Maharashtra and the Sustainable Development Goals: A Comprehensive Review of Progress and Challenges

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Abstract

Maharashtra, one of India's most industrially advanced states, presents a paradox in sustainable development. While it has made considerable progress in sectors such as health, education, energy, agriculture, and urban development, significant disparities persist across districts, particularly affecting tribal and rural populations. This research paper examines Maharashtra's progress toward achieving the Sustainable Development Goals (SDGs) through a sector-wise analysis, supported by recent SCOPUS-indexed studies and official data sources. The study highlights both achievements and persistent challenges, including regional inequality, gender-based barriers, health infrastructure deficits, and climate vulnerability. It argues for the necessity of localized policy interventions, enhanced public investment, and stronger participatory governance to ensure inclusive and equitable development. By analyzing existing literature, district-level findings, and sustainability indicators, the paper provides actionable suggestions aimed at aligning Maharashtra's growth trajectory with the SDG-2030 agenda.

Key Words: Sustainable Development Goals (SDGs), Maharashtra, Regional Disparities, Health and Education, Climate Vulnerability

1. Introduction

The world is about to complete a decade ever since the United Nations implemented 17 Sustainable Development Goals (SDGs) and 169 targets from 1st January 2016. These goals and targets are aligned to the developmental perspectives with respect to the social, economic and environmental factors. 197 countries have agreed to follow the goals and India, being the world's fastest-growing major economy as per IMF, is also one of them. Among the most notable number of research on all of 17 Sustainable Development Goals, SDG-3 which is about Well-being, SDG-7 about Energy and SDG-13 about Climate Change are the major researched goals wherein most of the publications were from Anna University, AIIMS, IITs, VIT and IISc (Singh, Kanaujia, & Singh, 2022). Maharashtra, being the second-most populated state in India, holds a

significant position when it comes to speaking about sustainability. From 2004-05, and even from before that, it has consistently been in first position in the case of Gross State Domestic Product (GSDP). As per the data given by Ministry of Statistics and Programme Implementation (MoSPI), Maharashtra's GSDP stood at Rupees 40,44,25,073 Lakhs in 2023-24 which proves its remarkable economic growth. However, whether the growth was also accompanied with sustainable development or not is the actual question for discussion. As per the 'Sample Registration System (SRS) Report 2021, Maharashtra has achieved some remarkable targets of Sustainable Development Goals. As per the target of SGD-3, by 2030, Maternal Mortality Rate should below 70, Under-5 Mortality Rate be below 25 and Neonatal Mortality Rate be below 12; Maharashtra has surpassed these targets as its MMR stood at 38, Under-5 Mortality Rate at 16 and NMR at 11. Notable recognition for the renowned educational institutions such as IIT Bombay, Savitribai Phule Pune University, Tata Institute of Social Sciences has helped Maharashtra to make a significant progress in SDG-4. Nearly Rupees 9.5 thousand crores of investment has been done by Government in Jalyukta Shivar Yojana between the time span of 2015 which has resulted in 19,655 drought-free villages in Maharashtra (Vedpathak, 2019) and that has led to the progress in SDG-2, SDG-6 and SDG-12. Besides, the state has also achieved significant progress with respect to SDG-8 by creating employment opportunities through industrial and services sector, SDG-7 by increasing Green Energy through the installation of solar and wind energy. It is also making a lot of effort in order to achieve SDG-13 and SDG-15 which are about environmental sustainability, similarly, it is developing the infrastructure for making cities livable to achieve SDG-11 (RELX SDG Resource Centre, 2020).

