URBANISATION AND URBAN DEVELOPMENT POLICY ISSUES OF THE NORTH EASTERN REGION

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MAIN REPORT

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PREFACE

The North Eastern Region consisting of the seven Indian states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura is undergoing a process of rapid urbanisation. In a short span of two decades, the urban population of the Region has risen from 0.12 million (1961) to 3.17 million (1981). The few estimates that have been made suggest that the process of urbanisation is likely to receive further impetus in the years to come.

How to steer and guide the process of urbanisation so that it leads to socioeconomic transformation of the Region is the subject matter of this study. Undertaken at the instance of the North Eastern Council (NEC), this study has proposed a long range urbanisation strategy for the Region, and proposed steps to ensure that the future urbanisation process is smooth and in harmony with the Regions's resources, pattern of settlements and living, and the traditions within which the Region is deeply embedded.

This study has taken note of the highly complex nature of the Region, including its rich but undeveloped resources, the difficult and mountainous terrain, small and dispersed settlements, highly diverse characteristics of its people, and, of course, its strategic nature. The study has recognised that the Region is characterised by striking disparities, on the one hand, and inadequate levels of services and infrastructure on the other.

The study has emphasised that urbanisation is an effective agent of change — an agent for generating economic growth, for social change, and crystallisation of the political processes. The National Institute of Urban Affairs have identified a number of nodal centres and suggested their development for the provision of employment, services and security.

The primary interest of the National Institute of Urban Affairs will be to now see that the various suggestions made in the report are effectively implemented. It may require feasibility studies of employment potential as well as service systems. In some cases it might require further fleshing out of the details, particularly with regard to funding of the urban development processes.

The National Institute of Urban Affairs would like to express its gratitude to the NEC who entrusted the present study to us vide letter No. NEC (FIN)/I-33/86-87/189. Special thanks are due to Shri R.K. Tikku, Member Secretary, Shri S.P. Bagla, Senior Planning Adviser, and Shri P.K. Choudhury, Under Secretary (Planning), NEC. Without their cooperation, assistance and insightful discussions this report would not have been what it is now.

For us at this Institute, it has been a challenging assignment. A greater part of the responsibility for conducting this study and report preparation has been borne by Shri Anil Rai, Senior Research Fellow (Urban Economics). He has designed,

coordinated and prepared the final draft of this report. I would like to compliment Shri Rai for his perseverance and sustained work on this study. Prof. Gopal Krishan has served as a Consultant to this project, and contributed immensely to shaping up the ideas and drafting of some of the major sections of the report. Shri Nand lal has provided research assistance for this project.

The report has been processed in the computer unit of the Institute under the overall supervision of Shri R.K.Dahiya, Systems Analyst. Special thanks are due to Ms.Indu Senan and Shri Tek Chand for programming and data computation. Ms. Meera Bhagchandani has provided the secretarial and typing assistance and deserves to be complimented for hard work. I would like to place on record my appreciation to all of them.

February 1989

OM PRAKASH MATHUR
Director

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INTRODUCTION

Urbanisation is generally viewed as a process which leads to an increasing number of people living in large, dense and basically non-agricultural settlements. More specifically, it refers to a process of economic and social transformation which necessitates increasing spatial concentration of people as well as secondary and tertiary economic activities. A continuing accretion of existing urban centres, along with the emergence of new ones, is envisaged.

Being a dynamic process impacting on major macro-economic growth parameters, urbanisation and urban development policy issues are critical to the advancement of any regional system and have significant implications for economic development:

First, the urbanisation process involves a transfer of population from rural to urban areas by way of migration. It transforms the character and life style of the people.

Second, the internal and external economies of scale combined with development of organised exchange mechanisms cause the evolution of several nodes of varying importance. This results in the formation of a hierarchy of urban centres with diverse central place functions. These places act as the nuclei of development activities, stimulate technological innovation and diffuse growth impulses widely in the region.

Third, to the extent urbanisation is accompanied by development of town-based secondary (industrial) and tertiary (services) sector oriented functions, a qualitative change in the sectoral composition of output and real income as well as in the occupational structure of the workforce takes place.

Fourth, urban places act as convergence points for a variety of people, hailing from different parts of a region or a country. As such, their federating role is of no less significance.

Fifth, as urbanisation gathers momentum, it becomes imperative for urban local bodies to provide an adequate urban infrastructure system which ensures the delivery of basic urban services (such as shelter, water supply, sanitation, public works, education and health) to enhance the welfare the people.

Finally, urbanisation places a heavy burden on the urban local bodies and necessitates adoption of measures to augment the flow of financial resources without which the development process is threatened with atrophy and decay.

It is in the context of the above stated implications of the urbanisation process that appropriate and sound urbanisation policies are required. Here it is important to point out that a piecemeal approach to urbanisation is unlikely to succeed. To bring forth desired results, urban policies require to be embedded in the larger socio-economic development framework. Urban policies relating to growth of specific cities cannot be separated or viewed in isolation from policies of spatial development at the regional and subregional level.

Effective and balanced urbanisation policies, hence, require to be directed towards creating effective linkages between rural-agricultural development on the one hand and industrial-urban on the other.

The NER Urbanisation and the NEC

The North-Eastern Region, henceforth abbreviated as NER, comprises the seven Indian states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. It forms the northeastern part of the Indian Union and is connected with the rest of the country through a narrow strip of land in West Bengal. It has an international border with a number of countries, Bhutan to the west, Tibet and China to the north and east, Burma to the south-east, and Bangladesh to the south.

The NER is endowed with a rich variety of natural resources, including land and water on the one hand, and abundant forest, energy and minerals on the other. For its population of 26.54 million in 1981, the NER possesses one of the highest levels of per capita availability of resources. Nevertheless, the level of economic development of the Region continues to be low, of course, with noticeable interregional variations. While the major factor behind the slow growth of the economy of the NER is its weak geographical link with the rest of India and a consequent "distancing" from the mainstream development processes, the following additional factors may also be noted while explaining its "development lag":

- lack of adequate infrastructure facilities, including transport and communications;
- depletion of agricultural resources through shifting cultivation and indiscriminate felling of trees;
- frequent floods and extensive soil erosion; and
- a largely primitive technology, weak industrial base, and low level of urbanisation.

The process of urbanisation, being vitally linked with the overall economic development process, cannot remain unaffected by the retardation of the growth process in the NER.

A number of important changes are visible in the urbanisation scenario of the NER, largely as a sequel to the carving out of new states and districts therein, and a relatively larger allocation of development funds from the central government on a per capita basis. An impressive tertiarisation of the state economies has started taking place. This is manifest in rapid growth in the state and district headquarters. A number of new towns have also emerged. In particular, the existing urban centres have expanded and grown in size, thereby creating problems of congestion and lack of basic amenities, particularly in the bigger cities (communication from Planning Adviser, North-East Council (NEC) Secretariat, Shillong No.NEC/PLAN/I-5/86 dated 24 March 1986).

Being the coordinating body for development planning of the entire NER, the North East Council, henceforth abbreviated as NEC, has been feeling a growing concern, and rightly so, for the problems which have emanated from the somewhat unregulated pace of urbanisation in the Region. At the same time the NEC's responsibility in giving an appropriate direction to the contemporary urbanisation process in the

Region has increased. The process should be perceived less as a problem and more as an instrument of rapid development.

In order, therefore, to have a comprehensive long term perspective on urbanisation in the NER and to propose appropriate strategies and policy measures, the NEC vide their letter No. NEC (FIN)/I-33/86-87/189 dated March 9, 1987, entrusted to the NIUA a research study on "Urbanisation and Urban Policy Issues of the North Eastern Region".

Objectives

The central objective of the present study is to examine the pattern and processes of urbanisation in the NER with a view to proposing a viable urbanisation strategy for the socio-economic transformation of the Region. Flowing from this central concern, the study aims at suggesting a set of appropriate policy measures for effectively guiding the future urban growth of the Region in desired directions.

In the above context the study undertakes an indepth analysis of the process of urbanisation and the emerging urban trends in the NER, focussing attention inter-alia on the following major aspects:

i. Regional structure with special emphasis on physiography, economy, demography and planning;

ii. Urbanisation patterns and processes - the number, location, size, growth pattern and other significant characteristics of all urban centres;

iii. Urban infrastructure - actual service levels and existing gaps in selected urban centres;

iv. Municipal finance - status, capacity and functions of selected urban local bodies;

v. Urban population projections - physical targets and financial requirements for provision of selected services for the horizon years 1991, 2001 and 2011 A.D.; and

vi. Regional urban infrastructure requirements as per norms; and

vii. Urbanisation strategy and policy measures at the State and the Region level.

Methodology

The methodology of the study has mainly involved an examination and analysis of urban data and information at two levels - i. regional and sub-regional level, and ii. city and town level. Detailed examination of maps and topographical sheets of the Survey of India, related to the Region, have been made essentially to cross check the urban data base.

In order to gather first-hand information and views relating to the urbanisation problems, issues, as well as, urban development policy perspectives, the NIUA's experts visited major urban centres of the Region including the State Capitals - Guwahati, Agartala, Shillong, Imphal, Kohima, Aizawl - as well as Silchar and Dimapur, for detailed discussions on existing major urban problems and issues. Discussions were held in particular with a number of concerned officials of the District Administration, North Eastern Council (Planning Division), Town and Country Planning Organisation, Development Bodies, Local Bodies, Municipal Administration Department (Assam), Directorates of Economics & Statistics, and North Eastern Hill University (Shillong).

During discussions, observations regarding problems arising from the urbanisation process, priorities in socio-economic development, and the exigency to improve the urban quality of life through the

provision of basic urban services (electricity, water supply, sanitation, transport, housing etc.) were noted. Besides this, important documents relating to proposed plans for select towns, or urban development in general, as well as plan allocations in particular, were collected from the concerned State departments, and the Planning Commission, New Delhi.

All the above mentioned information was carefully examined and analysed in the preparation of this study. While the basic data on urban places were obtained from various Census of India publications, data on State Domestic Product (SDP) were obtained from the Central Statistical Organisation (CSO), New Delhi

Chapters IV, V, VI and VII relating to actual and projected service levels, the physical and financial requirements for sustaining future population needs (for 1991, 2001 and 2011 A.D.), municipal finances, and normative study of urban regional infrastructure, are based additionally on primary data collected through canvassing a detailed questionnaire directly from the concerned urban local bodies. A summary data sheet was also mail-canvassed from the concerned urban development departments, planning directorates and administrative offices of State Governments. Where the Town Directory (Census of India) of constituent States were available, the services data was cross-checked and updated accordingly.

In order to assess the existing gap as well as the future requirements for urban infrastructure, physical standards for different classes of towns, as developed by the Committee on Augmentation of Finance for Municipalities (Zakaria Committee Report)

were utilised for urban water supply, roads and public street lighting. These standards and norms are reproduced in Annex 4.1 and 4.2.

The Zakaria Committee, estimated the requirements of funds for these services - both for capital costs and for operations and maintenance expenditure of capital assets-by the municipalities. These cost estimates were at 1960 prices. For purposes of our present study, cost estimates have been upgraded by an inflator worked out on the basis of annual compound growth rates of the All-India consumer price index for urban non-manual employees, during the period 1970-71 to 1986-87. The financial requirements for the horizon years have been normalised to the base year 1981.

The estimates of the present infrastructural gaps for the three selected services, (water supply, road and stret lighting) involved a direct comparison with the norms recommended at the national level by the Zakaria Committee (for water supply and roads) and the Committee on Plan Project (COPP) Report by the Planning Commission, Government of India (for street-lighting).

Population projections for selected urban centres over horizon years, are on the basis of annual compound rates, 1971-81, except for the following special urban centres: Guwahati, Bongaigaon and Jorhat. For these three centres, population projections were made using the 1971-81 annual compound growth rate for Assam State as a whole (this works out to 4.4 percent per anum). This method was adopted in view of high urban growth rate, resulting among other factors from an unusual extension of their territorial jurisdiction. Here it may be

mentioned that in the absence of the 1981 census in Assam, the State population figures are "estimates" prepared by the Town Planning Organisation, Guwahati.

The future physical targets for the individual urban services mentioned were estimated on the basis of recommended norms and standards. The future financial requirements - for both capital investment and annual maintenance expenditure - have been calculated on the basis of upgraded service cost estimates as noted above.

The following 22 urban centres for which the requisite urban services data were made available have been considered for the purpose of analysis in Chapter IV :

Assam - Karimganj, Silchar, Tezpur, Bongaigaon, Kokrajhar, Dhubri, Guwahati, Barpeta, Tinsukhia, Dibrugarh, North Lakhimpur, Nagaon, Lumding, Hojai, Jorhat and Sibsagar.

Manipur - Imphal

Tripura - Agartala

Meghalaya - Shillong

Nagaland - Kohima, Dimapur

Mizoram - Aizawl.

The following nine municipal bodies came forward with the necessary data and information, to undertake the analysis presented in Chapters V and VI.

i. Guwahati Municipal Corporation (GMC)

ii. Tinsukhia Municipal Board (TMB)

iii. Dibrugarh Municipal Board (DMB)

iv. Jorhat Municipal Board (JMB)

v. Agartala Municipal Board (AMB)

vi. Shillong Municipal Board (SMB)

vii. Imphal Municipal Board (IMB)

viii. Kohima Town Committee (KTC)

ix. Dimapur Town Committee (TMB)

The normative study of urban regional infrastructure presented in Chapter VII is with reference to the following 13 urban centres: New Itanagar, Guwahati, Jorhat, Tinsukhia, Silchar, Tezpur, Kohrajhar, Imphal, Shillong, Aizawl, Kohima, Dimapur and Agartala.

The following two major limitations were faced in undertaking the analysis in Chapter V on municipal finance:

i. Data inadequacy - although a fairly comprehensive questionnaire was provided to concerned local bodies, for supplying the relevant data, a number of local bodies did not respond. Several others could not supply necessary information on major points. Data gaps and inconsistencies in some schedules had to be rectified through further interaction with the concerned urban local bodies.

ii. Lack of uniformity in accounting - the accounting procedures and the data entry system varied significantly between one class of local body to another. The town committees, in particular, have yet to evolve a systematic accounting procedure. As such, part of the data provided could not be analysed in the study.

An important conceptual premise of the present research is that the process of urbanisation is vitally integrated with socio-economic development parameter. As such it is important to note that urban policies relating to growth of specific urban centres cannot be separated from policies of spatial development. Sound urbanisation policies have to be strongly embedded in a larger framework of overall socio-economic development.

II

SOME ASPECTS OF RESOURCE BASE

DEMOGRAPHY, ECONOMY AND PLANNING

This chapter briefly attempts to review the Region's demographic, economic, planning and resource milieu in which the process of urbanisation has taken place.

Resource Base

The NER comprises the seven States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. It extends from 22^{o} N to 29^{o} 28'N and 89^{o} 40'E to 97^{o} 22'E.

Covering an area of 255,037 sq.kms., with a population of 26.6 million in 1981, the NER accounts for 7.7% of the country's total area and 3.9% of its population. No Less than 90.6 per cent of its total population is rural.

Geomorphologically, the Region is composed of the segments of all the three macro-divisions of India. The hill ranges of Arunachal Pradesh, Nagaland, Manipur and Mizoram belong to the extra-Peninsular mountains (Himalayas); the Brahmaputra valley is an extension of the Indo-Gangetic plains, and the Shillong plateau is essentially an outlier of the Deccan Peninsula.

The Region is characterised by a highly diversified relief, ranging from 15 to over 3000 metres. Physiographically, it may be divided into the Brahmaputra Valley, the Surma Valley, and the Mikir and North Cachar Hillsthe Meghalaya plateau, the hills and mountains

of Arunachal Pradesh, Nagaland, Mizoram, Manipur and Tripura, the Manipur basin and the Tripura plains.

The river Brahmaputra and its numerous tributaries constitute the dominant drainage of the Region. The people have always depended on this mighty river for their agricultural pursuits. In addition, the Brahmaputra provided excellent inland waterways.

The Brahmaputra, with a total length of 2900 km, has a vast drainage basin covering an area of 220,057 sq.kms. As many as 35 tributaries join this river from the north and south along its elongated course. Among the right bank tributaries - the Subansiri, Dhansiri, Manas and Sankosh and among the left bank tributaries - the Lohit, Burhi-Dihing, Disang, Dikhow, Jhanji, Kopili, Digaru, Dudhnai, and Krishnai are the most important.

Apart from this river system, the rest of the Region is covered by innumerable streams and rivulets. Of these, the Barak or Surma (900 km long) is the most important river on the southern side of the Meghalaya Plateau.

Floods are an annual menace to agriculture and human settlements in the Brahmaputra and Barak valleys. The havoc caused by the recurring floods has remained an unresolved problem. This problem is further aggravated by the frequent earthquakes that this Region is prone to, as it falls under the geologically unstable seismic zone.

The Region is, at the same time, amply endowed with forest wealth, hydel power potential and mineral resources. The forests of the NER are rich in timber and a number of saw mills, plywood

factories, as well as paper and pulp industries have come up. At present there are three paper mills - two in Assam (Jogighopa & Guwahati) and one in Nagaland (Tuli). Two more paper projects : viz (i) Nagaon Paper Project and (ii) Cachar Paper Project are under implementation.

Besides timber, the forests of the Region are valuable for their minor produce, such as cane and bamboo among others. Commercial production of cane furniture in the NER is mainly concentrated at Silchar in the Cachar district of Assam. The other important centres in Assam are: Mangaldoi, Nalbari, Jorhat, Golaghat, Imphal and Jiribam in Manipur, Agartala in Tripura, Dimapur in Nagaland, and Bhallokpong and Itanagar in Arunachal Pradesh.

On the whole, about 50% of the area is under forest cover. Forests acount for 61.6% of the total area in Arunachal Pradesh, 36.4% in Assam, 67.8% in Manipur, 36.6% in Meghalaya, 17.4% in Nagaland, 33.8% in Mizoram and 57.5% in Tripura (Source: Land Utilisation Statistics 1982, NEC).

It is estimated that there are 4.92 lakh tribal families surviving on shifting cultivation - or " Jhuming " - in an area of 26,940 sq. km. in NER. "Jhuming" involves clearing a part of the forest, burning the wood and foliage, ploughing the land and mixing the ash with the top soil - and then sowing the seeds. The depleted soil does not sustain more than two or three crops and the "Jhumiya" family then moves on to another part of the forest, repeating this destructive process. There is an imperative need to convert Jhum lands to settled cultivation and agriculture. The efforts being made

by the Government of Mizoram under its Aibauk Jhum Control project are appreciable and deserve mention in this context.

The NER possesses an immense potential for a variety of power resources - hydel, thermal (in the form of coal and gas), geo-thermal and wind power. The Region has two major river basins - the larger Brahmaputra basin and the smaller Barak basin. According to estimates made by the Central Water and Power Commission (CWPC), there exists a potential for generating 14000 MW of hydro-power from the rivers of the Region. The installed capacity of power in the NER as of May 1982 was, however, only 510.08 MW. This is less than four per cent ofthe potential. The State wise break up ofthe installed power capacity is given in Table 2.1.

Table - 2.1

Installed Power Capacity as on May 1982

Name of the State/System	Hydel MW	Thermal MW	Diesel MW	Total
Arunachal Pradesh	9.17	-	2.40	11.37
Assam	-	306.50	23.27	329.77
Manipur	0.60	-	9.81	10.41
Meghalaya	126.71	2.50	1.99	131.20
Mizoram	-	-	6.60	6.60
Nagaland	1.50	-	3.88	5.38
Tripura	10.00	-	5.15	15.15
NER	147.98	309.00	53.10	510.08

Source: North Eastern Region Electricity Board.

Some of the important hydro-electric power generation projects may be listed below :

Meghalaya - Umiam Hydro Electric (H.E.) Project (114 M.W., to be augmented by Umiam Stage IV of 60 MW by 1989)

- Umtru H.E. Project (11.2 MW)
- Kopili H.E.Project (50 MW)

Tripura - Gumti H.E.Project (15 MW)

Manipur - Loktak H.E.Project (105 MW)

Nagaland - Doyang H.E.Project (105 MW)

Assam - Lower Barapani H.E.Project (50 MW)

In addition to these hydel projects, a number of thermal power stations have been set up to meet the growing energy requirements of the Region. Some of the important thermal power stations are located at Bongaigaon (120 MW), Namrup (111.5 MW), Chandrapur (30 MW) and Borgolai (60 MW).

The NER possesses a variety of mineral resources. Though only a quarter of the NER has been geologically mapped, yet numerous promising minerals have been located. The constraints of geographical isolation, inaccessibility, and lack of infrastructure, such as power have , however, retarded the mineral development of the Region.

The State of Assam can proudly claim the distinction of being the pioneer in India in respect of oil exploration since 1889 when the first oil well was drilled Digboi. The oil refinery set up in 1900 was also the only one of its kind in the country for over five decades. Since the discovery of oil in Assam, the oil industry has made tremendous progress in the sphere of prospecting and production.

Intensive search for oil by the O.N.G.C. (Oil and Natural Gas Commission) and the Oil India in post Independence period resulted in the discovery of a number of other oil producing fields in Assam. Besides Digboi field, whose production has started declining, the Nahorkatiya Moran fields possess promising potential. Indeed the Noonmati refinery and the Namrup fertilizer plants are based on the indigenous oil production in Assam.

Besides oil and natural gas, the NER has coal deposits of considerable quantity. An estimated total coal reserves of about 900 million tonnes have been reported in the Region. The main coal-fields of the Region are located in Assam, Arunachal Pradesh, Meghalaya and Nagaland. In Assam, good quality coal occurs at Jaipur-Tipam hills along the course of the Dibang river where it forms the boundary between Sibsagar and Dibrugarh districts. Makum coalfield covers the Bargolai, Ledo, Tipang and Namdang mines along the Southern boundary of Dibrugarh district. Inferior quality coal occurs in North Cachar and Mikir Hills in continuation with the Jaintia group of rocks.

