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A decadal comparative study of India's progress on the sustainable development goals, (2015-2025)

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Abstract
This paper assesses and compares India's advancement in attaining the Sustainable Development Goals (SDGs) between 2015 and 2025, which marks the 10th anniversary of SDGs. The research paper employs secondary data from the Sustainable Development Report 2025 to examine the achievements, challenges, and regional variations in all the 17 Sustainable Development Goals (SDGs). The findings illustrate significant achievements such as decreasing poverty, achieving universal access to education and electricity, improving child and maternal health, and increasing financial inclusion. However, there are challenges in environmental preservation, gender equality, urban sustainability, and hunger eradication. Bihar, Jharkhand, and Uttar Pradesh are still trailing behind, while Kerala, Himachal Pradesh, and Tamil Nadu are currently leading. According to the study's findings, India needs to implement more robust state-specific regulatory frameworks for environmental protections, and inclusive growth plans in order to achieve the 2030 targets.

Keywords: Sustainable development goals (SDGS), poverty, education, Niti Aayog, 2030 agenda, inclusive growth, universal access

Introduction
The UNDP (United Nations Development Program) defines sustainable development as "progress that satisfies the requirements of the present without compromising the ability of future generations to meet their needs" (UNDP, 2015). The UN established the 2030 Agenda for Sustainable Development in 2015, with 169 goals and 17 Sustainable Development Goals (SDGs). It is a global initiative that focuses on reducing poverty, protecting the environment, and ensuring prosperity for all. India, our nation of vast size and diversity, has significant socioeconomic and environmental differences but possesses great opportunities to integrate inclusive growth with sustainable development. Since the Sustainable Development Goals were adopted a decade ago in 2015, this is a crucial time to assess India's achievements from the beginning in 2015 to the midpoint in 2025. India has made significant progress in reducing the major challenges of poverty, hunger, improving digital and financial inclusion, and improving access to healthcare facilities, ensures universal access to education, and marks the development of infrastructure over the course of this period. However, challenges like gender equality, urbanization, conservation of the environment, and the eradication of hunger remain unresolved. This paper undertakes a comparative and analytical study of India's SDG progress between 2015 and 2025, examining achievements, challenges, and inter-state variations. It also identifies government policies and flagship schemes that have shaped outcomes and proposes forward-looking strategies for the final five years leading up to 2030. (World Bank, 2023; NFHS-5, 2021) [4, 13].

2. Research Methodology
This study relies entirely on secondary data sources, adopting a descriptive and analytical research design. The major source is the Sustainable Development Report 2025 (SDSN, 2025), which provides India's country profile and progress indicators across all 17 SDGs. Complementary state-level data is drawn from the NITI Aayog SDG India Index Reports (2018-2023). Additional sources include the National Family Health Survey (NFHS-5), the Periodic Labour Force Survey, the Economic Survey of India, and reports from the Ministries of Health, Education, Environment, and Women and Child Development. International comparisons rely on UNDP, World Bank, and UNDESA datasets [13].

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3. Objectives of the Study

- To compare the performance of India in terms of the SDGs from 2015 to 2025.
- To evaluate India's achievements and challenges in each of the 17 SDGs, with particular focus on the progress made during the period of ten years of implementation.
- To suggest strategies and recommendations in order to accelerate the progress of India towards SDGs during the remaining five years.

4. Literature Review

Debnath (2025) [1] conducted research on the progress of the Sustainable Development Goals in Indian states. The results indicate that the northern and eastern states that were poor couldn't keep up with the southern and western states that were moving faster in achieving goals. The study underscored the significance of the different government policies to reducing the regional gaps, emphasizing that disparities in governance, providing better infrastructure, and

strengthening institutional framework which are fundamental to their explanatory power.

Kumar and Anand (2022) [3] studied the journey of India toward the achievement of SDGs and their findings illustrate that India made a lot of progress in getting people access to energy and reducing poverty. Still, there are lags and not doing well in protecting the environment, achieving gender equality, or reducing hunger. The emphasis of their policies was placed on achieving the goal of balanced development, which necessitates increased support for states that are making slow progress through policy innovations and increased resource allocation.