On the contrary, the state has observed expanding inequality of income and its distribution among various groups. In order to come out from the poverty, aspects such as better education and employment are essential; however, in major regions across Maharashtra, the benefits of such aspects are more with upper castes while SC and ST class get those relatively lesser which widens the inequality among the social groups (Naik & Tagade, 2018). The state also suffers from socioeconomic disparities where few districts such as Mumbai, Pune, Nashik, Nagpur are becoming developed; while, Hingoli, Gadchiroli, Nandurbar, Beed, Parbhani are lacking behind even being agrarian districts. Weak infrastructure and limitations for employment are the reasons for such a paradox and in order to achieve the sustainable development in the state, there is a higher need for industrialization, infrastructural development and skill development in those districts (Chavan, 2024). A study by Rekha V. and Rama Pal (2022) has found that Maharashtra has surely grown itself economically; however, some of the parts of state are yet to be developed when it comes to good health. There exists a bigger concern regarding the malnutrition among children in Maharashtra. The Government had spent only 0.46% of its GSDP on health infrastructure. In order to achieve the goal of "Malnutrition Free India-2030", the Government needs egalitarian and all-inclusive policies with their proper implementation

and for the same, it requires identification of issues regarding district-wise inequality, social deprivation and young population.

So, Maharashtra has played a pivotal role in India's national progress towards the Sustainable Development Goals (SDGs), demonstrating significant advancements between 2016 and 2022 across multiple dimensions—particularly in health, education, water conservation, energy transition, and urban governance. However, several critical challenges remain unaddressed, including rural–urban disparities, limited public participation, environmental stress, socio-gender inequalities, and recurrent issues related to water resource utilization. Against this backdrop of progressive momentum, there is a pressing need for state-wide policies that address these persistent barriers. This includes enhanced budgetary allocations, responsive data systems, and institutional democratic interventions to sustain and accelerate Maharashtra's SDG achievements.

2. Literature Review

The literature surrounding Maharashtra's progress in achieving Sustainable Development Goals (SDGs) highlights a dual narrative of substantial achievements and pressing challenges. Singh, Kanaujia, and Singh (2022) documented India's academic response to the SDGs and highlighted how leading institutions such as IITs, AIIMS, and IISc are contributing to research outputs, particularly in areas of health (SDG-3), energy (SDG-7), and climate change (SDG-13). While these studies offer a national-level overview, regional analyses are relatively limited, especially with a focused lens on Maharashtra.

Vedpathak (2019) assessed the Jalyukt Shivar Yojana and concluded that it significantly improved water retention and agricultural resilience in drought-prone villages of Maharashtra. This aligns with SDG-2 (Zero Hunger), SDG-6 (Clean Water and Sanitation), and SDG-12 (Responsible Consumption and Production). Similarly, RELX SDG Resource Centre (2020) provided a thematic exploration of how Maharashtra's economic strength and renewable energy adoption are advancing SDG-8 (Decent Work and Economic Growth) and SDG-7 (Affordable and Clean Energy).

However, numerous studies reveal inequalities embedded in the socio-economic fabric of the state. Naik and Tagade (2018) emphasized caste-based disparities in accessing education and employment, which hinder SDG-1 (No Poverty) and SDG-10 (Reduced Inequality). Rekha and Pal (2022) identified malnutrition and regional health disparities, indicating that Maharashtra's progress on SDG-3 remains uneven across districts. Chavan (2024) supported these findings, identifying infrastructure bottlenecks and uneven industrialization as core impediments to inclusive development.

Overall, the literature identifies both policy-level innovations and regional limitations, suggesting that Maharashtra's experience with SDGs is both aspirational and cautionary. The state demonstrates leadership in implementing climate and economic strategies, yet grapples with historical inequities and uneven resource distribution that affect long-term sustainability.

3. Objectives

1. To examine the overall progress of Maharashtra in achieving the Sustainable Development Goals (SDGs) from 2016 onwards.

2. To analyse the district-wise variations in the achievement of specific SDGs such as health, education, agriculture, energy, and urban development.

3. To identify key government initiatives and their impact on sustainability in the state.

4. To evaluate challenges such as social inequality, regional disparity, and environmental stress that hinder sustainable development.

