Ensure GPDPs and similar frameworks are adopted across ULBs
- Include water budgeting, greywater reuse, and recharge structure planning in every GPDP
- Integrate water conservation via continuous capacity building
- Modernise and restore irrigation canals (above minors), targeting a 20% increase in water-use efficiency as per the National Action Plan on Climate Change. Adopt piped irrigation networks.
- Achieve 50% micro-irrigation coverage in all over-exploited blocks. Promote regenerative agriculture and agri-voltaics in micro-irrigated areas to improve soil moisture retention and create additional carbon sinks while generating solar power.

Long-Term Pathway (2047)

Reallocate and Restore Critical Water Zones

- Restore 50% of water-logged areas
- Reallocate agricultural water savings for domestic and industrial use through the Haryana Water Resources Authority

Implement M&E for Inclusive Water Projects

- Track impact on access, usage, and community satisfaction

Digitise and Automate Water Management

- Develop GIS-based digital water networks for JJM and AMRUT schemes, using as-built drawings capturing asset details.
- Deploy IoT-based systems to manage rural and urban water supply networks.

Surface Water and Non-Conventional Water Sources

- Interlink minor rivers and canal networks to enhance surface water utilisation.
- Develop unconventional water resources (e.g., direct rainwater use, desalination in salinity-affected areas) for 25% of domestic water needs. Leverage treated greywater and surface runoff in peri-urban areas for recharge zones, integrating climate-resilient water reuse systems into urban and rural planning.

ISSUE 3: CLEAN ENVIRONMENT – WASTE MANAGEMENT, AIR

Haryana's rapid urbanisation presents significant environmental challenges, particularly in waste management and air quality. With the urban population growing exponentially, waste generation is projected to increase from 4,500 tonnes per day to over 7,500 tonnes by 2035.[29] This waste comes from diverse sources—households, commercial establishments, industries, and agricultural activities—each requiring tailored management approaches. Simultaneously, air pollution from vehicular emissions, industrial operations, agricultural practices like stubble burning, and thermal power plants has resulted in PM 2.5 concentrations 12.6 times higher than WHO guidelines, creating serious public health concerns and deteriorating quality of life.[30]

In response, the State Government has introduced various initiatives to strengthen waste management and improve air quality. Key interventions include the State Solid Waste Management Policy, Solid Waste Environmental Excellence Protocol (SWEEP), and waste-to-energy and recycling infrastructure investments. Efforts to rejuvenate urban water bodies and control river pollution have also been prioritised. Haryana has expanded real-time monitoring on air quality, enforced action plans in high-risk districts, and scaled up measures to curb stubble burning and industrial emissions. The Haryana Clean Air Project, supported by multilateral agencies, represents a significant step in this direction.

While these initiatives reflect significant progress, the scale and complexity of environmental challenges demand sustained, coordinated, and community-driven action to secure a healthier urban future for the state.

Current Status

- 64.98% of wards have 100% source segregation[31]
- 94% of wards have 100% door-to-door waste collection[32]
- 50% of Municipal Solid Waste processed of the total generated[33]
- Urban areas generate 4,500 tonnes of waste per day (expected to reach 7,500 TPD by 2035)[34]
- PM2.5 concentration exceeds WHO guidelines by 12.6 times[35]
- **Solid waste infrastructure projects and digital governance mechanisms[36]:**
    - **Infrastructure & Segregation:** SWM sheds are being constructed for storage & segregation of bio-degradable & non-bio-degradable waste in villages. As of today, 2558 SWM sheds have been constructed, with 4074 more planned for 2025-26 to meet the existing gap.
    - **Composting:** 43539 individual and 8720 community compost pits have been built to promote organic waste management.
    - **Collection & Transportation:** Door-to-door solid waste collection is managed by Gram Panchayats, supported by provided collection & transport vehicles. Procurement of 298 Hopper Tipper Dumpers for large Gram Panchayats is underway to enhance this.
    - **Decentralised Management:** The department plans to partner with Cluster Level Federations of SHGs under Haryana State Rural Livelihoods Mission (HSRLM) for comprehensive door-to-door collection, transportation, segregation, and disposal.
    - **Plastic Waste Management Units (PWMUs):** 08 PWMUs have been established at the block level for plastic recycling and sustainable disposal, with more planned.
    - **GOBAR-DHAN Projects:** 11 Model GOBAR-DHAN projects for safe cow dung disposal are complete at the district level, with six more under construction.
    - **IEC Activities:** Continuous IEC activities are conducted at district, block, and GP levels to encourage plastic waste reduction and reuse.
- **Waste-to-Energy Plants (Urban Focus):**
    - A 750 TPD Waste-to-Energy plant in Sonipat is operational, serving Sonipat, Panipat, Samalkha, and Gannaur, significantly reducing landfill pressure.
    - MoUs signed with NTPC for 1,500 TPD (Gurugram) and 1,200 TPD (Faridabad) torrefied charcoal-based Waste-to-Energy plants, converting high-calorific waste into renewable fuel.
    - **Digital Governance (Urban Focus):** A centralised SWM Monitoring Portal provides real-time tracking of collection, segregation, transportation, and processing at the ULB level, fostering data-driven governance.
    - **Compressed Biogas (CBG) Plants (Urban Focus):** Plans are in place to establish CBG plants in six municipal corporations in collaboration with GAIL to convert organic waste into bio-CNG.
    - **E-waste Management (Urban Focus):** Haryana plans to establish dedicated e-waste collection centres at Material Recovery Facilities (MRFs) across ULBs, coordinating with Haryana State Pollution Control Board (HSPCB) for authorised dismantlers and recyclers.
- **Liquid Waste Management:**
    - **Diverse Management Systems:** Liquid waste is managed through various methods including drainage networks, 3/5 ponds systems, Waste Stabilisation Pond (WSP), Constructed wetlands, Nahveen, Seechewal, and Community Soak pits.