Unni *et al.* (2025) [15] focused on how Indian states build capacities to achieve sustainable development. Their study showed that states with diversified economies, better education systems, and stronger health infrastructure are performing better. In contrast, states heavily dependent on traditional resource-based growth struggled to convert economic progress into social well-being, this policy tends to point to the importance of integrated policy frameworks.
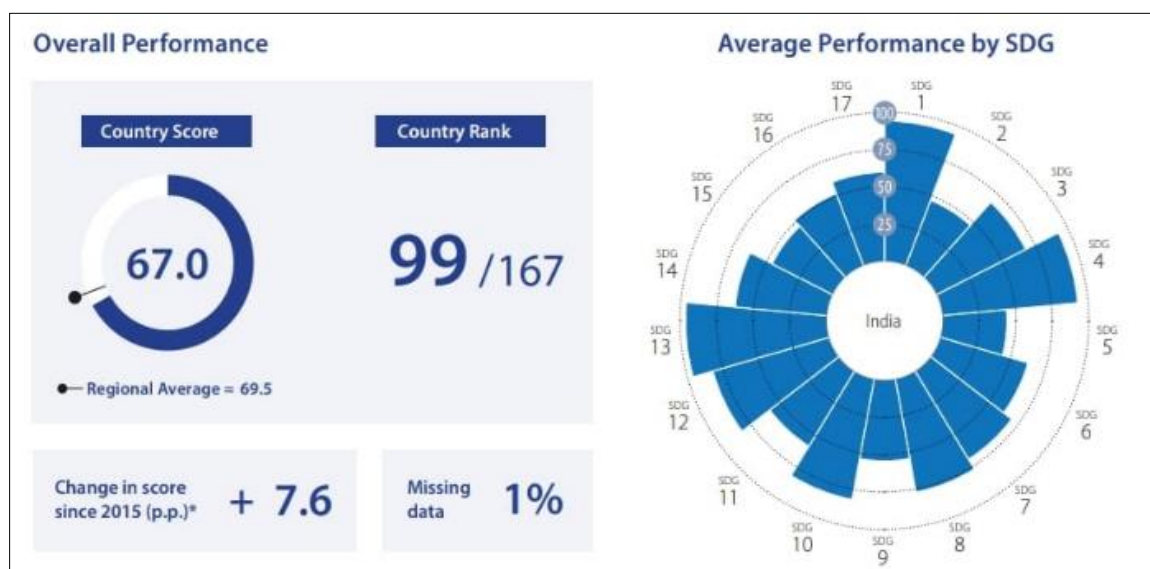

Fig 1: Performance of India, Average performance by SDG. (Source: Sustainable development report, 2025)

5. Findings of the Study: The findings indicate that India has achieved notable progress on several Sustainable Development Goals during the period 2015 to 2025. Nevertheless, the extent of progress has varied across different goals and regions, with some areas recording substantial improvements while others continue to demonstrate persistent challenges. To provide a comprehensive understanding, the analysis considers each goal separately, highlighting national achievements, existing gaps, and inter-state variations over the decade.

5. 1SDG 1-No Poverty: In 2015, when the Sustainable Development Goals were launched, India's poverty headcount ratio at the international poverty line of $2.15 per day was nearly 12%, with states such as Bihar, Jharkhand, and Uttar Pradesh reporting very high poverty rates. But around 2018-2020, schemes like the Pradhan Mantri Jan Dhan Yojana (PMJDY), the National Food Security Act (NFSA), and the expansion of MGNREGA had begun to show the positive impacts like reduction of overall poverty and greater access to financial inclusion especially in rural areas. In 2025, the SDR report highlights that India has reduced poverty drastically, with extreme poverty falling to 1.1% nationally (World Bank, 2023) [13]. Kerala, Himachal

Pradesh, and Tamil Nadu are the best performers due to strong social welfare systems and generating employment opportunities, while Bihar and Jharkhand still lag because of weak industrial bases and still a lot of people are dependent on agriculture, having low productivity causing agrarian distress. DBT largely contributes to the success of achieving this goal, PM-KISAN income support for farmers, housing schemes (PM Awas Yojana), and social pensions schemes, which have helped vulnerable households.

5.2 SDG 2 - Zero Hunger: In 2015, India faced a serious food and nutrition challenge, with undernourishment affecting nearly 15% of the population, and child stunting and wasting levels standing at 38% and 20%, respectively (NFHS-5, 2021) [4]. But several, flagship programs such as the Integrated Child Development Scheme (ICDS), the Mid-Day Meal Scheme, and the launch of Poshan Abhiyaan (2018) [16] proves to be successful in improving child and maternal nutrition. However, this progress was uneven across India; while states like Kerala, Punjab, and Tamil Nadu saw nutritional improvements due to stronger health infrastructure systems and efficient Public Distribution Systems (PDS), whereas some states like Bihar, Madhya Pradesh, and Uttar Pradesh continued to struggle with high

child malnutrition. In 2025, the SDR data shows only moderate improvement in undernourishment is 13.7%, stunting 35.5%, and wasting 18.7%. The persistence of hunger is directly related to poverty, unequal income distribution which causes weak maternal care.