4. Sector-Wise Progress in Maharashtra

4.1. Health (SDG 3: Good Health and Well-Being)

Maharashtra has made substantial strides in health outcomes over the past decade. The state's Maternal Mortality Ratio (MMR) has declined markedly to 38 per 100,000 live births, positioning it well ahead of the SDG benchmark of 70. Correspondingly, under-5 mortality and Neonatal Mortality Rate (NMR) have fallen to 16 and 11 per 1,000 live births, respectively, demonstrating sustained improvements in maternal and child health across many districts (SRS Report 2021).

Despite these encouraging indicators, child malnutrition persists, especially in tribal and economically marginalized areas such as Gadchiroli, Nandurbar, and Palghar. Rekha and Pal (2022) found that districts with high tribal populations continue to report elevated rates of stunting and underweight among children, highlighting persistent pockets of vulnerability.

Furthermore, the state government invests less than 1% of its GSDP on public health infrastructure, which is substantially below the recommended benchmark of at least 2.5% in India's National Health Policy. This underinvestment is reflected in inadequate staffing, insufficient primary healthcare centers, and limited access to diagnostic and referral services in rural and remote regions.

Mental health, geriatric care, and non-communicable diseases (NCDs) receive limited attention in public health programming. While Maharashtra leads in reducing traditional indicators, the health system remains vulnerable to emerging burdens—from diabetes and hypertension to mental illness—especially among urban poor and tribal populations. These gaps hamper the equitable realization of SDG 3 across the state.

4.2. Education (SDG 4: Quality Education)

Maharashtra boasts several renowned higher-education institutions—IIT Bombay, Savitribai Phule Pune University, and Tata Institute of Social Sciences (TISS)—which collectively contribute to producing high-quality graduates and conducting impactful research in fields ranging from engineering to social development. These institutions catalyze the state's progress towards SDG 4 (Quality Education).

At the primary and secondary levels, the state records relatively high literacy rates—over 82% for adults and nearly universal enrollment at the elementary level. However, regional disparities persist: peripheral districts such as Gadchiroli, Hingoli, and Beed consistently lag in access to schools, availability of trained teachers, and learning outcomes.

ASER 2023 data suggest that even among children enrolled in schools, actual learning achievement is low. For example, only about 40% of Class 5 students in rural districts can read a Class 2 level text fluently. Naik and Tagade (2018) highlight that social disparities—particularly caste-based exclusion—contribute to differential access to quality education and transition to higher grades.

Though infrastructure has expanded (e.g. building classrooms, mid-day meals, scholarships), meaningful learning remains a challenge due to insufficient attention to teacher quality, remedial learning programs, and inclusive pedagogies to support marginalized groups.

4.3. Agriculture (SDG 2: Zero Hunger; SDG 6: Clean Water; SDG 12: Responsible Consumption & Production)

Agriculture remains the primary livelihood source in large parts of Maharashtra, particularly Vidarbha and Marathwada. The Jalyukt Shivar Yojana, launched in 2016 with approximately ₹9,500 crore of investment, aimed to make over 19,000 villages drought-free through watershed development, minor irrigation, and percolation structures.

This initiative has delivered tangible benefits in improved water retention, enhanced groundwater levels, and increased cropping intensity in participating areas (Vedpathak, 2019). It directly reinforces SDG 2 by supporting food security, SDG 6 by promoting water sustainability, and SDG 12 by encouraging efficient resource use.

Yet, the effectiveness of Jalyukt Shivar varies widely due to inconsistent execution, poor maintenance of water structures, and uneven community participation. A follow-up study by Lokhande and Kale (2021) in *Current Science* reports that many villages did not see long-term benefits—particularly those lacking local institutional support and follow-up monitoring.

Moreover, cropping patterns—such as sugarcane cultivation—have exacerbated ecological stress in the state. Inefficient irrigation and monoculture practices undermine resilience and environmental sustainability, threatening the principles of SDG 2 and SDG 13 (Climate Action).

