

A Resilient Approach towards Attaining Sustainable Development Goals in India with a Focus on West Bengal

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Abstract : *The 2030 agenda for Sustainable Development Goals registers its call on governments and other stakeholders to implement 17 SDGs being divided into 169 targets. Our country, India, is no exception to this. In this paper, an attempt has been made to understand the resilient approach that India has taken up in attaining SDGs. The COVID-19 pandemic has been identified as one of the greatest threats to mankind during the Anthropocene and as a great obstacle for attaining the SDGs all throughout the Globe. The SDG India Dashboards for 2023-2024 records variations, rise or fall in the SDG average index score because of the sharp increase in the poverty rate, supplemented by unemployment (SDG Goal 1). Sub-goal 1.5 envisages to build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate related extreme events and other economic, socio -environmental shocks and disasters by 2030. Strengthening preparedness for Environmental sustainability is about the natural environment and how it remains productive and resilient to support human life as the earth systems have limits or boundaries within which equilibrium is maintained. There are multiple resilient approaches in the implementation of SDGs. Sub-goal 2.4 depicts implementation of resilient agricultural practices would help maintain ecosystems and that in its turn strengthen capacity for adaptation to climate change, flooding which progressively improves land and soil quality. Sub-goal 9.1 promotes those countries should develop quality, reliable, sustainable, resilient and affordable infrastructure. Sub-goal 13.1 focusses strengthening resilience to climate related hazards and natural disasters. Sub-goal 11 B advocates for increasing the number of sustainable cities and human settlements reflecting adaptation to climate change, resilience to disasters. It should be a complete holistic approach in terms of SDG synergies that culminates interactions across all 17 Goals under Governmental Leadership.*

Key words: *SDGs, Vulnerability, Resilience, Climate disasters, Adaptation*

Introduction

As per UNDRR–ISC Hazard Definition and Classification Review–Technical Report (Dadvar, 2020). which was released in July 2020, the Hazard Information Profile (HIP) had identified eight different hazard types, with varying cluster types. These are namely: (a) Meteorological & Hydrological; (b) Extraterrestrial hazards; (c) Geohazards; (d) Environmental hazards; (e) Chemical hazards; (f) Biological hazards; (g) Technological hazards, and (h) Societal hazards. Each hazard has been given a definition, being authenticated by relevant UN Agency who provides responsible

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guidance on the specific hazard. It is said that “hazards are complex, multidimensional phenomena or processes that require expertise from a range of disciplines to be described accurately”. Among many recommendations in this report, one such recommendation (Recommendation 4) suggests that the hazard list should actively engage policy makers and scientists in the process of disaster risk reduction and obviously risk involved sustainable development. Recommendation 5 called for further work towards implementation of varying parameters, such as vulnerability and capacity, while Recommendation 6 suggests that there is an immediate urgency to address cascading and complex hazards and risks and find out direct, as well as indirect relationships that persist among natural, biological, technological and multiple human induced hazards. This would definitely build up a methodical approach towards vulnerability and corresponding resilience in the process of management of systematic risks.

In 2009, a group of scientists from Stockholm Resilience Center had identified that there are nine processes which actually regulate the stability and resilience of the earth system and designated them as Nine Planetary Boundaries.

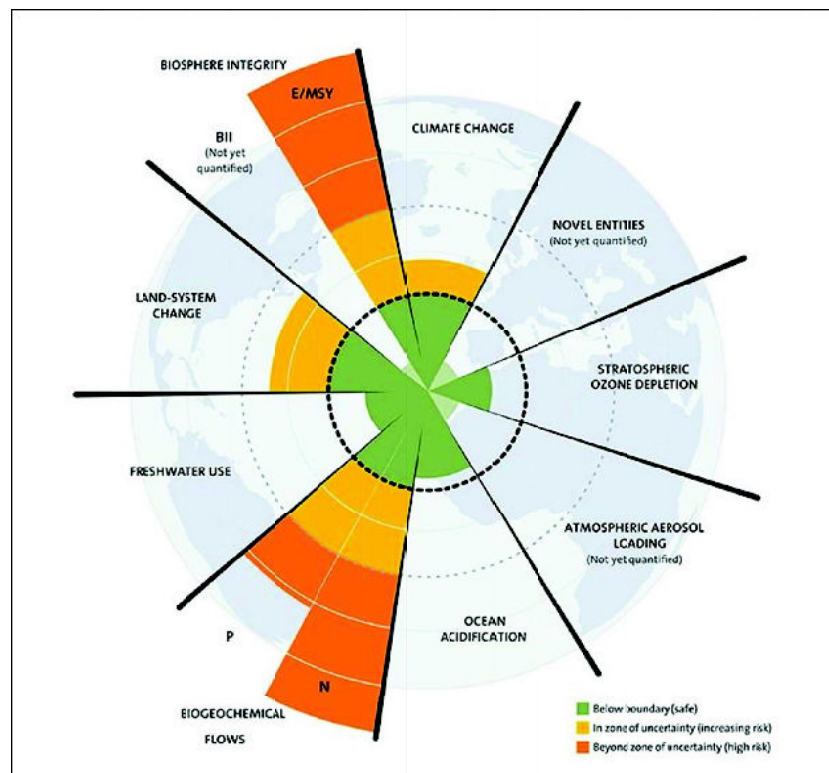


Fig. 1: Estimates of how the different control variables for seven planetary boundaries have changed from 1950 to present. The green shaded polygon represents the safe operating space. *Source: Steffen et al. 2015*

