

Karnataka's Journey Towards Agenda 2030: Evaluating Performance Across 10 Sustainable Development Goals

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Abstract

Karnataka has made significant progress towards achieving the Sustainable Development Goals (SDGs) by 2030, as evidenced by its score of 75 out of 100 in National Institute for Transforming India (NITI) Aayog's Sustainable Development Goals (SDGs) India Index for the fiscal year 2023-24. However, the state continues to face challenges in areas such as gender equality, resource control, and environmental sustainability. This paper reviews Karnataka's performance across 10 SDGs, highlighting achievements and gaps. Notable advancements include the use of technology and financial inclusion, whereas key issues remain in poverty alleviation, education, and infrastructure development. The state has implemented various schemes and programs to address these challenges, such as the 'Anna Bhagya' scheme for food security, 'Sarva Siksha Abhiyan' for education, and 'Jal Jeevan Mission' for safe drinking water. Despite this progress, Karnataka needs to focus on improving health worker density, mental health support, and road safety. Gender disparities persist in areas such as spousal violence, women's participation in decision-making, and access to economic resources. To achieve sustainable development, Karnataka must prioritize inclusive and equitable reforms across multiple sectors, ensuring no community is left behind. By addressing these challenges through targeted interventions and policy changes, Karnataka can pave the way for a sustainable future for all its citizens.

Keywords: NITI Aayog, Sustainable Development Goals, Agenda 2030, United Nations, Environmental Stewardship

1. Introduction

The idea of sustainable development gained prominence at the UN Conference on Environment and Development, aiming to promote growth that meets current needs without compromising the ability of future generations to fulfill their own requirements (Kaufmann, 2001). This concept is further emphasized by the Brundtland Commission, which stresses the importance of safeguarding the interests of upcoming generations when determining what the present generation should leave behind - a more favorable environmental legacy. To accomplish this goal, strategies have been implemented that combine the preservation of natural capital with the maintenance of the regenerative capacity of ecological systems, without imposing increased burdens or risks on future generations. Striking a balance between

environmental and economic considerations is not only essential but also critical for long-term sustainability. The unchecked pursuit of economic growth without consideration of its ecological ramifications has imperilled the environmental foundations crucial for the survival of all species (Redclift, 1989). Therefore, sustainable development has emerged as a potent strategy for securing a comparable standard of living for upcoming generations. This approach strives to achieve a delicate equilibrium between economic advancement and environmental stewardship, ensuring that present-day actions do not undermine prospects for future populations (Kumar et al., 2024). Such a paradigm shift necessitates reimagining environmental protection as an integral component of economic progress rather than a barrier. By implementing sustainable practices, we can cultivate a more adaptable and equitable global society that meets the requirements of both current and future generations without depleting our planet's resources (Spiker et al., 2020).

India, an emerging economy, has implemented several co-benefit strategies to achieve sustainable development, including Leadership in Energy and Environmental Design (LEED) certification of buildings, a green building certification program, and women's entrepreneurship and climate leadership at the local level (UN Report, 2023). National monitoring agencies were assigned to observe the progress of the SDGs, including the National Institution for Transforming India (NITI Ayog), the Ministry of External Affairs (MEA), and the Ministry of Statistics and Program Implementation (MoSPI). The SDGs have made substantial progress in several areas, including reducing poverty, establishing suitable workspaces, promoting economic growth, using sustainable and renewable energy to solve climate crises, and conserving terrestrial ecosystems. These effects have been realized through initiatives such as the Pradhan Mantri Awas Yojana, Ujjwala Yojana, Swachh Bharath Abhiyaan, Jan –Dhan Yojana, Ayushman Bharath Scheme, and Prime Minister Mudra Yojana (SDG India 2023-24 Index). India's progress has notched, with a score of 75 for the academic year 2023–24, indicating healthy growth with notable progress. In addition, many states and union territories are doing well above average compared to other states and union territories.

Karnataka's pioneering state must achieve sustainable development objectives by 2030. Karnataka scored 75 out of 100 in NITI Aayog's Sustainable Development Goals (SDG) India Index for fiscal year 2023-24 (Table 1), ranking fifth among all states and UTs (SDG India 2023-24 Index). The great ranking states that proactive government interventions are imperative to support human capital development and environmental policies that are ecologically friendly to create a balanced economy.