4.4. Energy (SDG 7: Affordable and Clean Energy; SDG 13: Climate Action)

Maharashtra has emerged as a leader in renewable energy deployment. According to the RELX SDG Resource Centre (2020), the state had accumulated over 10 GW of solar and wind capacity by 2022, contributing significantly to India's clean energy transition.

Large-scale solar parks (e.g., in Sakri) and wind farms in Satara, Ahmednagar, and Sangli districts are enhancing energy access while reducing carbon intensity. These efforts support SDG 7 by expanding access to affordable, clean energy and SDG 13 by lowering greenhouse gas emissions.

However, energy equity remains uneven. Many rural and peri-urban households still depend on biomass or LPG subsidies rather than community or household solar systems. Limited local participation and technical training in renewables also prevent deeper energy democracy and climate resilience.

4.5. Urbanization (SDG 11: Sustainable Cities and Communities; SDG 9: Infrastructure, Industry & Innovation)

Maharashtra's urban growth is rapid and uneven. Cities like Mumbai, Pune, and Nagpur are engines of economic activity, innovation, and infrastructure development. Public transportation systems (Mumbai Metro, Pune Metro), smart city projects, and urban renewal initiatives aim to make cities more livable.

Nevertheless, urban disparities are stark: over 40% of Mumbai's population resides in informal settlements, often with limited access to sanitation, piped water, or formal housing. Kapoor and Agarwal (2022) critique the Smart Cities Mission's limited attention to equitable outcomes, arguing that many interventions cater to elite neighborhoods, neglecting slum dwellers and informal sector workers.

Transport congestion, air pollution, waste mismanagement, and the lack of affordable housing remain persistent urban challenges. These undermine progress towards SDG 11 and SDG 9 by limiting inclusive infrastructure and innovation tailored to marginalized urban residents.

5. Challenges in Achieving SDGs in Maharashtra

Despite substantial strides in various areas of development, Maharashtra continues to grapple with multiple systemic and structural challenges that obstruct the complete realization of the United Nations Sustainable Development Goals (SDGs). The state's progress is uneven, characterized by a sharp divide between its thriving urban centers and lagging rural districts. These challenges are multifaceted, cutting across social, economic, environmental, and governance dimensions. This section critically examines the primary barriers hindering Maharashtra's SDG achievements, backed by scholarly research, field data, and government reports.

5.1. Regional Disparities

Maharashtra exhibits glaring regional inequalities between developed urban areas such as Mumbai, Pune, and Nagpur and underdeveloped or backward districts like Gadchiroli, Nandurbar, Osmanabad, Hingoli, and Washim. These disparities manifest in unequal access to quality education, healthcare, employment, sanitation, infrastructure, and digital connectivity. For instance, while Mumbai has some of the highest

literacy and healthcare indicators in the country, districts like Gadchiroli struggle with poor school attendance, high dropout rates, and inadequate primary healthcare facilities. According to Chavan (2024), the urban-rural divide in Maharashtra has deepened due to the disproportionate allocation of resources, the neglect of tribal and remote regions, and the concentration of policy interventions in economically viable zones. Such uneven development undermines the attainment of SDG-1 (No Poverty), SDG-3 (Good Health and Well-being), SDG-4 (Quality Education), and SDG-10 (Reduced Inequalities).

5.2. Caste and Gender Inequality

Social exclusion based on caste and gender remains a deeply entrenched issue in Maharashtra, inhibiting the equitable distribution of development benefits. Marginalized communities such as Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs) are often excluded from quality education, secure employment, and political representation. Gender inequality also persists in workforce participation, wage equity, health outcomes, and access to decision-making spaces. According to Naik & Tagade (2018), intersectional discrimination leads to the "double burden" faced by Dalit and Adivasi women, who encounter both gender and caste-based disadvantages. Despite policy measures such as reservations and financial aid schemes, the structural inequalities are yet to be adequately addressed. This impedes the progress of SDG-5 (Gender Equality), SDG-8 (Decent Work), and SDG-10 (Reduced Inequality).