Manipur is even now regarded as a geologically virgin territory. The State has thin veins of asbestos, chromite, copper, lignite, limestone and nickel but none of these occurrences seem to be of economic importance excepting limestone deposits of the Ukhrul area.

The potential of mineral-based industries in Meghalaya mainly depends on four principal mineral deposits, namely limestone, coal, sillimanite and clay. The State produces 95% of India's total output of sillimanite which occurs at Sonapahar, Nongstoin area of Khasi Hills.

In Mizoram, no major mineral deposit of economic importance has been reported so far, although deposits of thick grey pyrite near Chubal village and on the west bank of Bhaleshwari river and Lengpui, deserve attention. Indications of oil, a few seepages of natural gas and saline springs in the central part of Northern Mizoram and small quantities of limestone near Saithual have also been noticed.

In Nagaland, coal seams occuring in the Barails in Changkikong, Japukong region of the Mokokchung district and Nazira or Dikhu valley coalfield represent the most important coalfield at present. Limestone deposits occur in eight bands around Tuensang district and also at Chakabama near Kohima.

The most important mineral potential of Tripura is oil and natural gas which are being explored by the ONGC. Amongst other minerals of importance are glass sand,pottery,plastic clay, shale, and clay and sand deposits.

In Arunachal Pradesh, the poor accessibility, difficult terrain conditions and very limited geological investigations resulted in the territory remaining unexplored for a very long time. However, during the last three decades, deposits of coal, iron ore, sulphides, clay limestone, dolomite, graphite, and mineral water have been reported.

The availability of minerals is an important base for the economic development of the NER. It has affected the size of human settlements of several towns. This is true of places like Digboi, Sibsagar, Bongaigaon, Namrup, Nazira, Amguri, and Moranhut which are either connected with oil drilling or its ancillary industries, such

as oil refining, petrochemicals, fertilizer industries among others. Coal mining industries have been responsible for the development of towns like Makum, Margherita, and Jowai to name a few.

Industrial development, however, is yet to acquire a position of eminence in the regional economy. It has been slow and sporadic in nature. By and large, the secondary sector comprises of small scale units in the handicrafts sector. These are based on processing of local raw materials and are labour-intensive in nature.

The constituent State governments of the NER are at present offering a broad-based package of incentives which includes: capital investment subsidy; transport subsidy; exemption from payment of octroi on raw material, machinery and spare parts; interest subsidy infrastructral support in the availability of water, land, power and work-sheds among others. However, a variety of inhibiting factors, such as inadequate transport and marketing facilities, lack of entrepreneurship, limited demand for various products, as well as absence of knowledge regarding the availability of specific benefits, makes the full utilisation of the incentives package difficult.

It is suggested that the establishment of an ancillary relationship between factories and manufacturing units in the NER, with larger and more well-established ones outside the Region will assist in overcoming the problems of transportation and marketing. This ancillarisation process would involve small and medium units in the NER, manufacturing parts and components for the large scale establishment, which would provide an assured market for the Region's ancillary units. In particular, industries involved in

transportation, power production, machine tools manufacture, chemicals and pharmaceuticals, electronic watches and computer software/ peripherals, are in an advantangeous position to help in setting up and sustaining the ancillary units.

Ancillary industrialisation based on small and medium scale industries is not only feasible, but also desirable and imperative for the socio-economic transformation of the NER, and for setting in motion a process of balanced regional development leading to high levels of urbanisation.

A moderate number of medium scale industries and a few large scale industries have come up in sectors such as oil refining and allied industries including paper and pulp products, sugar, tea, plywood, veneer,cement, and fertiliser. In addition to this, a substantial small scale saw sector, comprising, mills, rice, flour and oil mills as well as other agro-based industries, auto-repair workshops and processing units has emerged, as a result of the attractive incentives package being offered by state government.

An efficienct transportation and communication network is an important precondition for maximising a region's growth potential. Inadequate connectivity through means of transport and communications, is a major obstacle for a balanced development of human settlements and socio-economic transfortation of the NER. In view of its topography and terrain, this region will have to rely mainly on road transport. Because of its low population density NER has a greater length of surfaced roads per thousand population than many other developed states of India. However as may be observed from Table 2.2,

the density of roads is substantially lower than the all India level, as also, the percentage of surfaced roads to total road length, which is less than half the national average.

Table - 2.2

Basic Road Statistics 1979

State/Union Territory	Total Length (kms.)	Surfaced (kms.)	Unsurfaced (kms.)	Density of roads per 100 sq.km. area (kms.)	Per thousand population (kms.)	% of surfaced road to total road length
Arunachal Pradesh	11553	2396	9157	13.82	21.43	20.74
Assam	56983	8396	48587	72.59	3.19	14.73
Manipur	8842	1520	7322	39.47	7.15	17.19
Meghalaya	3690	1475	2215	16.40	3.17	39.97
Mizoram	2916	1086	1830	13.82	7.48	37.24
Nagaland	5785	1392	4393	35.06	10.11	24.06
Tripura	7836	1220	6616	74.63	4.37	15.57
N.E.Region	97605	17485	80120	38.28	4.14	17.91
All India	1604110	623402	980708	48.90	2.54	38.86

Source: Basic Statistics of the N.E.Region N.E.C. Shillong, 1982 p.122.

From the data above, it may be observed that the ratio of unsurfaced to the surfaced road length for the region as a whole works out to a staggering 1:4.58. The need for bringing this ratio down to reasonable levels cannot be overemphasised.

A network of well planned, surfaced road system for the Region, would provide a major impetus to the development of nodal growth centres and appreciably improve the mobility of resources, goods and people both intra as well as inter-regionally. Furthermore, an

efficient and well planned system of road transport would help increase the tourist traffic as well.

Major urban centres located in particularly difficult hilly terain require to be placed on the aviation map in a planned manner. Initially these urban places may be connected though helicopter services and subsequently aviation services should be upgraded in a phased manner. It is heartening to observe that some of the states have already commenced helicopter service on a commercial basis.

The coverage and capacity of the existing railway network to meet the requirements of the Region is insufficient as may be noted from Table 2.3.

Table - 2.3

Railways Route Lengths (in kms.)

State	Metre Gauge	Broad Gauge	Total	Density of rlys/100 sq.km.area	per 100,000 population
Assam	2088.65	105.22	2193.87	2.80	15.03
Tripura	12.35	-	12.35	0.12	0.79
Nagaland	9.35	-	9.35	0.08	1.80
All India	25600.00	30333.00	60100.00	1.83	10.97

Source: Basic Statistics N.E.C. Shillong, 1982 p.126.

Of the seven constitutent states, three - Meghalaya, Manipur and Mizoram - have no railway line at all. As regards Assam, Tripura and Nagaland the rail facilities available are meagre and inadequate to serve the needs of the people. This is evident not only from the low densities of rail lengths, but also from low route kilometerage per lakh of population.

Railways in the NER were built by the British a century ago to serve their commercial interests. The most important requirement for expanding trade and commerce in the Region was the transportation of tea and later oil. The rail lines were therefore laid out to link major tea-growing areas, as well as strategically placed urban centres, such as Dimapur, which linked sensitive border areas.

Since Independence major ivestments have been made to improve the transport capacity of the North Eastern Railways. Construction of a rail cum road bridge over the mighty Brahmaputra river near Pandu was a major development. However, these investments are not sufficient to cater to anticipated traffic in the near future. There have been persistent and justified demands for more bridges over the Brahmaputra. The proposal for a rail bridge at Jogighopa has been under consideration for a long time. A road bridge near Tezpur has been recently constructed by the NEC.

With the tempo of industrialisation picking up in the Region, the existing railway network shall require to be considerably expanded. The NEC has recommended six new lines namely 1.Guwahati - Burnihat 2.Dharmanagar - Kumarghat 3.Silchar - Jiribam, 4.Bhalipara - Bhalukpung 5.Amguri - Tuli and 6.Lalaghat - Vairangte. Only if top priority is given in implementing these proposals, will an appropriate thrust be given to the growth and development of urban centres of NER.

Demography

Table 2.4 presents some salient features and growth trends of population in the constituent states of the NER. Assam accounts for the largest share in the total population of the region: 74.9 per cent

in 1981, followed by Tripura (7.7 per cent). Arunachal Pradesh and Mizoram, sharing 2.4 per cent and 1.8 per cent of the Region's population, are the most sparsely populated States in the NER.

Table - 2.4

Size, Density and Growth Rate of Population

State	Total population 1981 ('000)	Growth rate (%) 1961-71	Growth rate (%) 1971-81	Population density 1981	Scheduled tribe population as %age of total pop.
Arunachal Pradesh	628	38.91	34.63	8	69.82
Assam	19903 *	34.09	36.09 **	254 **	10.99 +
Manipur	1411	37.53	31.82	64	27.30
Meghalaya	1328	31.50	31.56	60	80.58
Mizoram	488	24.92	47.14	23	93.55
Nagaland	733	39.88	50.15	47	83.99
Tripura	2047	36.28	31.81	196	28.44
NER	26538	35.04	35.73 @	104	21.76
INDIA	658141 **	24.80	24.64	225	7.76

* Projected ** Worked out from projected population
@ Estimated + For 1971 Source: Census of India, 1981

A notable demographic feature of the Region is the rapid growth of its population. The decennial population growth rates of 38.91 per cent during 1961-71 and 34.63 per cent during 1971-81 consistently and significantly higher than the national average of 24.80 and 24.64 per cent respectively. The NER is indeed one of the major inmigration zones of India, the restrictions caused by inner line regulation notwithstanding.

The inmigration has been associated, firstly, with heavy influx of refugees from the former East Pakistan, and now Bangladesh since 1971. Nepal contributes a large number of inmigrants. Secondly, the Region has also been receiving a large number of migrants from other states of

India such as West Bengal, Bihar, Uttar Pradesh, and Orissa, particularly to its urban centres, tea plantations, mining centres and construction sites.

The average density of population in the NER is low (104) in comparison with the national average (225). With the exception of Assam, which has a population density of 254, all other constituent units of NER have population densities lower than the national average. Arunachal Pradesh has only 8 persons per sq. km., Mizoram 23 and Nagaland 47. Despite heavy influx of displaced persons from former East Pakistan (now Bangladesh), Tripura's density is only 196.

The very low densities in many parts of the NER are attributable to its largely hilly terrain, primarily agricultural economy, and its conspicuously tribal society. With only 30-35 per cent of the total land area suitable for habitation, the positive effects of a favourable land-man ratio get negated to a large extent. What becomes important for economic development is the capacity of the Region to exploit its immense natural resources for which the development and use of new technologies are imperative.

Table 2.5 presents data on the distribution of workers by the broad categories of cultivators, agricultural labourers, household industry and other workers as per the 1981 census.Agricultural workers (cultivators and agricultural labourers together) share 68.6 per cent of the working force in Manipur, 67.3 in Tripura and around 73 per cent in the remaining four states of the NER, excluding Assam for which data are not available. The national average is 66.5 per cent. In Assam, as per the 1971 census, 76.7 per cent of the working force

was engaged in primary activities, 4.5 per cent in the secondary sector and about 18.8 per cent in tertiary activities. Evidently the employment structure of the NER is dominantly agricultural.

Table - 2.5

Industrial Classification of Main Workers, 1981

State	As percentage of main workers			
	Cultivators	Agricultural labourers	Workers in household industry manufacturing, servicing repairs etc. V(A)	Other workers III,IV,V(b) & VI to IX
Arunachal Pradesh	71.26	2.49	0.32	25.93
Assam*	*	*	*	*
Manipur	63.60	4.99	9.68	21.73
Meghalaya	62.56	9.98	0.84	26.62
Mizoram	70.63	2.49	0.85	26.03
Nagaland	72.28	0.81	0.40	26.51
Tripura	43.29	24.00	1.44	31.27
All-India	41.58	24.94	3.48	30.01

Source: Same as Table 2.4
* Data not available.

Another significant feature of the NER's demography is the very high proportion of scheduled tribe population. Among its seven constituent States, the four, namely, Arunachal Pradesh, Meghalaya, Mizoram and Nagaland are tribal majority. Here scheduled tribes comprise between 70 and 94 per cent of the total population. Even in the other states, scheduled tribes though not in majority are well represented in the population. On the whole 21.76 per cent of the NER's population is tribal as compared with 7.76 per cent in India.

The existence of a large tribal population, accustomed to the age-old way of life of a traditional society, has important implications for the development strategy to be pursued in the region.

To be effective an appropriate policy will call for a kind of "selective acculturation" in which certain healthy aspects of traditional society would have to be retained and nourished.

Simultaneously, a process of judicious intervention could be initiated to bring about desired socio-economic changes in the Region. A network of growth centres could be set up for promotion of industries based on local raw materials and traditional skill. Marketing and credit facilities could be extended through banks and other financial institutions localised at such places and in the process, the whole system will get activated. The local inhabitants would then feel that they were contributing towards building their own economy.

Economy

The economic dimensions of the NER may be best examined through an analysis of the sectoral composition of net state domestic product (Table 2.6), growth trends in net state domestic product (Table 2.7), and income levels (Table 2.8). A careful perusal of Table 2.6 shows that:

i. While the primary sector (agriculture, forestry, fishing, mining and quarrying etc.) contributed 38.4 per cent of the net domestic product in India, its share for the NER was as high as 60.9 per cent. This is explained largely by the prime position of agriculture as the main activity of the people and partly by the sizeable production of tea, petroleum and forest based products in the Region. Within the NER, sharp variations exist: the share of the primary sector being the highest in Meghalaya (65.03 per cent), and the lowest in Nagaland (34.8 per cent).

ii. The secondary sector contributed only 12.1 per cent to the NER's net state domestic product as compared with 22.6 per cent in India. If the component of the construction sector is ignored,

the contribution of the secondary sector drops to 8 per cent. This is only one-third the national average. From a development view point, the contribution of manufacturing industries is the most critical. Here the performance of the NER is far below the nation's average. Only Assam, Tripura, and Manipur seem to possess a statistically significant level of manufacturing industries. But here again, with the exception of Assam, the share of registered industries is much less.

iii. The share of the tertiary sector in the Region's net domestic product (26 per cent) is lower than the national average of 39 per cent. The NER's economy shows a distinctly stronger tendency toward tertiarisation than secondarisation. This cannot be deemed as desirable since promotion of the secondary sector is critical to the overall growth and stability of the economy. In Nagaland nearly 40 per cent of the net domestic product originates in this sector. The figure for Manipur is 34.45 per cent.

Table - 2.6

Sectoral Distribution of Net State Domestic Product, 1983-84 (at Current Prices)

(Per cent)

State	Primary sector	Secondary sector	Tertiary sector	Total
Arunachal Pradesh	51.3	20.3	20.4	100.0
Assam	62.6	12.1	25.3	100.0
Manipur	51.0	10.9	37.3	100.0
Meghalaya	65.1	7.1	27.0	100.0
Mizoram	N.A.	N.A.	N.A.	N.A.
Nagaland	34.0	25.3	39.9	100.0
Tripura	60.6	0.6	30.0	100.0
NER*	60.9	12.3	26.0	100.0
INDIA	38.4	22.6	39.0	100.0

Source: Estimates of SDP, 1960/61 to 1983/84, CSO, Government of India, 1985.

* Excluding Mizoram.

Among the tertiary activities in the Region, public administration is prominent. For understandable reasons, the cost of administration tends to be high in areas which have mountainous topography, dispersed pattern of population, and inadequate

infrastructure. However, this expenditure has to be regulated so as to conserve scarce resources for development.

As a corollary of the same, the Region must industrialise in consonance with its resource and ecological setting. This would naturally stimulate the process of urbanisation which has to be anticipated, properly directed, and adequately provided for in terms of infrastructural facilities and services.

Our understanding of the growth trends of economy in the NER is limited to only four states, namely, Arunachal Pradesh, Assam, Manipur and Tripura, due to non-availability of data for the other states. A faster growth rate of the net state domestic product (SDP) both in current and constant price terms in comparison with the national average emerges as a most significant aspect of the NER's economy (Table 2.7).

Table - 2.7

Growth Trends in Net State Domestic Product

(Rs. in crores)

State	1970/71	1980/81	1982/83(P)	1983/84(Q)
	At current prices			
Arunachal Pradesh	16.54	81.09	98.95	-
Assam	773.50	2397.80	3342.00	3813.80
Manipur	39.76	148.08	223.10	255.84
Tripura	77.9	245.1	-	-
All India	34235.00	105834.00	133151.00	139628.00
	At constant prices (1970/71)			
Arunachal Pradesh	16.54	33.07	36.74	-
Assam	773.50	1095.10	1192.20	1253.30
Manipur	39.76	65.06	78.68	84.02
Tripura	77.90	126.70	-	-
All India	34235.00	47312.00	50633.00	51714.00

Source: Same as Table 2.6.

In 1970/71, the net SDP of Arunachal Pradesh was Rs.16.5 crores (at 1970-71 prices) and stood at Rs.98.9 crores (at current prices) in 1982-83 representing a growth of 499.4 per cent. In Assam, the net SDP was 773.5 crores in 1970-71 and reached Rs.3813.8 crores in 1983/84 at current prices, recording a growth of 393.1 per cent. In Manipur SDP increased from Rs. 39.8 crores to Rs. 255.84 crores in 1983/84, representing an increase of 542.8 per cent over the 1970/71 level. In Tripura net SDP increased by 215 per cent from Rs. 77.9 crores in 1970-71 to 245.1 crores in 1980/81. The comparative increase of the net domestic product for India as a whole, at current prices, was from Rs.34235 crores in 1970/71 to Rs. 139628 crores in 1983/84, representing an increase by 307.8 per cent. If the data are standardised to constant prices with 1970-71 as the base, the net domestic product for India increased by 51 per cent while it grew over the reference period by 122 per cent in Arunachal Pradesh, 62 per cent in Assam, 111 per cent in Manipur and 63 per cent in Tripura.

Table 2.7 shows that per capita income of the NER states is significantly lower than the national average. The actual situation may not be as unfavourable since the people do enjoy at least a high nutritional level. It seems that a large part of the economy being non-monetised (or barter) in nature does not get adequately covered in income statistics. Be that as it may, one redeeming feature is that the per capita income of most of the NER states is growing faster than the national average. During the years 1970-71 to 1983-84, the per capita income, at constant prices, increased by 64 per cent in Arunachal Pradesh, 38.5 per cent in Manipur, and 23 per cent in Tripura as compared with 18.3 per cent in India. Assam, of course,

lagged behind with increase of 8.2 per cent in its per capita income over the reference period.

Table - 2.8

Statewise Per Capita Income at Current and Constant Prices

(in Rs.)

State	1970/71	1973/74	1979/80	1980/81	1981/82	1982/83	1983/84
	at current prices						
Arunachal Pradesh	354	409	1120	1323	1566	-	-
Assam	535	648	1063	1201	1416	1596	1762
Manipur	381	637	1032	1294	1423	1498	1673
Meghalaya	-	598	1068	1135	1236	1308	1483
Nagaland	478	777	1517	-	-	-	-
Tripura	502	649	1095	1206	-	-	-
INDIA	633	870	1339	1564	1741	1868	2201
	at constant prices with 1970-71 as base						
Arunachal Pradesh	354	-	488	540	581	-	-
Assam	535	549	516	547	560	569	579
Manipur	381	450	476	518	523	528	550
Tripura	502	553	590	623	-	617	619
INDIA	633	621	664	700	715	711	749

Note: Constant price, estimates for Meghalaya and Nagaland not available.

Source: Same as Table 2.6.

The welcome rise in per capita income will certainly generate an additional demand for urban goods and services: fillip to urbanisation is inevitable. It is time that an appropriate urban pattern for the NER is designed.

Planning

Regional planning in the NER is carried out under a three-tier planning structure comprising the Central Government, the NEC and State Governments. While central planning concerns itself with plans

which are of national importance, the NEC deals with plans which are of regional importance. The state governments are responsible for development within their jurisdiction. The state plan objectives are formulated in the light of the national objectives, as adopted by the National Development Council (NDC).

With variations in emphasis, the objectives of planning in the constituent states of the NER over successive five year plans have been as follows:

- accelerating the economic growth rate,
- enlarging opportunities for gainful employment,
- achieving alterations in the productive structure,
- reducing regional imbalances,
- securing more equitable distribution of income embracing eradication of abject poverty, and
- achieving self-reliance.

The broad development strategy, with minor variations, in different constituent states of the NER seems to be:

- development and extension of transport/communication infrastructure as well as projects for power, irrigation and flood control;

- extension of social and community services such as health, education, housing, water supply and sewerage;

- development of agriculture and allied rural development sectors including control and reduction of dependence on traditional jhum cultivation in hill areas;

- revival and revitalisation of traditional handloom, handicrafts and other small/medium scale industrial endeavours; and

- encouragement to schemes/projects which are likely to make optimal use of local resources both human and physical.

The NER has been witnessing fairly high levels of planned investment in comparison with the national average for successive five year plan. The plan outlay for NER increased from Rs.33 crores during the First Plan to Rs.179 crores in the Third Plan followed by a sharp drop during the annual plan period. Subsequently the plan outlay in

the NER increased from Rs.369 crores in the Fourth Plan period to Rs.5145 crores in the Seventh Plan. Under the NEC plan also, the total outlay increased from Rs. 90 crores in the Fifth Plan to Rs.675 crores in the Seventh Plan. In per capita terms also, the plan outlay for the NER increased from Rs.485 in the Fifth Plan to Rs.2134 in the Seventh Plan or by 340 per cent. The corresponding increase at the national level was from Rs.329 in the Fifth Plan to Rs.1216 in the Seventh Plan or by 269 per cent.

Table - 2.9
Statewise Per Capita Plan Outlays

(in Rs.)

State/UT	Fifth Plan	Sixth Plan	Seventh Plan	% increase in Seventh Plan over Fifth Plan
Assam	303	609	1146	278
Manipur	825	1909	3420	314
Meghalaya	845	1985	3716	340
Nagaland	1569	3621	7017	347
Tripura	427	1345	2415	466
Arunachal Pradesh	1291	3876	7313	467
Mizoram	1335	3258	10024	650
NEC Contribution	44	141	280	410
NER	485	1131	2134	340
INDIA	329	783	1216	269

Source: Planning Commission, Government of India, New Delhi.