- **Focus on Community Soak Pits:** The primary focus is now on cost-effective and easy-to-maintain Community Soak Pits.
- **Project Completion:** 2237 Liquid Waste Management projects (village-level solutions) have been constructed.
- **Soak Pit Construction:** 10999 Community Soak Pits and 28860 individual soak pits have been built.
- **Urban Sanitation Infrastructure (SBM-Urban):**
    - 415 Community Toilets (2,334 seats) and 1,429 Public Toilets (6,838 seats) are functional across ULBs.
    - 72 urinals (161 seats) developed in high-footfall areas.
    - 836 units are directly maintained by ULBs or partner agencies.
    - The Annual Implementation Plan 2025-26 targets 75,995 additional Individual Household Laterines
    - (IHHL) (including PMAY-G beneficiaries), with 2,289 already completed this year.
    - Strategic placement in slum clusters, marketplaces, and transport hubs.
    - Ongoing efforts for retrofitting, digital monitoring, and improved access for vulnerable groups.

Sewage Treatment Plants (STPs) (Urban Focus):

- Currently, 10 STPs under ULB (Karnal, Sonipat, Panipat, Narnaul) with a combined capacity of 219 MLD and 146 MLD utilisation. Karnal, Sonipat, Panipat STPs are fully compliant. Narnaul STP is being operationalised.
- 33 STPs with a combined capacity of 391 MLD are under various stages of development across ULBs in Yamuna and Ghaggar catchments.
- Yamuna Catchment: 20 STPs (332.5 MLD) fully completed, with several transferred to Public Health Engineering Department (PHED).
- Ghaggar Catchment: 13 STPs (58.5 MLD) are in various stages, with 10 already 100% complete.

Factors Influencing the Issue

Regulatory policies and enforcement mechanisms significantly shape waste management practices and air quality standards, with effective implementation determining environmental outcomes. Economic considerations, including funding availability, market incentives, and investment priorities, influence waste treatment infrastructure development and pollution control technologies. Public awareness and community participation are critical determinants of waste segregation, recycling rates, and overall environmental stewardship. Technological advancements in waste processing, recycling, and air filtration offer opportunities for innovative solutions, while climate patterns and ecosystem resilience impact the environmental capacity to absorb pollution. These multifaceted factors interact in complex ways, necessitating comprehensive strategies that address environmental challenges from multiple angles simultaneously.

Impacts of the Issue

Direct Impact	Indirect Impact
• Poor air quality affecting residents' health. • Limited access to clean water affecting sanitation. • Agricultural productivity reduction from polluted sources. • Improper waste disposal leading to disease vectors.	• Rising chronic diseases and outmigration to cleaner cities. • Infectious disease spread and increased healthcare burden. • Disruption to food security and rural livelihoods. • Degradation of living conditions and economic vitality.

Global Learnings

Global Best Practice

Sweden – Integrated Waste-to-Energy Systems[37]: Sweden has pioneered an integrated approach to waste management and air pollution control by converting non-recyclable waste into energy through advanced waste-to-energy (WtE) plants. These facilities not only reduce landfill use but also supply heat and electricity to urban areas via district heating networks.

Disruptive Technologies - Circular Economy and Waste Management Technologies

Adopting circular economy principles and leveraging advanced waste management technologies like recycling robots and waste-to-energy systems can minimise waste, conserve resources, and create economic opportunities within the region. The city of San Francisco, USA, has implemented comprehensive recycling and composting programmes, diverting a significant portion of waste from landfills and promoting a circular economy model.[38]

Possible Pathways

Short-Term Pathway (2030)

Identify Gaps in Waste and Air Management

- Conduct a comprehensive needs assessment for waste and air quality

Strengthen Solid & Liquid Waste Management

- Implement SBM-Gramin for efficient waste systems
- Provide hopper tippers to Gram Panchayats with guidelines
- Assign SHGs for waste collection with structured wages

Implement Air Quality Policies and Monitoring

- Enforce the vehicle scrappage policy with incentives
- Expand air monitoring stations and use real-time industrial data

Enforce E-Waste Management Frameworks

- Develop and regulate an effective e-waste policy

Short-Term Pathway (2030)

Promote Green Transport & EV Adoption

- Incentivise electric vehicles and green public transport

Incorporate Pollution-Resilient Urban Infrastructure

- Integrate air quality considerations into urban planning by mandating built-in air purification systems and improved ventilation in all new public and private buildings. Retrofit existing infrastructure, especially in high-density urban areas, with air purification technologies to enhance indoor air quality

Enable Continuous Policy Review

- Form a high-level policy committee and stakeholder forums
- Conduct ongoing training for ULBs and enforcement bodies

Long-Term Pathway (2047)