Also, several challenges in PDS cause hindrances in achieving this goal. Yet there are many government schemes such as One Nation One Ration Card, food fortification initiatives, and targeted nutrition programs for women and children are helping India slowly move toward its hunger reduction targets.

5.3 SDG 3-Good Health and Well-Being
India's health indicators in 2015 reflected major public health challenges, with the maternal mortality ratio (MMR) at 167 per 100,000 live births, under-five mortality at 47 per 1,000, and life expectancy at 67 years. But the introduction of Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (2018) [16] marked a turning point, expanding health insurance to millions of poor households. Other interventions such as the National Health Mission, Janani Suraksha Yojana, and intensified immunization drives proved to be successful in improving maternal and child health. By 2025, the SDR highlights strong gains like MMR (Maternal mortality Rate) has dropped to 80.5, neonatal mortality is 17.3, under-five mortality is 27.7, and life expectancy has improved to 72 years. States such as Kerala and Tamil Nadu lead due to good primary health systems and community-level care, whereas some states with high population like Uttar Pradesh, Madhya Pradesh, and Bihar are lagging because of weak health infrastructure, as the available infrastructure is not sufficient to provide facilities to that much large population of these states and also insufficient doctor-patient ratios adding salt to the wounds. Government strategies like Janani Shishu Suraksha Karyakram, scaling of telemedicine, and expansion of medical colleges in underserved states are now seen as a step in the right direction.

5.4 SDG 4 - Quality Education
In 2015, India had already achieved near-universal primary school enrolment, but challenges persisted in retention of students in schools, secondary completion, and quality of learning outcomes. States like Kerala and Himachal Pradesh were ahead in literacy and enrolment of students, while states like Bihar and Uttar Pradesh lagged behind due to several reasons. To improve the enrolment rate and the literacy rate the government launched reforms under the Samagra Shiksha Abhiyan (2018) [16] and emphasising on quality through learning outcomes and infrastructure. The adoption of the National Education Policy (NEP) 2020 [17] marked a turning point by expanding access to early childhood care, vocational education, and digital learning. In 2025, India's net primary enrolment stands at 99.9%, youth literacy at 97%, and secondary completion at 85.5%. However, Kerala continues to excel due to high public spending on education and community participation, while Bihar and Jharkhand report high dropout rates and infrastructure gaps in education. The expansion of ICT under Digital India and free textbook/scholarship schemes have played crucial roles in ensuring inclusivity.

5.4 SDG 5 - Gender Equality
In 2015, gender disparities were evident across different sectors and at different scales like in labor participation, education, and political representation, with female labor force participation at just 32% nationally. Several initiatives are taken by GoI to improve the female labour participation

such as Beti Bachao, Beti Padhao (2015), reservation for women in local governance, and gender-sensitive financial schemes began to improve outcomes. By 2025, India has made a female-to-male labor force participation ratio 42.6%, family planning coverage stands at 77.5%, yet only 13.8% of parliamentary seats are held by women. States such as Kerala and Sikkim show higher women participation in education and employment, while states like Rajasthan, Bihar, and Uttar Pradesh continue to face cultural and structural barriers. Initiatives like PM Ujjwala Yojana, ensuring access to clean cooking fuels, and Stand-Up India, providing credit to women entrepreneurs, proves to be very beneficial in increasing the role and importance of women in several sectors.

5.5 SDG 6-Clean Water and Sanitation
In 2015, India faced a severe sanitation crisis, with less than 40% of households having access to toilets, and rural open defecation was a major challenge. The Swachh Bharat Mission (SBM) had transformed the sanitation scenario of India leading to a sharp decline in open defecation. The Jal Jeevan Mission (2019) further aimed to provide tap water to all households. By 2025, access to basic drinking water is 93.3%, and sanitation services 78.4%, though wastewater treatment remains at a low 19.2%. States like Goa, Haryana, and Kerala lead in water access to urban and rural areas, while states such as Odisha, Jharkhand, and Bihar still face challenges due to groundwater stress and weak infrastructure. The major success factors include SBM's behavioral change campaigns, infrastructure investments, and piped water schemes, though rising water scarcity highlights the need for sustainable groundwater management.