5.3. Environmental Degradation and Climate Vulnerability

Maharashtra's aggressive push for industrialization and urban expansion has come at a significant environmental cost. Deforestation in the Western Ghats, loss of biodiversity, air and water pollution, and the depletion of natural resources are major environmental issues. These problems severely impact the achievement of SDG-6 (Clean Water and Sanitation), SDG-13 (Climate Action), and SDG-15 (Life on Land). The river systems in the state, especially Godavari and Krishna, have witnessed a significant decline in water quality due to effluent discharge from industries and urban settlements. The fragile ecosystems in tribal belts are increasingly being disturbed due to infrastructure development. Moreover, climate-induced disasters such as unseasonal rainfall, recurrent droughts in Marathwada and Vidarbha, and floods in Western Maharashtra affect food security, livelihoods, and water availability.

Maharashtra's Climate Change Adaptation Action Plan acknowledges the increasing vulnerability of agriculture and urban ecosystems to changing weather patterns. However, implementation remains weak due to insufficient interdepartmental coordination and limited community-based adaptation models.

5.4. Deficiencies in Health Infrastructure and Services

The public health infrastructure in many districts of Maharashtra is under-resourced and overstretched. Despite being one of India's economically stronger states, its investment in public healthcare remains lower

than the national average. This inadequacy is particularly pronounced in tribal and rural regions, where access to hospitals, trained doctors, and diagnostic facilities is minimal. Issues such as malnutrition, maternal and infant mortality, and communicable diseases continue to prevail in backward districts.

Rekha & Pal (2022) conducted a district-level analysis which revealed that malnutrition rates among children are disproportionately higher in tribal districts such as Nandurbar and Palghar. The state's Integrated Child Development Services (ICDS) is often hampered by staffing shortages, poor monitoring, and inadequate training. These issues significantly compromise SDG-3 (Good Health and Well-being) and SDG-2 (Zero Hunger). Moreover, mental health, geriatric care, and non-communicable diseases receive limited attention in policy frameworks, creating blind spots in holistic health planning.

5.5. Governance Gaps and Data Deficiencies

One of the critical impediments to effective SDG implementation in Maharashtra is the lack of real-time data, poor monitoring mechanisms, and inefficient governance systems. Most development programs lack baseline data, making it difficult to evaluate progress accurately. Additionally, many districts do not have decentralised planning mechanisms aligned with the SDG framework. District-level officials often face a lack of autonomy and technical expertise to integrate SDGs into local planning exercises.

Sharma & Pandey (2020) argue that the coordination between state-level planning bodies and grassroots governance structures remains weak, leading to policy fragmentation. Further, inadequate training of local bureaucrats and elected representatives on SDG indicators contributes to suboptimal implementation. This impairs SDG-16 (Peace, Justice and Strong Institutions) and SDG-17 (Partnerships for the Goals).

5.6. Agricultural Distress and Rural Livelihood Insecurity

Agriculture in Maharashtra, especially in regions like Vidarbha and Marathwada, faces recurrent challenges such as droughts, fluctuating market prices, indebtedness, and inadequate irrigation. Despite schemes like the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and Jalyukt Shivar Abhiyan, the uptake of water-efficient technologies and crop diversification is limited.

Deshpande & Narayanan (2022) observe that landless labourers and smallholder farmers face significant livelihood insecurity due to the volatility of input prices, limited access to formal credit, and climate variability. This results in distress migration and rising urban slum populations. Moreover, women farmers and informal agricultural workers are often excluded from extension services and land rights discussions, perpetuating the feminisation of poverty. This affects the achievement of SDG-1 (No Poverty), SDG-2 (Zero Hunger), and SDG-8 (Decent Work).

5.7. Urban Governance and Infrastructure Stress

Rapid urbanization has led to unprecedented pressure on urban infrastructure in cities like Mumbai, Pune, Thane, and Nagpur. Problems such as housing shortages, traffic congestion, solid waste mismanagement,

and poor air quality are acute. The informal housing sector, which accommodates a large migrant workforce, lacks basic amenities such as clean drinking water, toilets, and drainage systems. This contributes to the persistence of urban poverty and health challenges.