2. Material and Methods

The secondary data were mobilized from available materials, such as research articles, review papers, the annual index report of NITI Aayog (2019-20 and 2023-24), and other resources available on the Internet for better comparison. The title, keywords, and other key terms such as sustainability, sustainable development, sustainable development goals, NITI Ayog, and United Nations were used to identify the materials. The data were extracted from research papers and other sources. Microsoft Excel was used to graphically represent the data. More details from the literature review were mobilized, interlinked, and Grammarly verified to make them simple, precise, and understandable. Finally, this paper summarizes the key issues of Karnataka state and presents the results of this study. This study explores progress and roadblocks to attain the first ten sustainable development goals and 78 indicators by considering the Karnataka state as a sampling frame. Secondary data were mobilized from the annual index reports of NITI Aayog (2019-20 and 2023-24), MoSPI, Ministry of Ayush, Newspapers (The Hindu and Times of

India), Sustainable Development Report (Special Edition 2023), and Karnataka state government websites to examine the schemes and programs implemented to attain sustainable development goals.

3. Results and Discussions

Table 1: SDG Index Score of Karnataka State (2019-20 and 2023-24)

Sustainable Development Goals	Score (out of 100)		Changes
	2019-20	2023-24	
SDG 1: No Poverty	49	73	24
SDG 2: Zero Hunger	37	56	19
SDG 3: Good Health and Well-being	72	80	8
SDG 4: Quality Education	67	63	-4
SDG 5: Gender Inequality	42	51	9
SDG 6: Clean Water and Sanitation	88	90	2
SDG 7: Affordable and Clean Energy	86	100	14
SDG 8: Decent Work and Economic Growth	78	86	8
SDG 9: Industry, Innovation and Infrastructure	40	62	22
SDG 10: Reduced Inequalities	70	69	-1
Karnataka (Overall) (Considering 17 SDG)	66	75	9