Make Haryana a Zero-Waste State

- Mandate waste reduction, recycling, and sustainable disposal. Expand WtE initiatives across ULB clusters with torrefaction and Refuse-Derived Fuel (RDF) co-processing technologies to reduce landfill dependence and generate renewable industrial fuel.
- Offer financial incentives and run awareness campaigns

Adopt Circular Economy in Waste Systems

- Mandate EPR, promote industrial symbiosis
- Support innovation hubs for sustainable materials

Reduce PM2.5 by 60%

- Enforce clean tech adoption and emissions tracking
- Expand green buffer zones

Expand Health Education & Outreach

- Add NCD modules to school curricula
- Launch regular health screenings at workplaces
- Conduct monthly community health camps and public campaigns

Scale Carbon Capture Projects

- Incentivise industries and partner with research bodies
- Target high-emission clusters for carbon capture and storage (CCS) deployment, coupled with afforestation in adjoining zones to create industrial carbon sinks.
- Integrate pilot learnings into full deployment

Transition to 100% Green Energy

- Set regulatory and financial frameworks
- Strengthen renewable grid integration

ISSUE 4: LAST MILE REACHING THE MARGINALISED AND EXCLUDED

Despite Haryana's overall economic progress, significant sections of society remain excluded from the benefits of development, particularly minorities, elderly individuals, persons with disabilities, scheduled castes, and backwards classes. The state aims to empower these groups through economic self-reliance, equal opportunities, and social security measures. Still, persistent disparities in political representation, employment, safety, and housing indicate that considerable challenges remain.

In recent years, Haryana has introduced several initiatives to promote inclusion and social welfare. Notable among these are the provision of 50% reservation for women in PRIs, the establishment of Senior Citizen Service Centres, and dedicated support for street vendors through welfare schemes and livelihood opportunities. The state has also actively advanced women's education and empowerment initiatives under the national BBBP campaign, aimed at improving the child sex ratio and promoting girls' access to education and healthcare.

While these efforts mark meaningful progress towards building an inclusive and equitable society, substantial gaps persist. Bridging these disparities calls for sustained, targeted interventions that address both systemic barriers and immediate socioeconomic needs, ensuring marginalised communities can fully participate in and benefit from Haryana's development trajectory.

Current Status

- Only 10% of Lok Sabha seats won by women candidates[39]
- 18.89% of state legislative assembly seats reserved for SC/ST candidates[40]
- Transgender to male labour force participation ratio: only 0.67[41]
- 21.2 crimes against SCs per 100,000 SC population[42]
- 0.2% of households living in kutcha houses[43]

Factors Influencing the Issue

Policy design and implementation directly impact the prioritisation and effectiveness of inclusion initiatives, with resource allocation decisions determining which communities receive attention and support. Financial constraints often limit programme scope and sustainability, while prevailing social norms and education levels shape attitudes toward marginalised groups and their own agency. Digital divides can either facilitate or hinder service delivery to excluded populations, with access barriers particularly affecting rural and economically disadvantaged communities. These factors operate within complex legal frameworks governing equality, affirmative action, and social protection, collectively determining whether marginalised communities can access development opportunities and essential services.

Impacts of the Issue

Direct Impact	Indirect Impact
• Improved access to essential services and opportunities. • Promotion of social inclusion. • Increased resources for marginalised populations. • Improper waste disposal leading to disease vectors.	• Enhanced well-being and reduced disparities. • More equitable and inclusive society. • Economic contributions from previously excluded groups. • Degradation of living conditions and economic vitality.

Global Learnings

Global Best Practice

Rwanda's Drone-Powered Leap in Last-Mile Inclusion[44]: Rwanda has transformed the challenge of reaching its most remote and marginalised communities by embracing cutting-edge drone technology. These agile drones soar over rugged terrain and poor roads to deliver essential medicines, vaccines, and diagnostic samples with unprecedented speed and precision. This innovative approach bridges critical gaps in healthcare access, ensuring that no village is too distant or underserved. Coupled with strong community engagement, Rwanda's drone programme exemplifies how technology can dismantle physical barriers and accelerate equitable service delivery.

Disruptive Technologies - Solar-Powered AI Telehealth Kiosks for Last-Mile Healthcare Access

Deploying solar-powered community telehealth kiosks equipped with diagnostic tools and AI support can bridge the healthcare access gap in remote and underserved regions. These kiosks provide basic medical consultations, diagnostics, and referral services without requiring full-time doctors on site. India Health Link's iCare clinics are pioneering such models, enabling last-mile populations to access preventive care, chronic disease management, and digital health records—often with the help of local health workers. These solutions reduce dependency on overburdened urban healthcare systems and ensure inclusive, tech-enabled healthcare delivery.[45]

Possible Pathways

Short-Term Pathway (2030)

Mandate Participatory Governance

- Review PRI/ULB laws to ensure ward committees, area sabhas
- Ensure inclusion of the elderly, disabled, women, SC/ST, and minorities. Promote schemes like "Incentive to Village Panchayats for their Outstanding Work," which awards INR 50,000 to local innovation and inclusion
- Panchayats that carry out innovative welfare initiatives for Scs, encouraging local innovation and inclusion

Make Development Plans Inclusive

- Amend the master/development plan policies for inclusivity mandates

Inclusion Review in Gram Sabha Meetings

- In every Gram Sabha 5.0 session introduce an "Inclusion Review"—a structured assessment of schools, Anganwadis, health centres, and welfare schemes for persons with disabilities. This mechanism will help capture real-time community feedback, align local priorities with Mission Antyodaya and GPDP, and institutionalise inclusion as a core element of local governance

