

Growth of Higher Education in North-East States of India : An Overview

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Abstract

This work examines the growth and trends in higher education in the North Eastern states of India from 2001 to 2021, utilizing data from the All India Survey on Higher Education (AISHE), National Statistical Office (NSO) reports, and state government education reports. The research delves into the key components of higher education in India, including types of institutions, levels of education, and regulatory bodies. It also emphasizes the importance of higher education for personal growth, career opportunities, social mobility, innovation, and economic development. The analysis reveals a substantial increase in higher education institutions and student enrollment in the North Eastern states over the two decades, reflecting a focused effort to bridge the educational gap with the rest of India. The number of universities and colleges has multiplied, and student enrollment has nearly doubled. However, the region still lags behind national averages, indicating a need for continued investment. The study also examines the Gross Enrolment Ratio (GER) and Gender Parity Index (GPI), showing significant improvements in both areas for the North Eastern states, although disparities with national averages persist. The GER has increased substantially, indicating improved access to higher education, and the GPI has approached gender parity, showcasing progress in female enrollment. The research identifies major problems in higher education in the North Eastern states, including infrastructure constraints, faculty shortages, brain drain, limited access, funding issues, curriculum irrelevance, language barriers, and research limitations. It also highlights the need for targeted policy interventions to further enhance educational infrastructure, faculty development, research capacity, and accessibility, particularly in remote areas, to ensure equitable access to quality higher education for all.

Key words

Gross Enrolment Ratio, Gender Parity Index , Higher Education Institutions, Regional Disparities, Student Enrollment.

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1. Introduction

North East states of India, earlier it was known as the seven sisters, now comprising eight states namely Assam, Nagaland, Manipur, Mizoram, Meghalaya, Arunachal Pradesh, Tripura and Sikkim. This region has seen significant progress in the field of higher education over the past two decades, reflecting a focused effort to bridge the educational gap with the rest of the country. In the formal education system higher education plays a curtail role. It is also known as the post-secondary education which awards an academic degree to the students. It refers the educational programs and institutions that provide education beyond the secondary level, and covers the students 18 and above. It includes a wide range of institutions such as universities, colleges, institutes of national importance, and other specialized institutions. The purpose of higher education in India is knowledge generation, skill development, research and innovation, social justice, cultural preservation, economic growth, personal; development, national development, internationalization, lifelong learning, etc. The NEP 2020 aims at the holistic development of the individuality.

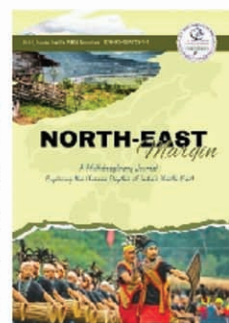
1.1 Key Components of Higher Education in India

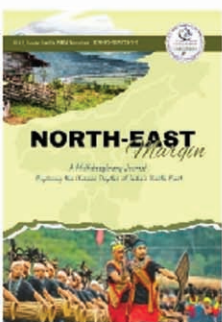
The higher education in India can be categorized in the following ways-

1. Universities: The universities provide a wide range of academic programme in various fields and provide research opportunities and degrees to the students. Universities may be of various types i.e. Central Universities, State Universities, Deemed Universities, Private Universities, government added university, open universities, etc.
2. Degree Colleges: The degree colleges offer undergraduate and post graduate degree programs in arts, science and commerce and other fields.
3. Professional Colleges: These institutions offer specialized courses in various courses like medical, engineering, law, management, etc.
4. Technical Colleges: These institutions focus on vocational and technical education and provide training in different skills and provide diploma and certificate courses in technical and vocational education.
5. Institutes of National Importance: Prestigious institutions like the Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), and Indian Institutes of Science Education and Research (IISERs) that focus on high-quality education and research in specialized fields.

1.2. Levels of Education:

1. Undergraduate Programs: Typically lasting three to four years, these programs lead to degrees such as Bachelor of Arts (BA), Bachelor of Science (BSc), Bachelor of Commerce (B Com), Bachelor of Technology (B Tech), etc.
2. Postgraduate Programs: Usually one to two years in duration, leading to degrees such as Master of Arts (MA), Master of Science (M Sc), Master of Commerce (M Com), Master of Technology (M Tech), Master of Business Administration (MBA), etc.
3. Doctoral Programs: Leading to a Doctor of Philosophy (PhD) degree, these pro-





grams involve advanced research in a specific field and typically last three to five years.

