

CHAPTER-I

Progress of Sustainable Development Goals in India

1.1. Introduction

Sustainable Development has become the buzz word of the international community. The struggle for growth and excellence has created imbalance in the economic development among countries, depleted some of the natural resources and has thus altered the ecological balance. Since this threatens the very existence of human life on earth, a course of action that would ensure a safe environment for future generations has become the need of the hour. Sustainable development is a term coined to ensure that development takes place in such a way that natural resources are sustained and passed on to the future generations unimpaired. Seventeen Sustainable Development Goals (SDGs) aimed to build a more prosperous, more equal, and more secure world by the year 2030 have been developed. They have been adopted by 193 Member States at the UN General Assembly Summit in September 2015 as a part of their agenda for Sustainable Development. India is a signatory to this summit and is strongly committed to the 2030 agenda.

At this juncture this paper makes an attempt to understand the challenges encountered by India in achieving the Sustainable development goals. The paper also makes an attempt to suggest measures to overcome the challenges.

1.2. The Sustainable Development Goals

The Sustainable Development Goals (SDGs) which came into effect on 1 January, 2016 is an improvement on the Millennium Development Goals (MDGs)¹. In India, as far as MDGs are concerned, considerable progress has been made in the field of basic universal education, gender equality in education, and global economic growth. However there was slow progress in the improvement of health indicators related to mortality, morbidity, and various environmental factors contributing to poor health conditions². With SDGs in place the Indian government is now trying to integrate the efforts taken towards achieving MDGs with SDGs. SDGs are wider in scope. The 17 SDGs are as follows. Sustainable Development Goals have been built on the universal principle of 'leave no one behind' As far as India is concerned, the national development goals of India, converge well with the SDGs and India is expected to play a leading role in determining the success of the SDGs, globally.

Table -1: Sustainable Development Goals

Goal 1	End poverty in all its forms everywhere
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3	Ensure healthy lives and promote well-being for all at all ages
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5	Achieve gender equality and empower all women and girls
Goal 6	Ensure availability and sustainable management of water and sanitation for all
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10	Reduce inequality within and among countries
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12	Ensure sustainable consumption and production patterns
Goal 13	Take urgent action to combat climate change and its impacts*
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17	Strengthen the means of implementation and revitalize the global partnership for sustainable development

Source: www.un.org/sustainabledevelopment/sustainable-development-goals/

1.3 Progress of Sustainable Development Goals in India

The 2030 Agenda also underscored the fact that quality, reliable and disaggregated data would be needed for measurement of progress on the targets and for ensuring that “No One is Left Behind”. The Government is committed to ensuring “Sabka Saath, Sabka Vikas, Sabka Vishwas” in the spirit of the Sustainable Development Goals’ motto of “Leaving No One Behind”. The concept of sustainability dates back many centuries. However, with the recent global awareness of the fact that the impact of human interventions on nature is out-weighing

its renewal process, this idea has been incorporated in the global political agenda (Leal Filho et al., 2018). So much so, that the United Nations in 2015 proposed a set of 17 goals with 169 targets popularly known as the Sustainable Development Goals (SDGs) to be achieved by 2030 by all its member states. Prior to this, the Millennium Development Goals (MDGs) were incorporated between 2000 and 2015. MDGs consist of eight goals to reduce poverty, and child mortality, HIV/AIDS and other diseases, improve maternal health, promote education, gender equality and to conserve the environment, and promote global partnership among nations. The SDGs, also known as the 2030 Agenda, on the other hand, primarily aims to deliver more importance to the provision of food and water, inequality in the distribution and allocation of resources, environmental problems and importance of policy implementation as a means to achieve sustainability more effectively than the MDGs (Pradhan, Costa, Rybski, Lucht, & Kropp, 2017).

According to the SDG Index and Dashboard global report 2020, India ranked 120 and 116 out of 157 nations in 2020 and 2017 respectively, behind Nepal, Sri Lanka, Bhutan and China. Like many other developing countries, India's role to promote sustainable development has been overshadowed by the unavailability of basic infrastructure (Rao, 2015), rising food insecurity (Vani et al., 2017) and degrading environment quality (Gurjar, Ravindra, & Nagpure, 2016). At a sub-national level, Kwatra et al. (2016) have combined social, economic and environmental sustainability index to formulate a Sustainable Development Index of India and have concluded that better performance of sustainable development is visible in states with higher economic sustainability. There exist rural-urban inequalities at both state and district level in the allocation of sustainable access to water and sanitation infrastructure (Chaudhuri & Roy, 2017). Although India's performance in providing access to improved water is achieved at a national level, the condition needs inspection at its lower administration level, especially in rural areas.

1.4 Objectives: overall development in all the sectors like social, economic, environmental sector needs an inclusive planning to attain the agenda 2030.

1. Analyze the performance of India at state level in the 17 indicators of sustainable development goals.
2. Assessing the progress of development year wise.
3. Analyze the performance of sustainable development goal-4 in India at state level.

1.5. Methodology: The first edition of the SDG India Index was launched in December 2018, using 62 indicators from 39 targets across 13 SDGs; Goals 12, 13, 14, and 17 had to be left out owing to the lack of indicators for which State-wise data was available. The second edition of the Index covering all the 17 Goals and 54 targets, launched in December 2019, was more broad in coverage with 100 indicators: 68 completely aligned with the National Indicator Framework (NIF), 20 refined, and 12 from other official government sources. The third and current edition (Index 3.0) marks an improvement over the 2019-20 edition with a wider coverage of targets. The Index offers insights into social, economic, and environmental status of the country and the States/UTs in their march towards achieving the SDGs. Index 3.0 is based on the framework of 17 SDGs and 169 targets. The Index estimation is based on data on indicators for the first 16 goals while a qualitative assessment has been made for Goal 17. It is constructed using 115 indicators which cover 70 targets from 16 Goals.

Composite Index method has been used to find out the state/UTs index score by using the following formula.

$$X_{\text{new}} = ((X_i - X_{\text{min}}) / (X_{\text{max}} - X_{\text{min}})) * 100$$

where, X_{new} is the normalized value of the indicator, X_i is the original value of the indicator, X_{min} and X_{max} are the minimum and maximum value of the indicator from the total observations.