Source: SDG Index 2019-20; 2023-24

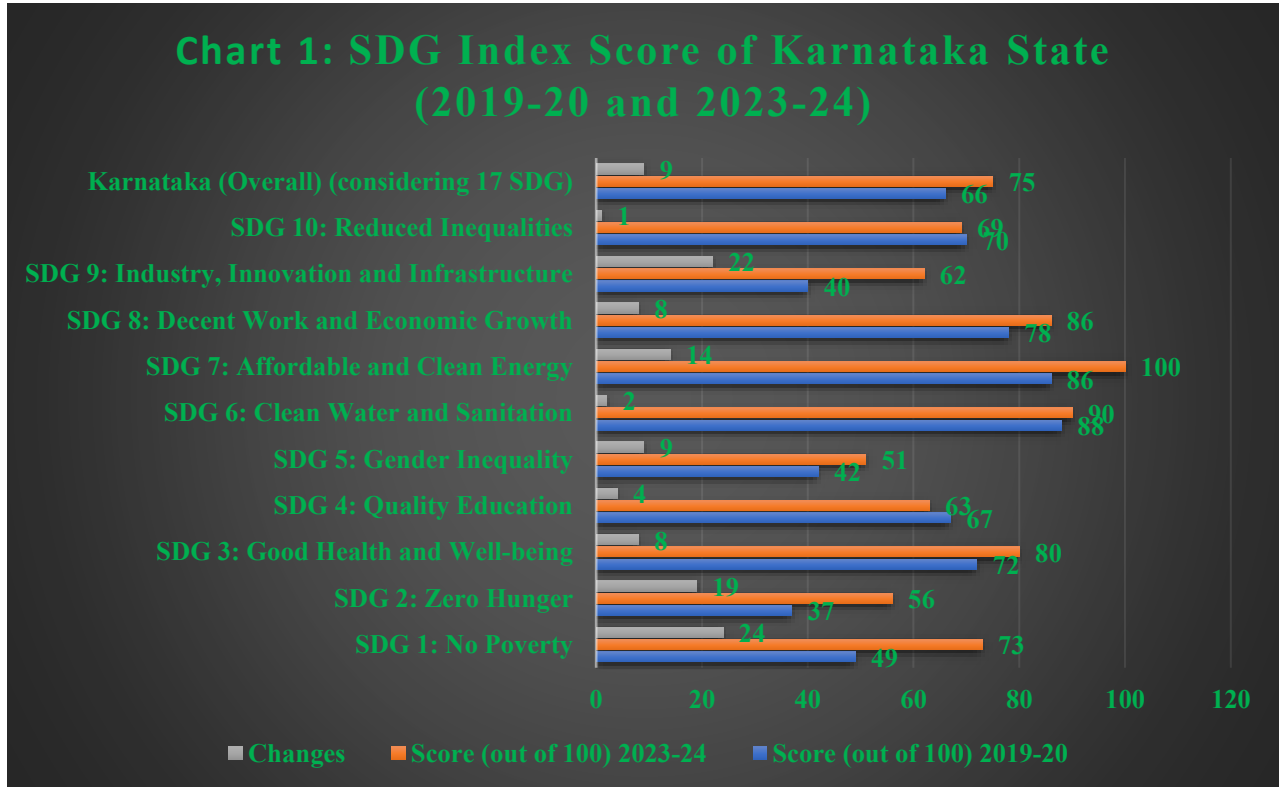


Table 2: SDG 1 Index Score of Karnataka State

SDG 1: No Poverty			
Performance by indicators	2019-20	2023-24	TARGET

NPL/ MPI Headcount Ratio (%)	20.91	7.58	12.425
Households covered by health scheme/insurance (%)	28.1	31.8	100
Persons offered employment under MGNREGA	85.53	97.40	100
Beneficiaries under PMMVY (%)	19.9	46.08	100
Households living in kaccha houses (rural + urban) (%)	2	2.6	0

Source: [SDG Index 2019-20; 2023-24](#)

The measurement tool for poverty has shifted from the national poverty line to the multidimensional poverty index, which covers diverse factors such as health, education, and access to basic infrastructure. Karnataka must execute different schemes to achieve its MPI India target of 12% by 2030. ‘Anna Bhagya’ is a distinct program that provides food for marginalized communities ([Guarantee Schemes](#)). Households covered by health insurance schemes were slightly improved but needed to meet the national target of 100% by the end of 2030, with an average increase of 10% each year. To achieve this, Karnataka had to transform its existing policy framework to include a large pool of individuals under insurance. Employment provided under MGNREGA increased by 11.87%. The MGNREGA program is a social security tool for marginalized populations. The PMMVY has drastically improved but lags behind the target of 100% by 2030. To reach the predefined target, the state needs to focus on a maximum outreach program for the maximum accessibility and visibility of the scheme. The target for 2030 for households living in Kaccha houses is zero; however, in the state, this has increased by 0.6%, which is a serious concern. Increasing financial assistance under ‘Basava Vasati Yojana’, ‘Pradhan Mantri Awas Yojana’, ‘Ambedkar Nivas Yojana’, and ‘Devraj Urs Vasati Yojana’ could reduce the number of houses in Kaccha. It can provide marginalized communities with equal rights to access economic resources and other forms of property ownership.

Table 3: SDG 2 Index Score of Karnataka State

SDG 2: Zero Hunger			
Performance by indicators	2019-20	2023-24	TARGET
Rural households covered PDS	1.1	-	1.29
Percentage of beneficiaries covered under NFSA	-	100	100
Children under 5 years who are underweight (%)	32	32.9	13.3
Children under 5 years who are stunted (%)	32.5	35.4	23.7
Pregnant women (15–49 years) who are anemic (%)	45.4	45.7	25.2
Women (15–49 years) (Body Mass Index is below 18.5%)	-	17.2	7.76
Rice & Wheat produced per unit area (Kg/Ha)	1731	2867.66	5322.08
GVA in agriculture per worker (in Lakhs/worker)	0.54	0.94	1.22

Source: [SDG Index 2019-20; 2023-24](#)