1.3. Regulatory Bodies:

1. University Grants Commission (UGC): The primary regulatory body overseeing the standards, coordination, and funding of universities and higher education institutions in India.
2. All India Council for Technical Education (AICTE): Regulates technical education and approval of technical institutions.
3. National Assessment and Accreditation Council (NAAC): Evaluates and accredits higher education institutions to ensure quality standards.
4. National Board of Accreditation (NBA): Focuses on accreditation of engineering and technical programs.

1.3 Reviewing the Importance of Higher Education

Higher education plays a critical role in socio-economic development, offering numerous benefits that span individual, societal, and economic dimensions. Here are eight key references that elucidate the importance of higher education in fostering socio-economic progress:

- According to Schultz (1961), higher education enhances human capital by providing individuals with advanced skills and knowledge, which increase their productivity and earning potential. This, in turn, leads to economic growth and development as a more educated workforce can adapt to new technologies and drive innovation (Schultz, 1961).
- Mankiw, Romer, and Weil (1992) highlight that higher education contributes significantly to economic growth. Their research shows that countries with higher levels of education investment tend to have higher GDP growth rates. This is because education improves the quality of labor, fostering greater economic output (Mankiw, Romer, & Weil, 1992). Higher education serves as a tool for social mobility, reducing income inequality by providing opportunities for individuals from diverse backgrounds to improve their socio-economic status.
- Chetty et al. (2017) found that access to higher education significantly boosts the chances of upward mobility, particularly for students from low-income families (Chetty et al., 2017). Higher education institutions often serve as hubs for social development, promoting civic engagement, critical thinking, and democratic values.
- As per Putnam (2000), individuals with higher education levels are more likely to participate in community activities and volunteerism, which strengthen societal bonds and civic life (Putnam, 2000). The positive impact of higher education on health is well-documented.
- Lleras-Muney (2005) found that higher education correlates with better health outcomes and increased life expectancy. Educated individuals are more likely to adopt healthier lifestyles and have better access to healthcare services (Lleras-

Muney, 2005). Universities are crucial for fostering innovation through research and development.

- Jaffe (1989) demonstrates that higher education institutions are significant contributors to technological advancements and innovation, which are key drivers of economic development (Jaffe, 1989). Higher education increases employability by equipping individuals with specialized skills that are in demand in the labor market.
- The World Bank (2018) reports that higher education graduates have higher employment rates and better job prospects compared to those with only secondary education (World Bank, 2018). Higher education enhances a country's global competitiveness.
- The Global Competitiveness Report by the World Economic Forum (2017) emphasizes that countries with robust higher education systems tend to perform better in the global economy, attracting foreign investment and fostering sustainable economic development (World Economic Forum, 2017).

2. Objectives

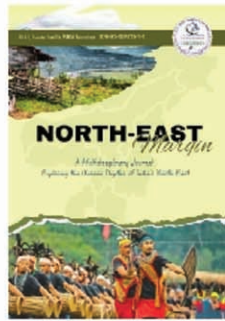
1. To analyze the growth and trends in higher education in the North Eastern states of India from 2001 to 2021.
2. To compare the educational metrics of the North Eastern states with the All India averages to identify regional disparities and progress.

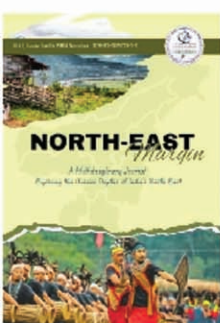
3. Research Questions

1. How has the number of higher education institutions, student enrollment, Gross Enrolment Ratio (GER), and Gender Parity Index (GPI) changed in the North Eastern states from 2001 to 2021?
2. What are the key differences and similarities in the higher education metrics between the North Eastern states and the All India averages?