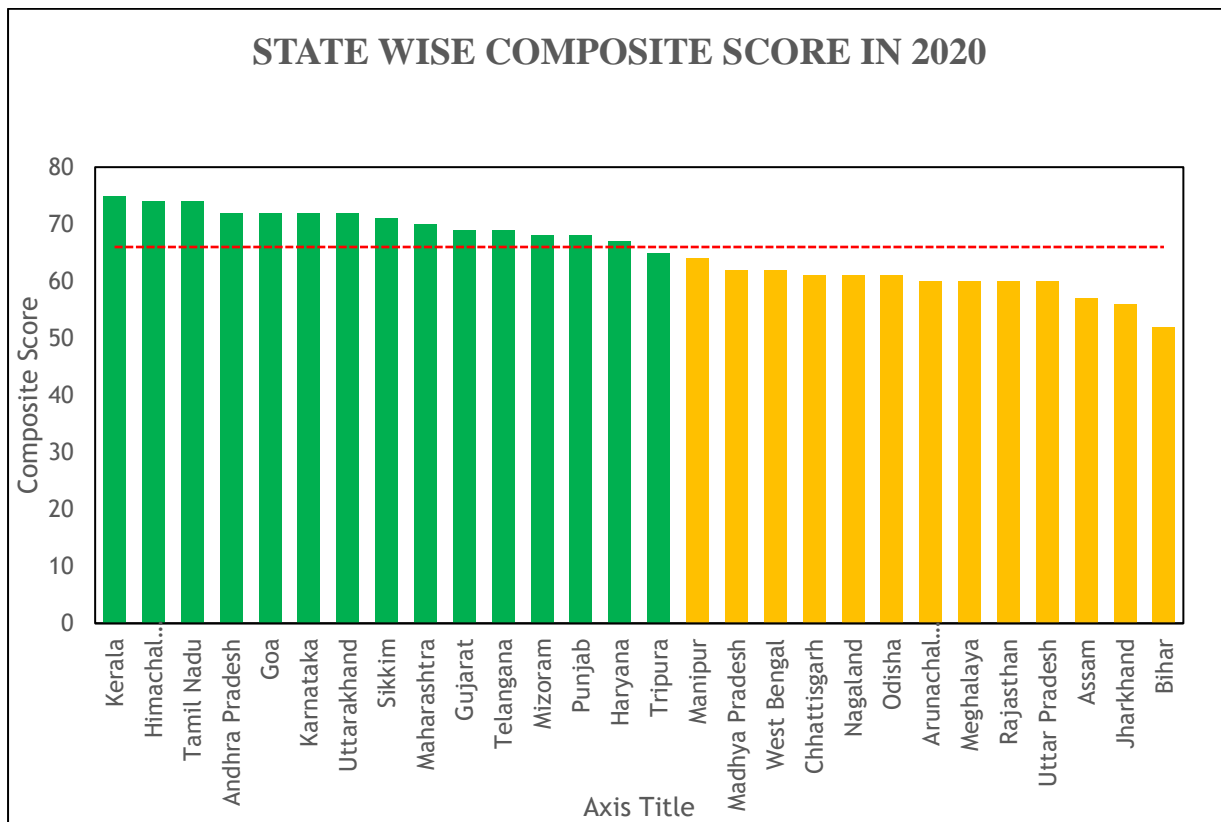
1.6. Result and Discussion: The composite score for each State/UT was computed by aggregating their performance across the goals, by taking the arithmetic mean of individual goal scores. The composite score ranges from 0 to 100 and denotes the overall achievement of the State/UT in achieving the targets under the Goals. A score of 100 implies that the State/UT has achieved the targets set for 2030; a score of 0 implies that the particular State/UT is at the bottom of the table. The SDG India Index 3.0 score for the States ranges between 52 and 75; for the UTs it belongs to the 62 to 79 band. This presents a notable improvement from 2019-20, when the scores varied between 50 and 70 for the States and 59 and 70 for the UTs. Kerala retained its rank as the top State with a score of 75. Chandigarh too maintained its top spot among the UTs with a score of 79. Tamil Nadu and Himachal Pradesh took the second spot while Goa, Uttarakhand, Karnataka and Andhra Pradesh shared the fourth spot on the table. The composite score for India improved, from 60 in 2019-20 to 66 in 2020-21. This indicates

that the country overall has progressed forward in its journey towards achieving the SDGs. Nine Goals drive the positive push - 3 (good health and well-being), 6 (clean water and sanitation), 7 (affordable and clean energy), 10 (reduced inequalities), 11 (sustainable cities and communities), 12 (responsible consumption and production), 13 (climate action), 15 (life on land), and 16 (peace, justice, and strong institutions), where India has scored between 65 and 99. Two goals - 2 (zero hunger) and 5 (gender equality) demand special attention, as the overall country score is below 50. However, 9 States in Goal 2 and 12 States in Goal 5 moved out of the Aspirant category this year as compared to 2019-20. In the other five goals (excluding 14 - life below water, which applies only to 9 coastal States, and 17 - partnerships for the goals, which is qualitatively analysed), the overall score lies between 50 and 64, including both, indicating the scope for significant improvement in the coming years. While in 2019-20, 10 States/UTs belonged to the category of Front Runners (score in the range 65-99, including both), 12 more States/UTs find themselves in this category in 2020-21. Uttarakhand, Gujarat, Maharashtra, Mizoram, Punjab, Haryana and Tripura graduated to the category of Front Runners (scores between 65 and 99, including both). Goal 6 has the highest number of Front Runners with 25 States in this category while Goals 5 and 9 have the highest Aspirants with 14 States each. In SDG 3, SDG 10, SDG 11 and SDG 12, the country score has moved from the Performer category to the Front Runner category. Among them, Goal 11 has seen the biggest movement from 53 in 2019-20 to 79 in 2020-21. All States have improved their score within a range of 1 to 12 points. Mizoram, Haryana, and Uttarakhand are the top gainers in 2020-21, in terms of improvement in score from 2019, with an increase of 12, 10 and 8 points, respectively. For Mizoram, the biggest jumps are in SDG 1 (+13), SDG 3 (+27), SDG 7 (+19), SDG 12 (+37), SDG 13 (+21) and SDG 16 (+18). In the case of Haryana, the five goals with biggest improvement are SDG 1 (+22), SDG 7 (+23), SDG 10 (+14), SDG 11 (+32), SDG 12 (+38). For Uttarakhand, the largest rise are in SDG 1 (+10), SDG 3 (+19), SDG 7 (+22), SDG 10 (+18), SDG 11 (+25) and SDG 12 (+32).