Karnataka secured the 16th position and ranked under the ‘performer’ category, which recommends undertaking affirmative actions to eradicate hunger. The ‘Anna Bhagya’ scheme introduced by the state government is a progressive step. There was a modification in the measurement from the PDS to the NFSA by covering all persons belonging to the eligible population and considering adequate quantity and quality of food and nutritional security at affordable prices. Concerning underweight children, Karnataka State needs to focus on providing nutritious food for children at ‘Bal Vikas Kendra’s’ and ‘Anganavaadi’s’ to

achieve the global target of 2.2% and India's target of 13.3% by eliminating all forms of malnutrition. The target for the percentage of stunted children is 23.7% at the national level, but there is serious concern because of the 2.9% increase in the percentage compared with the base year. This can be reduced by establishing a large number of health centers. The reduction in anemia in women of reproductive age was set at 25.2% according to the Global Nutrition Targets 2025. Karnataka needs to focus on the abatement of anemia in women. Progressive growth in the annual production of rice and wheat crops per unit area increased by 1136.66 kg/hectare. The national target is 5322.08 kg per hectare. Karnataka needs to concentrate on agricultural land formulation and create awareness among small-scale farmers regarding multi-farming ([KSDA](#)). Gross Value Added in Agriculture has increased by 0.40 lakh per worker but the state stands behind the national target ₹1.22 lakh per worker. The focus must be on increasing agricultural productivity and incomes of small-scale farmers by adopting policy-based suggestions from experts and agricultural producers.

Table 4: SDG 3 Index Score of Karnataka State

SDG 3: Good Health and Well-being			
Performance by indicators	2019-20	2023-24	TARGET
Maternal Mortality Ratio (per 100,000 live births)	97	69	70
Under 5 Mortality Rate (per 1,000 live births)	32	21	25
Children (9–11 months) fully immunized (%)	61.7	98.44	100
Tuberculosis case notification against a target in percentage	125	80.42	100
HIV incidence per 1,000 uninfected population	0.08	0.05	0
Life expectancy (years)	-	69.8	73.63
Suicide rate (per 100,000 population)	-	20.2	3.5
Death rate due to road traffic accidents (per 100,000 population)	-	17.36	5.81
Institutional deliveries out of the total deliveries reported (%)	59.2	99.98	100
Health worker Density (Total physicians, nurses, and midwives per 10,000 population)	72	86.67	44.5

Source: [SDG Index 2019-20; 2023-24](#)

State stands in 5th position in the overall state ranking. This is outstanding in terms of achieving a global maternal mortality ratio and highlighting the quality of the implemented health system. The target is to reduce neonatal mortality by 12 per 1,000 live births and 25 with respect to under-five mortality. The state has achieved a 21-under-five mortality rate by 2024. By the end of 2030, the target is set to eliminate epidemics of AIDS, TB, and other communicable diseases which can be controlled by adopting recommendations for health and wellness guidelines issued by the Ministry of Ayush that focus on do's and don'ts in respect of food, sleep & rest, Exercise, daily routines, seasonal eating, etc. ([Prakriti & Tridosha, 2016](#)) Karnataka is required to support research and development of vaccines and medicines for infectious and chronic diseases. The state needs to facilitate proper treatment and preventive measures by covering financial risk protection and access to quality health care facilities. The 'Yashawini' scheme is a major milestone for members of cooperative societies. The government can implement the same measures as the general public can. There is an urge to increase life expectancy by 73.63 by the end of 2030 from the present level of 69.8. The state must improve its performance by providing better health, education, environmental sustainability, work satisfaction and other services. The suicide rate stands at 20.2 per

100,000 people, but needs to be reduced to 3.5, the state of which is lagging. To reduce suicide rates, the state can change laws, such as the decriminalization of suicide, setting up toll-free mental healthcare helplines, compensating suicide victims, and enacting suicide control and prevention policies at the state level. Concerning deaths due to road accidents, Karnataka must enforce stringent safety laws by creating awareness through education to achieve a target of 5.81 by 2030. The Mukhyamathri Santwana- Harish scheme (MSHS) is a successful strategy for providing emergency medical services and financial assistance to road accident victims. Institutional deliveries were reported and health worker density improved during the high phase.