It is also observed that per capita plan outlays for all constituent states (except Assam) were consistently higher than the national average in the Fifth, Sixth and Seventh Plans. In addition, the rate of increase of per capita plan outlays, during the above

three plan periods, was higher in the NER states (not including Assam), in comparison with the all India figure.

One can infer the development priorities from the sectoral allocation of funds. It may be seen from Table 2.10 that irrigation, flood control and power sectors received high priority in all constituent states of NER. The NEC, the individual states, and the Planning Commission have all allocated high proportions of plan funds to these infrastructural sectors.

Although agriculture and allied activities received a fairly high proportion of plan funds, a significant feature noticed in all constituent states of NER is the decline in the share of plan outlay for agriculture and allied programmes during the Seventh Plan.

The industry and minerals sector, which has a higher linkage effect with economic development, is not given due weightage both in the state and the NEC plans. Indeed in the latter plan allocations for this sector declined from 4.4 per cent in the Sixth Plan to 1.6 per cent in the Seventh Plan.

The transport and communications sector has rightly received very high priority in the planning process. In fact, the NEC has accorded highest priority to this sector with an outlay of 44.1 per cent in the Seventh Plan.

Table - 2.10
Sectoral Distribution of Sixth and Seventh Plan Outlays

Sl. No.	State	Plan period	Plan outlay (crore rupees)	Percentage allocation to					
				Agriculture & allied activities	Irrigation/ flood control/ power	Industry & minerals	Transport & communi-cations	Social & community services	General services
1.	Assam	i. Sixth Plan	1115	25.5	40.8	4.9	9.2	18.7	1.0
		ii. Seventh Plan	2100	21.2	39.1	4.9	7.7	24.1	3.1
2.	Manipur	i. Sixth Plan	240	19.5	26.7	8.3	14.6	27.8	3.1
		ii. Seventh Plan	430	16.5	26.6	5.7	16.6	30.1	4.5
3.	Meghalaya	i. Sixth Plan	235	22.9	20.0	4.0	20.4	29.7	2.9
		ii. Seventh Plan	440	22.1	18.9	4.4	18.2	28.3	8.2
4.	Nagaland	i. Sixth Plan	210	27.7	7.3	5.7	26.4	26.4	6.5
		ii. Seventh Plan	440	24.8	12.2	7.1	24.6	26.6	4.8
5.	Tripura	i. Sixth Plan	245	32.1	18.8	5.7	12.9	28.9	1.5
		ii. Seventh Plan	440	23.6	21.8	3.7	11.8	37.5	1.6
6.	Arunachal Pradesh	i. Sixth Plan	212	24.2	12.8	4.8	26.3	30.9	0.8
		ii. Seventh Plan	440	23.0	15.7	2.4	31.8	26.3	0.8
7.	Mizoram	i. Sixth Plan	130	27.1	13.8	3.5	24.8	27.9	2.8
		ii. Seventh Plan	260	20.8	14.1	5.1	22.4	31.8	5.7
	NEC Total	i. Sixth Plan	340	8.8	33.8	4.4	45.6	5.9	1.5
		ii. Seventh Plan	675	6.9	41.2	1.6	44.1	5.2	1.0
	NER Total	i. Sixth Plan	2387	25.5	28.2	5.2	15.1	24.0	2.0
		ii. Seventh Plan	4470	21.5	28.2	4.8	14.5	27.3	3.4
	INDIA	i. Sixth Plan	9750	11.3	32.2	22.9	15.9	14.4	3.24
		ii. Seventh Plan	18000	12.7	39.9	12.5	16.4	17.7	0.9

Source: Plan documents of respective NER states.

The plan outlay for social and community services has risen both in the central and state plans. Plan resources for education, health, housing, water supply and sanitation constitute the major allocations in this sector. While the state plans allocated 27.3 per cent of outlay to this sector in the Seventh Plan, the Central Plan allocation was 17.7 per cent. In the NEC plan, however, allocation was distinctly lower, being 5.2 per cent. In rupee terms, the Seventh Plan outlay for social and community services was of the order of Rs. 1220.31 crores under the state plans; Rs. 3186 crores under the central plan; and Rs. 35.1 crores under the NEC plan.

Table - 2.11

NER: Sixth and Seventh Plan Outlays for Urban Development*

(in Rs. crores)

State	Sixth Plan	Seventh Plan
Arunachal Pradesh	-	0.50 (0.13)
Assam	2.60 (0.002)	12.00 (0.006)
Manipur	1.60 (0.007)	7.55 (1.75)
Meghalaya	1.60 (0.007)	5.00 (1.14)
Mizoram	1.25 (0.009)	5.50 (2.12)
Nagaland	4.15 (1.98)	8.00 (2.00)
Tripura	3.95 (1.61)	7.00 (1.59)
NER	15.15 (0.006)	45.55 (1.02)
INDIA	997.53	1352.18

* Including State Capital Projects.
Figures in brackets are percentages to the total plan outlays.

Source: Planning Commission, Government of India, New Delhi.

Within the services sector, the plan outlay for urban development (including state capital projects) for the NER as a whole increased from Rs.15.15 crores in the Sixth Plan to Rs.45.55 crores in the Seventh Plan (Table 2.11). In percentage terms, the share of the urban development sector in total plan outlay increased from a meagre 0.006 to 1.02 over the two plan periods. The urban development sector seems to be most neglected in Assam where it shares only .006 per cent of the Seventh Plan outlay for the state. Things are no better in other states either. In relative terms, Mizoram ranks first in its allocation to urban development but here again it is hardly 2.12 per cent of the total outlay in the Seventh Plan.

Summarising, this review of the regional structure and planning milieu, demonstrates that despite possessing one of the lighest levels of per capita availability of resources in the country, the NER has remained a "lagging region" with major development constraints particularly in economic and social infrastructure. Notwithstanding an attractive and broad-based package of incentives for new industries (including capital ivestment subsidy, transport subsidy, interest subsidy among others) provided by State Governments, industrialisation has been slow and sporadic in nature. While planned levels of investment in critical sectors, have been rising over successive five year plans, the allocations for urban development sector is languishing. A process of ancillary industrialisation based on small and medium scale industries, drawing upon local resources and skills, is not only feasible but also desirable for socio-economic transformation of the Region. This is considered imperative for setting in motion a process of balanced regional development leading

to high levels of urbanisation. It follows from the above that the NER has entered a phase in which urbanisation is going to play an increasing role but its allocations to urban development are far from adequate. It is now imperative to design suitable urbanisation policies for the Region and to arrange necessary funds for the purpose. In this context, it is essential to first examine the urbanisation patterns and processes in the Region.

III

PATTERNS AND PROCESS OF URBANISATION

In consonance with its largely undeveloped economy, traditional society, and predominantly hilly/mountainous topography dotted with small and dispersed settlements, the NER is one of the less urbanised parts of India. As per the 1981 census, only 11.93 per cent of its total poplation is urban as compared with 23.31 per cent of India. Its urbanisation level is just half the national average.

The average of urban population in all the seven states of the NER is only 3.17 million (Table 3.1). This works out as nearly one-third of the population of Calcutta or one-half that of Delhi. Moreover, 63.94 per cent of the NER's urban population is confined to Assam alone. It follows that the Region is not only at a low level of urbanisation but is also characterised by a striking regional disparity in the distribution of its urban population.

Table - 3.1

Urban Population by States, 1961-81

State/Region/ India	Total Population (in '000)			Urban Population (in '000)		
	1961	1971	1981	1961	1971	1981
Arunachal Pradesh	337	468	632	0	17	41
Assam	10837	14625	19897	913	1326	2047*
Manipur	780	1073	1421	68	141	375
Meghalaya	769	1012	1336	117	147	241
Mizoram	266	332	494	14	37	122
Nagaland	369	516	775	19	51	120
Tripura	1142	1556	2053	103	162	225
NER	14500	19582	26608	124	1881	3171
India	439235	548160	685185	78937	109114	159727

* Estimated

Level of Urbanisation

Although Assam shares almost two-thirds of the Region's urban population yet on its own it is only 10.29 per cent urban (Table 3.2) Tripura shown a comparable percentage of 10.99. In Arunachal Pradesh, hardly 6.56 per cent of the population is urban by residence. Meghalaya and Nagaland are also less urbanised than India. Only Manipur (26.42 per cent) and Mizoram (24.67 per cent) surpass the national average in this regard. However, these two states are also considerably lower on the urbanisation scale when compared to the relatively advanced states of India such as Maharashtra (35.02 per cent), Tamil Nadu (32.98 per cent), and Gujarat (31.08 per cent).

Table - 3.2
Level of Urbanisation by States, 1961-81

State/Region/	Percentage of urban population in the total		
	1961	1971	1981
Arunachal Pradesh	0.00	3.70	6.56
Assam	8.42	8.90	10.29
Manipur	8.68	13.19	26.42
Meghalaya	15.27	14.55	18.07
Mizoram	5.36	11.36	24.67
Nagaland	5.19	9.99	15.52
Tripura	9.02	10.43	10.99
NER	8.51	9.61	11.92
India	18.42	22.12	23.31

The entire NER has only 134 towns with an area which spreads over more than a quarter million sq. km. (Table 3.3). Punjab alone has the same number of towns over an area which is just one-fifth. The Region's share in India's area is 8 per cent; in towns 4 per cent and in urban population 2 per cent. One could easily infer that the average size of towns in the NER is around a half of that in India.

The mean distance between towns in the NER is 49.23 km. as

compared with 33.51 km. in India. By that toker, a town on an average, has to serve an area of nearly two thousand sq.km. as compared with one thousand in India. It also implies that urban services are far more distantly located for most of the rural population in the NER than in India.

Table - 3.3

Number of Towns and Related Data by States, 1981

State/Region/ India	Area (in sq.kms)	Number of towns/urban agglomeration	Mean distance between towns (in kms)	Average area served per town
Arunachal Pradesh	83743	6	127.00	13957
Assam	78438	66	38.90	1188
Manipur	22327	32	28.39	698
Meghalaya	22429	7	60.85	3204
Mizoram	21081	6	63.72	3514
Nagaland	16579	7	52.31	2368
Tripura	10486	10	34.81	1049
NER	255683	134	49.23	1904
India	3287263	3301	33.51	976

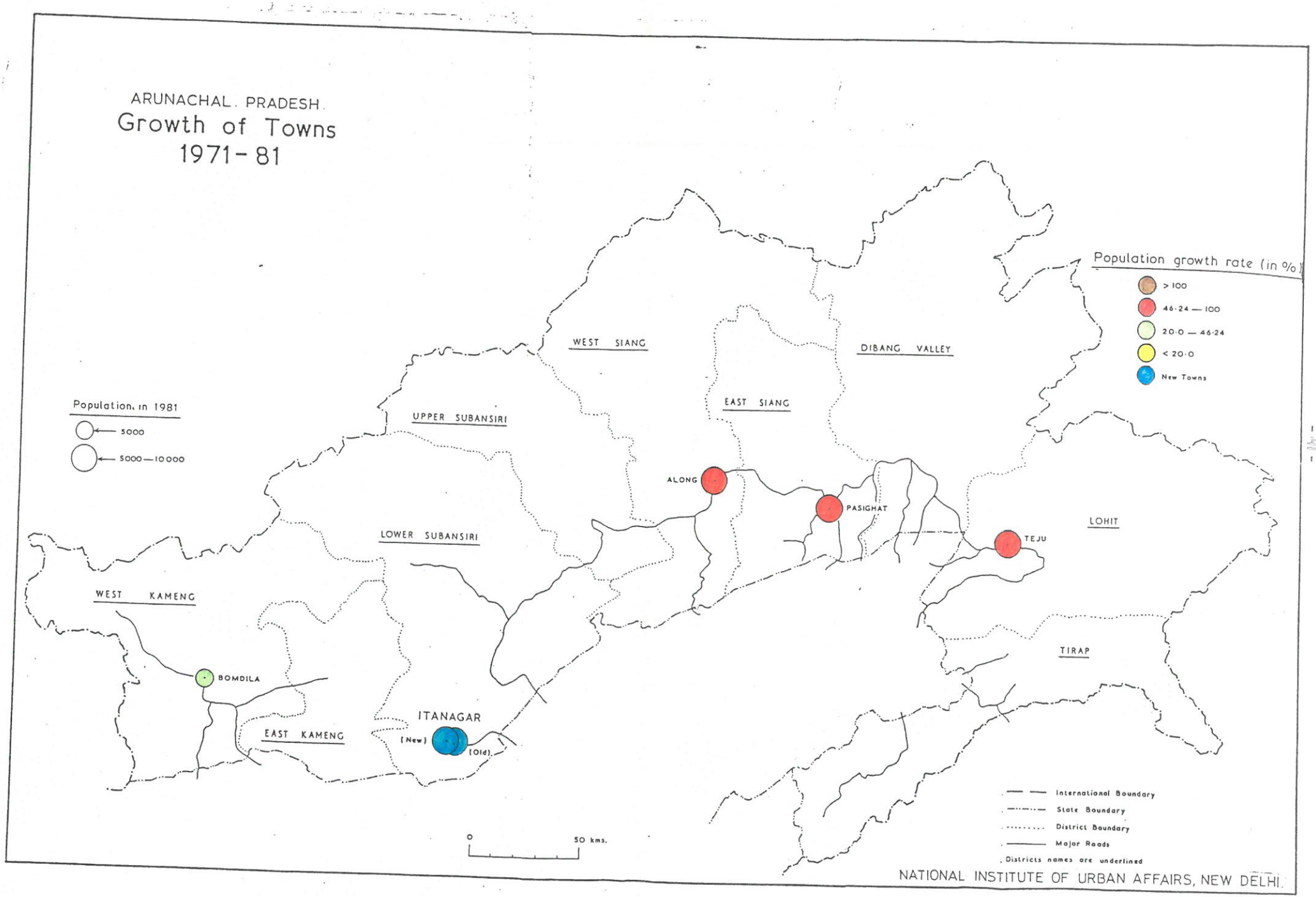
Nearly a half of the NER's towns are confined to Assam. Another one-fourth is in Manipur. The other five states of the Region share the remaining one-fourth of its towns. Arunchal Pradesh, accounting for almost one-third of the total area of the region, is sprinkled with just half a dozen towns.

Locational Patterns of Towns

A study of the locational pattern of towns in the NER brings out many interesting facts. These may be described by individual constituent states of the Region. It may be noted that :

i. All the towns in Arunachal Pradesh are administrative centres. These are widely spaced, functioning virtually in isolation from each other. Their links with towns in the adjoining Assam state

ARUNACHAL PRADESH
Growth of Towns
1971 - 81



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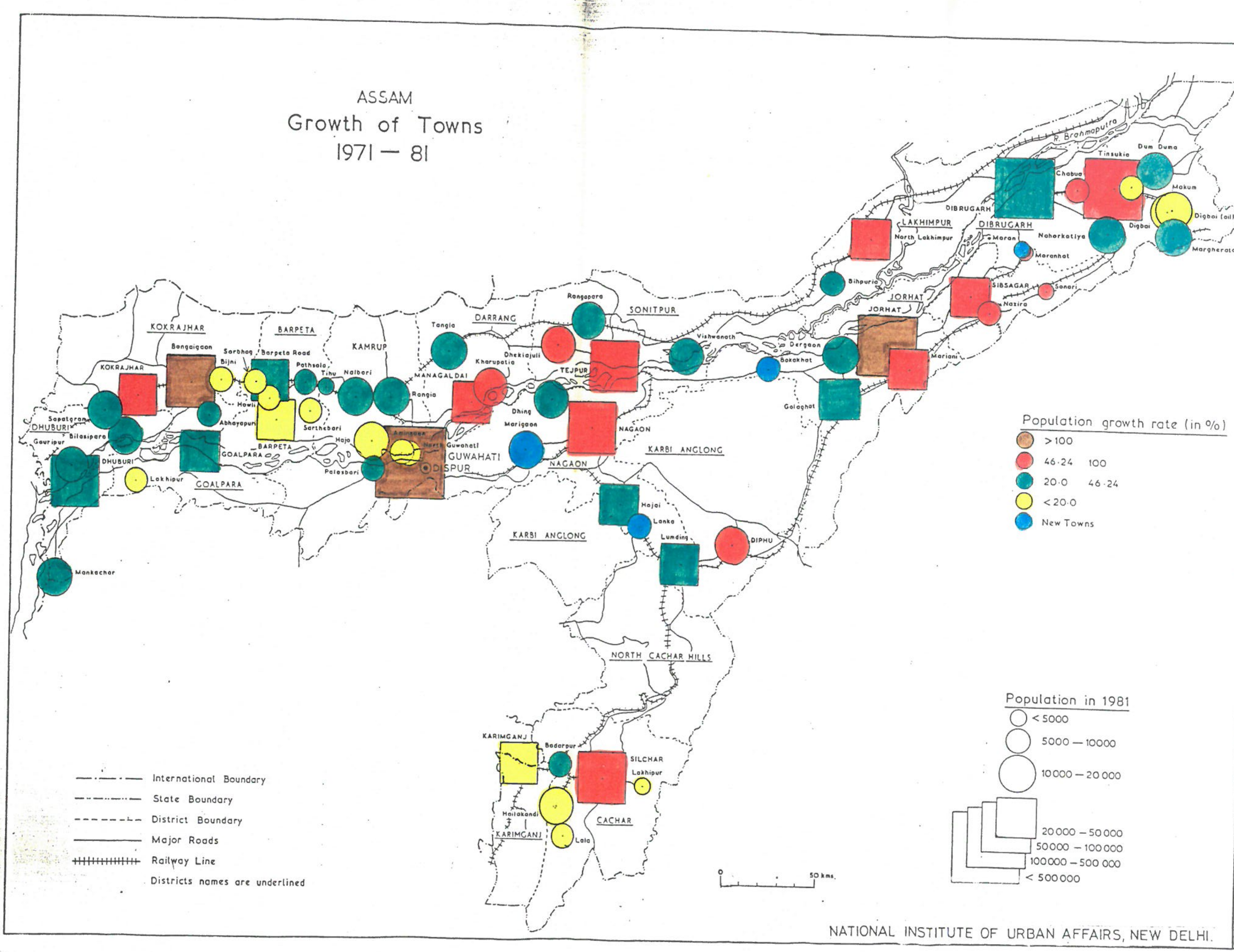
are stronger than amongst themselves. All of them are connected by transverse road routes meeeting the national highways running horizontally through the Assam Valley. These are small in size. The state capital of New Itanagar has a population of hardly six thousand. Old and New Itanagars pur together make a population of only fourteen thousand.

ii. Most of the towns in Assam cling to the Brahmaputra river. Important among these Dhubri, Goalpara, Guwahati, Mangaldoi, Tezpur, Jorhat, Sibsagar and Dibrugarh. Many of them were initially in the nature of river ports for navigation. The construction of the rail and national highways reduced their importance. New urban development got attracted to these transport arteries extending the existing towns in the form of a ribbon. This feature is most pronounced between Guwahati and Dispur, the new capital of the state. The proximity of the towns to the river makes them floodprone; a problem which has to be tackled at the regional level. Also since towns happen to be located on either side of the river, an adequate number of bridges need to be provided to enable them to serve the areas on both side of the river. This apart, Assam has a number of closely spaced towns connected with tea gardens in Dibrugarh and Lakhimpur districts in the northeast and Darrang and Sonitpur districts in the west. The northeastern part of the Assam has, in addition, a number of mining and industrial towns with mineral based manufacturing activity. By contrast, Karbi Anglong and North Cachar districts of Assam have only a few towns over a large area. The frequency of town increases in Silchar district. Silchar itself is as a prominent regional centre by virtue of its strategic loction in respect of the adjoining states of Meghalaya, Tripura, Mizoram and Manipur.

iii. In Manipur, a majority of towns are located in the Manipur basin. To be precise, 23 towns out of a total of 32 are concentrated in the Manipur Central district alone. Imphal, the state capital and the only city in the state, commands a central position. Several towns are located in its close proximity on road converging on it. Several of them are administrative centres. The remaning four districts share nine towns, all of them are again administrative centres.

iv. Meghalaya has seven towns. Shillong is the capital, the biggest, and the only city. Barring Cherrapunji and Baghmara, all others are administrative centres. Tura, Williamnagar and Baghmara, all others are administrative centres. Tura, Williamnagar and Baghmara are not linked directly by any metalled road with the state capital of Shillong. Towns make a linear scattering in east-west direction.

v. Mizoram has six towns; all of them are administrative centres and four of them are located along a national highway. Towns are dispersed in alinear fashion in north-south direction. Aizawl, Aizawl, although the state capital, does not enjoy a city status; its population being about seventy four thousand in 1981. The


ASSAM
Growth of Towns
1971 — 81
Population growth rate (in %)
> 100
46·24 100
20·0 46·24
< 20·0
New Towns
Population in 1981
< 5000
5000 — 10000
10000 — 20000
20000 — 50000
50000 — 100000
100000 — 500000
< 500000
International Boundary
State Boundary
District Boundary
Major Roads
Railway Line
Districts names are underlined
0
50 kms.
KOKRAJHAR
BARPETA
KAMRUP
DARRANG
SONITPUR
LAKHIMPUR
DIBRUGARH
JORHAT
SIBSAGAR
NAGAON
KARBI ANGLONG
NORTH CACHAR HILLS
CACHAR
KARIMGANJ
GOALPARA
DHUBURI
R. Brahmaputra
GUWAHATI
DISPUR
Bongaigaon
Sarbhog
Barpeta Road
Bijni
Pathsala
Tihu
Nalbari
Howli
Abhayapuri
Sarthebari
Hajo
Palasbari
North Guwahati
Tangla
Managaldai
Rangia
Kharupatia
Dhekiajuli
Rangapara
Tejpur
Dhing
Marigaon
Vishwanath
Bokakhat
Dergaon
Golaghat
Mariani
Nazira
Sonari
Bihpuria
North Lakhimpur
Moran
Moranhat
Naharkatiya
Chabua
Tinsukia
Dum Duma
Makum
Digboi (oil)
Digboi
Margherata
Hojai
Lanka
Lumding
Diphu
Badarpur
Silchar
Lakhipur
Hailakandi
Lala
Sapatgram
Bilasipara
Gauripur
Lakhipur
Mankachar
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location of Champhai and Saiha towns on the Indian border with Burma may also be noted.

vi. Nagaland has seven towns. All of them are administrative centres, and are dispersed over the whole state. The state capital of Kohima is the biggest but its population was just about thirty four thousand in 1981.

vii. There are ten towns in Tripura. Most of them are located close to the international border with Bangladesh. All of them, without exception, are administrative centres. Agartala enjoys the status of state capital; it is the biggest in population size and is a city.