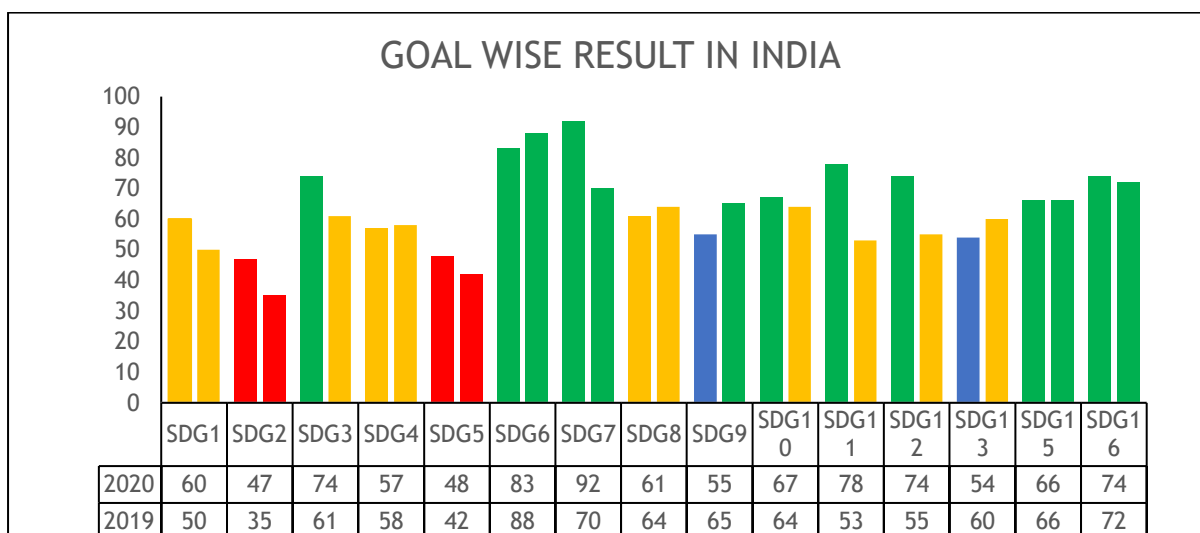
Table-2: State Wise SDG Composite Index in 2020-21

States/UTs	Composite Score	States/UTs	Composite Index
Andhra Pradesh	72	Rajasthan	60
Arunachal Pradesh	60	Sikkim	71
Assam	57	Tamil Nadu	74
Bihar	52	Telangana	69
Chhattisgarh	61	Tripura	65
Goa	72	Uttar Pradesh	60
Gujarat	69	Uttarakhand	72
Haryana	67	West Bengal	62
Himachal Pradesh	74	Andaman and Nicobar Islands	67
Jharkhand	56	Chandigarh	79
Karnataka	72	Dadra and Nagar Haveli	62
Kerala	75	Daman and Diu	68
Madhya Pradesh	62	Delhi	66
Maharashtra	70	Jammu and Kashmir	66
Manipur	64	Ladakh	68
Meghalaya	60	Lakshadweep	68
Mizoram	68	Puducherry	66
Nagaland	61	Rajasthan	60
Odisha	61	Sikkim	71
Punjab	68	Tamil Nadu	74

Source: SDG Index and Dashboard Global Report 2020



Source: NITI Aayog. **Fig-1: State wise Composite Score in 2020**



Source: NITI Aayog. **Fig-2: SDG Wise Composite Index in 2020 and 2019.**

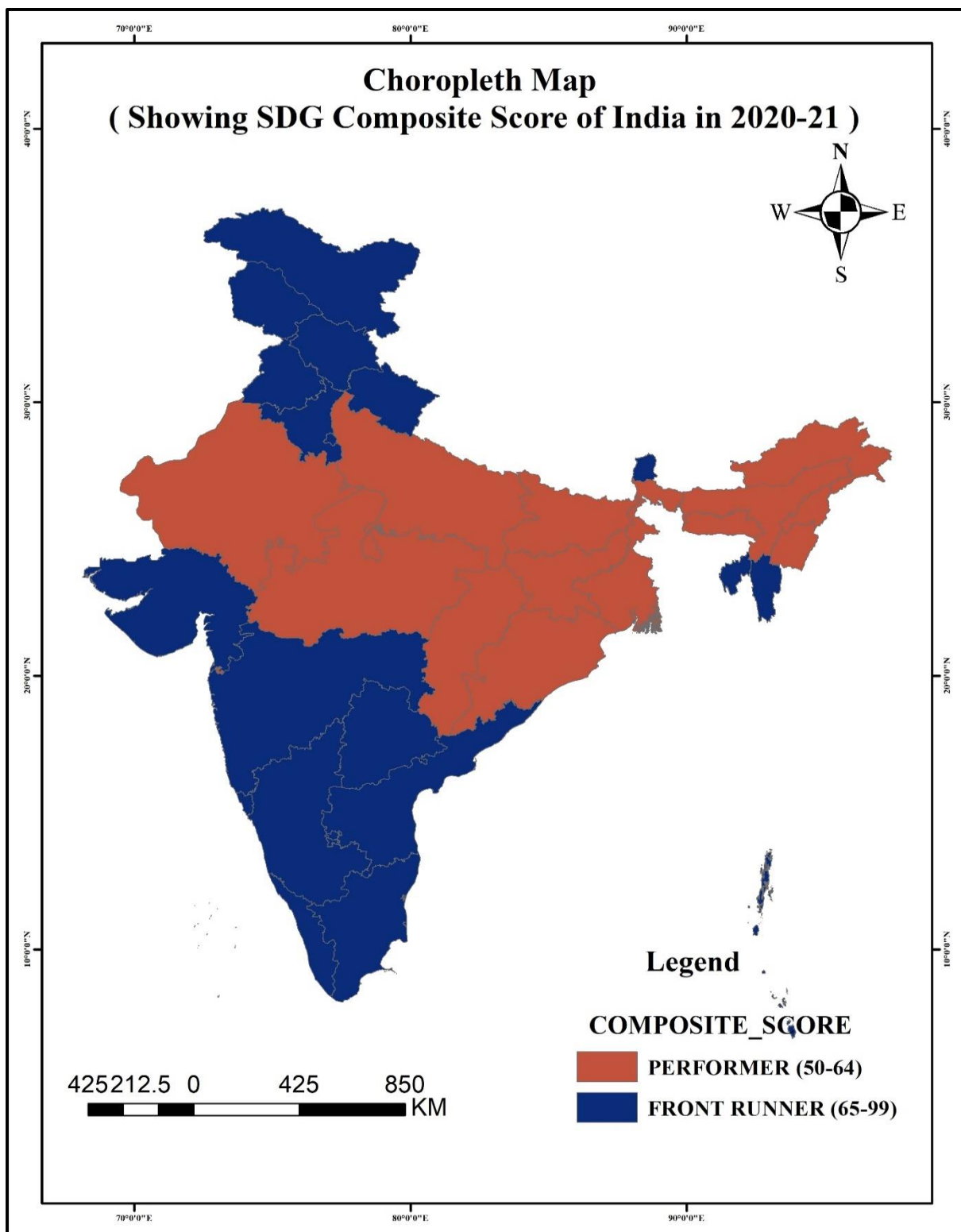


Fig-3: SDG Composite Score of India in 2020-21

CHAPTER-II

SDG-4 QUALITY EDUCATION

(Ensure inclusive and equitable quality Education and promote lifelong learning opportunities for all)

2. 1. Introduction: Achieving inclusive and quality education for all reaffirms the belief that education is one of the most powerful and proven vehicles for sustainable development. This goal is aimed at ensuring that all girls and boys complete primary and secondary schooling by 2030 and are provided equal access to affordable vocational training, to eliminate gender and wealth disparities, and achieve universal access to a quality higher education. Additionally, it emphasizes on lifelong learning opportunities, so as to achieve substantial adult literacy and numeracy, and on building and upgrading existing education facilities that are child, disability and gender-sensitive.