Table 5: SDG 4 Index Score of Karnataka State

SDG 4: Quality Education			
Performance by indicators	2019-20	2023-24	TARGET
ANER in elementary education (class 1–8) (%)	85.54	100	100
Average annual dropout rate at secondary level (class 9–10)	26.18	14.7	7.67
Class 8 students achieving minimum proficiency level in language and maths (%)	-	76	100
GER in higher secondary (class 11–12) (%)	-	56.6	100
GER in higher education (18–23 years)	28.8	36.2	50
Persons with disability (>15 years) having completed secondary education (%)	-	20.9	100
GPI for higher education (18–23 years)	1.04	1.01	1
Persons (>15 years) who are literate (%)	-	77.8	100
Schools with access to electricity and drinking water (%)	-	98.86	100
Schools with computers (%)	-	56.4	100
Trained teacher in elementary, secondary (%)	99.66	-	100
Trained teachers at secondary level (class 9–10) (%)	-	82.9	100
Pupil-teacher ratio ≤ 30	76.05	-	100
Pupil-teacher ratio at secondary level (class 9–10)	-	18	30

Source: [SDG Index 2019-20; 2023-24](#)

Karnataka stands in 10th position by providing quality education to its citizens. Adjusted net enrolment rate in elementary education for 1st to 8th class students, a remarkable milestone achieved by implementing “Sarva Siksha Abhiyan, Mid-Day Meal, Rashtriya Madhyamik Shiksha Abhiyan, National Program for the education of girls at Elementary level” and other initiatives ([DSE](#)). The average annual drop-out at secondary school level is substantially reduced by implementing programs like, ‘inclusive education for all categorical students, ‘infrastructure development,’ and ‘enhanced scholarship programs’ to achieve the target at the national level. To achieve a minimum proficiency level in language and mathematics, there is a need for skill enhancement programs and mental ability and reasoning classes for students in the 8th class. This can be achieved by appointing qualified teachers to build their self-confidence. Gross enrolment in higher secondary or pre-university level, Karnataka needs to focus on different strategies to increase the ratio and achieve the desirable target by setting up more institutions in rural and semi-urban areas. Concerning the gross enrolment ratio in higher education, which covers undergraduate, postgraduate, and technical education, the state needs to focus on different policy and program-based implementations. This

can be achieved by mobilizing resources and finances for colleges and universities to outline outcome-based educational models that concentrate on job creation and placement. This growing trend has been observed in the gender parity index, which indicates women's empowerment. The percentage of persons who have literate for over 15 years is 77.8%, which is desirable, and to achieve the target of 100%, Karnataka needs to focus on identifying lacunas in the present education system. Providing basic facilities such as drinking water accessibility, the state needs to go for an additional 1.14% to achieve the target. As observed earlier, schools need to be equipped with modern classroom facilities such as computers, smart boards, and projectors, which will boost the learning capabilities of students through outcome-based education model implementation. Regarding the percentage of trained teachers at elementary and secondary school levels, governments must collaborate with industries to provide training facilities for teachers and constitute special training cells under the government. The pupil–teacher ratio was 18, indicating an optimal and healthy learning environment for students and teachers to engage actively.

Table 6: SDG 5 Index Score of Karnataka State

SDG 5: Gender Equality			
Performance by indicators	2019-20	2023-24	TARGET
Sex ratio at birth	929	978	950
Average wage/salary received (Female to male)	0.7	0.76	1
Married women (18–49 years) having experienced spousal violence (physical/sexual) (%)	24.4	44.40	0
Female to male LFPR (15–59 years)	-	0.53	1
Women in managerial positions in listed companies (per 1,000 persons)	-	216.20	245
Demand for family planning satisfied by modern methods (15–49 years)	-	90.70	100
Female-operated operational land holdings (%)	1.197	20.07	50
Women (15–49 years) who own a mobile phone that they use (%)	-	61.80	80.63
Married women (aged 15–49 years) who usually participate in three household decisions (%)	-	82.70	100
Seats won by women in State Legislative Assembly (%)	3.14	-	50
Sexual crime against girl children	62.06	-	0

Source: [SDG Index 2019-20; 2023-24](#)