Urbanisation Morphology

Most of the towns in the NER are small. There are only seven cities, four of which are located in Assam (Table 3.4). Arunachal Pradesh, Mizoram and Nagaland are without any city. The region has 24 medium towns; of these 17 are in Assam alone. Small towns are 103 in all. These are fairly well distributed among various states. Twenty-seven towns could be called as tiny since their population is less than 5,000 each.

Table - 3.4
Distribution of Towns by Population Size Class, 1981

State/Region India	Number of towns with a population of						Total
	100,000+ (class I)	50,000 to 99,999 (class II)	20,000 to 49,999 (class III)	10,000 to 19,999 (class IV)	5,000 to 9,999 (class V)	less than 5,000	
Arunachal Pradesh	-	-	-	-	5	1	6
Assam	4	5	12	22	18	5	66
Manipur	1	-	2	4	9	16	32
Meghalaya	1	-	1	1	1	3	7
Mizoram	-	1	-	1	4	-	6
Nagaland	-	-	2	2	3	-	7
Tripura	1	-	1	4	2	2	10
NER	7	6	18	34	42	27	134
India	218	270	743	1059	758	253	3301

Source: Census of India, 1981. The 1981 data for Assam towns was obtained from the Towns Planning Organisation, Government of Assam, Guwahati.

As a corollary of the above, the median size of a town in the NER is only about ten thousand as compared with sixteen thousand in India (Table 3.5). The figures for Manipur, Meghalaya, Arunachal Pradesh and Mizoram are as low as five, six, seven and eight thousand respectively. The comparable figures for Tripura and Nagaland are eleven and twelve thousand respectively. The Median size of towns in Assam in close to the national average, being about fifteen thousand.

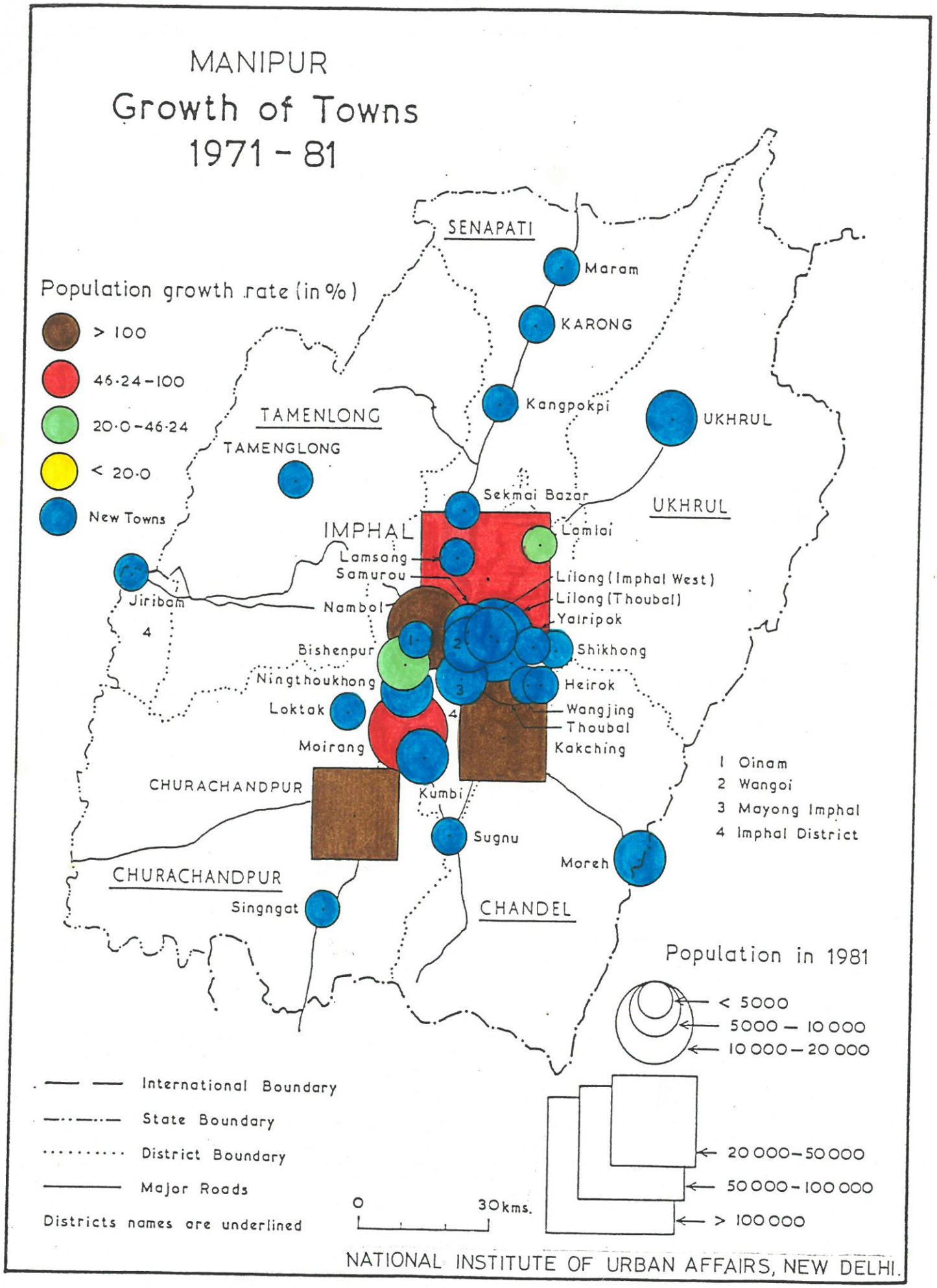
Table - 3.5

Median Population Size of Towns by States, 1981

State/Region/India	Median size (rounded to nearest thousand)
Arunachal Pradesh	7
Assam	15
Manipur	5
Meghalaya	6
Mizoram	8
Nagaland	12
Tripura	11
NER	10
India	16

Urban Primacy and Growth

High primacy of capital towns is typical of all states of the NER barring Nagaland and Arunachal Pradesh (Table 3.6). In the former case, the state capital of Kohima is only slightly bigger than the second town of Dimapur; and in the latter, Pasighat has 1.13 times the population of Along, and neither of the two is the state capital. In Assam, Guwahati is more than four times Jorhat; in Manipur, Imphal is


MANIPUR
Growth of Towns
1971 - 81
Population growth rate (in %)
> 100
46·24 - 100
20·0 - 46·24
< 20·0
New Towns
SENAPATI
Maram
KARONG
Kangpokpi
UKHRUL
TAMENLONG
TAMENGLONG
Sekmai Bazar
UKHRUL
Lamlai
IMPHAL
Lamsang
Samurou
Lilong (Imphal West)
Lilong (Thoubal)
Yairipok
Jiribam
Nambol
Shikhong
Bishenpur
Ningthoukhong
Heirok
Loktak
Wangjing
Thoubal
Kakching
Moirang
CHURACHANDPUR
Kumbi
Sugnu
Moreh
CHURACHANDPUR
Singngat
CHANDEL
1 Oinam
2 Wangoi
3 Mayong Imphal
4 Imphal District
Population in 1981
< 5000
5000 — 10 000
10 000 — 20 000
20 000 — 50 000
50 000 — 100 000
> 100 000
International Boundary
State Boundary
District Boundary
Major Roads
Districts names are underlined
0
30kms.
NATIONAL INSTITUTE OF URBAN AFFAIRS, NEW DELHI.

more than seven times Kakching; in Mizoram, Aizawl is more than four times Llunglei; in Meghalaya, Shillong is five times Tura; and in Tripura, Agartala is more than half of the urban population is confined to the state capitals alone. At the region level, Imphal is next to Guwahati but its population is less than one-third of the latter.

Table - 3.6

Urban Primacy Patterns, 1981

State/Region/ India	Ratio between the population of the largest and the second largest town	Percentage share of the largest town in total urban population
Arunachal Pradesh	1.13 : 1	22.06
Assam	4.58 : 1	26.87
Manipur	7.38 : 1	41.71
Meghalaya	4.95 : 1	72.39
Mizoram	4.33 : 1	61.15
Nagaland	1.04 : 1	28.56
Tripura	6.35 : 1	58.60
NER	3.51 : 1	17.34
India		

One redeeming feature of the NER urbanisation is its rapid pace. The urban population of the region grew by 68.58 per cent during 1971-81. Even during the preceding decade of 1961-71, it had recorded a growth rate of 52.43 per cent. The national average for the tow decades was 46.24 and 37.96 per cent respectively (Table 3.7). The trend is expected to continue in years to come. The projected urban population in the NER in the year 2001 is 6.85 million as compared with 3.17 million in 1981.

What impresses most is the fast rate of urban growth in virtually all the constituent states of the NER. Urban population increased by more than 100 per cent during 1971-81 in Mizoram, Manipur, Arunachal

Pradesh and Nagaland. In Assam and Meghalaya also, the urban growth rate was higher than the national average of 46.24 per cent. Only in Tripura this rate happened to be somewhat on the lower side being 38.93 per cent.

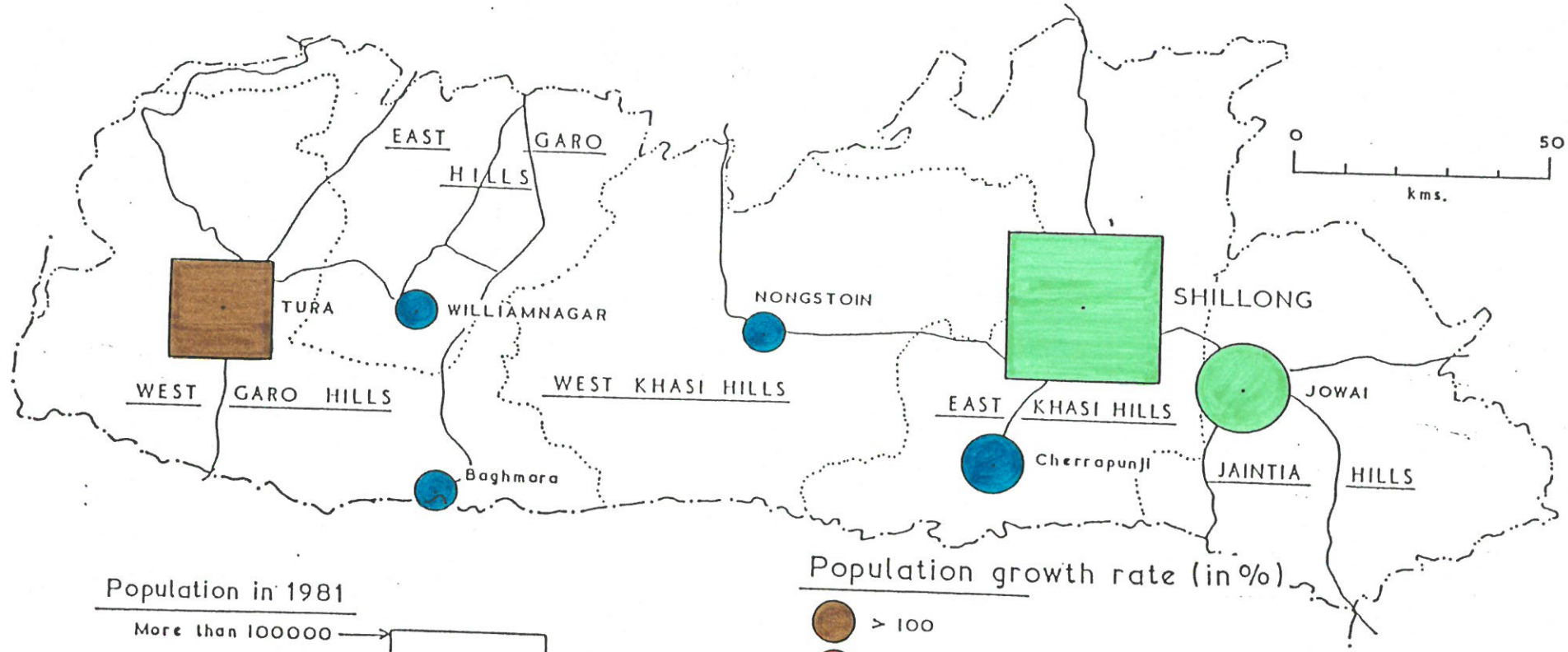
Table 3.7

Urban Growth Rates by States for 1961-71 and 1971-81

State/Region/India	Percentage urban growth rate during	
	1961-71	1971-81
Arunachal Pradesh	-	139.63
Assam	45.24	54.37
Manipur	108.95	165.36
Meghalaya	25.27	63.98
Mizoram	164.85	222.61
Nagaland	168.28	133.95
Tripura	57.64	38.93
NER	52.43	68.58
India	37.96	46.24

The same fact is corroborated by the emergence of a large number of new towns and fast grwoth of the already existing towns. The NER saw the emergence of as many as 46 new towns at the 1981 census (Table 3.8). Among the 88 already existing towns, 33 grew by a rate which was higher than the national average of 46.24 per cent and another 35 recorded a growth rate of 20 to 46.24 per cent. All of these were net inmigration cases. On the other hand, net outmigration was experienced by the remaining 20 inmigration. Net outmigration was was experienced by the remaining 20 towns where population grew by less than 20 per cent. Most of such towns are located in Assam. None of the towns in Manipur, Meghalaya, Arunachal Pradesh and Mizoram was a net loser in the process of migration.

MEGHALAYA
Growth of Towns
1971 – 81



Population in 1981

- More than 100000
- 50000 — 100000
- 20000 — 50000
- 10000 — 20000
- 5000 — 10000
- Less than 5000

Population growth rate (in %)

- > 100
- 46·24 — 100
- 20·0 — 46·24
- < 20·0
- New Towns

- International Boundary
- State Boundary
- District Boundary
- Major Roads

Districts names are underlined

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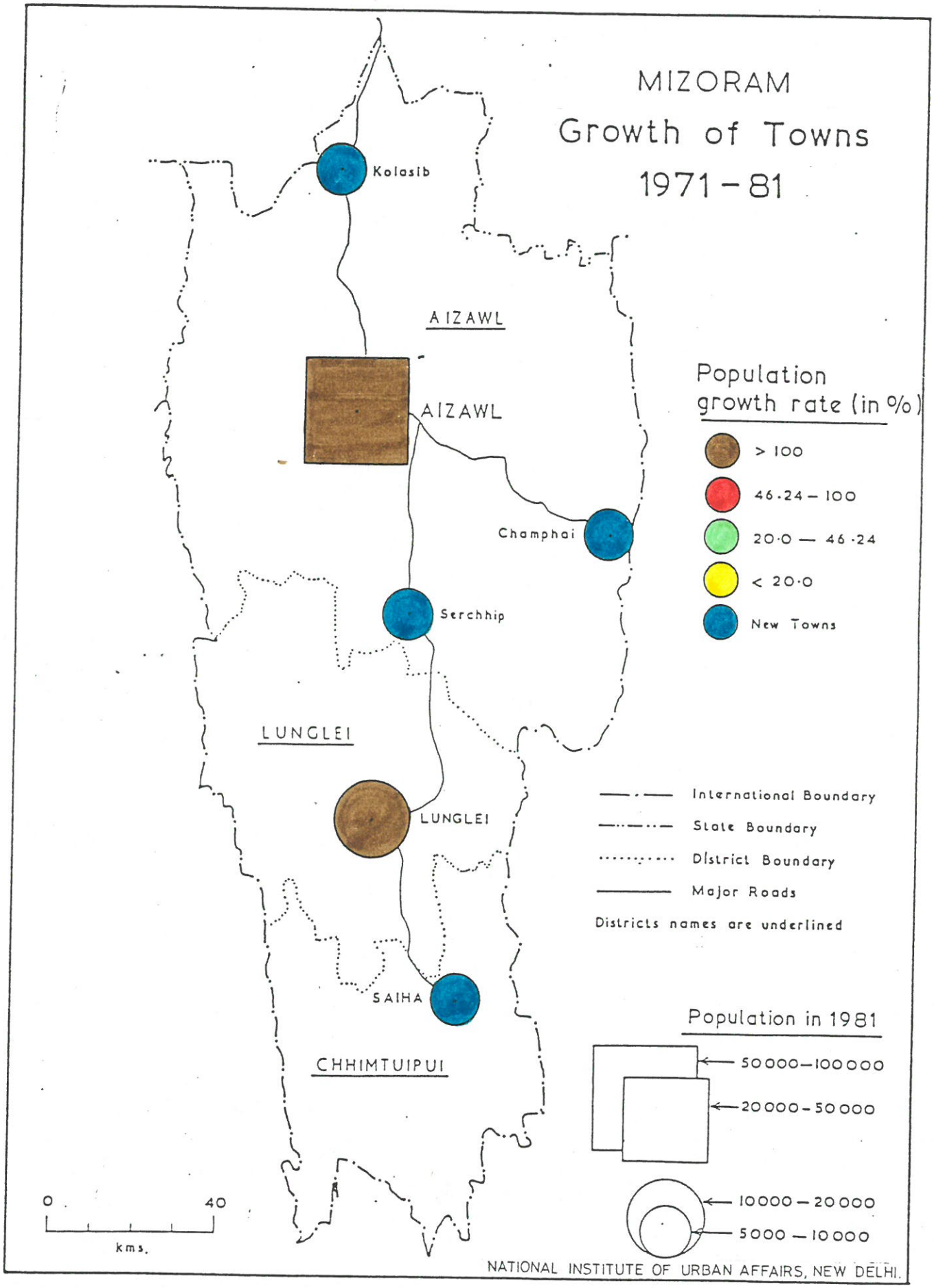
Table - 3.8

Distribution of Towns by their Growth Rate during 1971-81

State/Region/ India	Number of towns	New towns	Number of towns with a growth rate of		
			46.24+ per cent	20 to 46.23 per cent	less than 20 per cent
Arunachal Pradesh	6	2	3	1	0
Assam	66	4	19	27	16
Manipur	32	24	6	2	0
Meghalaya	7	4	1	2	0
Mizoram	6	4	2	0	0
Nagaland	7	4	2	0	1
Tripura	10	4	0	3	3
NER	134	46	33	35	20
India	3301	881	568	1365	487
Assam	+66	+4	+19	+27	+16

In spite of phenomenal rates of urban growth in different states, the urbanisation rates remain modest. For example, the percentage of urban population in the total increased from 8.9 per cent in 1971 to 10.29 per cent in 1981 in Assam; from 14.55 to 18.07 per cent in Meghalaya; and from 9.95 to 15.52 per cent in Nagaland. The rise in the percentage of urban population from 11.36 to 24.67 in Mizoram and from 13.19 to 26.42 in Manipur are indeed impressive. On the other hand, Tripura is noted for only a marginal rise in the percentage of its urban population from 10.43 to 10.99. By the year 2001 the NER is expected to be 16.40 per cent urban.