2.2 Targets of SDG-4 (Quality Education)

- By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
- By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
- By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.
- By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.

Table-3: SDG-4 Indicators and Justification

Indicator	Target	Justification
Adjusted Net Enrolment Ratio (ANER) in elementary education (class 1-8)	100	Corresponds to global SDG target 4.1 and National Education Policy 2020 goal for universal access to primary and secondary education.
Average annual dropout rate at secondary level (class 9-10)	8.8	Corresponds to global SDG target 4.1 and aims to achieve 100% Gross Enrolment Ratio by 2030, based on best performing
Gross Enrolment Ratio (GER) in higher secondary (class 11-12)	100	Aims for universal access to high-quality schooling through grade 12 as per National Education Policy
Gross Enrolment Ratio (GER) in higher education (18-23 years)	50	Aims for 50% GER in higher education by 2035 as per National Education Policy 2020.
Percentage of students in class 8 achieving at least minimum proficiency level	100	Aligned with global SDG target 4.1 to ensure quality education with effective learning outcomes
Percentage of persons with disability completing at least secondary education	100	Corresponds to global SDG target 4.5 for equal access to education for persons with disabilities
Gender Parity Index (GPI) for higher education (18-23 years)	100	Aligned with global SDG target 4.5 to eliminate gender disparities in education.
Percentage of persons 15 years and above who are literate	100	Aligned with global SDG target 4.6 for achieving literacy and numeracy for all by 2030.
Percentage of schools with access to basic infrastructure (electricity, drinking water)	100	Aims to provide adequate infrastructure for safe and engaging education as per National Education Policy 2020.
Percentage of trained teachers at secondary level (class 9-10)	100	Aligned with global SDG target 4.c to increase supply of qualified teachers.
Pupil Teacher Ratio (PTR) at secondary level (class 9-10)	30	Aims for optimal PTR to enhance educational quality as per National Education Policy 2020.

Choropleth Map (Showing SDG 4 Composite Score of India in 2020-21)

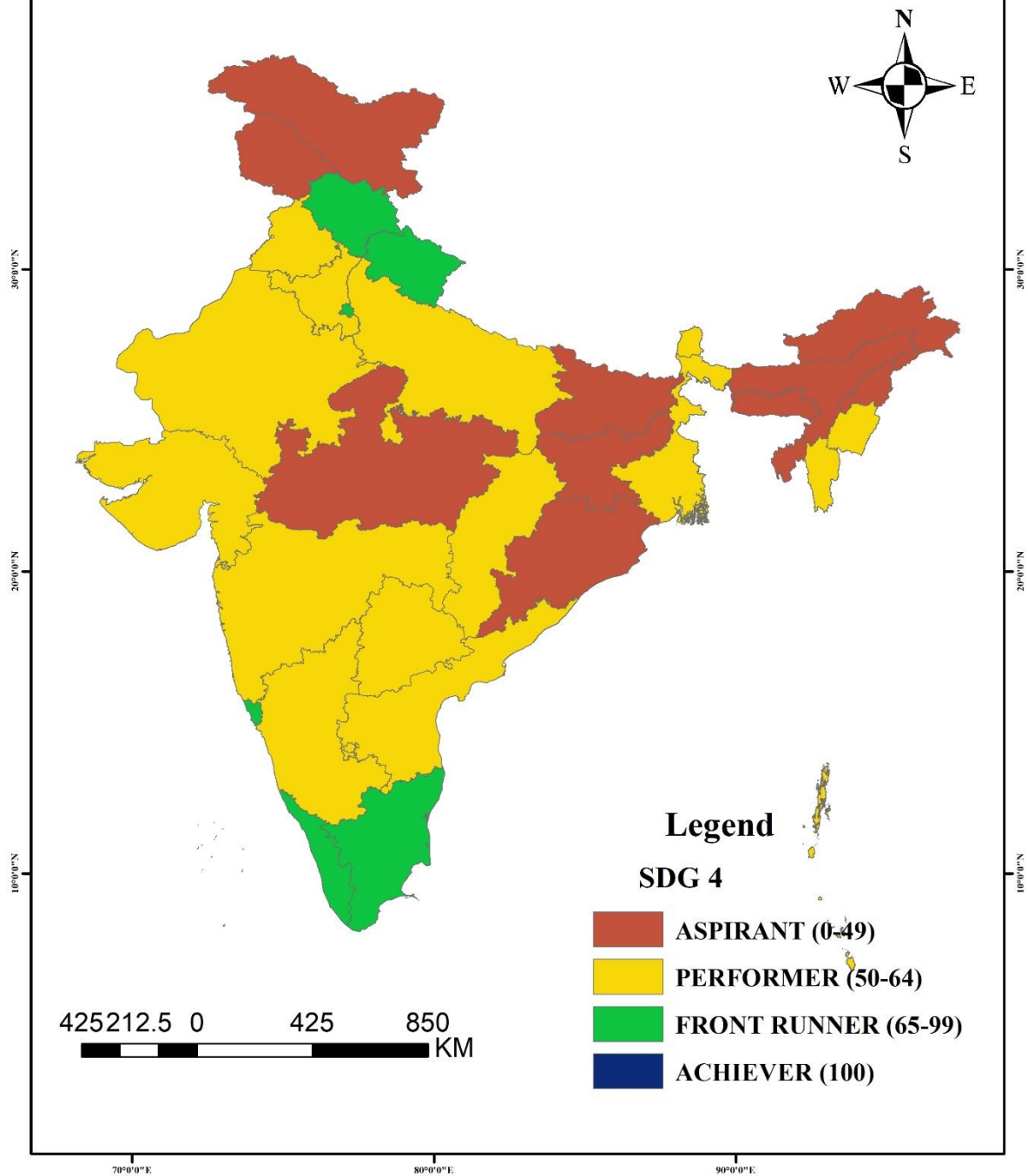


Fig-4: SDG-4 Composite Score of India in 2020-21

Table-4: SDG-4 Composite Score in 2020-21.