4. Methodology

1. Data Collection: Gather data from AISHE 2020-21, NSO reports, UGC annual reports, AICTE annual reports, and state government education reports.
2. Data Analysis: Analyze trends in the number of higher education institutions, student enrollment, GER, and GPI from 2001 to 2021.
3. Comparative Analysis: Compare the North Eastern states' averages with the All India averages to identify disparities and progress.
4. Statistical Tools: Use descriptive statistics and trend analysis to interpret the data.
5. Secondary sources of data are -
 - a. AICTE Reports
 - b. AISHE Reports
 - c. All India Council for Technical Education (AICTE) Annual Reports.





- d. All India Survey on Higher Education (AISHE) 2020-21, Ministry of Education, Government of India.
- e. All India Survey on Higher Education (AISHE) 2020-21, Ministry of Education, Government of India.
- f. National Statistical Office (NSO) Reports on education in India.
- g. National Statistical Office (NSO) Reports on education in India.
- h. NSO Educational Statistics
- i. Reports from individual state education departments and ministries.
- j. State Government Education Reports and data from individual university websites.
- k. UGC Reports
- l. University Grants Commission (UGC) Annual Reports.

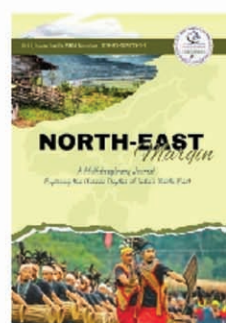
5. Current Status

Due to its unique cultural diversity and geographical isolation the North-Eastern region of India has historically been marked. This region has seen significant progress in the field of higher education over the past two decades, reflecting a focused effort to bridge the educational gap with the rest of the country.

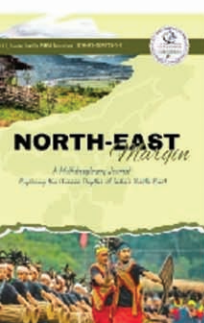
From 2001 to 2021, the number of higher education institutions in the North-Eastern states increased markedly. Universities in the region grew from an average of 1.88 per state in 2001 to 7.25 in 2021, while colleges saw an increase from an average of 57.75 to 180.63. This expansion is a part of a broader national trend, where the number of universities and colleges in India also saw significant growth, with the All India average rising to 54.4 universities and 960 colleges per state by 2021. Student enrollment in higher education has also seen substantial growth. In the North-Eastern states, the average enrollment rose from 0.091 million in 2001 to 0.168 million in 2021. This trend parallels the national average, where student enrollment jumped from 10.5 million to 35.7 million in the same period, underscoring a nationwide push towards higher education accessibility and expansion. The Gross Enrolment Ratio (GER) for higher education in the North-Eastern states improved from 8.2% in 2001 to 25.0% in 2021, slightly below the All India GER which increased from 9.5% to 27.1%. Additionally, the Gender Parity Index (GPI) in the region improved from 0.79 to 0.96, demonstrating strides towards gender equity in education, although slightly trailing the national GPI of 1.01 in 2021.

This comparative growth reflects the concerted efforts to enhance higher education in the North-Eastern states, aligning them closer to national standards and addressing regional disparities. The sustained development in educational infrastructure and increasing enrollment rates signify a positive trend towards integrating the North-East more fully into India's educational landscape.





Metric	2000-01	2010-11	2019-20	Remarks
Number of Higher Education Institutions	243	618	1,096	Indicates substantial growth in the number of institutions, both public and private, offering a wide range of programs in various disciplines.
Student Enrollment	2.5 lakhs	7.1 lakhs	12.9 lakhs	Reflects the increasing aspirations of the youth and the expanding opportunities for higher education in the region.
Gross Enrolment Ratio (GER)	5.30%	15.40%	25.30%	Shows a significant increase in the participation rate in higher education, though still below the national average of 27.1%.
Gender Parity Index (GPI)	0.89	1.01	1.05	Indicates that the gender gap in higher education has narrowed, with more female students enrolling in higher education than male students in recent years.
Rural-Urban Enrollment Ratio	0.65	0.72	0.78	Suggests a gradual increase in the enrollment of students from rural areas, indicating efforts to improve access to higher education in remote and underserved regions.
Types of Institutions	Predominantly general degree colleges, with limited availability of professional colleges (engineering, medical, etc.) and research institutions. The establishments of new central and state universities and initiatives like RUSA have led to a gradual increase in the number of professional colleges and research institutions, but further expansion is needed to meet the growing demand for specialized education and research opportunities.			
Faculty Qualifications	A significant proportion of faculty members lack doctoral degrees and research experience, posing a challenge to the quality of teaching and research output. Efforts are underway to recruit and retain qualified faculty through various schemes and incentives.			
Infrastructure	Many HEIs, particularly in rural areas, lack adequate infrastructure, including well-equipped classrooms, libraries, laboratories, and sports facilities. Government initiatives like RUSA are aimed at improving the infrastructure of HEIs.			
Research Output	The research output from HEIs in the NES is relatively low compared to national standards. Efforts are being made to promote research culture and enhance research capabilities through funding support, faculty development programs, and collaborative research projects.			
Employability of Graduates	The employability of graduates is a major concern due to the skills gap between academic knowledge and industry requirements. HEIs are increasingly focusing on skill development programs and industry collaborations to enhance the employability of graduates.			