One noticeable feature of the NER urbanisation is the change in the relative ranks of different towns. If only the 7 cities (population 100,000 or above) and 23 medium towns (population 20,000 to less than 100,000) are taken into account, it is observed that


MIZORAM
Growth of Towns
1971 - 81
Kolasib
AIZAWL
AIZAWL
Champhai
Serchhip
LUNGLEI
LUNGLEI
SAIHA
CHHIMTUIPUI
Population growth rate (in %)
> 100
46·24 — 100
20·0 — 46·24
< 20·0
New Towns
International Boundary
State Boundary
District Boundary
Major Roads
Districts names are underlined
Population in 1981
50000—100000
20000-50000
10000 — 20000
5000 — 10000
0
40
kms.
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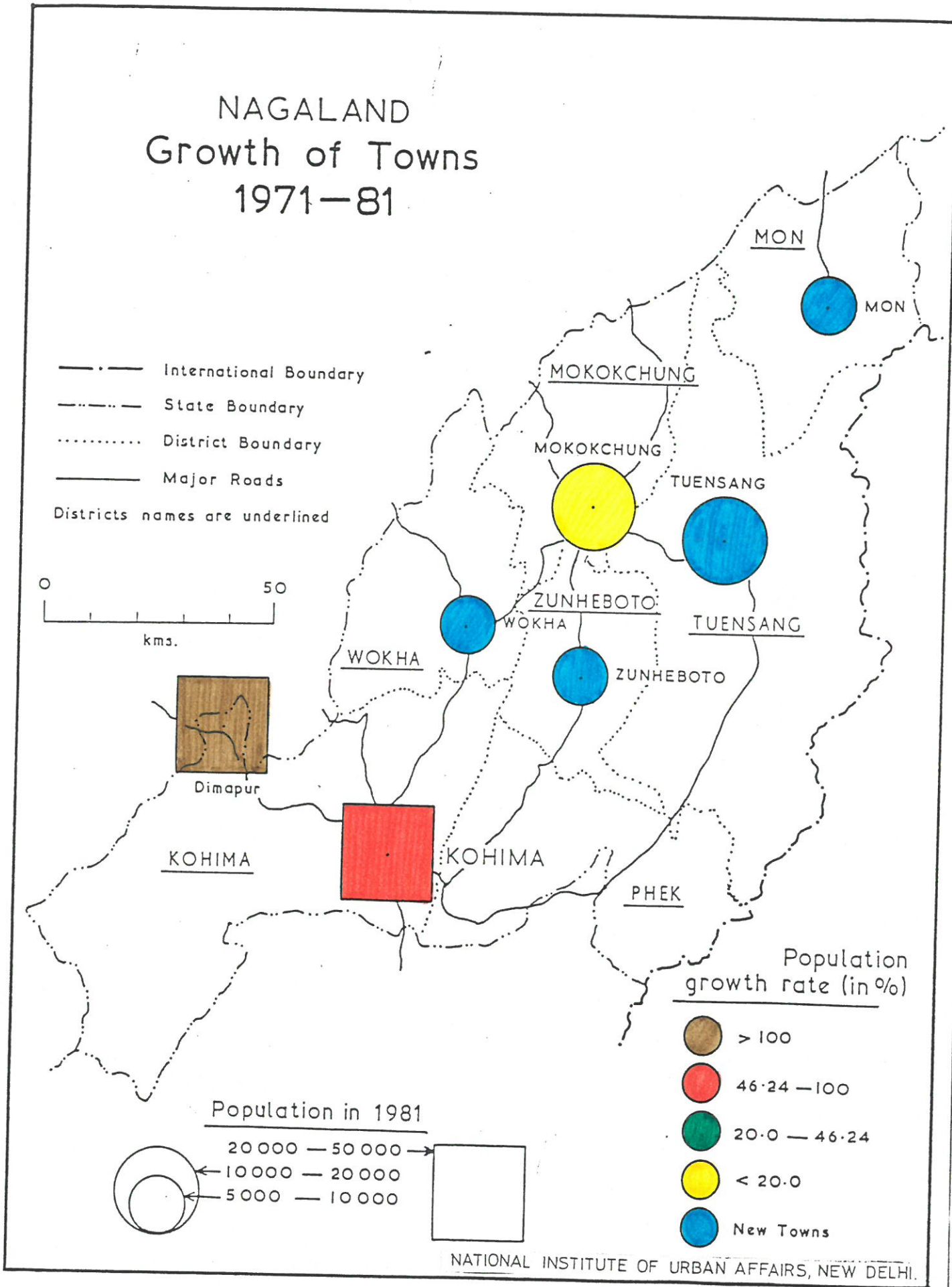
NAGALAND
Growth of Towns
1971—81
International Boundary
State Boundary
District Boundary
Major Roads
Districts names are underlined
0
50
kms.
MON
MON
MOKOKCHUNG
MOKOKCHUNG
TUENSANG
TUENSANG
ZUNHEBOTO
WOKHA
ZUNHEBOTO
WOKHA
Dimapur
KOHIMA
KOHIMA
PHEK
Population growth rate (in %)
> 100
46·24 — 100
20·0 — 46·24
< 20·0
New Towns
Population in 1981
20 000 — 50 000
10 000 — 20 000
5 000 — 10 000
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Shillong, which was the largest city in 1961, lost this position to Guwahati in 1971. This situation continued in 1981 (Table 3.9).

Table 3.9

Shifts in Ranks of the Large and Medium Towns
(with a population of at least 20,000 in 1981)

Rank	Name of the town in		
	1961	1971	1981
1	Shillong	Guwahati	Guwahati
2	Guwahati	Shilong	Shillong
3	Imphal	Imphal	Imphal
4	Dibrugarh	Agartala	Agartala
5	Agartala	Dibrugarh	Jorhat
6	Tinsukia	Tinsukia	Tinsukia
7	Jorhat	Jorhat	Dbrugarh
8	Silchar	Nowgong	Nowgong
9	Nowgong	Silchar	Silchar
10	Karimganj	Tezpur	Aizawl
11	Tezpur	Aizawl	Tezpur
12	Lumding	Karimganj	Bongaigaon
13	Barpeta	Lumding	Sibsagar
14	Sibsagar	Sibsagar	Lumding
15	Goaghat	Barpeta	Tura
16	Aizawl	Bongaigaon	North Lakhimpur
17	Goalpara	Hojai	Karimganj
18	Dharamnagar	Kohima	Kohima
19	Hojai	North Lakhimpur	Dimapur
20	Barpeta Road	Golaghat	Hojai
21	Kokrajhar	Kokrajhar	Barpeta
22	Mariani	Barpeta Road	Kokrajhar
23	Tura	Dharamnagar	Barpeta Road
24	Bongaigaon	Goalpara	Goalpara
25	Mangaldoi	Tura	Mariani
26	Kohima	Mariani	Kakching
27	North Lakhimpur	Dimapur	Mangaldoi
28	Dimapur	Mangaldoi	Goalpara
29	Churachandpur	Churachandpur	Dharmanagar
30	Kakching	Kakching	Churachandpur

Imphal retained its third rank. Agartala moved to fourth rank from fifth by displacing Dibrugarh which in 1981 had gone down to seventh place. By comparison Jorhat rose to fifth position in 1981 from seventh in 1961. Tinsukia retained its sixth rank. Aizawl showed a dramatic upward mobility from sixteenth to tenth rank. As it

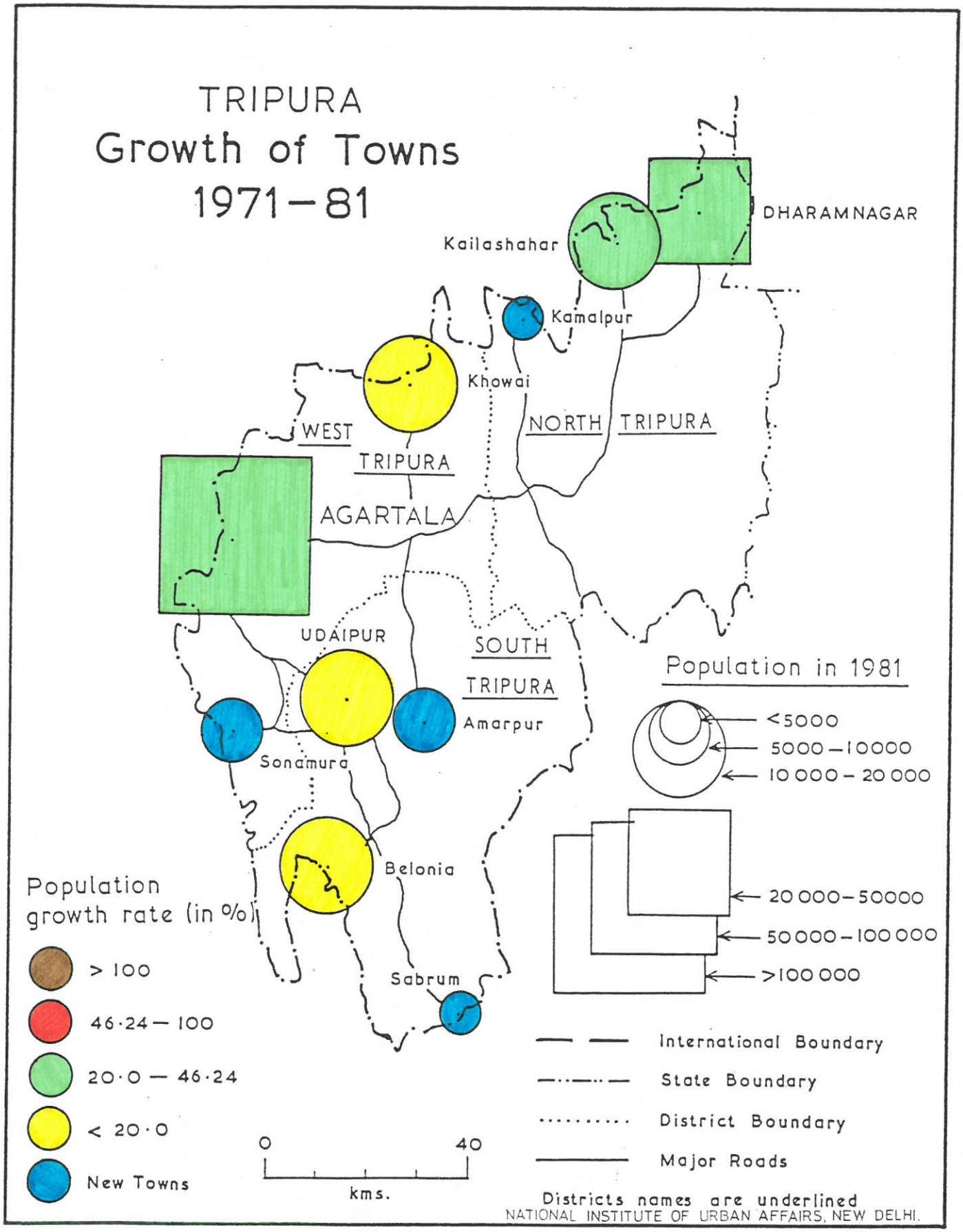
emerges, the state capitals have generally been jumping to higher ranks and this trend is likely to continue in future. By comparison, some of the important transport towns could just retain their rank or in some cases, came down during 1961-81: Tinsukia continued with its sixth position; Silchar came down from eighth to ninth; Tezpur remained steady at eleventh. Jorhat improved its position from seventh to fifth. On the whole, it seems that the administrative status of a town is of overriding importance in determining its relative regional importance and this creterion can be adopted with confidence in determining the hierarchy of urban places for a planned development of the NER's urban system.

One cannot miss the recent extension of the territorial limits of practically all the state capitals in the NER. This tendency is the most pronounced in the case of Aizawl whose area was extended from 18 sq.km. in 1971 to 110 sq.km. in 1981 (Table 3.10). The comparable increase was 17 to 30 sq.km. in Imphal, 21 to 25 sq.km. in Shillong, 10 to 23 sq.km. in Kohima, and 7 to 16 sq.km. in Agartala. The state capital are likely to spill over still larger areas in years to come.

Table - 3.10

Change in the Area of the State Capitals during 1971-81

State	Capital	Area of the capital (in sq.m.) in	
		1971	1981
Arunachal Pradesh	Itanagar	Data not available	
Assam	Guwahati	Data not available	
Manipur	Imphal	17	30
Mizoram	Aizawl	18	110
Meghalaya	Shillong	21	25
Nagalnd	Kohima	10	23
Tripura	Agartala	7	16


TRIPURA
Growth of Towns
1971–81
DHARAMNAGAR
Kailashahar
Kamalpur
Khowai
NORTH TRIPURA
WEST
TRIPURA
AGARTALA
UDAIPUR
SOUTH
TRIPURA
Amarpur
Sonamura
Belonia
Sabrum
Population in 1981
<5000
5000–10000
10 000 – 20 000
20 000–50000
50 000–100 000
>100 000
Population
growth rate (in %)
> 100
46·24 — 100
20·0 — 46·24
< 20·0
New Towns
0
40
kms.
International Boundary
State Boundary
District Boundary
Major Roads
Districts names are underlined
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Urbanisation and Tribal Population

It is often said tha towns in tribal regions of India are often demographically dominated by a nontribal population. To test this hypothesis, the relevant data for the NER and its constituent states was processed (Table 3.11). It is learnt that while 21.76 per cent of the NER's population is tribal, the sahre of tribal population in its towns is 12.52 per cent. The corresponding figures for Arunachal Pradesh are 69.82 and 24.28 per cent; for Meghalaya 80.58 and 55.36 per cent; for Nagaland 83.99 and 52.91 per cent; for Manipur 27.30 and 12.03 per cent; and for Tripura 28.44 and 3.40 per cent. In Assam, 10.99 per cent of the total population is urban but hardly 1.11 per cent of its urban population is tribal. Only in Mizoram, both the percentages are around 90 per cent. The above discussion does support the popular notion that the tribal population is distinctly less represented in towns even in those located in predominantly tribal states.

Table - 3.11

Share of Tribal Population in Urban Population by States, 1981

State/Region/ India	Scheduled tribe population (in '000)	Percentage of scheduled tribe population	
		Total population	Urban population
Arunachal Pradesh	441	69.82	24.82
Assam	2187	10.99	1.11
Manipur	389	27.30	12.03
Meghalaya	1076	80.58	55.36
Mizoram	462	93.55	89.05
Nagaland	651	83.99	52.91
Tripura	584	28.44	3.40
NER	5790	21.76	12.52
India	51629	7.76	2.03

In brief, the NER is a less urbanised but fast urbanising part of India. The administrative centres are distinctly outrating other kinds of towns in their growth. These are emerging as vital nodes in the organisation of space in the Region. The physical expansion of sate capitals has been phenomenal in general. The contribution of tribal population to the urbanisation process is notably less than what their share in the total population would warrant. In order that it plays an effective role in the socio-economic transformation of the Region, the urbanisation process has to be anticipated, properly directed and adequately provided for in terms of basic urban services and infrastructural facilities.

IV
URBAN INFRASTRUCTURE : A COMPARATIVE ANALYSIS OF SELECTED URBAN CENTRES

The provision of an adequate urban infrastructure system in the NER is a major issue which requires closer attention by urban economists and planners. Delivery of adequate goods and services so as to enhance socio-economic welfare is a primary function of urban local government. Indeed it is difficult to visualise the planned urbanisation of a developing region without acknowledging the significant contribution and role of urban infrastructure development as an integral component of socio-economic change.

Urban infrastructure including roads, bridges, water supply systems, street-lighting, are the underlying "capital" of an urban economy. They provide an essential foundation upon which society's economic and social activities are built. The strength of an urban system depends upon the vitality of the public works infrastructure.

Urban centres of the NER have been registering disproportionately high population growth rates, and consequently the demand for essential urban services has increased much faster than their supply, leading to the emergence of imbalances and critical gaps in urban infrastructure. This has resulted in a marked fragility of the urban system of an increasing number of urban centres. The major aspects of the fragility of the urban system include :

i. an inequitable distribution of basic services among different sections of the urban population;

ii. an inequitable access to basic services particularly for the vulnerable population segments; and

iii. wide inter-urban centre differentials in the availability of major urban infrastructure facilities.

An appropriate policy for urban infrastructure renewal and development, which takes cognisance of the requirements and special problems of hill areas, has hence become a critical issue in urban planning of NER.

At the same time it needs to be emphasised that in view of its inter-related nature, the disruption of any segment of the urban infrastructure system has serious upercussions for smooth functioning of the urban economy. For instance, a gap in the urban transportation network affecting regular adversely impacts on critical urban sectors such development as industry, markets, commercial and banking activity among others.

In the above context of close linkage between urban growth and infrastructural development, it becomes necessary, to examine the level and performance of critical urban services in the NER so as to suggest effective measures to improve their efficiency and role in future urban planning.

In this chapter, attention is focussed on the state of regional urban infrastructure in 22 selected urban centres of the NER. In the first instance, an estimation of the actual level of three critical urban infrastructure services - urban water supply, roads and public street-lighting - currently available to the population is made. Thereafter an assessment is made of existing infrastructural gaps in these critical sectors at the urban centre level.

Actual Level of Services 1981

a. Water Supply

A safe and adequate urban water supply system is a basic need of human settlements and forms an essential part of the infrastructure which enables it to function. As such the provision of urban water supplies constitutes one of the essential responsibilities of the administrative authorities of towns. The existing sources of urban water supply in the NER are tubewells and hand-pumps, wells, taps and tanks. While most towns use tubewells and taps, a few depend on water tanks for meeting requirements.

Table 4.1 indicates the unsatisfactory state of this crucial urban infrastructure in a majority of urban centres of the NER examined in this connection. It is indeed highly disconcerting that, as many as 20 of the 22 urban centres studies, failed to reach an availability level recommended as "prescribed norms", by the Zakaria Committee more than two decades ago.**

It may be observed from table 4.1 that except for two urban centres - Guwahati and Karimganj - which had excess water supply in 1981, the remaining were deficit in this critical urban service. The water supply deficit in per capita terms ranged from a low of 5.69 GPCD (Silchar) and 6.02 GPCD (Jorhat), to a maximum of 34.72 GPCD (Tinsukhia) 34.16 GPCD (Agartala) and 33.86 GPCD (Shillong). The deficit in four urban centres Tezpur, Bongaigaon, Imphal and Aizawl, varying between 15-30 GPCD, was particularly high, in the regional context.

** Augmentation of Financial Resources of Urban Local Bodies, Nov. 1963 (Zakaria Committee Report).

Table - 4.1

Water Supply Capacity and Gap, 1981
Selected Urban Centres

Selected urban centres	Capacity (mgd)	Availability (gpcd)	Standard (gpcd)	Water supply deficit/ surplus (gpcd)	Total * gap (mgd)
Karimganj	2.73	78.49	15	(+) 63.49	(+) 2.21
Silchar	1.00	19.31	25	(-) 5.69	(-) 0.48
Tezpur	0.06	0.84	25	(-) 24.16	(-) 1.59
Bongaigaon	0.08	1.56	25	(-) 23.44	(-) 1.17
Kokrajhar	-	-	15	-	-
Dhubri	0.06	1.19	15	(-) 13.81	(-) 0.65
Guwahati	10.10	66.40	35	(+) 31.40	(+) 4.78
Barpeta	-	-	15	-	-
Tinsukhia	0.03	0.28	35	(-) 34.72	(-) 3.72
Dibrugarh	-	-	35	-	-
North Lakhimpur	-	-	15	-	-
Nagaon	-	-	25	-	-
Lumding	0.18	4.87	15	(-) 10.13	(-) 0.37
Hojai	-	-	15	-	-
Jorhat	0.33	8.98	15	(-) 6.02	(-) 0.22
Sibsagar	0.06	1.34	15	(-) 13.76	(-) 0.64
Imphal	1.56	9.93	35	(-) 25.07	(-) 3.93
Agartala	0.11	0.84	35	(-) 34.16	(-) 4.52
Shillong	0.20	1.14	35	(-) 33.86	(-) 5.92
Kohima	0.05	1.54	15	(-) 13.46	(-) 0.46
Dimapur	0.10	0.17	15	(-) 11.93	(-) 0.39
Aizawl	0.20	2.68	25	(-) 22.32	(-) 1.66

* Estimated on the basis of 1981 population data.

Standard (gpcd) norm is as per the Zakaria Committee

Source: Field Survey, NIUA, 1988 and Census of India

It may be observed from table 4.1 that except for two urban centres - Guwahati and Karimganj - which had excess water supply in 1981, the remaining were deficit in this critical urban service. The water supply deficit in per capita terms ranged from a low of 5.69 GPCD (Silchar) and 6.02 GPCD (Jorhat), to a maximum of 34.72 GPCD (Tinsukhia) 34.16 GPCD (Agartala) and 33.86 GPCD (Shillong). The deficit in four urban centres Tezpur, Bongaigaon, Imphal and Aizawl,

varying between 15-30 GPCD, was particularly high, in the regional context.

For the 22 urban centres examined, the total water supply gap ranged from less than 0.5 MGD in the case of Silchar, Lumding, Jorhat, Kohima and Dimapur to a maximum gap of 5.92 MGD in Shillong. Three urban centres - Tinsukhia, Imphal and Agartala - had very high deficits ranging between 3-5 MGD. Field investigations by the NIUA, further revealed that on average about 50 per cent of the urban population in urban centres of the NER do not have access to safe drinking water supply.

It is encouraging to observe, however, that the concerned local bodies in selected urban centres are executing well-designed and innovative urban water supply schemes. Mention must be made of the (i) Greater Shillong Water Supply Scheme (ii) Augmentation of Water Supply at Dimapur Scheme (iii) Singda Dam Multipurpose Project at Imphal (iv) Master Plan for Improvement of Water Supply at Agartala, among others. When fully operational these urban water supply schemes will adequately meet the needs of municipal water distribution infrastructures and lay the basis for an appropriate urban water supply system in the respective urban centres.

b. Roads :

Just as urban centres cannot exist without water, they cannot function without a good transport and communication system. Historically, good transport has been a prime factor governing the location of urban centres and it is difficult to visualise a flourishing urban centre without good physical links between, its own

sectors and with the outside world.

Because of dominantly hilly terrain, the NER faces severe constraints on development of railways and hence roads have to largely meet the transport needs of different areas. The position of roads in the NER in terms of their length and density is indicated in Table 4.2.

It may be observed that if all the roads - National Highways, State Highways, other P.W.D. roads, roads under urban local bodies - are included, the Region shares a meagre 3.32 percent of the country's total road length. The average length of roads per 100 sq. Kms. (road density) in the NER comes to be 20.95 Kms. as against the national average of of 48.79 Km./100 Sq. Kms. With the exception of Tripura (55.97 Km.), the road density for each constituent State of the NER is substantially below the all-India average.

The position of surfaced roads is no better, with surfaced road density per 100 sq. Km. for the NER being only 6.46 Km. as against the national average of 18.96 Km./100 sq. Km. Here again, only Tripura with a surfaced road density of 26.31 Km. is better placed in the national comparison.

The percentage of unsurfaced roads is relatively high in the urban centres located in hill terrain, here additional problems of soil-erosion and land slide, make road construction a hazardous proposition. Most of the unsurfaced roads become useless for transportation during the rains and cause severe transportation bottlenecks.

Table - 4.2

State Road - Length and Density, 1985

State	Area in '000 sq. km.(as on 31.3.82)	Total length of Road (in kms.)	Average length of Roads in Km/ 100 sq.km.area	Lenght of Surfaced road in km./100 sq. kms. area
Arunachal Pradesh	84	3230	3.85	0.38
Assam	78	26765	34.31	8.67
Manipur	22	4130	18.77	10.75
Meghalaya	22	5869	26.68	10.47
Mizoram	21	1360	6.48	2.25
Nagaland	17	6264	36.85	8.83
Tripura	10	5597	55.97	26.31
Total NER Region:	254	53215	20.95	6.46
All-India	3287	1604110	48.79	18.96

Source : Report of Seventh Plan Working Group on Development of NER, March 1985, Annexure II, p. 120, NEC, Shillong. The length of road completed has been compiled from State Plan documents and is hence different from Road Statistics published by the Ministry of Shipping & Transport.