They urged that the humanity would continue to propagate and thrive for generations to come, provided the planetary boundaries are not crossed. A rough estimate shows that till 2015, two boundaries including biosphere integrity (biodiversity loss and extinctions) were crossed and the remaining others were in imminent danger of being crossed. Actually, these are at the threshold of crossing the boundaries.

Context of the Study

In order to understand the concept of resilient approach towards attaining SDGs in India in the present scenario, one has to go back to the definition of “resilience” at the beginning. As published by UN in Sendai Framework for Disaster Risk Reduction (Pearson, & Pelling, 2015) 2015-2030, the term “resilience” is defined as follows: “the ability of a system, community or society expose to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its basic structures and functions” [United Nations office for Disaster Risk Reduction (UNISDR) “2009 UNISDR Terminology on Disaster Risk Reduction. “Geneva, May 2009 (<http://www.unisdr.org/we/inform/terminology>)]

It is also necessary to define the term hazard. Hazard is defined in the Hyogo Framework for Action as “a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards)”

In the same report, as mentioned above, mentions have been made regarding different achievable targets. A few of these are mentioned below:

- a. “To promote the mainstreaming of disaster risk assessment mapping & management into rural development planning and management of inter alia, mountains, rivers coastal flood plain areas, drylands wetlands and all other areas prone to droughts and flooding, including through the identification of areas that are safe for human settlement, and at the same time preserving ecosystem functions that help to reduce risks”.
- b. “To encourage the adoption of policies and programs addressing disaster induced human mobility to strengthen the resilience of affected people and that of host communities, in accordance with national laws and circumstances”.

As per the World Conference in Disaster Reduction, between 18-22 January 2005, Kule, Hyogo, Japan and extract from the subsequent report, “Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and communities to Disasters (<https://www.unisdr.org/2005/wcdr/wcdr-index.htm>), challenges box by disasters are manifold. It says that the Disaster risk arises when hazards interact with physical, social, economic and environmental vulnerabilities (Vulnerability is

defined as: “The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards”).

It is now accepted that “Sustainable development, poverty reduction, good governance and disaster risk reduction are mutually supportive objectives, and in order to meet the challenges ahead, accelerated efforts must be made to build the necessary capacities at the community and national levels to manage and reduce risks”.

According to UNDP press Release (UNDP, 2021) the Global Multidimensional Poverty Index (MPI) finds, that in many cases multidimensional poverty across ethnic and racial groups are greater than disparities across geographical subnational regions.

As said by Achim Steiner, UNDP Administrator, “The Covid -19 pandemic has eroded development progress around the world and we are still grappling to understand its full impacts. This year’s Multidimensional Poverty Index (MPI) reminds us the need for a complete picture of how people are being affected by poverty, who they are and where they live, if we are to build forward better from the crises and design effective responses that leave no one behind.”

It is further reported in the blog (Basu, 2019), Climate Emergency COP 25, India suffered maximum number of climate- related fatalities in 2018, that India recorded the maximum number of deaths – 2081- from climate triggered extreme weather events in 2018, as documented by The Global Climate Risk 2020. The report (<https://www.germanwatch.org/en/17307>) was made public by a NGO, German watch on December 4, 2019, in Madrid. The report further recorded that India was in the fifth position with respect to overall climate vulnerability for the year 2018. The first four positions were occupied by Japan, Philippines, Germany and Madagascar. On the contrary, India’s position was 14th in 2017. It is further observed in the same report that India’s economic losses linked to extreme weather events were measured in the tune of \$37,808 million for 2018. The most alarming aspect was that it signifies an almost three-fold rise over losses suffered in 2017.

The report further elaborated that how temperatures in India were subjected to spiraling. In their words, “Since 2004, India has experienced 11 of its 15 warmest recorded years, affected by extreme heat in both 2018 and 2019” and it is now in 2024, the warmest days have come.

If we continue with the report, the following information is important. The information goes like this: “Puerto Rico topped the list of countries most vulnerable to long term climate risk. This is followed in succession by countries like Myanmar, Haiti, Philippines, Pakistan, Vietnam, Bangladesh, Thailand and Dominica. India’s rank was seventeenth.”