Assess Equity-Oriented Policies

- Review outcomes of budgets/laws for women, SC/ST, and the disabled
- Focus on tangible impact, not just allocations

Short-Term Pathway (2030)

- **Enforce E-Waste Management Frameworks**
- Develop and regulate an effective e-waste policy

Bridge Digital Divide

- Formulate targeted digital access policies for marginalised

Institutionalise Policy Dialogue

- Create stakeholder forums for inclusive governance inputs

Expand Vocational Training Access

- Leverage centrally sponsored schemes such as Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY) to provide targeted skill development training to SC communities
- Promote educational schemes, including scholarships and hostel facilities for SC/BC students, to improve literacy, skill acquisition, and employment opportunities
- Partner with local institutions to skill marginalised groups

Inclusion Cells at District level

- Establish Gender & Disability Inclusion Cells in select Zila Parishads such as Nuh, Sirsa, and Bhiwani to strengthen social and disability inclusion at the grassroots. These cells would serve as dedicated platforms to track local challenges, support inclusive planning, and ensure effective utilisation of funds from District CAPEX Plans and State Finance Commission Grants for accessibility and gender-focused initiatives

Enable Mentorship and Funding

- Partner with CSRs/philanthropies to support youth

Build Sensitisation Capacity

- Design training for local bodies on the needs of marginalised groups

Enhancing Pedestrian Safety and Accessible Urban Walkways

- District-level pedestrian infrastructure audits to prioritise accessible, Indian Roads Congress (IRC)-compliant footpath upgrades,
- Community-led footpath maintenance committees supported by digital grievance platforms,
- Adoption of smart crossings with AI-enabled lighting and sensors for safer pedestrian movement and
- Culturally tailored behavioural change campaigns to promote awareness of pedestrian rights and safe practices

Enhance Citizen-Centric Service Delivery

- Establish Citizen Experience Platforms (CXP) to unify key services (land, health, education, licenses, etc.) under one seamless digital interface, ensuring accessibility and convenience for all residents

Promote Social Equity and Harmony

- Ensure effective implementation of the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 by providing timely financial assistance and legal support to SC/ST victims of violence or discrimination
- Strengthen schemes like Mukhyamantri Vivah Shagun Yojna and Mukhya Mantri Samajik Samrasta Antarjatiya Vivah Shagun Yojna to promote inter-caste harmony and social cohesion by offering financial incentives for intercaste marriages

Launch Rights-Based Awareness Campaigns

- Educate communities on legal rights and entitlements

Long-Term Pathway (2047)

Institutionalise Participatory Governance Structures

- Scale up ward committees and area sabhas across all PRIs and ULBs campaigns
- Mainstream Participatory Budgeting
- Establish a real-time, AI-powered citizen engagement platform that empowers every Indian to participate directly in governance, policy feedback, grievance redressal, and development planning following objectives, thus enabling a truly participatory democracy by 2047 with the following objectives:
    - Enable two-way communication between citizens and government authorities
    - Streamline grievance redressal with speed and accountability
    - Strengthen trust between citizens and government institutions

Expand Participatory Budgeting in all Local Bodies with CSO Support

- Mandate budget creation through participatory processes

Embed Mobile Service Delivery Models

- Institutionalise mobile services in health, education, and welfare systems

Protect Digital Rights & Inclusion

- Advocate for inclusive digital policies addressing access, affordability, and relevance

Expand Strategic Partnerships

- Scale up partnerships with diverse actors for sustained local reforms

Ensure Transparency with Blockchain-Enabled Systems

- Introduce blockchain audit trails for land records, welfare schemes, and financial transactions to ensure traceability, reduce fraud, and eliminate physical submissions—taking cues from Telangana's Blockchain District

ISSUE 5: STRENGTHENING LOCAL SELF-GOVERNMENT

Effective local self-governance is fundamental to creating livable, sustainable communities that respond to citizens' needs. In Haryana, significant efforts have been made to empower grassroots institutions through inclusive dialogue, capacity-building, and awareness campaigns. While progress is evident in gender representation and fiscal management, local governance still faces substantial challenges, including limited financial autonomy, capacity gaps among elected officials, procedural delays in project approvals, and persistent social inequalities that restrict participation. Addressing these barriers is essential for realising the full potential of decentralised governance and ensuring that local institutions can effectively drive development that reflects community priorities.

Current Status[46]

- 6,201 elected Sarpanches (3,020 females, 3,181 males)
- 59,725 elected Panches (28,055 females, 31,670 males)
- Gender inclusivity in local governance with balanced representation
- Reservations implemented: 9,051 SC females, 9,477 SC males, 12,135 General females, and 13,857 General males elected
- Municipal bodies: INR 4,76,804 lakhs income and INR 2,71,787 lakhs expenditure (2020-21)

Factors Influencing the Issue

Governance structures determine the balance of power between different administrative levels, with decentralisation effectiveness varying based on institutional design and implementation. Resource distribution significantly impacts local bodies' capacity to address regional development disparities, with financial autonomy being a critical determinant of decision-making authority. Community engagement levels, demographic diversity, and social cohesion influence participation in and responsiveness of local governance, especially for marginalised groups. Environmental considerations increasingly shape local governance priorities, with climate resilience and sustainability becoming central to planning processes. These dynamics operate within legal frameworks that define local bodies' powers, responsibilities, and relationships with higher governance tiers, creating complex institutional environments that require strategic reform approaches.