Karnataka is listed under the ‘Performer’ category for maintaining gender equality. The Sex ratio at birth is rapidly increasing in comparison with the base year, and the state has been successful in the number of girls born per 1000 boys by implementing distinct programs such as the prevention of feticide and awareness campaigns. The average salary from females to males increased by 0.06 for five years which is a serious issue. This can be reduced by creating fair access to employment opportunities, equitable remuneration for equal positions, and by considering women in key positions. Spousal violence has increased rapidly by 20%, making it a serious concern. The government needs to implement stringent rules to mitigate these outbreaks of violence by empowering women by providing legal protection and counseling, creating awareness through education, and adopting a cultural value system. The female labor force participation rate is 0.53 and needs to achieve the target of 2030. In contrast to males, women's

representation in key managerial positions in listed companies is very low. Governments must ensure effective opportunities for participation in political, social, and public life through leadership and decision-making platforms. Family planning through modern methods achieved 90.70%, which indicates the universal protection of the sexual and reproductive health conditions of women. At the national level, only 13.96% of the women are operational landowners. Karnataka needs to go through different policy-based reforms to achieve the target by ensuring justifiable rights for women to own economic resources and control land. Only half of the women aged 15-49 years, that is 54%) had access to mobile phones [NFHS-4](#)). Karnataka made considerable progress in enabling technology for different basic purposes, such as repayment of loans, money transfers, food payments, electricity bill payments, and phone recharge, by providing incentives to own ICT. Karnataka has the lowest percentage of women participating in three major decisions: health care for themselves, major household purchases, and visiting family or relatives. To achieve this target, the state should focus on providing women with the domestic freedom to make decisions. Women's participation in the Karnataka State Legislative Assembly was 4.5% as of 2019-20 out of the total strength of the assembly which is 6th lowest in the country, with only 10 MLAs, and the lowest among South Indian states ([The Hindu, 2023](#)). This could be achieved by implementing women's reservation bills at the state level ([Article 243D](#)). To prove political leadership, female representatives should have clarity, goals, and a clear political vision. Concerning sexual crime, the target zero is set by 2030 for the complete eradication of all types of violence against women. The Bharathiya Nyaya Samhitha (BNS) is a major tool for transforming the Indian legal system.

Table 7: SDG 6 Index Score of Karnataka State

SDG 6: Clean Water and Sanitation			
Performance by indicators	2019-20	2023-24	TARGET
Safe and adequate drinking water within premises through Piped Water Supply (PWS) (%)	-	75.79	100
Rural population with improved source of drinking water (%)	95.40	100	100
Individual household toilets constructed against target (%)	100	100	100
Districts verified to be ODF (%)	93.33	100	100
Schools with functional girls' toilets (%)	97.4	97.9	100
Stage of groundwater extraction (%)	-	66.26	70
Blocks/mandals/talukas over-exploited (%)	25.57	18.8	0
Percentage of industries complying with wastewater treatment as per CPCB norms	93.26	-	100

Source: [SDG Index 2019-20; 2023-24](#)

Karnataka stands at 9th position securing 90 marks in overall performance by indicators. Safe and adequate drinking water is a fundamental requirement for humans. Karnataka achieved 75.79% of piped water supply within the premises through Jal Jeevan Mission (JJM) as the 'Mane Manege Gange' scheme under which 52,38,677 household tap connections were provided, 18,653 water purification plants, 32 districts, and 48 taluk-level laboratories, as of 2024, approximately 50,12,815 individual household latrines and 1,852 community toilets were constructed, 31 districts were verified to be open defecation-free, and 7113, 39, and 121 villages are declared under the Aspiring, Raising, and Model categories, respectively ([RDWSD](#)). To provide adequate and equitable sanitation facilities for girls, the state implemented the

‘Swachh Vidyalaya’ and SBMG Initiative programs, but still needs to focus on providing disabled-friendly toilets. The CAG performance audit report revealed that 73% (52, 321) of the 71,830 schools lacked disabled-friendly toilets (TOI, 2024). Groundwater extraction was calculated by considering the existing gross groundwater extraction for all uses and annual extractable groundwater resources. Karnataka stands under the ‘safe’ category of groundwater extraction, but in the case of Bengaluru, it stood at very high risk. Over 18.8% of blocks/mandals/talukas were overexploited for groundwater (CGWB). According to the monthly progress report of August 2021, there are 3574 water-polluting industries under the effluent generation category and 55631 total industries under the green, orange, and red categories, in which 93.26% of industries comply with wastewater treatment standards.