According to Maik Winges, another author of the report, “This is a clear signal that climate change impacts are happening and increasing everywhere including developed countries. If developed countries suffer, they have the means to recover, but not necessarily the smaller countries”. Accordingly, the concept of “Loss and Damage” was introduced as a part of United

Nation negotiation process which promotes that the developed countries should provide support, including funds to developing and under-developed countries, already being affected by climate change.

Materials and Methods

The entire work has been done on the basis of literature survey and thereby typically analyzing the secondary data, as available from Government of India, SDG Dash Board Publications for 2023-2024. (SDG India Index 2023-2024, Towards Viksit Bharat, Sustainable Progress, Inclusive Growth, published by NITI Aayog, Government of India, July, 2024, [sdgindia.index.gov.in](https://sdgindiaindex.gov.in/))⁴

Apart from that many international publications have been referred to in the text itself. On the other hand, the author is engaged as a member of the Task Force Group on SDGs on the International Forum for Earth System Governance. Accordingly for his continued research in the field of sustainable Development Goals, he regularly enhances his knowledge from the publications of Earth System Governance, as also from the reports and webinars conducted by Rockefeller Foundation, SEI, IASS and the reports on Human Development.

Results and Discussions

In order to understand the following discussion, it is preferred that we look at the different SDGs (Fig. 2), as shown below:

The performance of different states and UTs of India on SDGs as reported in SDG India: Index and Dashboard 2023-2024 (published by NITI Aayog) have been presented in Fig. 3 above.

SDG India Index 2023-2024, Towards Viksit Bharat, Sustainable Progress, Inclusive Growth, published by NITI Aayog, (Government of India, July, 2024, <https://sdgindiaindex.niti.gov.in/>, page 69) made multiple observations on the prevailing situation in different regions which are stated below:

- (i) SDG 6 (clean water and sanitation), Achiever State is only Goa; while among the UT, Andaman & Nicobar Islands has been identified as achiever.

In terms of Goal 11, Chandigarh has become an achiever.

- (ii) Eleven state like Punjab, Telangana, Haryana, Tripura, West Bengal, Madhya Pradesh, Uttar Pradesh, Odisha, Assam, Jharkhand, Bihar belong to Aspirant Group (Lowest group, score 0-49) in terms of SDG5 (Gender Equality). This is really alarming in terms of building resilience among vulnerable states, which suffer from Gender Inequality even after twenty-four years in the twenty-first century and after 78 years of Independence.
- (iii) In terms of SDG 7 (Affordable and Clean Energy) sixteen states like Uttarakhand, Kerala, Tamil Nadu, Goa, Himachal Pradesh, Punjab, Karnataka, Andhra Pradesh, Telangana, Maharashtra, Mizoram, Haryana, West Bengal, Rajasthan, Uttar Pradesh, Assam and six