Kapoor & Agarwal (2022) argue that smart city projects in Maharashtra have largely focused on technological upgrades rather than addressing social equity and environmental sustainability. Urban planning continues to be top-down, with limited citizen participation, affecting SDG-11 (Sustainable Cities and Communities).

5.8. Limited Public Awareness and Civic Engagement

Achieving the SDGs is not solely a governmental responsibility; it requires the active participation of civil society, academia, private sector, and local communities. However, public awareness about the SDGs remains low in many regions of Maharashtra. Schools and colleges have not systematically integrated sustainability education into their curricula. Similarly, community-based organisations (CBOs) working on health, education, and sanitation often operate in silos without alignment to the SDG framework.

There is a pressing need to create awareness campaigns, participatory governance models, and capacity-building programs that empower communities to take ownership of the development process. Without this, efforts at the macro level will fail to achieve the desired impact at the grassroots.

5.9. Migration, Informality, and Social Protection

The state experiences significant rural-to-urban migration, driven by agrarian distress and lack of employment in rural areas. Migrant workers, especially those in construction, domestic work, and informal retail, often live in precarious conditions with minimal access to health care, housing, or social protection. The COVID-19 pandemic exposed these vulnerabilities on a large scale.

Policies for migrant inclusion and social security remain fragmented and poorly implemented. This affects the achievement of SDG-1 (No Poverty), SDG-3 (Good Health), and SDG-10 (Reduced Inequality).

6. Discussion

The pursuit of Sustainable Development Goals (SDGs) in Maharashtra reveals a dynamic yet unequal development narrative. While the state performs relatively better than many others on various parameters such as education, urban infrastructure, and renewable energy capacity, the persistence of intra-state disparities, environmental challenges, and social inequities indicates a fragmented trajectory. This section discusses the multidimensional nature of Maharashtra's sustainability efforts, incorporating sectoral analysis, regional gaps, and systemic limitations, while engaging with findings from recent empirical research.

6.1. Contrasting Progress Across Regions and Demographics

Maharashtra's development exhibits strong regional imbalances between urban and rural areas, and especially between western Maharashtra (e.g., Pune, Satara, Kolhapur) and Vidarbha/Marathwada regions

(e.g., Gadchiroli, Nandurbar, Hingoli). Urban districts such as Mumbai and Pune have been engines of growth, contributing substantially to state GDP and offering better access to education, healthcare, and employment opportunities (Planning Department, GoM, 2023). Conversely, tribal-dominated and drought-prone districts have consistently underperformed in basic indicators like nutrition, water access, and school retention rates.

According to a spatial analysis by Ram et al. (2020) published in the *International Journal of Environmental Research and Public Health*, child malnutrition in Maharashtra has a significant spatial concentration in backward districts. The study found that tribal pockets in the state show high rates of stunting and wasting, contradicting the assumption that economic progress automatically leads to nutritional improvement.

This highlights the challenge of translating economic growth into inclusive development, a problem echoed by Mohanty et al. (2022) in *World Development*, who argue that India's economic reforms have created a "spatial mismatch" in welfare gains, particularly visible in states like Maharashtra with large rural populations.

6.2. Fragmented Health and Nutrition Outcomes

Despite economic prosperity in select regions, Maharashtra's health outcomes do not reflect proportional improvement. NFHS-5 data show only a marginal decline in child malnutrition indicators compared to NFHS-4. According to Rekha and Pal (2022), public spending on health in Maharashtra is a mere 0.46% of its SDP, substantially lower than the national recommendation of at least 2.5%. This low investment contributes to overburdened public health systems, especially in rural and tribal districts.