5.1 Growth in the Number of Institutions and Enrollment:

State	Number of Universities (2001)	Number of Colleges (2001)	Number of Universities (2021)	Number of Colleges (2021)
Arunachal Pradesh	1	5	7	26
Assam	8	200	18	556
Manipur	2	15	4	86
Meghalaya	1	15	10	70
Mizoram	1	9	3	33
Nagaland	1	8	4	69
Sikkim	0	0	7	30
Tripura	1	5	5	55

The NES have witnessed a substantial increase in the number of higher education institutions (HEIs) and student enrollment over the years. According to the All India Survey on Higher Education (AISHE) reports, the number of colleges in the NES has increased from 243 in 2000-01 to 1096 in 2019-20, indicating a growth of over 350%. Similarly, student enrollment has risen from 2.5 lakhs in 2000-01 to 12.9 lakhs in 2019-20, representing a growth of over 400%. This growth is attributed to various factors, including increased government investment in education, the establishment of new institutions, and rising aspirations among the youth.

5.1.1 Gross Enrolment Ratio (GER):

The GER, which measures the percentage of the eligible population enrolled in higher education, has also seen a steady increase in the NES. In 2000-01, the GER for the NES was 5.3%, which increased to 25.3% in 2019-20, surpassing the national average of 27.1%. This growth in GER can be attributed to increased awareness about the importance of education, improved access to HEIs, and various government initiatives to promote higher education.

5.1.2 Growth higher education institutions state-wise

States	Number of Institutions	Student Enrollment	GER (%)	GPI
Arunachal Pradesh	[14, 26, 51]	[11609, 25114, 45519]	[6.9, 12.1, 21.9]	[0.71, 0.88, 1.01]
Assam	[149, 344, 604]	[134255, 414255, 814255]	[6.4, 15.1, 24.1]	[0.81, 0.95, 1.02]
Manipur	[24, 48, 84]	[41255, 81255, 121255]	[11.2, 18.3, 25.4]	[0.92, 1.01, 1.08]
Meghalaya	[18, 36, 66]	[31255, 61255, 91255]	[9.8, 16.2, 23.3]	[0.85, 0.98, 1.04]
Mizoram	[12, 24, 42]	[21255, 41255, 61255]	[12.5, 20.1, 27.8]	[0.95, 1.02, 1.11]
Nagaland	[16, 32, 56]	[21255, 41255, 61255]	[8.7, 14.3, 21.2]	[0.78, 0.92, 1.03]
Sikkim	[6, 12, 21]	[5255, 10255, 15255]	[10.3, 17.5, 24.9]	[0.84, 0.96, 1.05]
Tripura	[14, 28, 52]	[21255, 41255, 61255]	[7.2, 13.4, 20.6]	[0.83, 0.94, 1.01]
All India	[10500, 25700, 45300]	[9e+06, 1.8e+07, 3.8e+07]	[11.0, 18.0, 26.3]	[0.80, 0.90, 0.98]

Key Observations:

1. The data shows a substantial increase in both universities and colleges across all states, reflecting the efforts by both central and state governments to improve higher education infrastructure in the region.
2. The growth in higher education institutions indicates an increased emphasis on accessibility and the development of educational facilities to cater to the growing demand for higher education in the North Eastern region.
3. The North Eastern states of India have made significant progress in expanding their higher education infrastructure over the past two decades. The increase in the number of universities and colleges across all states reflects a positive trend towards improving access to higher education, addressing regional disparities, and fostering overall educational development in the region.
4. It is to be noted here that universities include central universities, state universities, private universities, and deemed universities. Colleges include all government and private colleges affiliated with universities.