Table 4.3 provides data on road and extent of area under circulation in the selected towns of the NER. In all,the 22 urban centres studied by the NIUA the total road length available is estimated at 2217.9 km. in length - with about 39% being surfaced and 61% being unsurfaced.

Table - 4.3

Road Development : Length and Density, 1981
(Selected Urban Centres)

Selected urban centres	Area (sq.Km.)	Total road length per km.	Total road length per sq.km. area	Surfaced road length (km.)	% age to total road length	Unsurfaced road length (km.)	% to Total Road Length (km.)
Karimganj	5.93	29.33	4.95	9.00	30.69	20.33	69.31
Silchar	13.25	35.59	2.69	14.32	40.24	21.27	59.76
Tezpur	7.10	30.72	4.33	20.60	67.06	10.12	32.94
Bongaigaon	4.79	25.58	5.34	14.13	55.24	11.45	44.76
Kokrajhar	8.34	48.50	5.82	10.00	32.99	32.50	67.01
Dhubri	7.21	32.53	4.51	13.07	40.18	19.46	59.82
Guwahati	215.00	288.78	1.34	125.01	43.29	163.77	56.71
Barpeta	3.86	37.67	9.76	19.13	50.78	18.54	49.22
Tinsukhia	13.16	56.09	4.26	20.60	36.73	35.49	63.27
Dibrugarh	13.72	196.08	14.29	38.08	19.42	158.00	80.58
N. Likhimpur	13.74	20.21	1.47	6.86	33.94	13.25	66.06
Nagaon	7.93	119.77	15.10	88.40	73.81	31.37	26.19
Lumding	5.20	115.00	22.01	97.00	84.35	18.00	15.65
Hojai	5.28	77.59	14.70	37.00	47.69	40.59	52.31
Jorhat	17.12	107.50	6.28	38.50	35.81	69.00	64.19
Sibsagar	10.95	21.88	1.99	11.63	53.15	10.25	46.85
Imphal	29.57	122.00	4.13	46.00	37.71	76.00	62.29
Agartala	15.81	222.59	14.08	49.66	22.31	172.93	77.69
Shillong	10.36	131.80	12.72	26.36	20.00	105.44	80.00
Kohima	23.00	151.69	6.59	28.52	18.80	123.17	81.20
Dimapur	18.13	127.00	7.00	47.00	37.00	80.00	63.00
Aizawl	110.00	220.00	2.03	88.00	40.00	132.00	60.00
All Urban Centres	559.45	2217.09	3.96	854.87	38.54	1363.03	61.45

Source : Census of India (Town Directory) 1981 and NIUA Survey.

The road length per sq. Km. area ranges from less than 2 Kms. in the case of Guwahati, North Lakhimpur and Sibsagar; to more than 10 Kms., in the case of Dibrugarh, Nagaon, Lumding, Hojai, Agartala and Shillong.

More than 30 percent of the urban centres examined possessed municipal roads in the range 4.1 to 6 Kms. per sq. Km. area, while about 27 percent of the selected urban centres had more than 10 Kms. of municipal roads per sq. Kms. area (Table 4.4). There seems to the no clear relationship between city size and the road length per unit area with a highly populated city like Guwahati having only 1.34 Km. road length per sq.km. area and class D towns such as Lumding and Hojai possessing road length 22.12 Km. and 14.70 Km. per sq.Kms. area respectively. This is an area requiring closer attention by Town Planning Organisation.

The conclusion seems inescapable that the transportation infrastructure in a majority of urban centres of NER is inadequate and has failed to keep pace with the increasing traffic requirements of fast urbanisation. A steady decrease of roads in good condition, in hill areas (such as Kohima) is to be observed especially during the rainy season. Hill towns (such as Shillong, Aizawl and Kohima), are further burdened with narrow roads and which streets place a heavy strain on vehicular movement. Movement of traffic is further constricted by haphazard building constructions, with high-rise building abutting on main roads and streets.

The bigger urban centres, including State capitals presently face a severe shortage of parking facilities for both public and private vehicles. Also, the volume of through traffic is extremely high. Traffic congestion at major junctions has already started affecting orderly movement.

Table - 4.4

Roads: Density by Size Class of Selected Urban Centres

Muninicipal Roads per sq.km. Area (in Kms.)	Size Class				All	Percentage to total
	A	B	C	D		
0.1 - 2.0	1	-	-	2	3	13.64
2.1 - 4.0	-	-	2	-	2	9.09
4.0 - 6.0	-	2	1	4	7	31.82
6.1 - 8.0	-	-	-	3	3	13.64
8.1 - 10.0	-	3	1	2	6	27.27
All	1	5	4	12	22	100.00

Note : Size classification as adopted by Zakaria Committee

A = Cities with a population of 5 - 20 lakhs

B = Cities with a population of 1 - 5 lakhs

C = Towns with a population of 50,000 to 1 lakh

D = Towns with a population of 20,000 to 50,000

Source : Census of India (Town Directory) 1981 and NIUA Survey 1988.

The NEC has been playing a major role in the construction of inter state roads of regional importance, improvement of existing sub-standard roads and also roads of economic importance, for developing major resources of the Region.

In its Seventh Plan, the NEC proposed a strategy of constructing inter-state roads connecting district with the sub-divisional and

block headquarters of respective adjoining administrative units in the neighbouring States of the Region. This strategy need to be pursued in subsequent five year plans. The total length of roads proposed for construction under the three tier strategy noted above is 3700 kms. and the cost is estimated at Rs. 560 crores.*

Traffic and transportation in urban centres of the NER, particularly the hill areas, is a public hazard, and requires to be attended on priority basis. For this related urban sectors, such as housing and building construction sectors, which impinge on urban transport require to be properly regulated. In this context planning standards and norms for housing need to be reviewed so that the structural design of new housing conforms more closely with the natural landscape of such hill towns. In sensitive seismic zones, high-rise buildings need to controlled, if necessary strictly prohibited.

Our analysis has shown that the following measures if adopted, would considerably ease the urban transport bottleneck particularly in State capitals:

- development of more bye-pass roads for through traffic;
- more transport Nagars with night halt facilities, for inter state movement;
- provision of new parking lots and sites;
- remodelling of major traffic junctions and redesign urban roads in the hill areas.

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* Report of the Seventh Plan Working Group on Development of NER, March 1985, p.117.

At the sametime a greater emphasis needs to be given by local authorities to the maintenance of urban roads in good condition. Without this, not only will urban roads worsen and accidents become more frequent, the overall costs of urban transport will also sharply increase, and institutional thus placing additional financial burden on existing transport resources.

(c) Street-Lighting

A well designed and appropriate street lighting system is an essential service requirement in urban particularly those located in hill areas, where a sub-standard street-lighting system can prove extremely hazardous.

Illumination engineers view a good street-lighting system as one which enables motorists to drive at prescribed high-way speeds without the use of headlights, such that the motorist can see an object on the road within safe-stopping distance. In towns where the speed limit is between 40-50 km. per hour, the safe-stopping distance is estimated at 130 feet. Keeping this in view, the Planning Commission* suggested a norm of one lighting point per 100 feet of surfaced road length of a town.

Table 4.5 provides the data on street-lighting and the estimated infrastructure gap as per the national norm regarding street-lighting in 22 urban centres of the NER, examined by the NIUA.

The combined deficit of street-lighting points is estimated at about 6,500. Nine urban centres - Karimganj, Silchar, Tezpur,

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* Committee on Plan Project (COPP) Report, Planning Commission, Government of India.

Table - 4.5

Street Lighting Capacity and Gaps Selected Urban Centres

Urban Centres	Street-Lighting Points (Nos.)	Number of Points as Per COPP Norms	Infrastructure Gap (Nos.) (Surplus +) (Deficit -)	
Karimganj	709	295	(+)	414
Silchar	1963	470	(+)	1493
Tezpur	803	676	(+)	127
Bongaigaon	2192	463	(+)	1729
Kokrajhar	316	525	(-)	209
Dhubri	390	429	(-)	39
Guwahati	2294	4100	(-)	1806
Barpeta	156	627	(-)	471
Tinsukia	738	676	(+)	62
Dibrugarh	862	1249	(-)	387
N. Lakhimpur	819	225	(+)	594
Nagaon	98	2899	(-)	2801
Lumding	1202	3182	(-)	1980
Hojai	208	1214	(-)	1006
Jorhat	544	1263	(-)	719
Sibsagar	579	382	(+)	197
Imphal	1120	1509	(-)	389
Agartala	2575	1629	(+)	946
Shillong	2039	865	(+)	1174
Kohima	815	936	(-)	121
Dimapur	809	1542	(-)	733
Aizawl	567	2886	(-)	2319
Pasighat	265	459	(-)	194
All-Urban Centres	22063	28501	(-)	6438

Source: Same as table 4.4.

Bongaigaon, Tinsukhia, North Lakhimpur, Sibsagar, Agartala, and Shillong - are surplus in this urban amenity and possess a higher level of street-lighting in comparison with the norms recommended by Planning Commission. The remaining 13 urban centres examined, are deficit and the availability of public lighting is much below the stipulated national norms in this regard. Bongaigaon town has the highest number of lighting points and Nagaon the lowest among urban centres of NER examined.

Public street-lighting which has emerged as a major urban infrastructure service needs to be further extended in urban centres of the NER. At present, the State Electricity Boards (SEBs) under agreement with the urban local bodies are supplying power and laying the lighting poles and wires. SEBs should in addition, be made responsible for preparing municipal street lighting maps for all urban centres. This will substantially improve standards and greatly assist in planning a well laid-out public street lighting in the Region.

The main findings of this chapter may be summarised :

i. The provision of adequate urban infrastructure system has emerged as a major welfare area requiring closer attention by concerned local authorities;

ii. An examination of the level and performance of three critical urban infrastructure sectors - water supply, roads and street-lighting - in 22 urban centres, has revealed the unsatisfactory urban services infrastructure of the Region.

iii. On average about 60-70 per cent of the urban population do not have access to urban water supplies.

iv. Street lighting was deficient in about 50 per cent of the urban centres studied.

v. State capitals such as Aizawl, Kohima and Shillong are burdened with narrow roads and streets which place a heavy strain on vehicular movement.

vi. Movement of traffic is further constricted by haphazard building construction, which in the absence of proper building bye-laws, have abutted on the main roads and streets.

vii. A majority of the bigger urban centres including State capitals, presently face a severe shortage of parking facilities for both public and private vehicles.

viii. The volume of through traffic is extremely high with traffic congestion at major junctions already affecting orderly movement of both vehicular and non-vehicular traffic.

The following suggestions are made for augmentation and renewal of urban infrastructure in the NER:

i. Urban infrastructure planning should match and be consistent with local skills, technology and resources;

ii. Urban water supply system should be undertaken as a self - paying proposition and Urban Water Supply and Sewerage authorities should augment treatment and storage facilities in deficit urban cengtres;

iii. Urban roads in major hill area urban centres (such as Aizawl, Kohima and Shillong) face deterioration and decline. Regulatory measures including repairs and reconstruction of major urban roads; resurfacing of State highways and rehabilitation of bridges and culverts, need immediate attention.

iv. Planning standards and norms for urban housing need to be reformulated so that the structural design of new housing conforms more closely with the natural landscape of hill towns in particular. In sensitive seismic zones, high-rise buildings may be controlled and if necessary strictly prohibited.

v. Urban transport bottlenecks in State capitals and major regional urban centres would be considerably eased through:

- development of bye-pass roads for through traffic;
- more Transport Nagars at appropriate locations for inter-state movement;
- provision of new parking facilities, bus terminals and sites.
- remodelling and redesign of major traffic junctions and widening of urban roads.

vi. In addition to their present functions the State Electricity Boards (SEBs) should also be made responsible for preparing municipal street-lighting maps for all urban centres. This will assist in planning a well laid-out public street-lighting network in the Region.

V

MUNICIPAL FINANCE

The analysis of the previous chapter has revealed that considerable inadequacies exist with regard to urban service provision in the NER. Critical urban infrastructure such as water supply system, roads and transportation, as well as utilities like public street-lighting among others, were deficient in comparison with suggested national norms.

With urbanisation rates accelerating in the Region's constituent States (the only exceptions being Nagaland and Tripura) urban infrastructure shortfalls are likely to further aggravate.

In the above context, an increasing level of investment in urban insfrastructure facilities in the NER is called for. Urban local bodies, traditionally responsible for service provision will have to play an increasing role in removing these critical deficits.

The present chapter undertakes an analysis of municipal functions, status and finances of selected urban local bodies in the NER. Some of the specific questions addressed, in addition to related municipal finance issues, are as follows:

- What is the position of urban local finances of municipal bodies in the NER?
- Is the pattern of municipal expenditure and functional outlays of local bodies in conformity with emerging requirements of urban infrastructure development?
- How can municipal bodies be strengthened and made more effective in fulfilling their primary functions of provision, maintenance and continual augmentation of urban infrastructural services?
- How can a regular flow of funds through greater fiscal devolution on the one hand, and higher resource raising by the local bodies themselves on the other, be ensured?

Status of Urban Local Bodies

The urban areas of NER are at present covered by five types of municipal bodies constituted with reference to character, size and importance of different towns and cities. The criteria generally applied are i) population, ii) income, and iii) other factors like industrial development, historical importance, and special considerations. The different types of urban local bodies are :

i. City Corporations,

ii. Municipal Boards or Municipalites,

iii. Town Area Committees,

iv. Notified Area Committees, and

v. Cantonment Boards.

Each of these possess features of their own based on status, powers and functions. The first four are created under State municipal laws, while Cantonment Boards owe their origin to a Central Act, called the Cantonments Act, 1924.

Municipal corporations enjoy greater autonomy and are somewhat more favourably placed in their relations with State Governments, as also, in their resource mobilisation functions. The Municipalities and Town Committees, however, have to depend much more on State Governments, both in administrative and financial matters.

Civic Status

Table 5.1 presents the civic status of urban local bodies in the NER. The glaring inter-regional imbalance in the distribution of urban local bodies is observed from the table.

Table - 5.1

Civic Status of Urban Local Bodies in NER

States	Corporation	Municipalities	Town/ Area Committees/ Notified	Others*	Total
Assam	1	23	38	1	63
Arunachal Pradesh	-	-	1	2	3
Manipur	-	2	1	-	3
Meghalaya	-	1	2	-	3
Mizoram	-	-	1	2	3
Nagaland	-	-	3	-	3
Tripura	-	1	9	-	10
All NER	1	27	55	5	88
All India	63	1711	839	-	2613

* Census Towns

Source : Census of India (1981) and NIUA Survey

While Town/Notified Area Committees constitute 62% of the urban local bodies in the Region, Municipal Boards cover one-third of the total number. Some local bodies in the border states of Arunachal Pradesh and Mizoram, continue to remain census towns and are expected to graduate to an Area Committee status shortly.

Out of a total of 88 urban local bodies in the Region, as many as 63 bodies, constituting 72 percent of the total are located in Assam alone. The regional concentration by type of urban local bodies is also evident from the statistics - more than 85 percent of the Municipalities, about 70 percent of Town/Notified Area committees, as

well as the Region's only Municipal Corporation are situated in Assam. The overall pace of development of civic institutions in the Region has, however, continued to remain slow and tardy.

Municipal Functions

The municipal functions enumerated under the various Acts can be classified into two categories-obligatory and discretionary. An obligatory function is one which the local body, under normal circumstances, is expected to make adequate provision for; while discretionary function is one which the local authority may, in exercise of its discretion, undertake to provide wholly or partly. In a technical sense, these two categories may be considered as being compulsory and non-compulsory; however, Municipal Acts generally permit municipalities to undertake any measure which is likely to promote public safety, health, and convenience of the people.

Among major obligatory functions are the following : potable water supply, public street lighting, sewerage and drainage system, health and education services, while the main discretionary functions comprise : provision of reading rooms, public libraries and auditoria, constructing public parks and recreational facilities, museums, cinemas etc.

The sphere of municipal functions-both obligatory and discretionary - has witnessed a fast expansion, with urbanisation making impressive headway in the NER. Municipal bodies are most important local level institutions assigned the difficult task of provision and maintenance of urban infrastructure. This task, cannot

be successfully accomplished unless local resources are efficiently tapped by these urban bodies.

Municipal Resources

The sources of revenue and the various functions on which the revenue is spent are presented in Chart 1 & 2 respectively.

The major sources of finance for the local bodies are: Tax and non-tax revenue (own 'self-generated) and External Assistance including assigned taxes as well as grants and loans from higher levels of government.

Some of the taxes are levied and collected by the local bodies themselves, while others are levied by the local bodies and collected by the State Government. The main taxes levied by the municipalities are :

i. Taxes on property, duty on transfer of property, rates on buildings (and lands) and betterment levies;

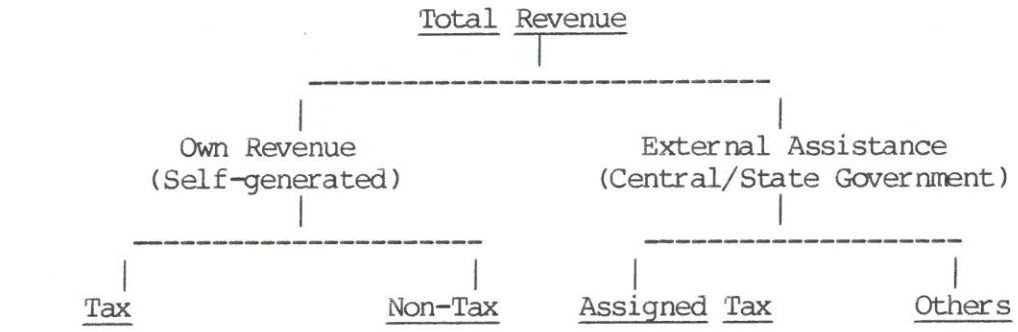
ii. Personal Tax - taxes on profession, vocation and calling;

iii. Taxes on vehicles, carts, carriages and animals.

Non-tax revenues of the municipal bodies are the fees, fines, charges and rents collected. Contributions to elementary education and internal transfers are also included in non-tax revenues.

CHART - 1

Sources of Revenue - Urban Local Bodies
in Ner (Current & Capital)



- Property Tax
- Profession Tax
- Vehicles & Animal Tax
- Others*

Fees
Fines
Charges
Rents
Others**

Motor Vehicle Tax
Entertainment
Surcharge on Stamp duty

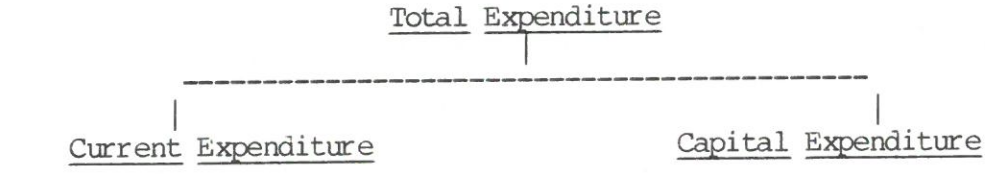
Loans
Grants (Current and capital nature)

* Includes i) Company Tax, ii) Advertisement Tax

** Includes i) Income from Investments, and ii) Sundry receipts

CHART - 2

Functional Outlays - Urban Local Bodies
in the NER (Current and Capital)



Current Expenditure	Capital Expenditure
- Public Health	- Public Health
- Water Supply	- Water Supply
- Lighting	- Lighting
- Roads	- Roads
- Others	- Others

Table 5.2 presents estimates of the municipal resources of the constituent states of the NER for the years 1976/77 and 1979/80.

An examination of the table reveals the following :

i. While total municipal revenue of a highly municipalised State such as Assam has declined of relatively less municipalised states such as Meghalaya and Nagaland have registered an increase are the same period. Revenues of urban local bodies at the all India level, have increased by 22.8 percent during the reference period.

ii. The resource structure of municipal bodies in all NER states have weakened. This is evident from the decline in own self-generated resources of local bodies in all NER states. The sharpest decline is in the case of Assam where own revenues of local bodies have declined from 87.9 percent to only 45.6 percent (i.e. by about half) of total revenues over the 4 year period under study.

iii. As a corollary to (iii) the level of external assistance (from the Central and State Government) in the form of grants, loans and other shared tax revenues to the urban local bodies of all NER states has increased dramatically. The increase of grants/other external assistance ranging from 290 percent (Assam), 209 percent (Meghalaya) and 214 percent (Nagaland) over the reference period.

Table - 5.2

Composition of Municipal Revenues

(Rs. Lakhs)

State/Year	Municipal Own Revenue			Other Sources	
	Tax	Non-Tax	Total	Grants	Total
Assam					
1976-77	212.00	315.00	527.00	72.50	599.50
	(35.40)	(52.50)	(87.90)	(12.10)	(100.00)
1979-80	133.00	43.00	176.00	209.90	385.90
	(34.46)	(11.14)	(45.71)	(54.39)	(100.00)
Manipur					
1976-77	28.00	7.00	35.00	194.00	229.00
	(12.20)	(3.10)	(15.30)	(84.70)	(100.00)
1979-80	0.20	0.50	0.70	-	N.A.
Meghalaya					
1976-77	18.00	1.00	19.00	2.02	21.20
	(84.90)	(4.70)	(89.60)	(10.40)	(100.00)
1979-80	18.30	1.80	20.10	4.60	24.70
	(74.10)	(7.30)	(81.40)	(18.60)	(100.00)
Nagaland					
1976-77	3	-	3.00	139.60	142.60
	(2.10)	(-)	(2.10)	(97.90)	(100.00)
1979-80	-	-	-	298.4	298.4
				(100.00)	(100.00)
Tripura					
1976-77	13.00	-	13.00	18.00	31.00
	(41.90)	(-)	(41.90)	(58.10)	(100.00)
1979-80	-	-	-	-	-
All-India					
1976-77	32278.00	15941.00	8219.00	16137.80	64356.80
	(50.20)	(24.80)	(75.00)	(25.00)	(100.00)
1979-80	50354.60	9781.60	60136.20	18871.50	79007.70
	(63.70)	(12.40)	(76.10)	(23.90)	(100.00)

Source : (a) 1976-77 data. Finance Commission Report, 1973
(b) 1979-80 data. NIUA Study, 1983

iv. Meghalaya emerges as the only NER State, where urban local bodies are making the highest contribution in tapping own (self-generated) resources for development purposes. Own (both tax and non-tax) revenues accounted for over 80 percent of total municipal revenues. However, even in Meghalaya external assistance to urban local bodies displays a positive and rising tendency.

v. Nagaland is the only State where virtually no efforts are being made to mobilise local revenues - the entire municipal revenue coming by way of external assistance from the Centre/State Government to the concerned urban local bodies.

vi. At the all India level, the own municipal revenues generated by local bodies has increased, while the level of external assistance in the form of grants and borrowings from the Centre/State Governments has declined from 25 percent of total revenues in 1976-77 to 23.9 percent in 1979-80.