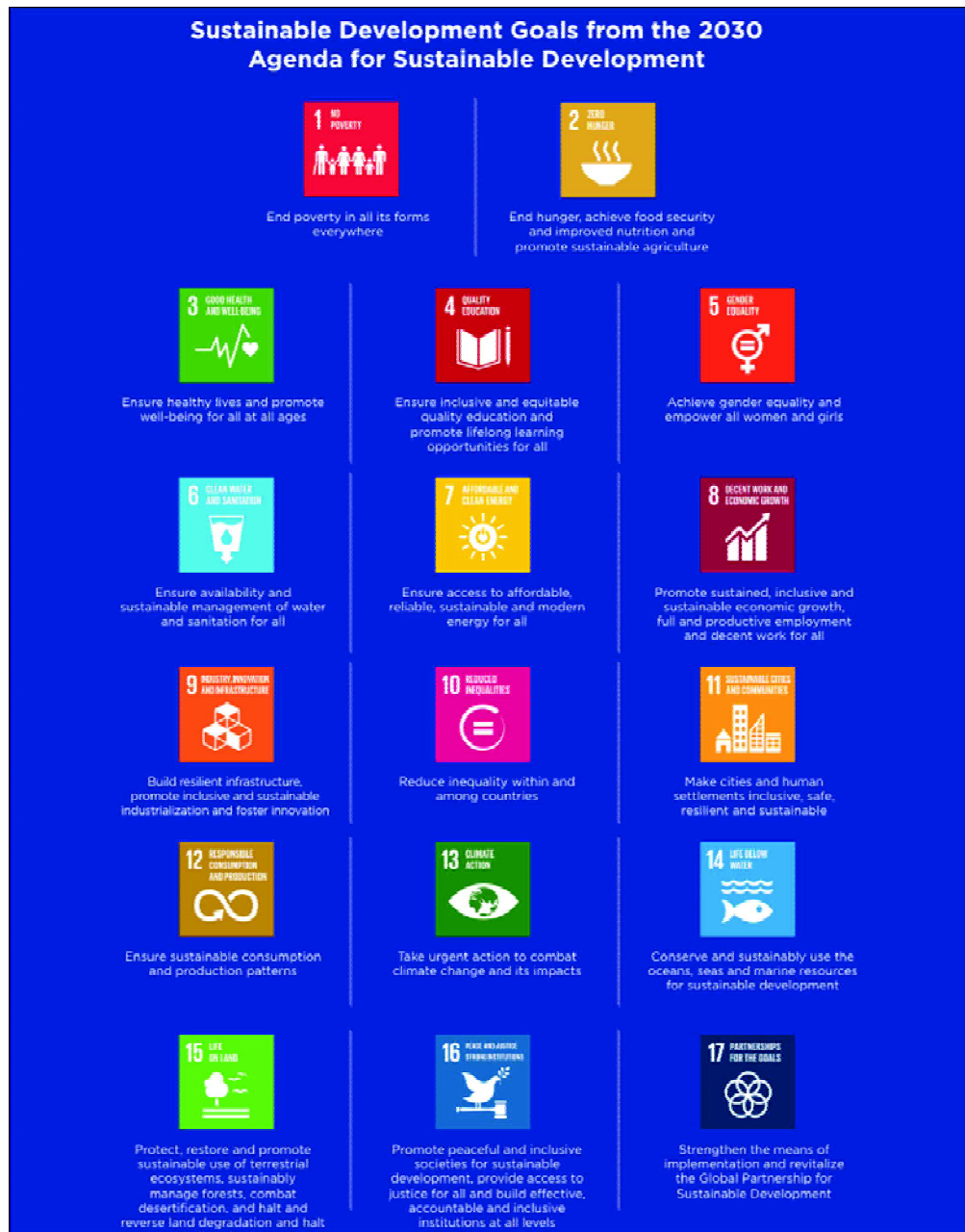
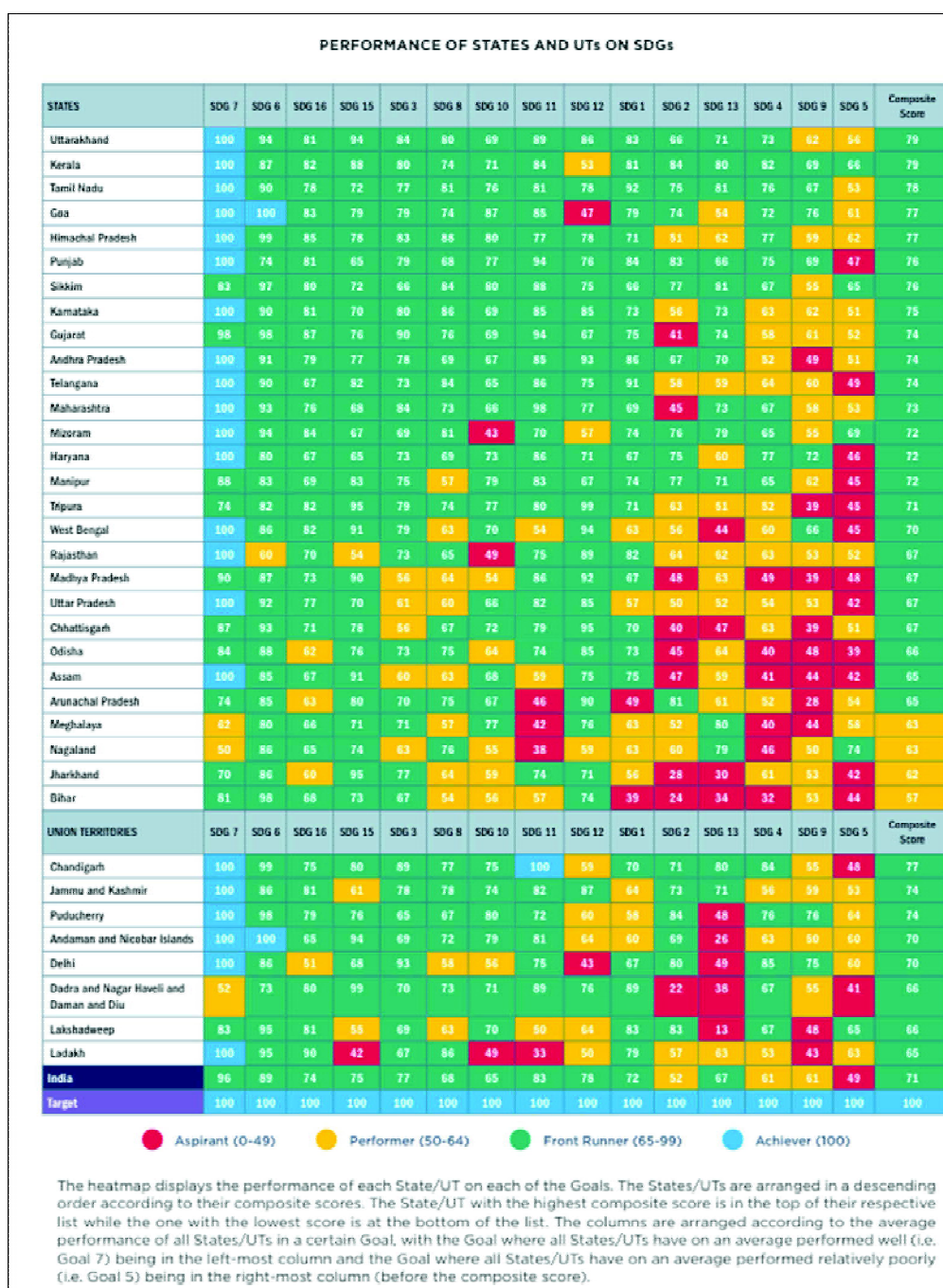