Table 8: SDG 7 Index Score of Karnataka State

SDG 7: Affordable and Clean Energy			
Performance by indicators	2019-20	2023-24	TARGET
Households electrified (%)	100	100	100
Households using clean cooking fuel (LPG) (%)	81.4	-	100
LPG+PNG connections against no. of households (%)	-	116.39	100

Source: SDG Index 2019-20; 2023-24

Karnataka state has achieved remarkable achievements by electrifying 100% of households. ‘Gruha Jyothi,’ is one of the flagship programs implemented by the state government with 200 units of free electricity for households (Guarantee Schemes). Other schemes include the “Pradhan Mantri Surya Ghar Yojana, Nirantara Jyoti, and Bhagya Jyoti”. To empower farmers, the state initiated the ‘Karnataka Surya Raitha Yojana’ to provide reliable and affordable energy (MoNRE). The target for the second indicator was successfully achieved by providing liquid petroleum gas and piped natural gas connections at 116.39%, by ensuring global access to safe energy services. The state can focus on other renewable energy sources such as marine turbine technology in coastal regions, establishing thermal solar power plants, and advancing technological tools for generating kinetic energy sources.

Table 9: SDG 8 Index Score of Karnataka State

SDG 8: Decent Work and Economic Growth			
Performance by indicators	2019-20	2023-24	TARGET
Annual growth rate of GDP (constant prices) per capita (%)	8.90	7.43	7
Unemployment rate (%) (15–59 years)	4.80	2.6	2.9
Labour Force Participation Rate (%) (15–59 years)	51.60	62.9	66.9
Regular wage/salaried employees in the non-agriculture sector without social security benefits (%)	-	39.2	0
Households with usual member with a bank/post office account (%)	99.97	94.5	100
Functioning branches of commercial banks per 100,000 population	-	16.65	21.27
ATMs per 100,000 population	-	28.29	28.9
Proportion of women account holders under PMJDY (%)	55.00	56.56	50

Source: SDG Index 2019-20; 2023-24

Karnataka stands at 2nd position under SDG 8, followed by Himachal Pradesh. GDP per capita ensures sustainable growth by crossing the national target of 7%; however, it still needs to improve its economic productivity through technological advancement, research, and development in high-value and labor-intensive sectors. The unemployment rate has fallen from 4.80% to 2.6% from 2019-20 to 2023-24 as per the Periodic Labour Force Survey. The state needs to focus on economic reforms by implementing different economic policies for men and women, including for young people and persons with disabilities, such as reservations in private jobs, women's empowerment, and adopting advanced technologies to create job opportunities. In this regard 'Prerana' is a flagship program by the Department of Collegiate and Technical Education in which industry experts train the students to upskill their soft and communication skills (DCE). The LFPR increased by 11.30%. It can be further improved by identifying the barriers, adoption of workers and family friendly workplaces, and active participation of community partners in providing business solutions. Providing social security benefits is a fundamental duty of the government for every class of employees. The target zero can be achieved by effectively adopting state and union schemes such as "Ambedkar Karmika Sahaya Hasta, Ashadeepa Scheme, Accident and Education Benefit Scheme, Pradhan Mantri Shram Yogi Maandhan Yojana (PM-SYM), Aam Admi Beema Yojana", etc (MoLE). The negative growth of household members with banks or post-office accounts indicates that the state must create a platform for domestic financial institutions to expand banking, insurance, and economic services for every citizen. Pradhan Mantri Jan Dhan Yojana (PMJDY) can be effectively implemented. To improve the functioning of commercial banks, the government can strengthen the capabilities of domestic financial institutions by providing incentive programs to establish branches in remote and marginalized areas. Karnataka had the lowest ATMs (Goa 67/1,00,000 and Chandigarh 60/1,00,000). This indicates that Karnataka must improve its financial environment by increasing its number of ATMs in rural areas. The increase in the proportion of female account holders under PMJDY indicates that different reforms have been implemented to provide justifiable access to national resources and financial services.

