



INTEGRATED SUSTAINABLE DEVELOPMENT IN NORTH-EAST INDIA

Dr Anita Deka Bora¹, Dr Chanam Sonia Devi²

¹Associate Professor, Department of Education, Lakhimpur Girls College, North Lakhimpur, Assam, email: rintinlp@gmail.com

²Assistant Professor (S-3), Dept. of ACEE, MU, email: chanam.ed@gmail.com

Article History:

Article Type: **Research**

Received Date: 23/02/2026

Revised Date: 20/04/2026

Accepted Date: 16/05/2026

Published Date: 27/05/2026

Keywords: sustainable development, livelihood, biodiversity, connectivity, inclusive development

ABSTRACT

Sustainable development refers to a pattern of development that meets present needs while protecting the capacity of future generations to meet their own needs. The Sustainable Development Goals (SDGs) provide an important framework for such an approach. North-East India occupies a distinctive position in the socio-economic and ecological landscape of the country. Comprising Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, the region is characterized by rich biodiversity, diverse ethnic communities, traditional knowledge systems and considerable natural resources. At the same time, geographical remoteness, inadequate infrastructure, livelihood insecurity, environmental vulnerability, unemployment and uneven access to quality education and healthcare continue to affect its development. This paper examines integrated sustainable development in the eight North-Eastern states of India through secondary data analysis of district-level sustainable development goal. The study uses the SDG Index 2023-2024 prepared by NITI Aayog in collaboration with the Ministry of Development of North Eastern Region. The findings indicate that substantial progresses 103 of the 121 districts (85.1%) were classified as Front Runners compared with 62% in the previous record. The paper highlights integrated development framework combining education, livelihoods, digital inclusion, environmental conservation, gender equality and locally responsive governance.

Introduction

The understanding of development has gradually shifted from a narrow focus on economic expansion to a broader concern for human well-being, environmental stability, and long-term resilience. Experiences across the world have demonstrated that growth achieved at the cost of ecological degradation and social exclusion is neither durable nor desirable. In response to these realizations, sustainable development has emerged as a guiding framework that integrates economic progress with social justice and environmental responsibility.

In India, this shift is particularly significant. The country's development trajectory is shaped by demographic pressure, regional inequalities, ecological diversity, and historical legacies. Rapid economic growth has lifted millions out of poverty, yet it has also intensified challenges such as resource depletion, environmental stress, and uneven regional development. Sustainable development therefore represents an effort to recalibrate growth strategies so that economic advancement does not undermine ecological balance or social cohesion.

The relevance of this framework becomes even more pronounced in the North-East region of India, which includes Assam and seven other states. The region is marked by fragile ecosystems, rich biodiversity, complex ethnic composition, and unique cultural traditions. It also faces structural constraints such as difficult terrain, limited industrialization, and vulnerability to natural hazards. Applying conventional development models in such a setting can lead to unintended consequences, including environmental damage and social disruption.

Hence, sustainable development in the North-East requires a context-specific approach that recognizes ecological limits, respects indigenous institutions, and prioritizes inclusive livelihoods. This report examines sustainable development in India with a focused lens on Assam and the North-Eastern states, integrating conceptual discussion, empirical illustrations, tables, and a conceptual framework to present a comprehensive analysis.

Objectives of the study

The present study has the following objectives:

- i. To examine the status of sustainable development in North-East India
- ii. To analyze district-level SDG performance in the region.
- iii. To examine disparities among districts.
- iv. To analyze environmental sustainability as a component of regional development
- v. To assess future pathways for sustainable development in the region.
- vi. To identify key concerns and propose mitigation measures to ensure long-term sustainability.

Research Methodology

The study adopts a qualitative and descriptive research approach, drawing primarily on secondary sources such as government publications, academic literature, policy briefs, institutional reports, and credible analytical writings. Instead of reproducing existing narratives, the study synthesizes ideas and evidence to generate original interpretations relevant to the North-Eastern context.