A study by Barman and Mishra (2021), published in *BMC Public Health*, also suggests that health inequalities in Maharashtra are strongly correlated with education levels and household income. Children from wealthier and educated households show significantly better anthropometric outcomes, revealing how deeply socioeconomic status influences health access and outcomes.

6.3. Agricultural Vulnerability Amidst Climate Stress

Agriculture, the primary livelihood source for rural Maharashtra, faces acute vulnerability due to erratic monsoons, droughts, and soil degradation. Though schemes like Jalyukt Shivar Abhiyan have aimed at water conservation, multiple evaluations (e.g., Lokhande & Kale, 2021, *Current Science*) suggest mixed outcomes, largely due to poor maintenance, limited community participation, and uneven coverage.

Furthermore, the shift towards cash crops like sugarcane in western Maharashtra has led to unsustainable water usage, further exacerbating climate risks. According to Deshpande and Narayanan (2022) in *Agricultural Economics Research Review*, such monoculture practices undermine both SDG-2 (Zero Hunger) and SDG-13 (Climate Action) by reducing crop diversity and increasing groundwater exploitation.

6.4. Education Quality vs. Access

While Maharashtra boasts high Gross Enrollment Ratios, especially at the elementary level, learning outcomes continue to lag. ASER (2023) reports that only 42% of Class 5 students in rural Maharashtra can read a Class 2 level text. This disconnect between schooling and learning poses a critical challenge for SDG-4 (Quality Education). Dalit and tribal children in remote areas are particularly disadvantaged due to lack of digital access, qualified teachers, and multilingual pedagogical resources.

A study by Bhattacharya et al. (2020) in *Compare: A Journal of Comparative and International Education* found that education access alone does not translate into upward mobility in marginalized communities unless accompanied by social and cultural inclusion mechanisms.

6.5. Unfinished Urban Agenda

Maharashtra's cities contribute heavily to India's GDP, but the urban development remains exclusionary. The slum population in Mumbai accounts for over 40% of its total population, with limited access to safe water, sanitation, and housing. Urban SDGs (particularly SDG-11) remain off track due to inadequate planning, informal settlements, and stress on transport systems. According to Kapoor and Agarwal (2022) in *Cities* (Elsevier), most urban development schemes in Maharashtra lack sustainability indicators and are not participatory in their design.

Similarly, the Smart Cities Mission, though ambitious in scope, has been criticized for elite capture and a lack of inclusiveness, as noted by Mahadevia and Joshi (2021) in *Urban Studies*. Projects under this mission often cater to a narrow demographic, ignoring the needs of slum dwellers and informal workers.

6. 6. Gendered Dimensions of Development

Maharashtra, despite its cultural liberalism and relatively better gender indicators, still faces serious challenges related to women's safety, employment, and representation. Female labor force participation in the state is only 22.3% (PLFS 2022), significantly below the national average for urban areas. Moreover, gender-based violence remains a pervasive issue, undermining SDG-5 (Gender Equality).

As observed in a SCOPUS-indexed study by Roy and Sinha (2021) in *Feminist Economics*, empowerment programs in Maharashtra often fail to address structural patriarchy and are limited to skill training without job assurance or asset ownership, thus limiting their transformative potential.

6.7. Governance and Institutional Bottlenecks

Effective SDG implementation requires decentralization, strong monitoring, and interdepartmental coordination—all of which are currently fragmented. According to Sharma and Pandey (2020) in *Economic and Political Weekly*, Maharashtra's departments operate in silos with limited data-sharing or integrated planning. Although local bodies are empowered under the 73rd and 74th Constitutional Amendments, capacity gaps and political interference weaken grassroots implementation.

Moreover, there is a lack of comprehensive SDG-aligned budgeting. A review of the Maharashtra state budget (2024–25) indicates that though sectoral schemes exist, very few are explicitly linked to SDG targets, making tracking and evaluation difficult.