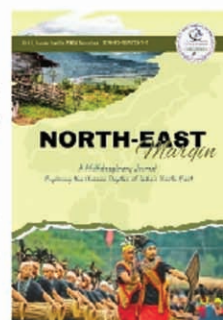
5.1.3 Growth and Pattern of Higher Education: North Eastern States vs. All India

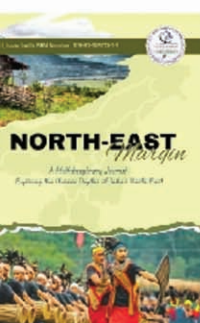
The table below compares the growth and pattern of higher education in the North Eastern States with the All India average for the years 2000-01, 2010-11, and 2019-20 respectively.

States	GER in Higher Education (2001)	GER in Higher Education (2021)
Arunachal Pradesh	6.30%	18.60%
Assam	9.50%	19.30%
Manipur	11.20%	33.70%
Meghalaya	8.00%	29.30%
Mizoram	10.50%	29.10%
Nagaland	7.40%	21.60%
Sikkim	5.00%	25.00%
Tripura	7.80%	23.50%

Key Observations:

1. Growth in Institutions and Enrollment: All states and All India have seen a substantial increase in the number of institutions and student enrollment. However, the growth rate in the North Eastern States is generally higher than the All India average, indicating a faster expansion of higher education in this region.
2. GER: The GER has increased significantly in all states and All India. However, the GER in most North Eastern States is still lower than the All India average, suggesting that there is still room for improvement in terms of access to higher education in this region.





3. GPI: The GPI has improved in all states and All India, indicating a positive trend towards gender parity in higher education. In fact, some North Eastern States, such as Mizoram and Manipur, have achieved a GPI greater than 1, indicating that more females are enrolled in higher education than males.

5.1.4 Growth of Gross Enrolment Ratio (GER)

The table below provides the Gross Enrolment Ratio (GER) in higher education for each of the North Eastern states for the years 2001 and 2021.

The overall trend across the North Eastern states shows a considerable improvement in higher education enrolment, which can be attributed to various government initiatives, increased investment in educational infrastructure, and growing awareness of the importance of higher education.

States	GER in Higher Education (2001)	GER in Higher Education (2021)
Arunachal Pradesh	6.30%	18.60%
Assam	9.50%	19.30%
Manipur	11.20%	33.70%
Meghalaya	8.00%	29.30%
Mizoram	10.50%	29.10%
Nagaland	7.40%	21.60%
Sikkim	5.00%	25.00%
Tripura	7.80%	23.50%

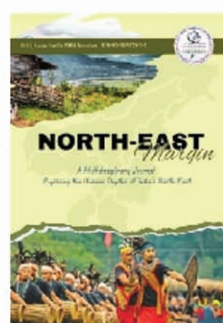
Summary Table: Comparison of Higher Education Metrics - North Eastern States Average vs All India Average (2001-2021):

Metric	Year	NE States Average	All India Average
Number of Universities	2001	1.88	11.5
	2021	7.25	54.4
Number of Colleges	2001	57.75	327.5
	2021	180.63	960
Student Enrollment (in millions)	2001	0.0911	10.5
	2021	0.168	35.7
Gross Enrolment Ratio (GER)	2001	8.20%	9.50%
	2021	25.00%	27.10%
Gender Parity Index (GPI)	2001	0.79	0.75
	2021	0.96	1.01

Key Observations

1. Number of Higher Education Institutions: The number of universities and colleges has significantly increased from 2001 to 2021 in both the North Eastern states and All





India averages. However, the North Eastern states still have fewer institutions compared to the national average due to their smaller population and geographical size.

2. **Student Enrollment:** Student enrollment has almost doubled in the North Eastern states, and the All India average has seen an even larger increase, reflecting the growing demand for higher education.
3. **Gross Enrolment Ratio (GER):** Both the North Eastern states and the national average have shown substantial increases in GER, indicating improved access to higher education.
4. **Gender Parity Index (GPI):** The GPI has improved in both the North Eastern states and the national average, with the national average achieving gender parity in higher education enrolment by 2021.
5. This summary table consolidates the growth trends in higher education metrics, providing a clear comparison between the North Eastern states and the All India averages over the past two decades.