States/UTs	Composite Score of Goal-4	States/UTs	Composite Score of Goal-4
Andhra Pradesh	50	Rajasthan	60
Arunachal Pradesh	41	Sikkim	58
Assam	43	Tamil Nadu	69
Bihar	29	Telangana	63
Chhattisgarh	55	Tripura	42
Goa	71	Uttar Pradesh	51
Gujarat	52	Uttarakhand	70
Haryana	64	West Bengal	54
Himachal Pradesh	74	Andaman and Nicobar Islands	57
Jharkhand	45	Chandigarh	79
Karnataka	64	Dadra and Nagar Haveli	56
Kerala	80	Daman and Diu	75
Madhya Pradesh	45	Delhi	49
Maharashtra	64	Jammu and Kashmir	49
Manipur	63	Ladakh	62
Meghalaya	48	Lakshadweep	70
Mizoram	60	Puducherry	57
Nagaland	39	Rajasthan	100
Odisha	45	Sikkim	60
Punjab	60	Tamil Nadu	58

Source: SDG Index and Dashboard Global Report 2020

2.3 Goal 4 Index Score:

SDG Index Score for Goal 4 ranges between 29 and 80 for States and between 49 and 79 for UTs. Kerala and Chandigarh are the top performers among the States and the UTs, respectively. Five States and three UTs bagged a position in the category of Front Runners (score range between 65 and 99, including both). However, nine States and two UTs fell behind in the Aspirants category (with Index scores less than 50).

Table-5: Adjusted Net Enrolment Ratio (ANER) in elementary education (class 1-8)

States/UTs	Adjusted Net Enrolment Ratio (ANER) in elementary education (class 1-8)	States/UTs	Adjusted Net Enrolment Ratio (ANER) in elementary education (class 1-8)
Andhra Pradesh	87.98	Rajasthan	83.29
Arunachal Pradesh	80.98	Sikkim	72.91
Assam	96.36	Tamil Nadu	85.49
Bihar	86.54	Telangana	93.69
Chhattisgarh	89.25	Tripura	100
Goa	88.26	Uttar Pradesh	84.54
Gujarat	85.38	Uttarakhand	96.38
Haryana	89.31	West Bengal	93.21
Himachal Pradesh	97.82	Andaman and Nicobar Islands	74.1
Jharkhand	89.15	Chandigarh	85.78
Karnataka	100	Dadra and Nagar Haveli	88.75
Kerala	92.07	Daman and Diu	79.13
Madhya Pradesh	81.19	Delhi	100
Maharashtra	90.92	Jammu and Kashmir	67.88
Manipur	100	Ladakh	67.88
Meghalaya	97.43	Lakshadweep	75.27
Mizoram	90.08	Puducherry	84.15
Nagaland	67.38	Rajasthan	83.29
Odisha	71.57	Sikkim	72.91
Punjab	71.5	Tamil Nadu	85.49

Source: UDISE+, MoE

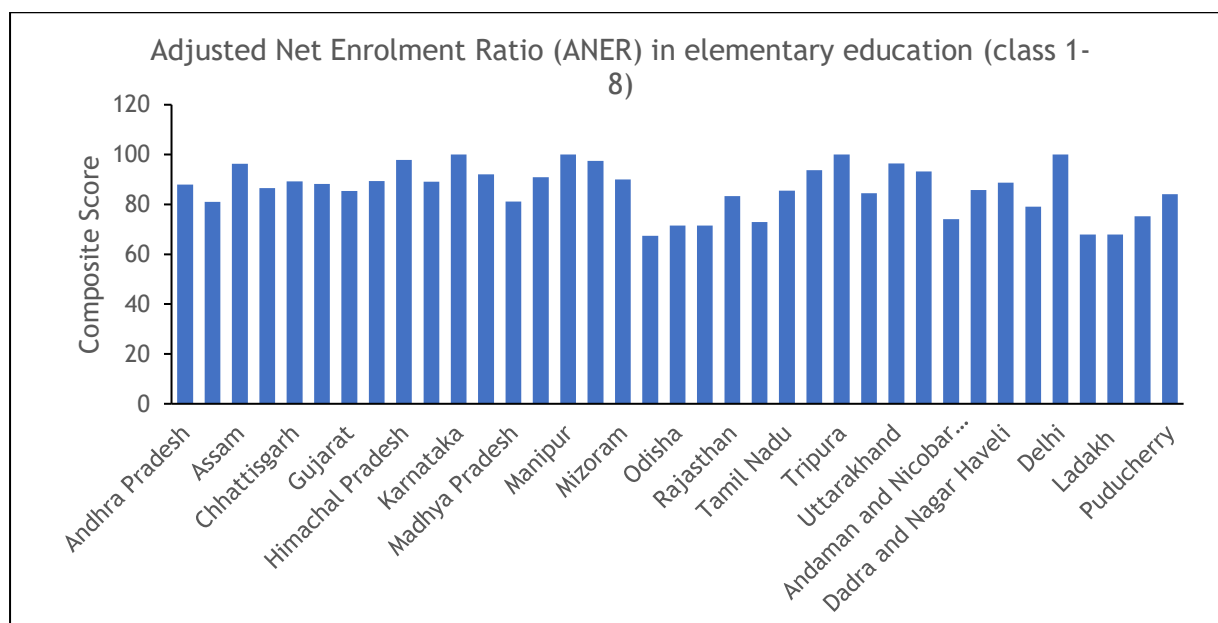


Fig:5 Adjusted Net Enrolment Ratio (ANER) in elementary education (class 1-8)

2.4 Enrolment Ratio in elementary education: The Adjusted Net Enrolment Ratio at Elementary (Class 1-8) education in India is 87.26 percent. Three States and one UT namely Karnataka, Manipur, Tripura and Delhi have achieved the target of 100 percent enrolment at elementary level. Nagaland has the lowest enrolment ratio of 67.38 percent among the States and Jammu and Kashmir and Ladakh have the lowest percentage among the UTs (67.88 percent).

2.5 Average Annual dropout rate: The average annual dropout rate at the secondary level in India is 17.87 percent, with Himachal Pradesh performing the best among the States with 7.81 percent and Chandigarh among the UTs with 4.52 percent. At 35.98 percent, Arunachal Pradesh has the highest percentage of drop-out at secondary level, followed by Assam at 31.47 percent and Andaman and Nicobar Islands (22.22 percent).