5.6 SDG 7-Affordable and Clean Energy
In 2015, nearly 300 million Indians lacked access to electricity, and rural households relied heavily on biomass for cooking. By the midway period, flagship initiatives like Saubhagya Yojana (2017) [18] ensured near-universal household electrification, and the Ujjwala Yojana expanded LPG coverage. By 2025, 99.2% of households have electricity, and 74.5% have access to clean cooking fuels. However, renewable energy's share in total consumption remains modest at 18%, and CO_2 emissions from electricity generation are still high. States such as Gujarat, Rajasthan, and Tamil Nadu are leading in solar and wind power adoption, while Bihar and Jharkhand remain dependent on coal-based electricity. India's international commitment under the International Solar Alliance (ISA) and domestic programs like PM-KUSUM (solar for farmers) have accelerated clean energy transitions.

5.7 SDG 8 - Decent Work and Economic Growth:
In 2015, India's GDP growth was robust, but unemployment and informal labor dominated the economy. By the midway stage, reforms such as the Make in India initiative (2014), Startup India (2016), and Skill India Mission promoted entrepreneurship and job creation. The pandemic (2020-2021) disrupted labor markets, but recovery measures helped stabilize growth. By 2025, unemployment stands at 4.2%, financial inclusion has expanded to 77.5% of adults with bank accounts, and GDP growth remains moderately strong. States like Maharashtra, Gujarat, and Karnataka lead in industrial growth, while Bihar and Uttar Pradesh struggle with low industrialization. Schemes like Atmanirbhar Bharat, Production-Linked Incentives (PLI), and strengthened labor codes have supported job creation, though informal sector vulnerabilities persist.

5.8 SDG 9 - Industry, Innovation and Infrastructure

In 2015, India's infrastructure deficits were stark, with poor rural connectivity, low internet penetration, and minimal R&D investment. By 2020, investments in highways, ports, and rural connectivity improved under Bharatmala, Sagarmala, and the Digital India program. By 2025, 99% of rural households have access to all-weather roads, and internet penetration has reached 55.9%. However, R&D spending remains at only 0.6% of GDP, and India publishes fewer research articles per capita compared to global peers. States like Karnataka and Maharashtra are innovation leaders due to strong IT clusters and higher education ecosystems, while poorer states lag in patents and infrastructure. Policies such as the Startup India Seed Fund, National Infrastructure Pipeline, and Gati Shakti Master Plan aim to accelerate industrial and innovation growth.

5.9 SDG 10 - Reduced Inequalities

In 2015, India's inequality remained high, reflected in income gaps between urban and rural populations as well as among states. The Gini coefficient hovered around 35, and marginalized groups faced limited access to education, jobs, and healthcare. By the halfway stage around 2019-2020, government programs such as Pradhan Mantri Jan Dhan Yojana for financial inclusion, reservation policies for OBCs, SCs, and STs, and the EWS quota in education and jobs (2019) began narrowing some gaps. By 2025, India's Gini index has improved to 32.8, showing reduced inequality, while the Palma ratio stands at 1.3, reflecting a fairer income distribution. States like Kerala and Himachal Pradesh perform better due to robust welfare systems, while Bihar and Uttar Pradesh struggle because of weaker institutional capacity and wide rural-urban divides. Initiatives like Skill India, Stand-Up India, and Aadhaar-enabled direct transfers have helped reduce financial and social inequality, though structural barriers remain.

5.10 SDG 11-Sustainable Cities and Communities

In 2015, India's cities faced overcrowding, poor sanitation, and inadequate housing, with over 50 million people living in slums. By 2018-2020, initiatives like the Smart Cities Mission (2015) and Pradhan Mantri Awas Yojana - Urban (2015) started improving housing and urban infrastructure. In 2025, 41.4% of the urban population still lives in slums, and air pollution levels (PM2.5) remain critically high at 47.3 μg/m³. States like Maharashtra, Delhi, and Uttar Pradesh continue to struggle with rapid urbanization pressures, while cities in Kerala and Tamil Nadu perform relatively better on housing and transport access. Programs such as AMRUT, Metro expansions, and electric bus projects are slowly making Indian cities more sustainable, but affordable housing, clean air, and public transport coverage remain pressing concerns.