Fig.2 SDG India Index 2023-2024, Towards Viksit Bharat, Sustainable Progress, Inclusive Growth, published by NITI Aayog, Government of India, July,2024, sdgindia.index.gov, page 72



UTTs like Chandigarh, Jammu & Kashmir, Puducherry, Andaman& Nicobar Islands, Delhi and Ladakh are identified as Achievers, which is considered to be big step towards attaining resilience in this specified Goal.

- (iv) In terms of SDG1 (No Poverty), none of the states has been able to become Achiever and some of the states are categorized as Performers. Accordingly, this is attributed as a failure in terms of resilience.
- (v) In terms of SDG2, (Zero Hunger) the performance rate is alarmingly poor in eight states like Gujarat, Maharashtra, Madhya Pradesh, Chhattisgarh, Odisha, Assam, Jharkhand, Bihar and five UTTs like Puducherry, Andaman and Nicobar Islands, Delhi, DadraandNagar Haveli (including Daman and Diu), Lakshadweep and Ladakh. This definitely depicts that India is far behind in terms of resilient approach in attaining SDG2.
- (vi) In terms of SDG9 (Development of Sustainable Quality and Resilient infrastructure), the score card is somewhat satisfactory. Six states fall within Front Runner Group, twelve states belong to Performers, while eight states fall within the Aspirant Group.
- (vii) In terms of SDG13 (Climate Action), 13 states fall within Front Runner Group, ten states belong to Performer Group, four states and five UTTS are included within the Aspirant Group. It is thus may be inferred that as the coastal states are very much valuable to climate action, India has progressed at a very slower pace in terms of resilient approach towards attaining SDG13 in coastal states like Odisha, Andhra Pradesh, Maharashtra and Goa.
- (viii) In terms of SDG16 (Peace, Justice & Strong Institutions), most of the states have been ranked within Front Runner Group (Himachal Pradesh, highest with a score of 85), while among the UTTs Ladakh has scored the highest marks of 91.

The following figure (Fig. 4) shows the Key Highlights of the performances of the states, as discussed above. The readers can very easily gain an insight, while studying Figure 4, given below:

While discussing the data from the SDG Dash Board of 2023-2024, it is now necessary to focus on Comparative Study of West Bengal- Performance by Indicators.

Comparative Study of West Bengal– Performance by Indicators

Till now we had been discussing the SDG India: Index and Dashboards 2023-2024, regarding the performances of different states with reference to resilient approaches, as revealed in context to different SDGs. But it seems that a specific discussion on the state of West Bengal is needed, as the present author is from the state of West Bengal and he equally gives importance in understanding the merits and demerits of SDG Index performance of West Bengal in terms of resilient approach. The reader is requested to go through Fig. 5 below:

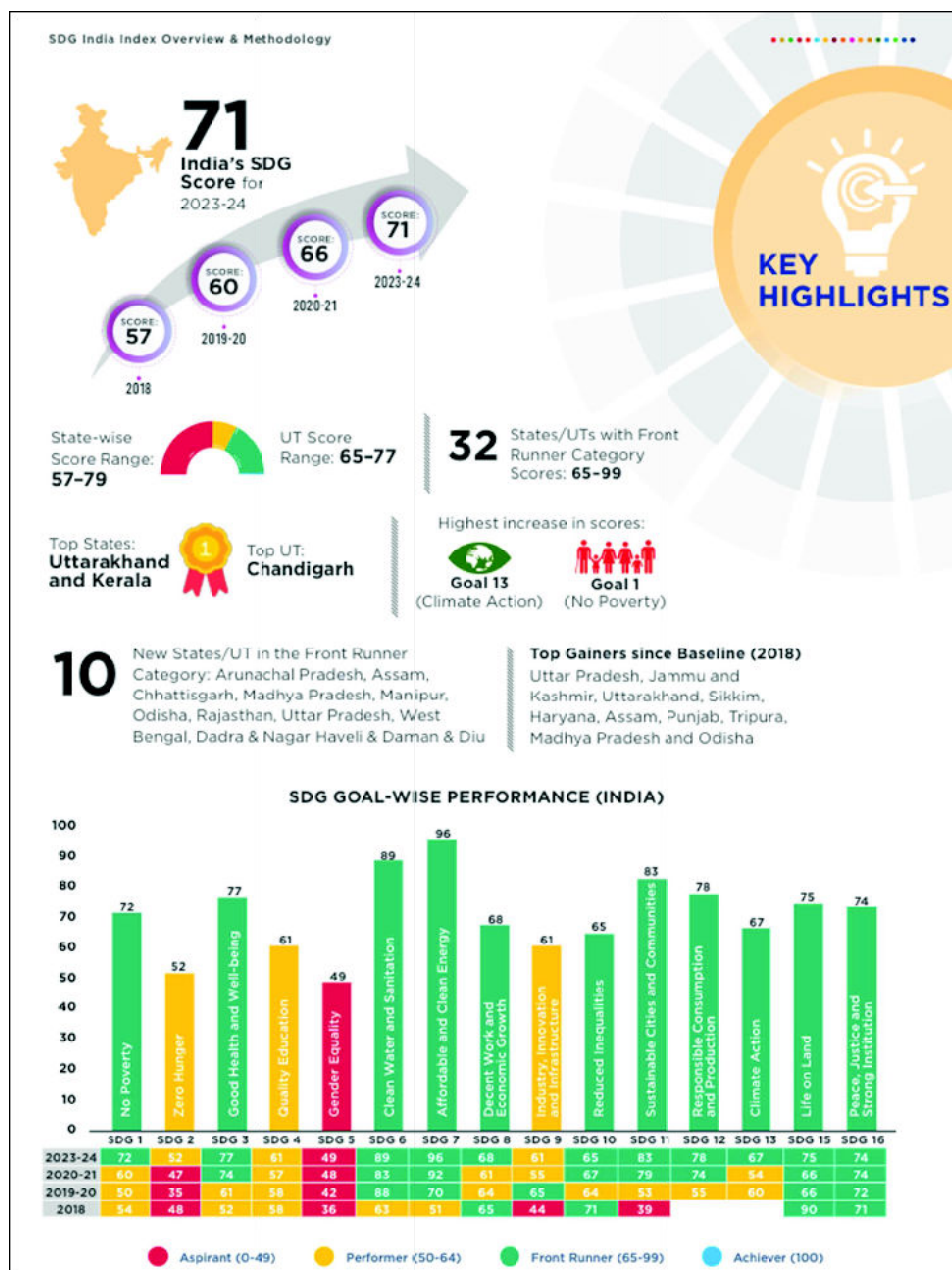


Fig. 4: SDG India Index 2023-2024, Towards Viksit Bharat, Sustainable Progress, Inclusive Growth, published by NITI Aayog, Gov. of India, July, 2024, sdgindia.index.gov.in, page 67