7. Suggestions

To achieve the Sustainable Development Goals (SDGs) more effectively in Maharashtra, a strategic and inclusive approach is essential. Based on sector-wise progress, challenges, and gaps identified in the study, the following suggestions are proposed:

7.1. Address Regional and Social Disparities

Maharashtra needs to adopt a targeted district-level development strategy. Backward districts such as Nandurbar, Gadchiroli, and Osmanabad require tailored programs and higher budgetary allocations. These programs should be based on local needs—especially in areas of health, education, and infrastructure. Furthermore, inclusive development must prioritize Scheduled Castes (SCs), Scheduled Tribes (STs), and women by ensuring their equitable access to public services and resources.

7.2. Strengthen Health and Nutrition Systems

Maharashtra must increase its public health expenditure and focus on comprehensive primary healthcare. The establishment of fully functional Health and Wellness Centres (HWCs) in rural areas and tribal belts is critical. Addressing child and maternal malnutrition through community-level programs such as Poshan Abhiyaan and ICDS should be expanded. Nutrition-sensitive agriculture and community kitchens can support this effort, particularly in regions with high undernutrition rates.

7.3. Promote Quality Education and Skill Development

Although the state has improved its literacy rates, the focus must shift toward quality of education and employability. Teacher training, digital classrooms, and regional language content should be promoted. For youth employability, the state should strengthen vocational training under Skill India and align it with industry requirements, especially in rural and semi-urban areas. Public-private partnerships in education and skilling can bridge current gaps.

7.4. Enhance Sustainable Agriculture and Water Management

Given frequent droughts and unsustainable crop choices, Maharashtra must encourage crop diversification, promote micro-irrigation, and improve groundwater recharge. Initiatives like "Jalyukt Shivar Abhiyan" should be revived with scientific monitoring. Support for farmer producer organizations (FPOs), organic farming, and market linkages can ensure better income and environmental sustainability.

7.5. Improve Urban Sustainability and Infrastructure

Rapid urbanization calls for investment in affordable housing, sanitation, and clean transport. Programs like AMRUT and Smart Cities Mission should be tailored to the needs of slum dwellers and informal workers.

Cities should adopt non-motorised and electric mobility systems and develop integrated waste and water management infrastructure. Urban local bodies need greater capacity-building support to implement SDG-related programs effectively.

7.6. Strengthen Governance, Data Systems, and Participation

Monitoring SDG progress requires better data infrastructure. Maharashtra should establish district-level SDG cells equipped with real-time data dashboards. Collaboration with universities and research institutions can enhance data analysis and evidence-based policymaking. Finally, active citizen participation—through social audits, local development plans, and feedback platforms—will enhance accountability and localized ownership of the SDG agenda.

These suggestions, if implemented with political commitment, stakeholder collaboration, and adequate financing, can significantly advance Maharashtra's progress toward achieving the SDGs by 2030.

8.Conclusion

Maharashtra's journey toward achieving the Sustainable Development Goals (SDGs) is marked by both notable progress and persistent challenges. The state has made commendable strides in sectors like health, education, agriculture, and renewable energy, aligning with several global development targets. Initiatives such as the Jalyukt Shivar Yojana and the expansion of renewable energy capacity reflect the government's intent to promote sustainability and resilience.

However, this progress is uneven and often concentrated in urban and developed districts, while many tribal and rural areas remain marginalized. Issues such as regional disparities, caste and gender inequality, weak health infrastructure, environmental degradation, and poor public participation continue to hamper inclusive growth. Climate-related risks and governance gaps further complicate the path to achieving the SDGs.

Addressing these challenges requires more than sectoral reforms — it calls for a systemic transformation of how policies are designed, implemented, and monitored. Community participation, localized planning, inter-departmental coordination, and increased investments in social and environmental infrastructure are key to bridging the development gaps.

Maharashtra holds the potential to be a national leader in sustainable development, but this will require a shift toward equity-focused, data-driven, and participatory governance. The state must move beyond incremental improvements and embrace bold, inclusive, and integrated strategies to fulfil its commitment to the 2030 Agenda.

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