A thematic method is used to organize the analysis under economic, social, environmental, and institutional dimensions. Selected examples from Assam and other North-Eastern states are examined as illustrative cases rather than exhaustive evaluations. Tables are employed to enhance clarity and comparison, while a conceptual framework is developed to visually integrate the major components of sustainable development discussed in the study.

Result and Discussions

Table 1 indicates the North-Eastern Districts Sustainable Development Goals Index

Indicator	2023-2024
North-Eastern states	8
Total districts in region	131
Districts covered	121
Coverage	92.4%
Indicators	84

Indicators from Union sources	41
Indicators from State Sources	43
SDGs covered	15

Source: NITI Aayog Index 2023-2024

From the table no.1 shows that the detailed evidence for examining sustainable development at the district level. Its coverage increased from 103 districts in the first edition to 121 districts in the second edition. This improvement is important because district-level data can reveal inequalities that may be hidden by state-level averages.

Table no. 2 distribution of overall performance of North-Eastern Region districts

Category	Number of districts	Percentage
Front Runner	103	85.12%
Performer	18	14.88%
Aspirant	Nil	Nil
Achiever	Nil	Nil
Total	121	100%

Source: NITI Aayog Index 2023-2024

The above table no. 2 distributes the overall performance of North-Eastern Region assessed districts. It found that 103 of the 121 assessed districts were Front Runners while 18 were Performers. But the Aspirant and Achiever was no assessed district. According to NITI Aayog reports Front Runner share increased from 62% to 85.12% in 2023-24. This shows that broad progress across the region while also showing that there remains considerable distance between current performances.

Table no. 3 details range of District-level SDG Scores

Indicator	Scores
Highest district score-Hnahthial, Mizoram	81.43
Lowest district score-Londging, Arunchal Pradesh	58.71
Difference	22.72 points

Source: NITI Aayog Index 2023-2024

From the above table no.3 its shows that the difference of 22.72 points between the highest and lowest scores ranges of district-level of Sustainable Development Goals. It shows that district-level planning is required to identify areas with specific differences.

Table no.4 distribution of selected districts SDG Scores

District	State	Score
Hnahthial	Mizoram	81.43
Champhai	Mizoram	79.86
Gomati	Tripura	78.79
Mokokchung	Nagaland	78.43
West Tripura	Tripura	77.64
Kohima	Nagaland	76.93
South Tripura	Tripura	76.71
Gangtok	Sikkim	76.64
Kolassib	Mizoram	76.50
Dimapur	Nagaland	76.29
Imphal West	Manipur	73.21
Imphal East	Manipur	72.93
Longding	Arunachal Pradesh	58.71

Source: NITI Aayog Index 2023-2024

The above table no.4 its shows that the distribution of selected districts SDG Scores. It highlights the diversity of the selected districts of the highest and lowest scores of district-level of Sustainable Development Goals. The highest score district is hnahthial district in Mizoram i.e 81.43% followed by Champhai district in Mizoram (79.86%) , Gomati district from Tripura (78.79%), Mokokchung district from Nagaland (78.43%), West Tripura district from Tripura (76.71%), Kohima district from Nagaland (76.93%), South Tripura district from Tripura (76.71%), Gangthok district from Sikkim (76.64%), Kolassib, Dimapur, Imphal West, Imphal East and the lowest is Longding in Arunachal Pradesh i.e 58.71%.

Table no.5 Environmental significance of North-east India

Indicator	Reported value
India's geographical area represented by NER	7.98%
India forest and tree cover	21.08%
Change in forest and tree cover reported for NER	-327.30 Km2

Source: Forest Survey of India 2023

The table no.5 shows the details environmental significance of North-east India. According to 2023 forest report it shows that the eight north-eastern regions occupy 7.98% of India's geographical area but account for 21.08% of the country's total forest and tree cover. The report also records an overall decrease of 327.30 km² in forest and tree cover in the region at the assessment. Thus, it demonstrates why environmental conversation must be integrated with economic and social development.