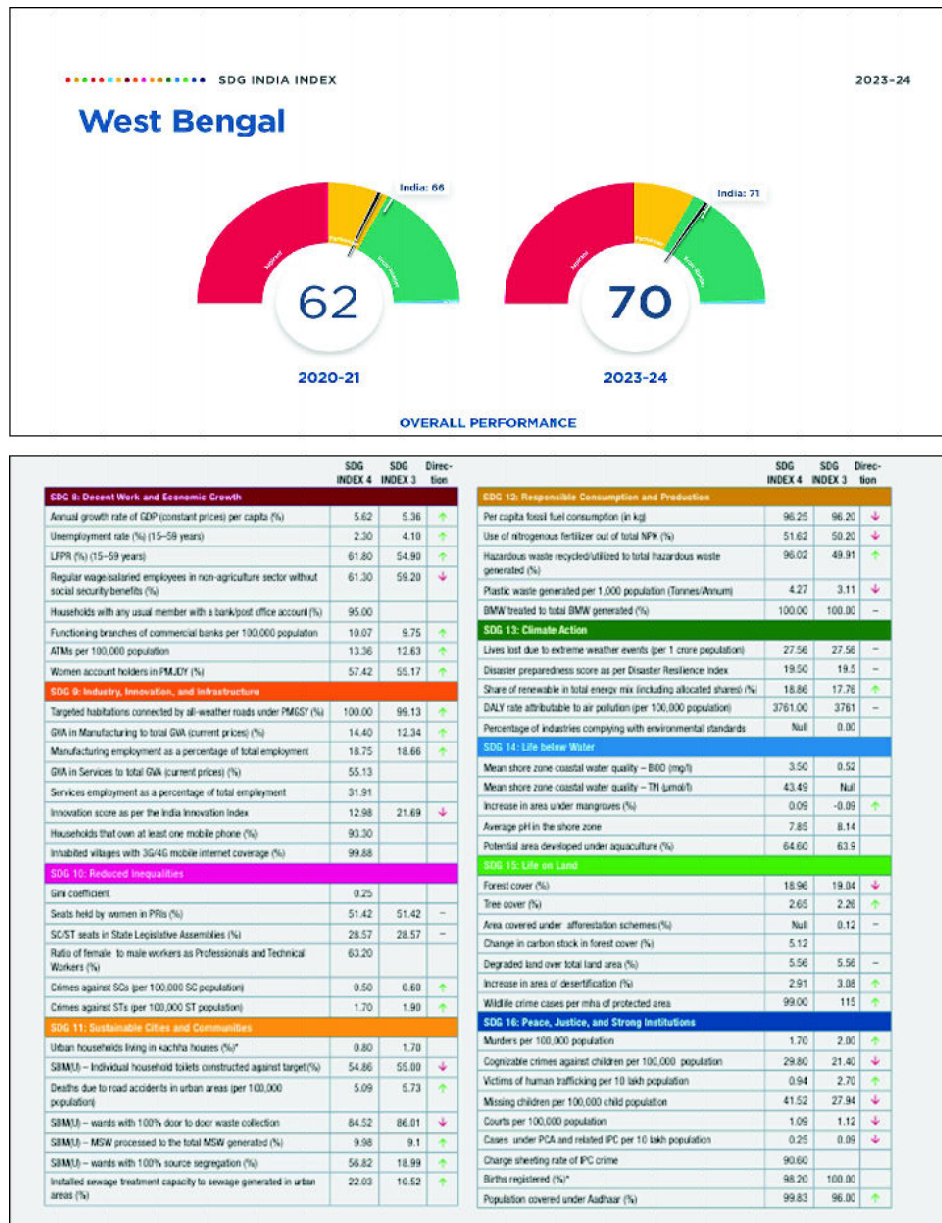


Fig. 5: SDG India Index 2023-2024, Towards Viksit Bharat, Sustainable Progress, Inclusive Growth, published by NITI Aayog, Government of India, July, 2024, sdgindia.index.gov.in, page 258-259. With reference to gross overall score of West Bengal in 2020-2021 (62, while India 66), the gross score of West Bengal has significantly changed in 2023-2024 (70, while India 71).

At this stage, it is to be noted that there are many such targets within specific goals have shown declining trend, which definitely indicates a lack of resilience or lack of compatibility in achieving such targets.

The present author tries to focus on such issues, so that more attention can be paid by the appropriate authorities to put our state in the higher performance index by 20230 (present target year of achieving the SDGs) (Sachs, et al., 2024).

These are enlisted below:

- i) SDG1 (No poverty): Sub -target: Beneficiaries under PMMVY %.
- ii) SDG 2 (Zero Hunger): Sub-target: Pregnant women (15-49) who are anemic (%).
- iii) SDG 3 (Good Health & Well Being): Material Mortality Rate (per 100,000 live births).
- iv) SDG 6 (Clean Water & Sanitation): Stage of ground water extraction (%).
- v) SDG 8 (Decent Work & Economic Growth): regular wage/salaried in non-agriculture sector without social security benefits.
- vi) SDG 9: (Industry, Innovation Infrastructure): innovation score as per India Innovation Index.
- vii) SDG 11:
 - a) SBMU –Individual toilets constructed against target (%);
 - b) SBMU – wards with 100% door to door to waste collection.
- vii) SDG 12 (Responsible Consumption & Production):
 - a) Per capita fossil fuel consumption (in KG);
 - b) Use of nitrogenous fertilizer cut of total NPK (%);
 - c) Plastic waste generated per 1000 population (Tonnes/Annum).
- viii) SDG 13 & 14 (Climate Action & Life Below Water): Data Lacking.
- viii) SDG 15: (Life on Land): Forest Cover (%).
- ix) SDG 16: (Peace, Justice & Strong Institution):
 - a) Cognizable crimes against children per 100,000 children;
 - b) Courts per 100,000 population;
 - c) Missing children per 100,000 child population;
 - d) Cases under PCA & related IPC per 10 lakh population.

If we now look at the Bar Diagrams in between, some comparisons are made with reference to 2020-2021 and 2023-2024. These are as follows to reflect:

- i) Substantial rise in performance from 46 to 56 (SDG 2);
- ii) Very little rise from 41-45 (SDG 5);
- iii) Substantial rise in 45- 54 (SDG 11);
- iv) Very little change from 39-44 (SDG 13); and
- v) Remarkable change from 53 to 91(SDG 15).