Impacts of the Issue

Direct Impact	Indirect Impact
• Greater authority and autonomy in decision-making. • Responsive local governance addressing community needs.	• Increased accountability and transparency in resource use. • Improved service delivery and community living standards.

Global Learnings

Global Best Practice

Kerala's People's Plan Campaign[47]: Kerala's People's Plan Campaign stands as a visionary model of participatory planning through PRIs, where local communities actively shape their development priorities. Piloted in villages such as those in Kottayam district and places like Vellanikkara in Thrissur district, citizens participate in grama sabhas (village assemblies) to identify needs, propose projects, and allocate resources. Kerala has demonstrated how deep democratic decentralisation can lead to inclusive, transparent, and accountable governance. This approach inspires the creation of empowered local governments that truly reflect and respond to the aspirations of their people, fostering equitable growth and sustainable development at the grassroots.

Disruptive Technologies - AI for Decision Making

AI can analyse vast amounts of data to provide insights for better decision-making in urban planning, resource allocation, and public service delivery. Predictive analytics can help anticipate and mitigate various challenges, such as traffic congestion or resource shortages. The city of Helsinki, Finland, utilises AI algorithms to optimise public transportation routes and schedules based on real-time data, improving efficiency and reducing congestion.[48]

Possible Pathways

Short-Term Pathway (2030)

Enhance Financial Independence for Local Governments

- Increase fund transfers to Panchayats and ULBs and ensure predictability in timing and quantum of grants
- Rationalise property tax to augment own sources of revenue for the ULBs
- Implement PPPs, local municipal bonds, and self-sustaining business models

Strengthen Governance and Capacity Building

- Provide training for elected representatives on governance and service delivery
- Amend policies for local autonomy and create a Local Governance Index
- Grant legislative powers to local bodies and mandate social audits

Streamline Project Approvals and Regional Development

- Digitise approval processes and reduce bureaucratic delays
- Develop integrated governance for peri-urban areas and improve resource-sharing

Foster Sustainable Infrastructure and Innovation in Local Administration

- Implement climate-resilient infrastructure and e-governance for service delivery
- Promote gender and caste inclusion, strengthen women's leadership
- Introduce citizen-led planning and expand social accountability
- Install interactive digital feedback kiosks in public offices, schools, and health centres where citizens can instantly rate services and provide suggestions (like public dashboards in Dubai)

Long-Term Pathway (2047)

Promote Public-Private Partnerships (PPPs)

- Introduce local municipal bonds and promote self-sustaining business models for local governments
- Grant legislative powers to local bodies
- Institutionalise participatory governance and mandate social audits for accountability

Amend Policies for Greater Local Autonomy

- Create a Local Governance Index and establish an independent governance audit body

Implement Climate-Resilient Infrastructure

- Adopt e-governance for efficient service delivery and create knowledge-sharing platforms for best practices

Develop Integrated Governance Models for Peri-Urban Areas

- Improve regional resource-sharing and promote balanced urbanisation

Align Governance with SDGs

- Integrate sustainability indicators into policy frameworks and foster innovation in local administration

Encourage Citizen-Led Local Development Planning

- Expand social accountability mechanisms and establish local governance forums

ISSUE 6: UNPLANNED GROWTH AND URBAN MIGRATION

Haryana's urbanisation rate increased from 10.77% in 1911[49] to 34.88% in 2011[50], exceeding the national average and reflecting significant demographic and spatial transformation. This figure has further risen to 37% in 2024.[51] This demographic shift has driven the expansion of the manufacturing, services, and knowledge economies, generating new socioeconomic opportunities while presenting challenges for existing governance and infrastructure systems. Rapid urban growth, particularly concentrated in the NCR, has outpaced infrastructure development, resulting in overcrowding, inadequate housing, traffic congestion, environmental degradation, and pressure on public services.

Haryana's Vision 2047 articulates a commitment to building prosperous, inclusive, and resilient cities, guided by sustainability, equity, innovative governance, and participatory planning principles. This vision emphasizes the implementation of balanced development strategies across the state, including significant improvements in infrastructure within lagging districts and the creation of diverse employment opportunities beyond the current NCR corridor. Strengthening rural-urban linkages and promoting balanced development in peri-urban areas, smaller towns, and Mahagrams—large, modern village clusters—will be essential to mitigate the growing pressure on the NCR and encourage distributed economic growth.

Integrating climate resilience measures—including mitigating urban heat island effects, water-sensitive urban design, and low-carbon mobility solutions—will be critical to ensuring sustainable urban development. Leveraging smart digital infrastructure, such as GIS, IoT, and integrated data platforms, will enable real-time, evidence-based planning and improve service delivery outcomes.

Further, prioritising affordable housing, upgrading informal settlements, and advancing community-led, inclusive planning processes will be key to fostering social equity. The Housing for All Department will play a central role in addressing urban housing needs through innovative models such as rental housing for migrant workers and economically weaker sections. Innovative financing mechanisms, including public-private partnerships, municipal bonds, and multilateral funding, will be indispensable for addressing investment gaps and realising the state's long-term urban development objectives.

These interconnected priorities underscore the imperative for comprehensive, future-ready urban planning frameworks harmonising growth with sustainability, resilience, and social inclusion.