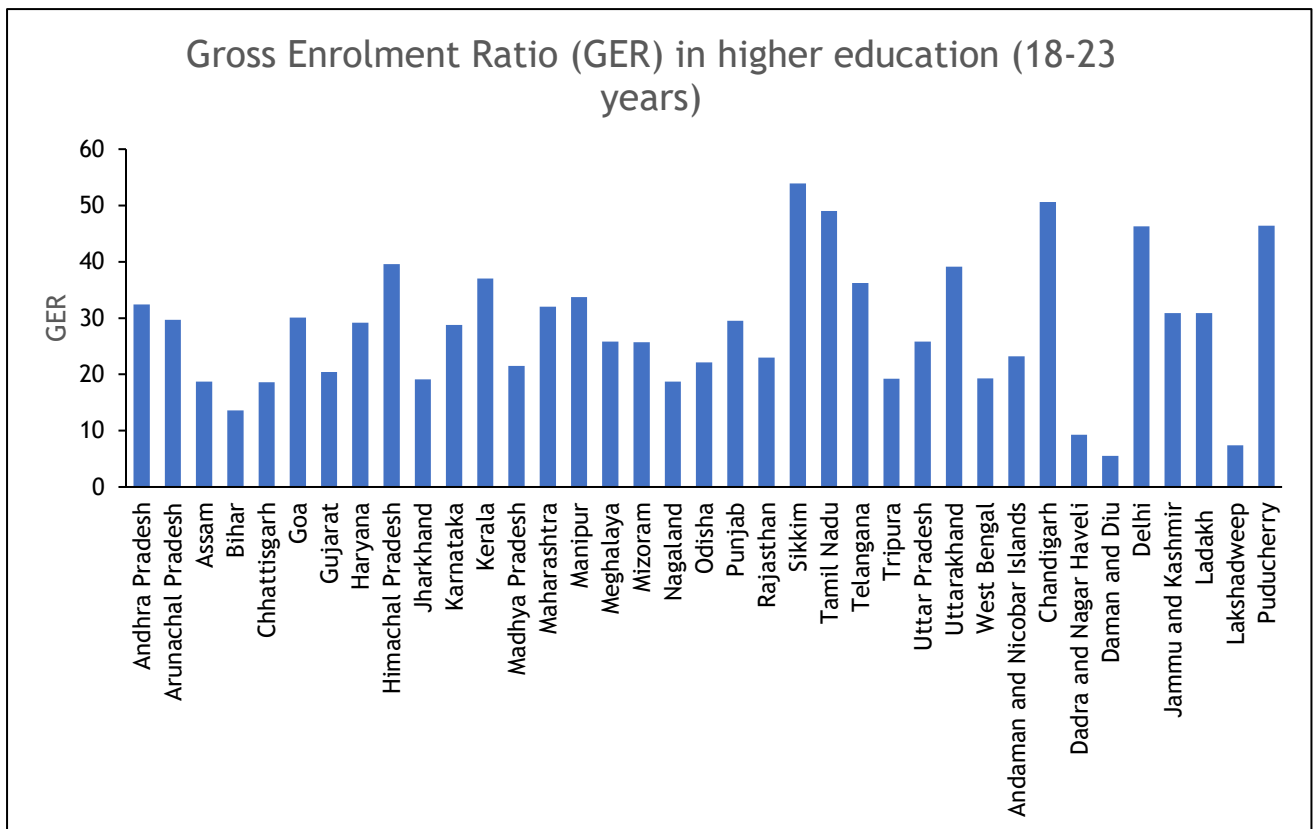


Fig-6: Gross Enrolment Ratio (GER) in higher education (18-23 years)

2.5 Education level among Persons with Disability: 19.3 percent of persons with disability (15 years and above) have completed at least secondary education. No State/UT has achieved the target of 100 percent. The best performing State is Goa at 32.4 percent and the best performing UT is Delhi at 41 percent. On the other hand, only 10.3 percent of persons with disability in Arunachal Pradesh have completed secondary education.

2.6 Gender Parity in higher education: An all India GPI value of 1 is reported according to AISHE report 2018-19 implying a parity between females and males (18-23 years) in higher education in the country. Fifteen States and all the Union Territories have achieved gender parity in Higher education. GPI is lowest in Bihar at 0.79.

2.7 Literacy levels: The literacy level among persons aged 15 years and above at the all India level stood at 74.6 percent. Mizoram at 98.5 percent and Lakshadweep at 95.7 percent are the closest to achieving the target of 100 percent literacy. In Bihar, only 64.7 percent of the persons 15 years and above were literate.

2.8 Infrastructure in schools: In 2018-19, 84.76 percent of schools had access to basic infrastructure (electricity and drinking water). Goa at 99.97 and Gujarat at 99.95 percent are the closest to achieving the target of 100 percent. Only 28.4 percent of schools in Meghalaya have access to basic infrastructure. Among the UTs, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Delhi and Lakshadweep have achieved the target.

2.9 Proportion of trained teachers: Approximately 83 percent of teachers in secondary schools are trained. The percentage of trained teachers is highest in Kerala (94.53 percent) among the States, and Puducherry (92.57 percent) among the UTs. Assam has less than 30 percent trained teachers at the secondary level.

Table-6:Gross Enrolment Ratio (GER) in higher secondary (class 11-12)

States/UTs	Gross Enrolment Ratio (GER) in higher secondary (class 11-12)	States/UTs	Gross Enrolment Ratio (GER) in higher secondary (class 11-12)
Andhra Pradesh	46.84	Rajasthan	56.51
Arunachal Pradesh	38.48	Sikkim	58.22
Assam	30.94	Tamil Nadu	72.32
Bihar	26.39	Telangana	56.49
Chhattisgarh	52.08	Tripura	38.62
Goa	71.95	Uttar Pradesh	46.12
Gujarat	41.2	Uttarakhand	66.2
Haryana	56.05	West Bengal	51.73
Himachal Pradesh	81.79	Andaman and Nicobar Islands	56.44
Jharkhand	38.89	Chandigarh	83.43
Karnataka	44.4	Dadra and Nagar Haveli	53.46
Kerala	80.26	Daman and Diu	33.21
Madhya Pradesh	43.73	Delhi	70.07
Maharashtra	68.93	Jammu and Kashmir	42.31
Manipur	54.82	Ladakh	42.31
Meghalaya	41.64	Lakshadweep	73.5
Mizoram	51.87	Puducherry	69.78
Nagaland	33.92	Rajasthan	56.51
Odisha	65.86	Sikkim	58.22
Punjab	68.14	Tamil Nadu	72.32

Source: UDISE

2.10 Enrolment Ratio in higher secondary: The Gross Enrolment Ratio (GER) at higher secondary level is 50.14 percent. Among the States, Himachal Pradesh recorded the highest GER at 81.79 percent, while Bihar recorded the lowest of 26.39 percent. Among the UTs, Chandigarh has the highest gross enrolment ratio of 83.43.