Our focus now shifts to the Sustainable Development Report 2024⁹ (Steffen et al., 2015), published by Dublin University Press. We initiate our discussion, while observing the 2024 SDG Dashboards (Level and Trends) for East and South Asia as found in page 33. The entire Dashboard has used certain symbolic representations (see fig. 6)

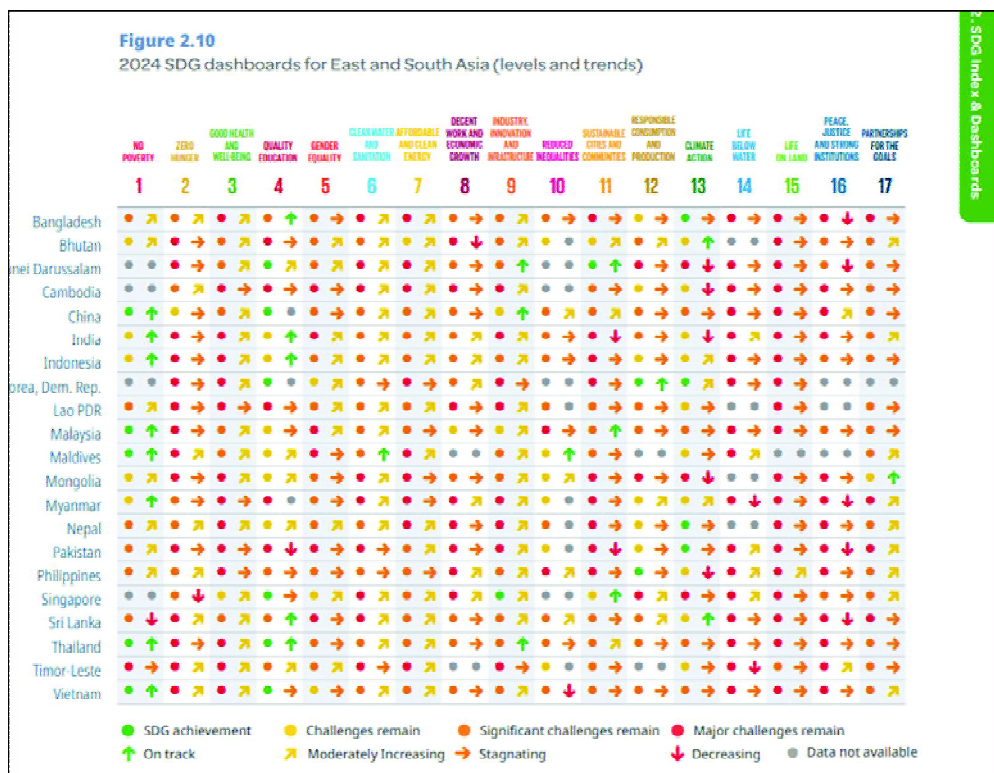


Fig. 6: 2024 SDG Dashboards for East and South Asia (levels and trends), page 25;

Source: (Sachs, J, D, Lafortune, G., Fuller, G., (2024), Sustainable Development Report 2024, The SDGs and the UN Summit of the Future (on line version <https://doi.org/10.25546/108572>)

From this dashboard, we have chosen India and we find that India's achievement in 2024 with reference to SDGs is as follows:

SDG 1: >ØmÜ (challenges remain, but on track); SDG 2 (major challenges remain, but stagnating); SDG 3 >ØmÜ (major challenges remain, but moderately increasing); SDG 4 >ØkÜ (challenges remain, but on track); SDG 5 >ØjÜ (challenges remain, but moderately increasing); SDG 6 >ØiÜ (significant challenges remain, but moderately increasing); SDG 7 >ØmÜ (significant challenges remain, but moderately increasing); SDG 8 >ØmÜ (significant challenges remain, but moderately increasing); SDG 9 >ØmÜ (major challenges remain, but moderately increasing); SDG 10 – (significant challenges remain, but stagnating); SDG 11 >ØjÜ (major challenges remain and decreasing); SDG 12 – (significant challenges remain and stagnating); SDG 13 >ØiÜ (significant challenges remain and decreasing); SDG 14 >ØmÜ (major challenges remain, but moderately increasing); SDG 15 >ØkÜ (major challenges remain and stagnating); SDG 16 >ØjÜ (major challenges remain and stagnating) and SDG 17 >ØjÜ (challenges remain but moderately increasing).

As this dashboard provides data for East and South Asia, some interesting observations can be made in terms of resilient approach. The readers are requested to study the table for the desired data for other countries, as per their requirements.

Conclusions

As the entire discussion was made on the basis of 'SDG India: Index & Dashboard 2023-2024', and SDG report 2024, it is imperative to conclude our observations, essentially based upon these two publications. It is urged upon that the role of NITI Aayog would be very crucial as it would act as a catalyst can facilitator and definitely as an enabler to drive the implementation process of SDGs on the right and a fast track, with minimum glitches and obstacles.

As per the studied reports, as mentioned above, it is needless to say that the six SDG transformations should be recognized as the key functional tools through which all 17 SDGs can be achievable. To reiterate, these six major societal transformations are education and skills; health and well-being; clean energy and industry; sustainable land use; sustainable cities; and digital technologies. Furthermore, the final call for understanding, "A Resilient Approach Towards Attaining Sustainable Development Goals in India (and the rest of the globe as well)" would be guided and governed by the twin principles to "leave no one behind" and ensure "circularity and decoupling".

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