5.11 SDG12-Responsible Consumption and Production:

In 2015, India's waste management and sustainable consumption practices were at a nascent stage, with rising municipal solid waste and electronic waste, but limited collection infrastructure. By 2018-2020, campaigns like Swachh Bharat, Plastic Waste Management Rules (2016, amended 2021), and promotion of circular economy principles began to shape awareness. In 2025, India produces around 0.4 kg of municipal solid waste per person daily and 2.9 kg of electronic waste per capita annually. While states like Kerala and Sikkim lead in waste segregation and plastic bans, others continue to grapple with landfill overflows and inadequate recycling. National initiatives promoting

Extended Producer Responsibility (EPR), energy efficiency through Perform, Achieve and Trade (PAT) scheme, and industrial waste management are essential to aligning India's growth with sustainable consumption.

5.12 SDG 13-Climate Action

India was experiencing a rise in carbon emissions due to coal dependence of all the major industries, though its per capita CO_2 emissions were lower than the global average. India's commitment to renewable energy and emission reduction in the Paris Agreement lead to a shift in policy outlook of India. Several government policies like the National Action Plan on Climate Change, National Electric Mobility Mission, and rapid solar adoption will lead India on a green path. By 2025, India's per capita CO_2 emissions are 2.2 tonnes, still relatively low, but growing due to industrial and transport sector expansion. States like Gujarat, Rajasthan, and Tamil Nadu are leaders in renewable energy, while states such as Jharkhand and Chhattisgarh struggle with emission control due to heavy dependency on coal industries. Other Schemes like the International Solar Alliance, PM-KUSUM, and National Electric Bus Mission are fostering and prove to be helpful in integrating India's balanced growth with sustainability.

5.13 SDG 14 - Life below Water:

In 2015, India's marine resources were under pressure from overfishing, pollution, and limited marine protected areas. By 2018-2020, efforts like the Blue Revolution scheme and adoption of Coastal Regulation Zone guidelines attempted to address marine ecosystem pressures. By 2025, marine biodiversity protection remains limited, with only 4.2% of key marine sites protected, and the Ocean Health Index score is low at 32.3. States like Kerala and Tamil Nadu, which depend heavily on fisheries, face challenges of overfishing and coastal degradation. Programs promoting sustainable fishing practices, community-based conservation, and marine plastic clean-up are critical for India's coastal states to achieve SDG 14 targets.

5.14 SDG 15 - Life on Land:

In 2015, India's biodiversity was at risk from deforestation, poaching, and land degradation, though forest cover was increasing due to afforestation drives. By 2018-2020, large-scale campaigns like Green India Mission and Compensatory Afforestation Fund Management (CAMPA) boosted forest plantations. By 2025, 6.3% of terrestrial and 8.3% of freshwater biodiversity areas are protected, and permanent deforestation has fallen to 0%. However, species survival remains a concern, with the Red List Index at 0.67, reflecting continuing threats. States like Madhya Pradesh and Uttarakhand lead in protected forest areas, while northeastern states face challenges from shifting cultivation and illegal logging. Government interventions such as Project Tiger, National Mission on Himalayan Ecosystem, and community-based afforestation have helped, but stronger monitoring is needed.

## 5.15 SDG 16 - Peace, Justice and Strong Institutions

In 2015, India's justice delivery system faced delays, undertrial cases, and governance concerns. By the midway stage, digital court initiatives and anti-corruption reforms made modest improvements. In 2025, challenges persist: 75.8% of the prison population consists of undertrials, and the Corruption Perception Index score is 38/100. However, progress is visible in areas such as improved crime control perception (0.79 on a 0-1 scale) and high birth registration (89%). States with better law enforcement and governance

such as Kerala and Himachal Pradesh perform better, while Uttar Pradesh and Bihar face higher crime and judicial delays. Reforms such as Digital India in judiciary, fast-track courts, and anti-corruption measures are essential to improve institutional trust.