Table-7: Pupil Teacher Ratio (PTR) at secondary level (class 9-10)

States/UTs	Pupil Teacher Ratio (PTR) at secondary level (class 9-10)	States/UTs	Pupil Teacher Ratio (PTR) at secondary level (class 9-10)
Andhra Pradesh	16	Rajasthan	12
Arunachal Pradesh	14	Sikkim	13
Assam	11	Tamil Nadu	18
Bihar	58	Telangana	11
Chhattisgarh	18	Tripura	18
Goa	11	Uttar Pradesh	34
Gujarat	33	Uttarakhand	15
Haryana	15	West Bengal	36
Himachal Pradesh	9	Andaman and Nicobar Islands	10
Jharkhand	51	Chandigarh	12
Karnataka	15	Dadra and Nagar Haveli	28
Kerala	16	Daman and Diu	15
Madhya Pradesh	36	Delhi	29
Maharashtra	22	Jammu and Kashmir	12
Manipur	10	Ladakh	12
Meghalaya	12	Lakshadweep	7
Mizoram	10	Puducherry	11
Nagaland	11	Rajasthan	12
Odisha	22	Sikkim	13
Punjab	13	Tamil Nadu	18

Source: UDISE+, MoE

2.11 Pupil-Teacher Ratio: The all-India pupil teacher ratio at secondary level stands at 21. The target is to have at least one teacher for every 30 students in all schools. Himachal Pradesh has the best P-T ratio in the country with one teacher for every 9 students in the secondary level. Six States, namely, Bihar, Gujarat, Jharkhand, Madhya Pradesh, Uttar Pradesh and West Bengal are yet to achieve the target.