Table 10: SDG 9 Index Score of Karnataka State

SDG 9: Industry, Innovation, and Infrastructure			
Performance by indicators	2019-20	2023-24	TARGET
Targeted habitations connected by all-weather roads under PMGSY (%)	0.00	100	100
GVA in Manufacturing to total GVA (current prices) (%)	-	13.06	25
Manufacturing employment as a percentage of total employment	12.29	10.36	19.66
GVA in Services to total GVA (current prices) (%)	-	65.41	63.26
Services employment as a percentage of total employment	-	32.34	52.98
Innovation score as per the India Innovation Index	-	18.01	100
Households that own at least one mobile phone (%)	-	92.8	100
Inhabited villages with 3G/4G mobile internet coverage (%)	-	96.86	100
Number of Internet subscribers per 100 population	10.32	-	100

Source: [SDG Index 2019-20; 2023-24](#)

Karnataka stands under the 'Performer' category, which indicates that the state needs to reform its existing capabilities to promote investment in industry, innovation, and resilient infrastructure. Road connectivity under Pradhan Mantri Gram Sadak Yojana was achieved by connecting the targeted habitats on all-weather

operational roads (NRIDA). Concerning gross value added in manufacturing, the state needs to take initiatives to increase the proportion of the manufacturing sector to the country's GDP. The target of 25 sets for 2025 can be achieved by adopting "Make in India, international connectivity, Skill Enhancement, promoting the MSME sector, incentives for exports, encouraging eco-friendly industry setup, etc. Karnataka has the highest percentage of gross value added in service, followed by Telangana. Bengaluru, located in the Silicon Valley of India, contributed the most. Innovation is the key to success, Karnataka ranked 2nd in India's Innovation Index 2021. Over 92.80% of households in Karnataka owned mobile phones. Increasing access to ICT through Digital India Initiative programs can boost the universal coverage of internet connectivity. The number of internet subscribers is very low because of the expensive data that a common person cannot afford. Empowerment of BSNL is a major step. The government can provide new entrants to the telecom industry and formulate strict policies regarding data recharging packs.

Table 11: SDG 10 Index Score of Karnataka State

SDG 10: Reduced Inequalities			
Performance by indicators	2019-20	2023-24	TARGET
Gini coefficient	-	0.16	0
Seats held by women in PRIs (%)	53.4	50.05	33
SC/ST seats in State Legislative Assemblies (%)	22.77	22.77	-
The ratio of female to male workers as Professionals and Technical Workers (%)	-	55.6	100
Crimes against SCs (per 100,000 SC population)	-	18.9	0
Crimes against STs (per 100,000 ST population)	-	10.3	0

Source: SDG Index 2019-20; 2023-24

Inequality is a major hurdle in achieving development goals and hinders national development. Karnataka stands in the 10th position securing the 'front-runner' category. The Gini coefficient (0 represents low inequality, and 1 represents high inequality) indicates that Karnataka needs to reform laws relating to scheduled castes and tribes by allocating more representation by considering the population. Article 243D of the Indian Constitution mandates a 33% reservation for women at panchayath Raj Institutions, in which Karnataka made remarkable achievements by having a 50% representation. The target for SC/ST in state legislative assemblies has not been set because of its higher representation in northeastern states, although it is a crucial indicator for over-viewing the nature of representation. To promote and empower social and political inclusion, the state needs to create more women's workforce at the professional and technical levels by strengthening anti-discrimination laws, promoting work-life balance, providing good quality education, skill enhancement, and so on. To prevent crimes against marginalized communities (SC and ST), strengthening the Atrocity Act can ensure equitable opportunities by eliminating discriminatory laws, policies, and practices that are major roadblocks for these communities to grow and are a major hurdle to living in mainstream society.

4. CONCLUSION

The success of achieving the SDGs relies heavily on active participation from states and union territories, emphasizing the need for decentralized planning and execution of developmental policies. Karnataka's low percentage of women participating in key decisions and limited access to economic resources

highlights the urgent need for gender-inclusive policies to ensure equal opportunities and rights for women. To achieve sustainable development, Karnataka must prioritize reforms in education, poverty alleviation, infrastructure, and innovation, ensuring that these efforts are inclusive and equitable, thereby fostering a sustainable future for all communities.

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