5.16 SDG 17- Partnerships for the Goals
In 2015, India's global partnerships focused on South-South cooperation and development aid to neighboring countries. UNDESA, 2022; Sachs *et al*., 2023) [6, 7]. By 2020, India expanded its role through initiatives like the International Solar Alliance and active participation in the UN. By 2025, government spending on health and education is 5.4% of GDP, and India's support to multilateralism is rated at 63.8/100. States like Maharashtra and Karnataka, with global investment links, contribute significantly to partnerships in technology and trade. Nationally, schemes promoting foreign collaborations in higher education, infrastructure financing, and corporate social responsibility (CSR) have strengthened India's global role. Achieving SDG 17 requires India to further expand financial resources, enhance statistical systems, and deepen state-level international partnerships.
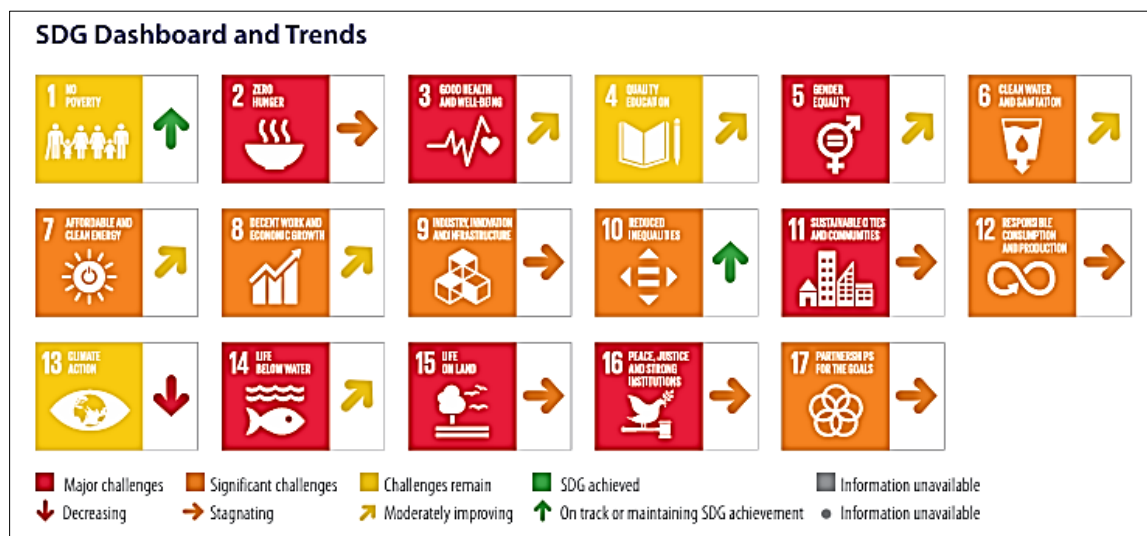
***Source*:** SDG REPORT, 2025

Fig 2: SDG Dashboard and trends

6. Conclusion and Recommendations
The comparative analysis of India's Sustainable Development Goals performance from 2015 to 2025 reveals a decade of remarkable gains alongside deep-rooted challenges. The most significant achievements include the steep decline in extreme poverty, near-universal access to electricity and primary education, improvements in maternal and child health, and the expansion of digital and financial inclusion. These advancements are possible with effective implementations of Government schemes such as MGNREGA, Swachh Bharat Mission, Ayushman Bharat, PM Ujjwala Yojana, Jal Jeevan Mission, and the National Education Policy. Despite these improvements, India still has a long way to go to eradicate issues like hunger, attain gender equality, and make cities more sustainable and environmentally friendly. Global issues are shown by instances like child hunger, pollution in the air and water, loss of biodiversity, and disparities in opportunity between states. The findings indicate that development in India is uneven. States like Kerala, Himachal Pradesh, and Tamil Nadu are top achievers, whereas states like Bihar, Jharkhand, and Uttar Pradesh are lagging behind. India's progress could be uneven and incomplete without specific state-level efforts

India has to implement multifaceted strategies to achieve the goals by 2030. Initially, it is essential to boost the efforts made to address hunger and nutrition.

Poshan Abhiyaan, that assures universal PDS coverage and encourages sustainable agriculture and fortified foods. Secondly, gender empowerment must move forward from social campaigns to structural reforms, which aims to improve women's access to several opportunities like political representation, and workforce participation etc.

Third, the core of development should be environmental sustainability, which can be achieved by expanding renewable energy, enforcing air quality regulations, safeguarding forests and biodiversity, and urging circular economy practices.

Fourth, there is a need to invest in affordable housing, public transportation facilities, and effective waste management to solve the waste disposal and cleanliness issues in cities. Lastly, to mitigate different disparities among the states, it is necessary to enhance fiscal devolution and statewide collaborations. States that are behind in these areas must implement some unique programs for infrastructure, education, and health. India's progress to attain the SDGs by 2030 will rely on both central initiatives and the state efforts to innovate, collaborate, and execute policies customized to their own developmental circumstances.

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