Current Status

- Urbanisation increased from 10.77% (1911)[52] to 34.88% (2011)[53]
- Urban areas struggling with inadequate infrastructure and housing
- Increased private vehicles leading to congestion and pollution
- Water scarcity exacerbated by growing demand

Factors Influencing the Issue

Governance effectiveness significantly impacts urban development patterns, with planning capacity and regulatory enforcement determining whether growth occurs in systematic or haphazard ways. Economic

disparities between rural and urban areas drive migration patterns, while job market dynamics shape settlement concentration and labour force distribution. Demographic shifts, including population growth, household size changes, and ageing trends, influence housing demand and service requirements. Environmental pressures such as resource depletion and climate vulnerability affect urban sustainability and resilience, creating complex feedback loops with development decisions. These factors operate within legal frameworks governing land use, property rights, and development controls, collectively shaping the urban landscape and determining whether growth enhances or diminishes the quality of life for residents.

Impacts of the Issue

Direct Impact	Indirect Impact
• Unplanned and haphazard city growth patterns. • Urban sprawl, congestion, and overcrowding. • Inadequate provision and planning of public spaces. • Poorly planned and disconnected street networks. • Deteriorating, high-density old city areas requiring retrofitting. • Rising traffic congestion and mobility bottlenecks. • Increased frequency of urban flooding and water scarcity. • Intensification of urban heat island effects. • Environmental degradation from pollution. • SWM challenges. • Unemployment and informal employment.	• Rapidly expanding urban footprint without rural-urban integration. • Increased exposure to disaster risks due to inadequate risk-informed planning. • Land value fluctuations and competition over limited resources. • Public health deterioration and disruption of livelihoods. • Social instability and limited human capital development opportunities. • Health challenges and declining tourism potential. • Neglect and deterioration of urban heritage structures.

Global Learnings

Global Best Practice

Curitiba's Transit-Oriented Development[54]: Curitiba, Brazil, has been internationally recognised for its innovative approach to urban planning, particularly through its implementation of transit-oriented development (TOD). The city's master plan strategically directed urban growth along dedicated bus rapid transit (BRT) corridors, integrating land use and transportation planning. This approach facilitated high-density

Disruptive Technologies - IoT for Smart Infrastructure

IoT devices can be deployed in various infrastructure components such as transportation, energy, and waste management to optimise resource usage, reduce costs, and improve service delivery. For example, smart metres can monitor and manage energy consumption efficiently. Singapore has implemented an extensive IoT network for various purposes, including smart transportation with sensors on buses and traffic

development near transit routes, reducing urban sprawl and promoting efficient public transportation usage.

lights to optimise traffic flow and smart waste management with sensors in trash bins to optimise waste collection routes.[55]

Possible Pathways

Short-Term Pathway (2030)

Facilitate Sister-City Agreements

- Foster urban innovation, academic exchange, and smart governance through strategic partnerships- e.g., Gurugram–Dubai (Tech), Hisar–Haifa (Agriculture), Panchkula–Melbourne (Urban Planning), Sonipat–Nizhny Novgorod (Education)

Revise and Enforce Urban Planning Regulations

- Mandate regular Master Plan updates with stricter zoning and land-use norms, integrating multi-scalar planning approaches (inspired by **Kuala Lumpur)**
- Digitise land records for transparent, accessible urban governance
- Promote spatial planning tools like digital GIS-based models for real-time urban data management

Launch Targeted Affordable Housing Programmes

- Provide financial incentives for low-cost, inclusive, climate-resilient housing projects
- Streamline approval processes for affordable housing
- Enforce slum redevelopment and rehabilitation policies with clear, time-bound targets
- Incorporate successful models from **Odisha and Gujarat's** housing initiatives

Initiate Urban Rejuvenation and Retrofitting Projects

- Revamp and densify old city areas, leveraging London Docklands' revitalisation model
- Incentivise mixed-use, transit-oriented developments (**Japan's** transit corridor densification model)

Strengthen Urban and Rural Mobility and Transport Infrastructure

- Expand public transport fleets and develop new metro corridors in high-density areas
- Launch state-subsidised last-mile services using e-rickshaws and shared mobility models (drawing from **Jakarta and European** urban mobility practices)
- Prioritise walkable, pedestrian-friendly street design (as in Amsterdam) in the core city and neighbourhood areas
- Ensure all rural habitations are connected by all-weather roads and promote the adoption of Evs to enhance sustainable rural mobility

Improve Water Security and Disaster Preparedness

- Mandate rainwater harvesting in all new developments
- Rehabilitate water bodies for flood control and recharge
- Deploy IoT-based groundwater monitoring systems
- Begin sponge city-inspired projects for stormwater management (**Singapore and China**)
- Launch passive cooling, tree cover expansion, and shaded public space initiatives to counter the urban heat island effect

Short-Term Pathway (2030)

Expand Healthcare and Sanitation Infrastructure

- Establish mobile health clinics in underserved urban areas
- Ensure universal access to sanitation and clean drinking water
- Launch targeted vaccination and health awareness programmes

Create Employment Hubs in Peri-Urban Areas

- Establish job hubs in emerging peri-urban growth zones
- Encourage SMEs, logistics parks, and agro-processing units as decentralised employment sources

Enhance Recreational Spaces and Urban Commons

- Develop public parks, waterfronts, and community plazas as economic and cultural hubs (following **South Korea's** recreational urban space model)