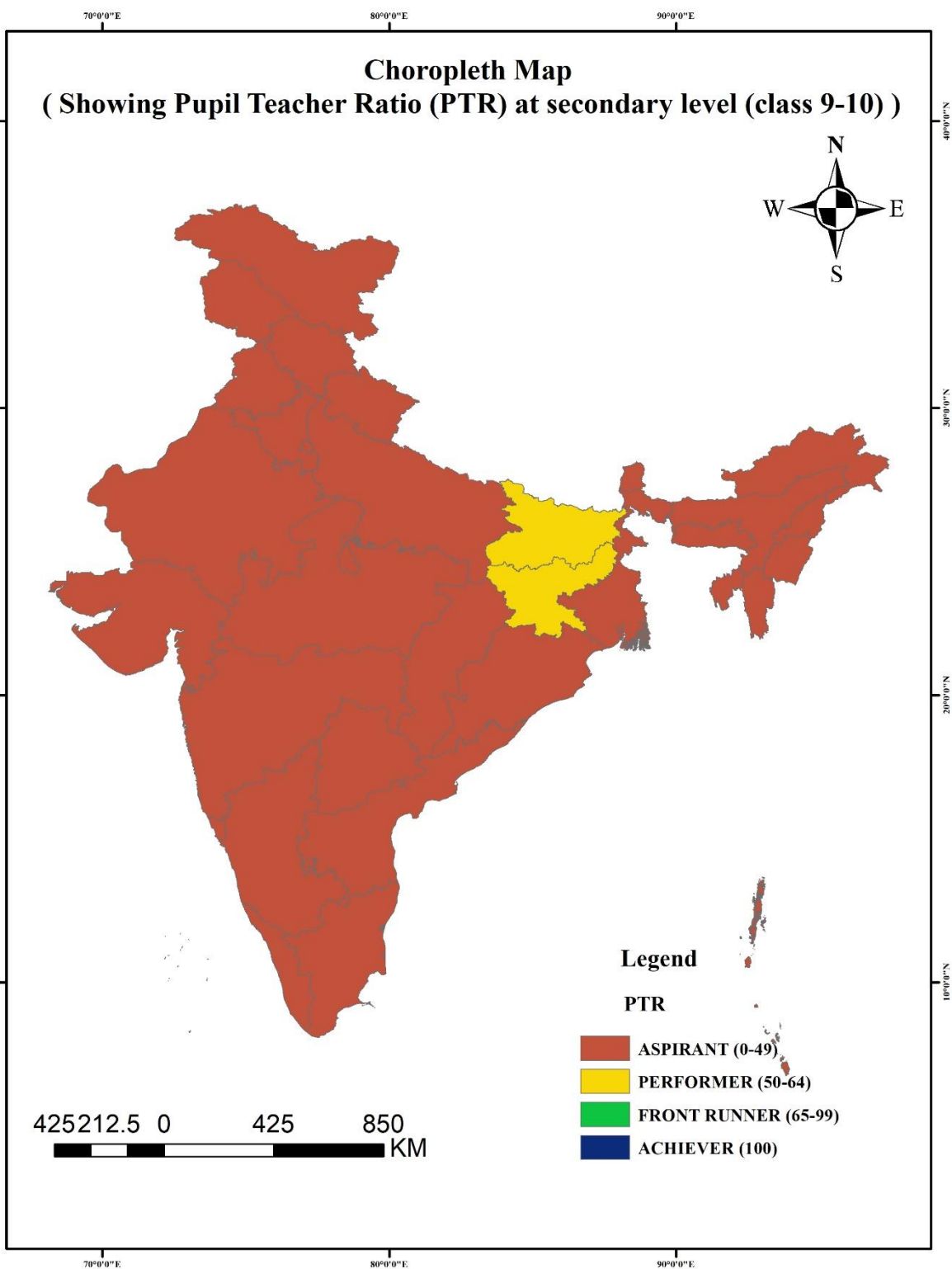


Fig-7: Pupil Teacher Ratio at Secondary Level

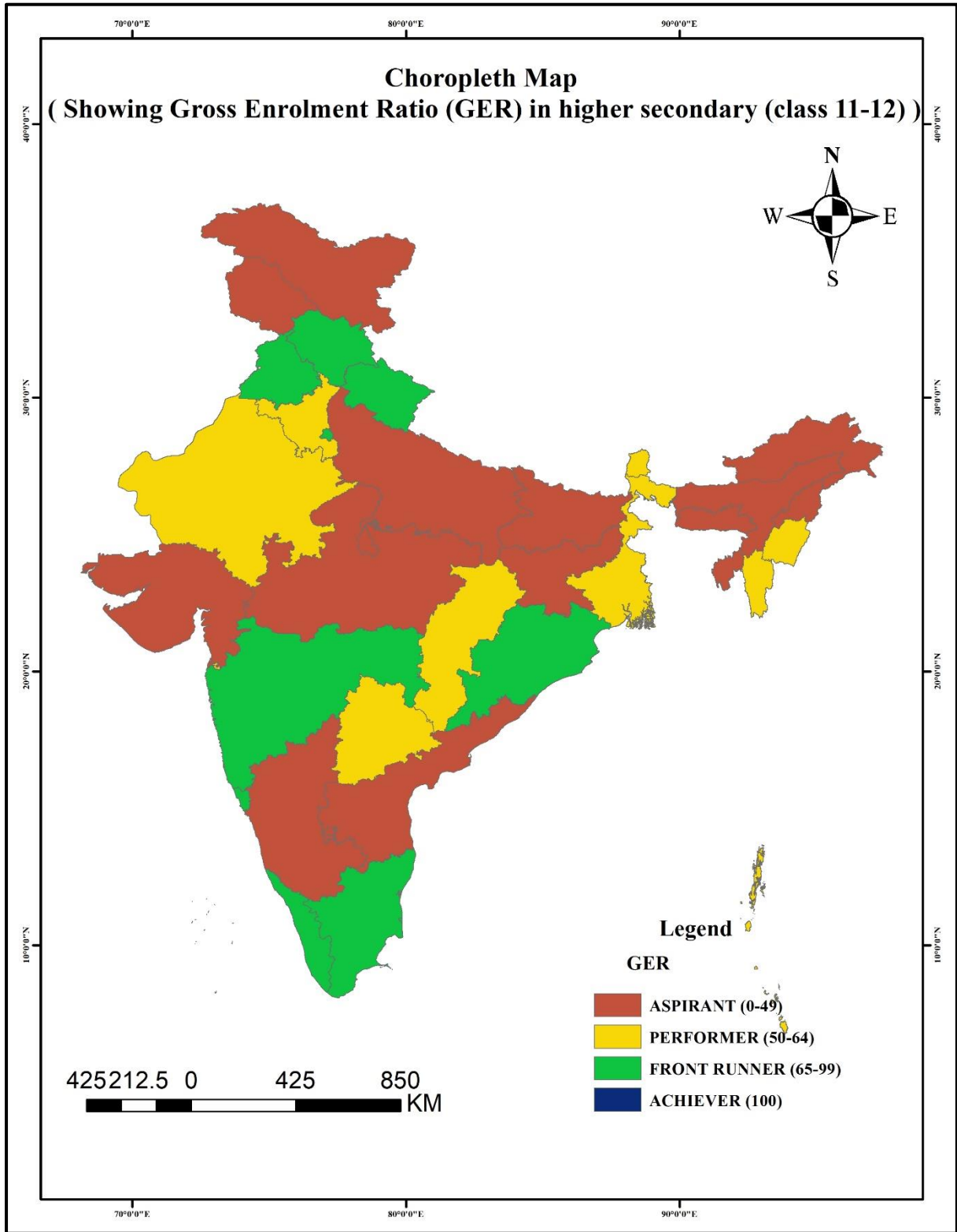


Fig-8: Gross Enrollment Ratio in Higher Secondary Level

CHAPTER-III

Challenges in attaining SDGs in India

Four areas have been identified as areas of concern for India in Achieving SDGs . They are discussed below

3.1 Defining Indicators

One of the major challenges for India is devising suitable indicators to effectively monitor the progress of SDGs. India's past records reveal that it has not been very successful in setting relevant indicators to measure outcomes. The definition for "safe" drinking water has been misconstrued with the availability of hand pumps and tube wells and the official data suggested that 86% of Indians had access to safe drinking water and therefore were "on track" for the MDG goal on drinking water . But the number of waterborne diseases and deaths due to diarrhea are quite high in India.

3.2 Financing SDGs:

Despite India's best efforts to reduce poverty it has the highest number of people living below international poverty line. As per the World Bank report 2013, 30 per cent of its population was under the \$1.90-a- day poverty measure. ¹³ According to the United Nations MDG 2014 report, despite high economic growth, in 2010, one-third of the world's 1.2 billion extreme poor lived in India alone. ¹⁴ At today's level of investment – public and private in SDG related sectors in developing countries, an average annual funding shortfall over 2015-2030 of some \$2.5 trillion remains. ¹⁵ This gap can be bridged only through increased private sector investments, especially in infrastructure, food security and climate change mitigation sectors.

In India, A new study estimates that implementing SDGs in India by 2030 will cost around US\$14.4 billion. Given the recent cut in social sector schemes in India there is likely to be a significant funding gap.

3.3 Monitoring and Ownership: A third significant challenge in implementing SDGs would be with respect to ownership. Though NITI Aayog is expected to play the lead role in tracking the progress of SDGs, its members have expressed reservations on being able to take on this mammoth task.

3.4 Measuring Progress: The last challenge is how to measure the progress or achievement of SDGs. The Indian government has admitted that non-availability of data (particularly in respect to sub-national levels), periodicity issues and incomplete coverage of administrative data, have made accurate measuring progress of even MDGs virtually impossible.

In developing countries like India, there was some hesitation in reducing carbon emissions for two reasons, first their per capita emissions were lower, second, it would mean compromising with the development of the nation. Therefore a carbon trading system was evolved among the countries of the world where firms were permitted to emit carbon within the prescribed limit and were assigned carbon credits for this purpose. If any firm wants to exceed the limit it can buy the unused credit from another firm. In this way the buying firm is penalized for exceeding its carbon quota and the selling firm is rewarded for reducing its emissions. Governments can consider the idea of penalizing firms with higher carbon footprints by making them finance the sustainable goal programmes in the developing and least developed countries.

References

1. Sachs JD. From millennium development goals to sustainable development goals. *The Lancet*. 2012 Jun 9; 379(9832):2206-11.
2. Anita N. India' s progress toward achieving the Millennium development goal. *Indian J Community Med*. 2011;36:85-92
3. Chatterjee S, Hammill M, Kumar N, Panda S. Assessing India's Progress in Achieving the Millennium Development Goals: Key Drivers of Inter-state Variations. United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) South and South-West Asia Office; 2015 Nov.
4. Rakesh Kumar Maurya .National Implementation of the SDG Monitoring India 2015 Available from <https://unstats.un.org/sdgs/.../Presentation--4.3-Implementation-of-SDG-Monitoring--I>
5. Government Flagship Programs: Make In India And Digital India. Available from <https://unacademy.com/lesson/government-flagship-programs-make-in-india-and-digital-india-for-upsc-cseias-exam/L26JW6RP>
6. Report of the third International Conference on Financing for Development. 2015. Available from <http://www.undocs.org/A/CONF.227/20>
7. Bhattacharya S, Patro SA, Vaidyanathan V, Rathi S. Localising the gender equality goal through urban planning tools in South Asia.
8. Abhiyan WN. Promises & Reality.
9. Avani Kapur .Four challenges that India faces in achieving sustainable development goals. 2015. Available from www.business-standard.com › Punditry › Social Specs
10. United N. The Millennium Development Goals Report 2014. New York: United Nations. 2014.