Comparative Analysis of Municipal Finances

The overall status of municipal finances of the nine urban local bodies under consideration are presented in Table 5.3.

Of these only four viz. Guwahati Municipal Corporation, Agartala Municipal Board, Shillong Municipal Board, and Dimapur Town Committee showed an overall surplus on the combined current and capital account for the year 1986-87. The surplus ranged from Rs. 323 lakhs for Guwahati Municipal Corporation to Rs. 0.94 lakh for Shillong Municipal Board. However, observed budgetary surplus is only apparently encouraging, because it does not clearly indicate the extent to which the surplus is real, i.e., the extent to which it is related to own - resources and level of expenditure. As an illustration of this important anomaly we may consider the overall finances of these four local bodies in greater details. It may be observed that Guwahati

Table - 5.3

Financial Situation of Selected Local Bodies, 1986,87

(Rs. in Lakhs)

Name of the Local Bodies	Total Receipts*	Total Expenditure	Income & Expenditure differential (Surplus/ Deficit)	Percentage is total receipts
GMC	1,125.42	802.44	(+) 322.98	(+) 28.70
TMB	19.58	27.58	(-) 8.00	(-) 40.86
DMB	33.92	45.14	(-) 11.22	(-) 33.08
JMB	26.55	31.02	(-) 4.47	(-) 16.84
AMB	314.14	214.25	(+) 99.89	(+) 31.80
SMB	100.65	95.81	(+) 4.84	(+) 4.81
IMB	67.57	68.48	(-) 0.91	(-) 1.35
KTC	10.23	15.42	(-) 5.19	(-) 50.73
DTC	77.29	50.56	(+) 26.73	(+) 34.58

Source : NIUA Survey (1988).

* Including capital Grants and Loans.

01. (GMC) Guwahati Municipal Corporation

02. (TMB) Tinsukhia Municipal Board

03. (DMB) Dibrugarh Municipal Board

04. (JMB) Jorhat Municipal Board

05. (AMB) Agartala Municipal Board

06. (SMB) Shillong Municipal Board

07. (IMB) Imphal Municipal Board

08. (KTC) Kohima Town Committee

09. (DTC) Dimapur Town Committee

Municipal Corporation's overall revenue receipt of Rs. 1,125/- lakhs for 1986-87 is inclusive Rs. 303/- lakhs as contribution from the State Government in the form of Assigned taxes (under section 184); Rs. 54 lakhs as Grants-in-aid; and Rs. 350/- lakhs as loans from Government and public financial institutions. The combined external assistance received by the for Guwahati Municipal Corporation amounts

to Rs. 707/- lakhs for 1986-87, which works out to nearly 63 percent of total receipts. Similarly for Agartala Municipal Board, an actual level of grants of Rs. 242/- lakhs for 1986-87, alone, works out to 77 percent of total revenue; for Shillong Municipal Board and Dimapur Town Committee external assistance as a percentage of total receipts for 1986-87 is 42 percent and 74 percent respectively. This trend reflects a general fiscal weakening of local bodies with increased dependence on devolution from the higher levels of government both central and state.

The remaining five municipal bodies examined possessed an overall budgetary deficit which ranged from Rs. 0.91 lakh for Imphal Municipal Board to Rs. 11.22 lakhs for Dibrugarh Municipal Board. The level of the deficit in these cases is positively correlated with the size of the external assistance received (including both grants and loans). In the case of the five concerned municipal bodies the budgetary deficits have been financed from previous capital and revenue balances, apart from the external assistance as noted. This indicates that the concerned local bodies have not made any special effort to mobilise additional local resources for development purposes.

To summarise briefly, it may be therefore stated that, even in the case of urban local bodies showing an overall budgetary surplus in financial terms, the real situation as quite different from what an apparent income-expenditure differential leads one to believe.

Table 5.4 provides data on the revenue and capital accounts separately for the selected municipal bodies. The table reveals that except for Guwahati Municipal Corporation, Shillong Municipal Board

Table - 5.4

Revenue and Capital Account Differentials of Selected Local Bodies, 1986-87

(Rs. in lakhs)

Selected Local Bodies	Current Revenue*	Ordinary Expenditure	Current Account Differential (+ Surplus - deficit)	Capital Revenue	Capital Expenditure	Capital Account Differential (+ Surplus - Deficit)
GMC	775.42	567.44	(+) 207.98	350.00	235.60	(+) 115.00
TMB	18.10	24.74	(-) 7.26	2.10	2.84	(-) 0.74
DMB	22.21	33.24	(-) 11.03	11.17	11.90	(-) 0.19
JMB	21.24	26.50	(-) 5.26	5.31	4.52	(+) 0.79
AMB	67.46	93.02	(-) 25.56	246.68	121.23	(+) 125.45
SMB	54.97	28.90	(+) 41.77	45.68	2.76	(-) 21.23
IMB**	55.93	66.01	(-) 10.08	11.64	2.47	(+) 9.17
KTC	9.23	14.42	(-) 5.19	1.00	1.00	NIL
DTC	27.29	24.56	(+) 2.73	50.00	26.00	(+) 24.00

* Including Assigned Taxes

** Capital account is inclusive of suspense head items.

Source : NIUA Survey, 1988.

and Dimapur Town Committee, all six remaining local bodies possessed a deficit in their current account balances for 1986-87. This deficit varied from Rs. 5.19 lakhs for Kohima Town Committee to Rs. 25.56 lakhs in the case of Agartala Municipal Board.

NIUA's field investigations revealed that the current account deficits particularly in the municipalities in Assam were largely due to the non-transfer of certain taxes and duties by State government,

to the concerned urban local bodies. As per the recommendation of Assam Municipal Finance Committee 1966 adopted by the State Government, 90 per cent of collections under Entertainment tax, Motor vehicle tax, Professional tax and duties such as stamp duty were to be transferred (refunded) to concerned local bodies. The 10 per cent deduction was on account of "collection charges".

However, urban local bodies other than the Guwahati Municipal Corporation were not being refunded their share of the taxes levied by the State Taxation Department. As regards the Motor Vehicle tax, disbursements were reported as being quite irregular, resulting in substantial losses to concerned local bodies. A similar situation seems to prevail in the other NER states, as a result substantial revenues cannot be utilised by the urban bodies for major development and maintenance activities.

With respect to the capital account, table 5.4 shows that three local bodies - Tinsukhia, Dibrugarh and Shillong Municipalities - had a deficit, while the remaining possessed a surplus on their capital account for the year 1986-87. Here it is to be noted that capital grants and loans under capital account are essentially meant for capital development programmes of the local bodies and as such has to be spent as per sanctioned plans. A capital account surplus is hence an indication of "inefficiency", as it suggests that planned capital expenditure is not being undertaken. Local bodies in such situations by not creating capital assets as planned are, therefore, likely to face further difficulties in the future, due to higher cost of capital, which is itself a result of inflationary trends in the capital markets.

Municipal Performance

After examining the overall financial situation of the selected local bodies it is time now to consider their performance. In order to do so, it is essential to examine the functional distribution of municipal expenditure on critical urban services.

Table 5.5 provides data on current per capita municipal revenues and expenditure of the selected urban bodies for the financial year 1986-87. It may be observed that wide differentials in per capita revenues and expenditures exist. While per capita revenue varies from a low of Rs. 16.92 (Tinsukhia Municipal Board) and Rs. 17.70 (Jorhat Municipal Board) to a maximum of Rs. 140.99 (Guwahati Municipal Corporation); the per capita municipal expenditure ranges from a low of Rs 22.08 (Jorhat Municipal Board) and Rs.23.12 (Tinsukhia Municipal Board) to a high of Rs. 103.17 (Guwahati Municipal Corporation).

Table - 5.5

Current Per Capita Municipal Revenue and
Expenditure of Selected Local Bodies of NER, 1986 - 1987

Selected Local Bodies	Population 1981	Per Capita Municipal Revenue (Rs.)	Per Capita Municipal Expenditure (Rs.)
GMC	550000	140.99	103.17
TMB	107000	16.92	23.12
DMB	102040	21.77	32.58
JMB	120000	17.70	22.08
AMB	132186	51.11	70.47
SMB	174703	55.24	55.39
IMB	156622	35.62	42.04
KTC	34340	27.14	42.41
DTC	32878	82.69	74.42

Source : NIUA Survey, 1988.

A majority of urban local bodies are living beyond their means, is a significant finding which the above table provides. Barring Guwahati Municipal Corporation and Dimapur Town Committee, remaining seven local bodies possess expenditure levels outstripping the revenues. Only in the case of Shillong Municipal Board, the revenue expenditure parity is maintained.

Per capita municipal expenditures provide an idea about the level of civic services in an urban centre, and from the table it may be noted that Guwahati Municipal Corporation, Agartala Municipal Board and Dimapur Town Committee are considerably ahead of the other urban bodies, under consideration. Four selected bodies Dibrugarh, Imphal and Shillong Municipalities and Kohima Town Committee have moderate levels of per capita expenditure varying between Rs. 33 and Rs. 55. The remaining two urban bodies i.e. the Tinsukhia and Jorhat Municipal Boards have unsatisfactory levels of per capita expenditure (less than Rs.25 per capita) despite high population growth. The observed wide differentials in per capita revenues clearly indicate the extreme imbalance in the size of the revenue base as also in the revenue mobilisation efforts of the selected local bodies.

The NIUA, in an earlier study*, grouped the States/UTs on the basis of per capita expenditure of local bodies on urban services. From the data, Delhi, Maharashtra, Gujarat, Sikkim and Himachal Pradesh were identified in Group I with per capita expenditure exceeding Rs. 40. Assam, Bihar, Meghalaya and Manipur were placed at the bottom. The local bodies of the NER despite notable exceptions

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* NIUA, A Study of the Financial Resources of Urban Local Bodies in India, and the Level of Services Provided, 1983.

are unable to maintain service levels, because of the poor economy and the high cost of providing and maintaining the essential services in difficult hilly terrain. These local bodies are constrained by low per capita municipal revenues, as noted, and have to cope with a inhibiting factors including poor tax collection, inefficient tax structure, insufficient fiscal devolution and grants from higher levels of government (paticular State Government), physical constraints of hilly terrain and the uncontrolled sprawl of the cities, particular State Capitals.

The functional expenditures on major urban services are given in table 5.6.

a) Public Health :

Data reveals that public health is the most significant urban service provided in all the selected local bodies except Tinsukhia Municipal Board. Expenditure on public health (including drainage, sewerage and conservancy) was highest in the case of Dibrugarh Municipal Board constituting 58.81 per cent of aggregate municipal expenditure and it was the lowest in the case of Dimapur Town Committee accounting for 31.35 per cent. Notwithstanding the above the existing arrangements for collection and disposal of sewage in most local bodies examined are unsatisfactory. Most urban areas have open surface drainage and the fully covered drains serve a negligible area. The biggest State, Assam is yet to launch a sewerage development programme for its towns - the main constraints in this respect being resource availability and expertise at the local level.

Table - 5.6

Functional Distribution of Municipal Expenditure (in Rs.)
Selected Local Bodies, 1986/87

Local Bodies	Muncipal Services						
	Water Supply	Public Health	Education	Roads	Street Light-ing	Other	Total
GMC	25.90 (25.10)	32.96 (31.95)	1.85 (1.79)	24.65 (23.89)	0.71 (0.69)	17.1 (16.57)	103.17 (100.00)
TMB	* (-)	7.75 (33.52)	0.33 (1.43)	9.36 (40.48)	0.23 (0.99)	5.45 (23.57)	23.12 (100.00)
DMB	* (-)	19.16 (58.81)	0.68 (2.09)	3.43 (10.53)	1.00 (3.07)	8.31 (25.51)	32.58 (100.00)
JMB	5.75 (26.04)	9.72 (44.02)	0.15 (0.68)	4.56 (20.65)	0.13 (0.59)	1.77 (8.02)	22.08 (100.00)
AMB	25.47 (36.14)	27.69 (39.29)	0.18 (0.26)	14.74 (20.92)	*** (-)	2.39 (3.39)	70.47 (100.00)
SMB	13.27 (23.96)	22.34 (40.33)	** (-)	5.77 (10.42)	0.28 (0.51)	13.73 (24.79)	55.39 (100.00)
DTC	@ (-)	23.33 (31.35)	3.03 (4.07)	21.48 (28.86)	1.21 (1.63)	25.37 (34.09)	74.42 (100.00)

NOTE : Municipal Expenditure data for Imphal Municipal Board and Kohima Town Committee is not available.

Figures in brackets are percentages to the total.

* Organised Water supply system does not exist.

@ Water supply function performed by Public Health Engineering Department (PHED).

** Education provided by State Education Department.

*** Street lighting function under P.W.D. Electrical Department directly.

Source : NIUA Survey (1988)

While a large share of municipal expenditure on drainage and conservancy is incurred on staff maintenance for road cleaning and garbage collection, what is required is a proper drainage system based on low - cost technology and recycling of storm water for new agricultural practices. For this purpose a drainage betterment tax to be levied and sewerage connections be made obligatory and charged on full cost basis.

b) Water Supply :

Water supply has been prescribed as an obligatory function in State Municipal Acts, however, municipal expenditure on this vital function is grossly inadequate ranging from Rs. 5.75 (Jorhat Municipal Board) to Rs. 25.90 (Guwahati Municipal Corporation) per capita for the reference year. With the demand for water constantly increasing, development of water supply system in urban areas needs to be closely inter-linked with parameters of housing, transport, energy, and commercial development in particular. With state level agencies such as the Public Health Engineering Departments (PHED) assuming larger responsibility for provision of water supply this deficiency is being reduced.

It is imperative that water supply management in urban areas be conducted from the view point of both an essential service and an economic enterprise. The pricing policy for urban water supply including water charges and water tax levies on urban properties, should be judiciously worked out on sound principles of "cost-effectiveness" and what "the traffic and bear".

c) Roads :

Expenditure on municipal roads varies between 10.42 percent in the case of Shillong Municipal Board to as much as 40.48 percent for Tinsukhia Municipal Board. Municipal roads and streets are as much a civic necessity as a convenience and a well designed and laid-out intrnal road network is a most important municipal function, in all urban centres, particularly the bigger centres. In some of the smaller municipalities and town area committees, the existing roads on account of larger traffic loads are rapidly deteriorating and repairs/maintenance works are not promptly undertaken. At the sametime, in heavy land-slide prone hill areas, such as Kohima, road development and maintenance require careful technical (including soil-testing) evaluations before major works are undertaken.

d) Street Lighting :

Municipal expenditure on public lighting and is extremely unsatisfactory in a majority of selected urban local bodies of the Region. With the exception of Dibrugarh Municipal Board (3.07 percent) and Dimapur Town Committee (1.63 percent) the per capita expenditure on street lighting was below one percent for the remaining urban bodies examined. As a result a large proportion of municipal areas either remained unserved or were inadequately served with respect to this critical function.

Public street lighting is a major function of municipal bodies and with rapid increase in vehicular traffic the importance of public lighting is likely to increase in the future years. Municipal bodies in the NER need to give greater attention to public lighting of street and cross-roads.

Financial Augumentation

The expenditure analysis has revealed that adequate financial resources constitute a major constraint in the way of upgradation of urban service levels in the Region. As such financial augmentation of urban local bodies, emerges as a crucial area of concern, for improving the state of urban services.

The financial resources position of urban local bodies can be improved through both internal and external measures. Internally financial augmentation may be effected through :

i. Improvement in revenue collections;

ii. Revisions of existing taxes and rates; and

iii. Imposition of new taxes.

The external measures for improving municipal finances include :

i. Greater financial devolution by higher levels of government (both state and central);

ii. Institutional Finance and Borrowings;

iii. International Assistance.

a. Internal Measures

Table 5.7 shows the demand and collection of municipal revenues of the nine selected urban local bodies. It may be noted that the apparently very high percentage of revenue collection to demand, in the case of three local bodies - Dibrugarh, Shillong and Imphal Municipalities - is due to inclusion of previous arrears in the revenue collections. The real achievements in this respect however, appear to be much more modest at around 50 percent on an average for the selected local bodies.

Table - 5.7

Municipal Revenue Collection Against Demands
Selected Local bodies, 1986 - 1987
(Rs. in Lakhs)

Selected Local Bodies	Current Revenue		
	Demand	Collection	Percentage of Collection to the demand
GMC	915.52	459.76	50.22
TMB	34.00	18.10	53.24
DMB	25.82	22.21*	86.02
JMB	52.81	21.24	40.22
AMB	473.85	309.46	65.30
SMB	84.81	96.67*	113.98
IMB	68.39	61.30*	89.65
KTC	-	9.23	-
DTC	46.62	27.29	58.54

Note : * Including arrears.
Source : NIUA Survey (1988)

Field investigations revealed the following major factors behind low revenue collections:

i. Laxity of the tax collectors;

ii. Lack of supervision over tax collection;

iii. Shortage of tax-collecting staff;

iv. Inability of the Boards/Town Committees to apply coercion; and

v. Delayed servicing of bills.

The following measures are expected to remove existing lacunae in revenue collections :

For the main factors noted (i & ii), the procedure of submitting monthly progress reports should be strictly enforced and necessary follow-up actions undertaken to fill deficiencies in tax collection expeditiously. Regarding (iii) the required number of tax collectors should be engaged so that the burden of visiting vast numbers of

holdings on a particular Tax Collector may be avoided thus helping efficiency and speedy collection of taxes. With reference to (iv) the procedures laid down in the State Municipal Acts for realisation of taxes should be strictly adhered to in all cases. Finally, irregular and delayed servicing of Bills should be eliminated through prompt action and the concerned officers of the Billing Section be made directly accountable for any laxity in this regard, and disciplinary proceedings where applicable may be initiated.

Property (or Holding) tax has emerged (after the abolition of octroi) as the most important tax available to urban local bodies in the Region. The other important tax is the Service tax which includes Lighting, Water and Conservancy (or Scavenging) tax.

Table 5.8 gives the structure of tax revenue in the selected local bodies. It may be observed that with the exception of Agartala Municipal Board, property tax accounted for between 11-25 per cent of current revenue of the selected local bodies. The highest level of property tax was reported from Dibrugarh Municipalilty and the lowest from Agartala Municipality.

In a recent study covering 210 municipalities in India*, the NIUA has observed that property tax as a source of revenue is not significant for relatively smaller local bodies and has ascribed three reasons for this :

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* The Nature and Dimension of the Urban Fiscal Crisis - NIUA, New Delhi, September 1987, (p. 25-26).

Table - 5.8

Structure of Tax Revenue, 1986-87
Selected Local Bodies

(in Rs. lakh)

Local Bodies	Property Tax	Service Tax			
		Water	Lighting	Conservancy	Total
GMC	134.9 (17.4)	N.A.	N.A.	N.A.	117.52 (15.2)
TMB	2.02 (11.2)	*	0.53 (2.9)	0.86 (4.8)	1.40 (7.7)
DMB	5.64 (25.4)	*	1.07 (4.8)	0.61 (2.7)	1.68 (7.6)
JMB	4.01 (18.9)	*	1.35 (6.4)	0.94 (4.4)	2.30 (10.8)
AMB	2.89 (4.3)	3.44 (5.1)	0.89 (1.3)	1.09 (1.6)	5.42 (8.0)
SMB	11.21 (20.4)	6.75 (12.3)	2.38 (4.3)	0.56 (1.0)	9.69 (17.6)

Notes : * Water Tax not levied.

The figures in brackets are percentages to total current Revenue.

Source : NIUA Survey (1988)

i. the inability of the smaller local bodies to undertake periodic valuation of properties;

ii. gross ineffeciencies in the collection of taxes; and

iii. their inability to use the prescribed limits of tax rates (this being a characteristic of lar local bodies also).

Investigation revealed that in most municipalities statutory

quinquinial reassessment of properties are long overdue. As a result the old rates of taxes were being collected leading to loss of revenue for the urban local bodies. In a number of cases, valuation officers were not appointed by the Government, and even where they were, frequent transfers grievously affected valuation work in the municipalities. Complaints from tax payers resulting from over-assessment were not disposed off expeditiously leading to an increase in the quantum of pending litigation.

It is suggested that re-assessment of urban properties within municipal limits be undertaken regularly, For this purpose the survey wings of the concerned local bodies including the Town and Country Planning Departments may be appropriately strengthened. The sample of properties/holdings to be surveyed should be representative of the entire urban area within municipal jurisdiction.

Further table 5.8 indicates that the extent of taxation of services in the selected local bodies varies widely from a maximum of 17.6 per cent of revenue (Shillong Municipal Board), to a minimum of 7.6 per cent (Dibrugarh Municipal Board). The most significant component, the water tax, netted more than 12 per cent of the current revenue of the Shillong Municipality in 1986-87.

Like property tax, the Water tax (and also conservancy tax) is levied on the assessed value of urban premises, and overall collections from this source are adversely affected through outdated valuations. At the sametime, widely varying rates of water taxation, particularly in the urban bodies of Assam is an irritant to the rate payers. A uniform rate of water tax in urban areas where water supply

facilities have been established with suitable adjustments for prevailing local conditions, especially in hill towns, would constitute a major reform in this critical infrastructure area.