Long-Term Pathway (2047)

Integrate AI and Predictive Modelling in Urban Planning

- Adopt AI-driven digital twin modelling for infrastructure planning, disaster risk reduction, and resource optimisation (**Singapore's** digital twin model)
- Use AI-based systems for traffic management, waste logistics, and urban sprawl control

Ensure Universal Climate-Resilient Housing

- Mandate green, climate-adaptive housing in all new urban expansions
- Provide mortgage assistance for low-income and marginalised groups
- Encourage passive cooling designs, energy-efficient construction, and net-zero residential clusters

Achieve Zero Waste, Circular Cities

- Deploy AI-powered waste tracking and decentralised processing hubs
- Enforce strict EPR on manufacturers and large waste generators
- Promote recycling, composting, and reuse economies

Build Blue-Green Infrastructure for Climate Resilience

- Develop integrated blue-green networks for flood resilience, urban cooling, and biodiversity (inspired by China, Rotterdam, and Singapore)
- Promote household- and city-level energy audits, urban farming, and permeable street design

Strengthen Water Resilience and Smart Distribution

- Integrate AI-driven water distribution systems and predictive leak detection
- Ensure universal water metering and 100% treated wastewater reuse in industries and urban agriculture

Promote Resilient, Inclusive Urban Economies

- Launch AI-based job-matching and upskilling platforms
- Incentivise automation-focused vocational training

Long-Term Pathway (2047)

- Formalise and support a sustainable gig economy model, inclusive of women and marginalised workers.

Prioritise Child- and Women-Friendly Urban Design

- Mandate gender-sensitive urban audits and inclusive planning processes.
- Integrate safety, accessibility, and inclusivity features for women and children in public transport, streets, and community spaces.

BIG ACTIONS

1. Future-First Growth Zones

Haryana will establish high-impact Regional Acceleration Hubs in underserved districts—powered by advanced infrastructure, AI-driven governance, and industry-specific innovation clusters—unlocking new engines of inclusive prosperity and dismantling the geography of inequality.

2. Gram Sabha 5.0

A paradigm shift in local governance: Haryana will embed digital democracy, fiscal power, and participatory planning into every Panchayat and Urban Local Body. Backed by real-time data systems and performance-linked financing, grassroots institutions will emerge as autonomous transformation architects.

3. EquiLead

A bold state-led revolution to embed gender equity at the core of economic transformation. EquiLead mandates 50% women's participation across all new industrial corridors, powered by AI-integrated skill hubs, equity-linked financing for women-led enterprises, and gender-intelligent infrastructure, positioning Haryana as a national model where inclusive growth is non-negotiable.

WORKING GROUP - 6

Departments

1. Development and Panchayats Department
2. Rural Development Department
3. Urban Local Bodies
4. Public Health Engineering Department
5. Social Justice, Empowerment, Welfare of Scheduled Caste & Backward Classes, and Antyodaya (SEWA)
6. Swarna Jayanti Haryana Institute for Fiscal Management

Timeline

24/07/2023
Introductory Presentation and Workshop on Strategic Foresight Approach Haryana Civil Secretariat, Chandigarh

27/09/2023
Meeting with the Member Secretary at Directorate of Urban Local Bodies, Panchkula

05/10/2023
First Meeting of the Working Group at Paryatan Bhawan Building, Sector 2, Panchkula

13/12/2023
Second Meeting of the Working Group at Directorate of Urban Local Bodies, Panchkula

25/01/2024
Strategic Foresight Workshop at Hotel Mountview

REFERENCES

[1]Department of Economic and Statistical Affairs, Haryana. "Economic Survey of Haryana 2024-25". Government of Haryana, 2025.

[2]Ibid

[3]Industries & Commerce Department, Haryana

[4]Ibid

[5]Department of Economic and Statistical Affairs, Haryana. "Economic Survey of Haryana 2024-25". Government of Haryana, 2025.

[6]"National Multidimensional Poverty Index." NITI Aayog, 17 July 2023, https://www.niti.gov.in/sites/default/files/2023-08/India-National-Multidimentional- Poverty-Index-2023.pdf.

[7]Ibid

[8]Ibid

[9]Ibid

[10]Ibid

[11]Ibid

[12]Ibid

[13]Excise & Taxation Department, Haryana

[14]Sustainable Development Goals Coordination Centre, and Swarna Jayanti Haryana Institute for Fiscal Management, Department of Finance, Government of Haryana. "Haryana SDG Vision 2030: Midpoint Review." SDGCC, https://sdgcc.in/wp-content/uploads/2023/06/Small-Haryana-2030-sdg-wise-roadmap-without-executive-summery.pdf

[15]"National Multidimensional Poverty Index." NITI Aayog, 17 July 2023, https://www.niti.gov.in/sites/default/files/2023-08/India-National-Multidimentional- Poverty-Index-2023.pdf

[16]Ibid

[17]Ibid

[18]Presidência da República. "Novo PAC Is to Invest BRL 1.7 Trillion across All Brazilian States." Gov.br/Planalto, 11 Aug. 2023, https://www.gov.br/planalto/en/latest-news/2023/08/novo-pac-is-to-invest-brl-1-7-trillion-across-all-brazilian-states.

[19]How Dubai is Becoming the Blockchain Capital of the World. IBM Newsroom, https://newsroom.ibm.com/IBM-blockchain?item=30730.