Findings:

1. District-level SDG performance has improved. The Front Runner category increased from 62% in the earlier edition to 85% in 2023-24.
2. Inter-district disparities remain substantial with ranging from 81.43 to 58.71.
3. Environmental sustainability is a central development issue, given the ecological importance of the region and the reported change in forest and tree cover.
4. District-level planning is important because state averages can conceal considerable variation between districts.
5. Environmental protection and social inclusion need to be planned together rather than through isolated programmes.

Conclusions

Sustainable development in India reflects an evolving understanding of progress that values long-term resilience over short-term gains. In the North-East, and particularly in Assam, sustainability acquires heightened importance due to ecological fragility, cultural diversity, and historical developmental constraints.

This study demonstrates that sustainable development in the region must be context-sensitive, inclusive, and environmentally grounded. Infrastructure, agriculture, livelihoods, and governance initiatives show positive outcomes when aligned with local realities and ecological limits. At the same time, unresolved challenges related to environmental risk, social equity, and institutional capacity require continuous attention.

Ultimately, sustainable development in North-East India is not about replicating national growth models but about crafting region-specific pathways that harmonize development with nature and society. Such an approach offers the most viable route to ensuring prosperity, resilience, and dignity for present and future generations.

The future of the North-East should therefore be based not simply on more infrastructure or higher economic output but on inclusive, resilient and environmentally responsible development. Greater cooperation among governments, communities, educational institutions, researchers and civil society can help transform the region's unique resources into sustainable opportunities while protecting its ecological and

References

1. Bora, U. (2020) Indigenous approach to the Sustainable Development Goals in India with special reference to Assam. Paper presented at the International Conference on Sustainable Development (ICSD). Available at: <https://ic-sd.org/wp-content/uploads/2020/11/Upendranath-Bora.pdf> (Accessed: Day Month Year).
2. Jain, A., Neela Madhaba, S. and Mandal, S.T. (2022) 'Agricultural sustainability in the North Eastern Region of India: a Sustainable Livelihood Security Index (SLSI) approach', *Ecology, Economy and Society – the INSEE Journal*, 5(2), pp. 43–63.
3. NITI Aayog and United Nations Development Programme (UNDP) (2024) North Eastern Region District Sustainable Development Goals Index 2023–24. New Delhi: NITI Aayog. Available at: <https://www.undp.org/india> (Accessed: Day Month Year).
4. Saha, D., Barman, S., Hoque, S.U. and Baruah, B. (2025) 'An analysis of Sustainable Development Goals in the North-Eastern States of India and Government interventions', *Journal of Advanced Zoology*, 46(1), pp. 110–126.
5. North East Foundation for Regional Sustainability (NEFRS) (n.d.) Community-based sustainable development initiatives in North East India. Available at: <https://nefrs.org> (Accessed: Day Month Year).
6. World Commission on Environment and Development (WCED) (1987) *Our common future*. Oxford: Oxford University Press.
7. Rogers, P., Jalal, K.F. and Boyd, J.A. (2007) *An introduction to sustainable development*. London: Earthscan.
8. Lusseau, D. and Mancini, F. (2018) 'The sustainome of global goal interactions varies by country income and is disproportionately influenced by inequalities', *arXiv preprint*, arXiv: 1804. 09095.
9. Hasan, M.T., Shamael, M.N., Akter, A., Hossain, M.A. and Rahman, M.M. (2023) 'An artificial intelligence-based framework to achieve the Sustainable Development Goals in the context of Bangladesh', *ar Xiv preprint*, arXiv: 2304.11703.
10. Global Development Research Center (GDRC) (n.d.) Sustainable development concepts: a practical basis for the Sustainable Development Goals. Available at: <https://www.gdrc.org/sustdev/concepts.html> (Accessed: Day M)