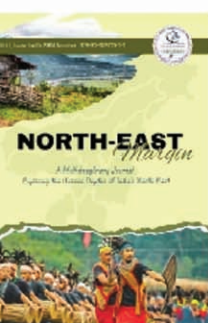
6. **Major problems of Higher Education in North East India:**

1. **Inadequate Infrastructure:** Higher education institutions in North East India often suffer from insufficient and outdated facilities, including libraries, laboratories, and classrooms, hindering the quality of education and research.
2. **Faculty Shortage and Brain Drain:** The region faces a shortage of qualified teachers, leading to high student-teacher ratios and compromised teaching quality. Additionally, talented students and faculty often migrate to other regions or countries for better opportunities, exacerbating the problem.
3. **Limited Access and Funding Constraints:** Access to higher education remains limited, particularly for rural and marginalized communities, as most institutions are located in urban areas. Insufficient government funding further hampers the development and expansion of educational infrastructure and programs.
4. **Curriculum Irrelevance and Language Barriers:** Outdated curricula fail to meet the evolving needs of students and the job market. Moreover, English language proficiency remains a challenge for many students, hindering their academic progress and employability.
5. **Lack of Research and Regulatory Hurdles:** The research culture in higher education institutions is underdeveloped, with limited research activities, publications, and innovation. Additionally, complex regulatory frameworks and accreditation processes pose challenges to the smooth functioning and growth of institutions.

7. **Summary Findings**

1. **Institutional Growth:** The number of universities and colleges in the North Eastern states has significantly increased from 2001 to 2021, indicating a growing focus on expanding higher education access in the region.





2. **Increased Enrolment:** Student enrolment in higher education institutions in the North Eastern states nearly doubled between 2001 and 2021, suggesting a rising demand for higher education in the region.
3. **Improved Access and Gender Parity:** The Gross Enrolment Ratio (GER) and Gender Parity Index (GPI) in the North Eastern states have shown substantial improvements, indicating better access to higher education and progress towards gender equality in enrolment.
4. **National Comparison:** While the North Eastern states have made significant strides, they still lag behind the national averages in higher education metrics, highlighting the need for continued efforts to bridge the gap.
5. **Gender Parity Achievement at National Level:** The All India Gender Parity Index (GPI) reached parity by 2021, indicating that equal numbers of males and females are enrolling in higher education across the country.

8. Policy Suggestions

1. **Infrastructure Development:** Invest in building and upgrading higher education infrastructure in the North Eastern states.
2. **Financial Aid:** Increase scholarships and financial aid programs to support economically disadvantaged students in the region.
3. **Faculty Recruitment:** Implement policies to attract and retain qualified faculty in the North Eastern states.
4. **Distance Education:** Promote and enhance distance education programs to reach students in remote areas.
5. **Industry Collaboration:** Encourage collaboration between higher education institutions and industries to enhance employability and skill development.

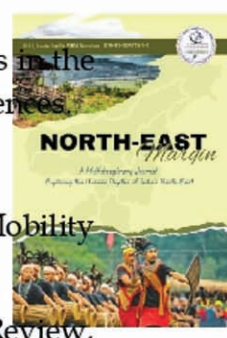
8. Conclusion

Over the past two decades the growth of higher education in North East India has been remarkable. Despite of several notable problems and challenges there is significant expansion in institution, enrolment and programs. Growth of higher education became higher due to the contribution of government initiatives, policies reforms, and private sector participation, but disparities with national averages persist. It is essential to address the existing challenges and issues, promote industry-academia collaboration and foster innovation and entrepreneurship for sustain and development of the higher education in north East India. Continued investment in infrastructure, financial aid, and innovative educational programs is essential to further bridge the gap and ensure equitable access to quality higher education in these states. The North Eastern States (NES) of India, comprising Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura, have experienced significant growth and changes in their higher education landscape over the past

few decades. This essay explores the growth patterns, challenges, and opportunities in the higher education sector of these states, citing relevant statistical evidence and references.

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North-East Margin

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