[20]Government of India, Ministry of Jal Shak, et al. Annual Report 2020-21. 2021, master-jalshakti-ddws.digifootprint.gov.in/static/uploads/2024/02/Annual-report-2020-2021-eng.pdf.

[21]Ibid

[22]Central Ground Water Board, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti. "National Compilation on Dynamic Ground Water Resources of India, 2023." https://cdnbbsr.s3waas.gov.in/s3a70dc40477bc2adceef4d2c90f47eb82/uploads/2023/12/20231206209724415.pdf

[23]GOVERNMENT OF INDIA, et al. Annual Report 2019-20. 2019, master-jalshakti-ddws.digifootprint.gov.in/static/uploads/2024/02/Annual-report-2019-2020-eng.pdf.

[24]Department of Urban Local Bodies, Haryana

[25]"93% of Drains Cleaned Across Haryana, Flood Control Measures in Full Swing: Irrigation Minister." Hindustan Times, 23 June 2025, www.hindustantimes.com/cities/chandigarh-news/93-of-drains-cleaned-across-haryana-flood-control-measures-in-full-swing-irrigation-minister-101750618612167.html.

[26]Department of Urban Local Bodies, Haryana

[27]PUB, Singapore's National Water Agency. "NEWater." PUB, Singapore's National Water Agency, 2 Oct. 2024, https://www.pub.gov.sg/Public/WaterLoop/OurWaterStory/NEWater.

[28]"Waterproofing the West." CRC for Water sensitive cities, https://watersensitivecities.org.au/solutions/case-studies/waterproofing-the-west/.

[29]Haryana State Policy and Strategy on Solid Waste Management, ULB Haryana, https://ulbharyana.gov.in/Website/DirectorateofUrbanLocalBodies/Images/652076bf-a91d-4653-a7ae-d365bbdaa1c9.pdf

[30]Haryana Air Quality Index. AQI, 20 November 2025, https://www.aqi.in/in/dashboard/india/haryana

[31]Urban Local Bodies Department, Government of Haryana.

[32]Ibid

[33]Haryana State Policy and Strategy on Solid Waste Management, ULB Haryana, https://ulbharyana.gov.in/Website/DirectorateofUrbanLocalBodies/Images/652076bfa91d-4653-a7ae-d365bbdaa1c9.pdf

[34]Department of Urban Local Bodies, Haryana

[35]Haryana Air Quality Index. AQI, 20 November 2025, https://www.aqi.in/in/dashboard/india/haryana

[36]Department of Urban Local Bodies, Haryana

[37]Swedish Energy Agency. "From Waste to Wealth—Sweden's Comprehensive Approach to Energy Recovery." Swedish Energy Agency, 24 Feb. 2025, https://www.energimyndigheten.se/en/news/2025/from-waste-to-wealth---swedens-comprehensive-approach-to-energy-recovery.

[38]"Zero Waste: Working Towards Zero Waste in a Steady State Economy." FasterCapital, fastercapital.com/content/Zero-waste--Working-towards-Zero-Waste-in-a-Steady-State-Economy.html

[39]Election Commission of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2046014

[40]Ibid

[41]Ibid

[42]National Crime Record Bureau Annual Report(2023), Government of India

[43]Census 2011, Government of India.

[44]About | Zipline Drone Delivery and Logistics." Zipline, www.zipline.com/about.

[45]"India Health Link hPod Health Kiosk and Health ATM Helps in Preventive Health Screening." India Health Link, 2025, https://indiahealthlink.com/india-health-link-hpod-health-kiosk-and-health-atm-helps-in-preventive-health-screening/. Accessed 20 May 2025.

[46]Department of Economic and Statistical Affairs, Haryana. "Statistical Abstract of Haryana 2021-22". Government of Haryana, 2023

[47]"Decentralisation Participatory Planning and Development in Kerala." KILA Digital Repository, Kerala Institute of Local Administration, https://dspace.kila.ac.in/server/api/core/bitstreams/09023293-25cc-4a51-80e6-3e28ddacae76/content.

[48]Artificial Intelligence Video Streaming Surveillance in Traffic Management. Maris-Tech, 20 June 2023, https://www.maris-tech.com/blog/driving-into-the-future-how-ai-video-streaming-is-revolutionizing-traffic-management/

[49]"Urbanisation And Urban Systems In Haryana - A Geographical Analysis." Neliti,

[50]"61 Level of Urbanization and its Socio Economic Aspects in Haryana: A Spatio-Temporal Analysis: 2001 & 2011." International Journal of Multidisciplinary Research and Development, https://www.allsubjectjournal.com/assets/archives/2016/vol3issue7/3-7-16-690.pdf

[51]FIDR population, December 2024

[52]Urbanisation And Urban Systems In Haryana - A Geographical Analysis." Neliti,

[53]Level of Urbanization and its Socio Economic Aspects in Haryana: A Spatio-Temporal Analysis: 2001 & 2011." International Journal of Multidisciplinary Research and Development, https://www.allsubjectjournal.com/assets/archives/2016/vol3issue7/3-7-16-690.pdf

[54]ICLEI Case Studies, report, 190, ICLEI, 2016, www.thegpsc.org/sites/gpsc/files/todknowdoc/iclei_cs_190_curitiba_urban-leds_0_0.pdf.

[55]Internet of Things: Exploring the Role of IoT in Smart Cities. FasterCapital, 17 December 2023, .