Municipal bodies should ensure the economic viability of providing urban services and make cost-recovery an important component of service utilisation. A greater reliance on user charges for amenable urban services such as water supply, sewerage and solid waste disposal among others is recommended. Here again, disadvantages suffered by adversely situated hill towns may be adequately compensated.

With the abolition of octroi, a significant source of local body revenue was lost. To compensate for this the state governments. have been disbursing specific-purpose grants to the local bodies; except in the case of Guwahati Municipal Corporation which is empowered to collect entry tax. Recently the "Committee on Substitution of Octroi", (P.D. Kasbekar) of the Maharashtra Govt. has recommended entry tax as a subsitute for octroi.

The Report argues :

> "Entry tax is the closest to octroi in terms of incidence. It can be levied without any hindrances on all goods subject to octroi. It has a wide tax base. Further it may be levied without encroaching upon the State Government Revenues".

In line with this recommendation respective State governments of NER may allow the imposition of entry tax by local bodies on the pattern of Guwahati Municipal Corporation. Alternatively, as recommended by the Assam Municipal Finance Committee, a levy of surcharge on sales tax @ 2.5 per cent in lieu of octroi, will considerably augment finances of local bodies.

With urbanisation and increasing tertiarisation of the economy, trading activities have grown rapidly in several urban centres. With a view to bring about sectoral balance in the share of fiscal resources, a trading tax, levied on the basis of a percentage of gross turnover (say 0.5 percent per annum), may be imposed on major trading Federations, Corporations, and Registered Associations operating within the jurisdiction of municipal bodies in the large urban centres, to start with. The tax may be collected by the local bodies directly.

Throughout the NER, the payments of taxes by State Government offices for their properties/holdings within municipal jurisdictions is irregular and substantial amounts have accumulated as arrears. State Government departments may be directed to make regular payment of taxes on office buildings so as to keep arrears at a minimum. This will considerably improve the resource position of the concerned local bodies.

Property taxes are presently not levied on Central government properties located within municipal jurisdiction in the NER. It is perhaps not widely known that in 1967, the Central Government. (Department of Coordination, Ministry of Finance) issued a circular on taxation of Central Government properties and detailed the basis of fixation of property tax for such properties at concessional rates. In view of above, property tax may be imposed on central government building properties as per rules.

b. External Measures

We have noted earlier that shared taxes, such as the professions tax, entertainment/show tax, motor vehicles tax belong to the domain of local bodies. As such the levy of such taxes by concerned state governments at present, without sharing it with local bodies is an act of encroachment by the higher level of government. With a view to financial augmentation, the recommendation of the Assam Municipal Finance Committee, that after deducting the collection charges (a nominal 10 percent of tax collected), the remaining quantum may be refunded to the local bodies, is desirable.

Grants constitute a powerful instrument of control by higher levels of Government over the finances of urban local bodies. At present grants-in-aid are largely ad hoc and discretionary in nature and it is necessary to ensure continuity and certainty in the flow of grants to municipal bodies. The higher levels of Government can render financial assistance of local bodies through a simplification of prodedures, elimination of unnecessary delays, and a codification

of their grants-in-aid system. With regard to specific purpose grants, a more liberal pattern of financial assistance for hill towns and places of tourist interest may be considered. In the case of hill to a minimum contribution by the local body need not be insisted upon and the percentage of grants may be increased according to the circumstances of each case.

International assistance for urban development has yet to emerge as a major catalytic agent in the development process underway in the Region. Urban local bodies are largely unaware of the modalities of securing international assistance as they are, by and large, unequipped with adequate expertise to propose sound and technically feasible urban projects for international funding.

Without proper institutional arrangements for urban financing, the capital requirements of urban projects presently are being neglected (or are met from current maintenance revenues), and important urban projects are delayed or indifferently executed.

The main findings may be recapitulated as follows :

i. The acceleration in the rate of urbanisation in the NER has necessitated an increasing role of urban local bodies in the provision of essential urban services such as water supply, sewerage, drainage and sanitation, local roads, street-lighting and solid waste disposal.

ii. The evolution of urban local institutions in the Region, however, has remained retarded with glaring inter-regional imbalance in the distribution of municipal bodies. Over 85 per cent of municipalities, about 70 per cent of Area Committees and the Region's only Corporation are located in Assam.

iii. While total municipal revenue of a highly municipalised State (Assam) declined by 35.60 per cent over the period 1976 to 1980, the total revenues of municipal bodies in relatively less developed states (Meghalaya and Nagaland) registered an increase over the same period. At the all India level, municipal revenues have increased by 23 per cent cost over the same period.

iv. There are clear indications to suggest a weakening of the resources structure of municipal bodies in the NER. While internal resource generation has declined (the sharpest fall being observed in Assam) the share of external assistance (in the form of grant-in-aid and other constributions from state and central governments) has registered impressive increases in all constituent state of the Region. These trends point to a fiscal weakening of local bodies with increasing dependence on devolution from higher levels of government both centre and state.

v. While Meghalaya has emerged as the premier state as regards own resource mobilisation by municipal bodies (tax and non-tax revenues accounted for over 80 per cent of a total municipal revenues); Nagaland is the only state entirely dependent on external revenues for municipal functions of local bodies.

vi. Municipalities in Assam are facing budgetary deficits, largely due to non-transfer of certain taxes and duties (in particular Motor Vehicle Tax) gross inefficiencies in the collection of taxes, out dated assessments of properties (affecting Property Tax, Water tax, and Conservancy tax).

vii. With reference to their performance, most local bodies incurred a moderate to high level of per capita expenditure on urban services, ranging between a low of Rs.22 in the case of Jorhat Municipal Board to a high of Rs 103 for Guwahati Municipal Corporation. The Agartala Municipality and the Dimapur Town Committee had a creditable performance in this regard, with per capita expenditure on municipal services exceeding Rs. 70 per capita in 1986/87.

viii. While public health (including drainage and conservancy) emerges as the most significant urban service sector municipal expenditure on urban water supply is grossly inadequate, ranging from Rs. 5.75 to Rs. 25.90 per capita.

ix. The following major internal financial augmentation measures for strengthening municipal bodies have been suggested :

a. Tax collection system may be improved through more efficient enforcement of procedures laid down in the State Municipal Acts.

b. Regular reassessment of urban properties through representative surveys - both in residential and commercial areas.

c. Water tax to be made uniform in served areas and levied on reassessed property values, with suitable adjustments in the hill towns.

d. Imposition of entry tax (in lieu of Octroi) on the pattern of the Guwahati Municipal Corporation is recommended. Alternatively, a levy of surcharge on sales tax @ 2.5 per cent in lieu of octroi will considerably augment finances of local bodies in the Region.

e. In the interest of maintaining sectoral balance in the share of fiscal resources a trading tax may be imposed on major Trading Federations, Corporations and Registered Associations, operating within municipal jurisdictions. The tax may be directly collected by the local bodies.

f. Property tax on central government properties may be imposed in the Region as per the Rules. Arrears in the collection of property taxes on state government properties within municipal jurisdiction may not be allowed to accumulate.

g. Municipal bodies should ensure the economic viability of providing urban services and make cost recovery an important component of service utilisation. A greater reliance on user charges for amenable urban services such as water supply, sewerage, and solid water disposal is recommended.

x. Significant external measures for financial augmentation include : imposition of tax-sharing proposals (particularly for Motor vehicle tax, Professions tax and Entertainment tax); greater financial devolution with more liberal urban infrastructure financing for hill towns and places of tourist interest in the NER.

VI

URBAN POPULATION PROJECTIONS AND IMPLICATION FOR SELECTED SERVICES

Urbanisation is a phenomenon which is closely related with economic development in general. It is a natural consequence of economic activities which require an increasing concentration of people in a spatial-locational system.

A striking feature of urbanisation in NER is the fast growth of urban population in virtually all constituent States. With the exception of Tripura, urban growth rates during 1971-81, have surpassed the national average of 46.24 per cent, in the remaining six States of the Region. Indeed four States, Arunachal Pradesh, Manipur, Mizoram and Nagaland, have seen their urban population increase by more than 100 per cent over the decade.

Urban population projections constitute a necessary pre-requisite for planning the future pattern of urban population growth and in setting targets and quotas. Existing trends indicate that provision of basic urban services, and civic amenities are likely to become acute problems n future city planning in the Region. The impact of a fast rate of urbanisation is already visible in a strain on the absorptive capacity of cities, particularly the bigger urban centres.

The present chapter addresses itself to the future pattern of urbanisation in the Region, through an analysis of population projections for selected major urban centres. Some special

features of future population growth of urban centres have been highlighted. An assessment of the future requirements of three selected urban services have been provided as an illustration of the magnitude of urban problems which have already started unfolding in the Region, on a wider scale. The future urban service requirements, to sustain urban populations growth, have been estimated both in physical and financial terms. The horizon years for projections are 1991, 2001 and 2011 A.D.

Table 6.1 gives the population projections for 22 selected urban centres. The aggregate urban population of these centres shall cross 3 million by 1991, increase to slightly more than 5 million by 2001 and is projected to reach a level of 8.6 million by 2011 A.D.

In 1981, of the 22 selected centres, seven had a population exceeding one lakh; in 2011 A.D. as many as 17 are expected to enter the lakh plus category. While Guwahati is the only urban centre with a population size exceeding 5 lakhs in 1981, by the year 2011, A.D. 5 urban centres - Aizawl, Dimapur, Imphal, Shillong and Tinsukhia - are projected to reach the 5 lakh plus category, with Aizawl registering maximum growth. The urban population of Guwahati is projected to cross the 2 million mark in 2011 A.D.

Table 6.2 reveals the process of population polarisation towards the larger urban centres of NER. It may be observed that except for the 2 lakh plus population size class, the share of urban population in all the other three classes, continuously declines over the horizon years. As against 35 percent of aggregate urban population living in 15 small and medium towns of NER (population size below 1 lakh) in

1981, only 4 percent are expected to reside in 5 small and medium towns of the Region in the year 2011 A.D.

Table - 6.1

Population Projections for Horizon years
1991, 2001, 2011, A.D.
(Selected Urban Centres)

Urban Centres	1981	1991	2001	2011
Imphal	156622	244409	381403	595183
Agartala	132186	174271	229755	302905
Shillong	174703	248640	353870	503634
Kohima	34340	54733	87238	139047
Aizawl	74493	174833	410329	963032
Dimapur	32878	86992	230172	609014
Karimganj	34780	38258	42084	46292
Silchar	84000	134154	214255	341183
Tezpur	65800	108593	179219	295777
Bongaigaon	50000	77203	119208	184066
Kokrajhar	25800	39017	59006	89236
Dhubri	56980	71217	89011	111252
Guawahati	550000	849241	1311293	2024736
Barpeta	31774	38127	45752	54901
Tinsukia	107000	208501	406286	791693
Dibrugarh	102040	129588	164573	209004
North Lakhimpur	35000	60963	106186	184957
Nowgong	84800	127191	190775	286144
Lumding	36500	45542	56824	70902
Hojai	31800	44413	62028	86631
Jorhat	120000	185289	286100	441760
Sibsagar	46700	79519	135402	230557
Total	2068196	3220694	5160769	8562906

Source: National Institute of Urban Affairs (1988).

Table - 6.2

Urban Population Projections by Size Classification
(Selected Urban Centres)

Size (Population)	1981		1991		2001		2011	
	No. of centres	Population ('000)	No. of centres	Population ('000)	No. of centres	Population ('000)	No. of centres	Population ('000)
200,000 +	1	550 (26.6)	5	1551 (48.2)	9	3823 (74.1)	13	7596 (88.7)
100,000 - 200,000	6	793 (38.3)	7	1034 (32.1)	6	859 (16.6)	4	619 (7.2)
50,000 - 100,000	6	416 (20.1)	6	431 (13.4)	5	354 6.9)	4	302 (3.5)
0-50,000	9	309 (14.9)	5	205 (6.4)	2	88 (1.7)	1	46 (0.5)
Total	22	2068 (100.0)	22	3221 (100.0)	22	5160 100.0)	22	8563 (100.0)

Figures in brackets are percentage to the total.

Source : National Institute of Urban Affairs (1988).

A graphic representation of urban population projection for the 22 selected centres, for the three horizon years, is provided in Graph 6.1.

Our analysis of urban population trends in future years, indicates that the urban structure of the NER is steadily evolving towards a higher degree of primacy. If uncontrolled this, threatens the fabric of the urban infrastructure system. Existing shortages in critical services are already placing a heavy burden on the "carrying capacities" of urban centres. In the absence of control and regulation these are likely to get accentuated in the future.

In order therefore, to effectively guide the future urban growth in such a manner that the delivery of basic urban services to the population is ensured, an assessment of the physical and financial requirements of urban services is presented.

Estimates relate to the total requirements for three basic urban services for which the relevant data were available viz., water supply, roads and public street-lighting, with respect to 22 urban centres of NER for the horizon years 1991, 2001 and 2011 A.D. In addition, an estimation is made of the financial resources - including both capital and maintenance requirements - for providing the basic services need of the selected urban centres of the NER for the respective horizon years.

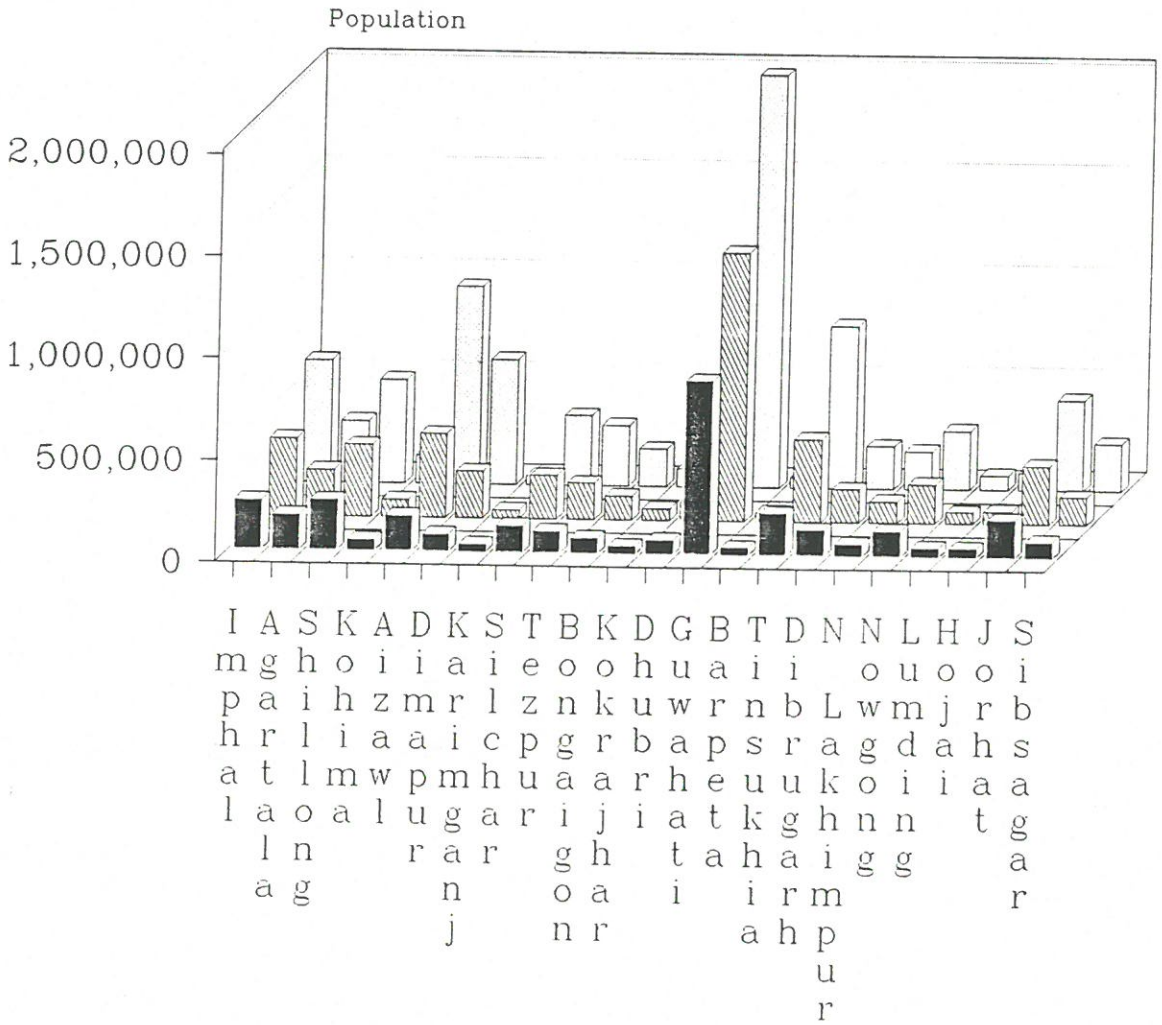
a) Water Supply

Table 6.3 gives the estimated physical and financial requirements of water supply for the 22 urban centres. The aggregate results show that for the horizon year 2011 A.D., the total requirement of water supply needed for a population of 8.56 million is of the order of 381 M.G.D. or 1714.5 million liters per day. While urban water supply requirements of Guwahati Corporation (GMC) alone would be of the order of 547 m.l.d. (or 32 per cent of the combined total), if we consider, in addition the 5 major urban growth centres - Imphal, Shillong, Aizawl, Dimapur, and Tinsukhia - the requirement increases to 1248 m.l.d. (or 73 percent of the combined total).

The following urban centres are projected to have moderate level of water requirement - between (10 - 20) M.G.D. in 2011 A.D. - Agartala, Silchar, Tezpur, Nagaon and Jorhat. The remaining of urban

POPULATION PROJECTIONS – N.E. REGION

Selected Urban Centres



centre under examination are estimated is have a water requirement of less than 10 M.G.D. by the year 2011 A.D.

In financial terms, table 6.3 reveals that an estimated Rs. 168.05 crores in capital requirement and Rs. 35.54 crores in annual maintenance expenditure (as constant 1981 prices) shall be required for maintaining the population level of 2011 A.D. for the 22 selected urban centres of NER.

b) Roads

The physical and financial requirements of urban roads in the 22 selected centres of NER, for the respective horizon years, are provided in table 6.4.

It may be observed that the combined road length of all the urban centres, is estimated to increase from 1373 Km. in 1991 to 4286 Km, in 2011 A.D. or by about 212 percent. Considering that the terminal jurisdiction of most urban centres in the Region (which in special terms is the largest unit accounting for 7.7 percent of total land area of India) is expanding rapidly, urban road length is adequately reflected in the above estimated increase.

The following urban centres have been estimated to have high road development requirements by 2011 Aizawl, Dimapur, Guwahati, Nagaon, Lumding, Imphal and Tinsukhia.

Urban centres having a medium road requirements between 100-150 Km. in 2011 A.D. are : Agartala, Hojai and Jorhat. The remaining urban centres are estimated to have a road requirements of less than 100 Km. by the year 2011 A.D.

Table - 6.3

Estimates of Physical and Financial Requirements
for Water Supply for Horizon Years
1991, 2001, 2011 A.D.
(Selected Urban Centres of NER)

Urban Centres	1991			2001			2011		
	Physical Requirements (M.G.D.)	Financial Requirements (Rs.in lakh)		Physical Requirements (M.G.D.)	Financial Requirements (Rs.in lakh)		Physical Requirements (M.G.D.)	Financial Requirements (Rs.in lakh)	
		Capital Cost	Maint. Cost		Capital Cost	Maint. Cost		Capital Cost	Maint. Cost
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Imphal	8.55	381.28	95.81	13.35	566.66	142.39	26.78	1144.37	248.35
Agartala	6.10	271.86	68.31	8.04	341.35	85.78	10.60	483.27	121.44
Shillong U.A.	8.70	387.88	97.47	12.39	525.75	132.11	22.66	968.35	210.15
Kohima	1.37	65.68	18.92	2.18	99.70	28.71	4.87	221.84	55.75
Aizawl	6.12	272.74	68.53	14.36	609.63	153.19	43.34	1851.65	401.85
Dimapur	2.17	104.39	30.06	8.06	341.97	85.93	27.41	1170.97	254.12
Karimganj	0.57	33.67	11.57	0.63	35.27	12.12	0.69	41.66	14.32
Silchar	4.70	209.28	52.59	7.50	318.32	79.99	11.98	545.94	137.18
Tezpur	3.81	169.41	42.57	6.27	266.27	66.91	10.35	471.90	118.58
Bongaigaon	1.93	92.64	26.68	4.17	177.11	44.50	6.44	293.67	73.79

Contd...

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Kokrajhar	0.59	34.33	11.80	1.48	67.44	19.42	2.23	109.52	31.54
Dhubri	1.78	85.46	24.61	2.23	101.73	29.30	3.89	177.50	44.60
Guwahati	38.22	1596.57	346.49	59.01	2347.84	509.53	121.48	5383.96	894.57
Barpeta	0.57	33.55	11.53	0.69	35.34	13.18	1.37	67.38	19.41
Tinsukhia	7.30	325.26	81.73	14.22	603.62	151.68	35.63	1522.21	330.35
Dibrugarh	4.54	202.16	50.80	5.76	244.51	61.44	7.32	333.46	83.79
North Lakhimpur	1.52	73.16	21.07	3.72	157.76	39.64	6.47	295.09	74.15
Nowgong	4.45	198.42	49.86	6.68	283.44	71.22	10.02	456.53	114.72
Lumding	0.68	40.08	13.77	1.42	64.94	18.70	1.77	87.02	25.06
Hojai	0.67	39.08	13.43	1.55	70.89	20.42	2.17	106.32	30.62
Jorhat	6.49	289.05	72.63	10.01	425.06	106.81	15.46	704.81	177.11
Sibsagar	1.99	95.42	27.48	4.74	201.17	50.55	8.07	367.84	92.43
Total	112.80	5001.37	1237.72	188.44	7888.77	1923.53	381.00	16805.25	3553.88

Source: NIUA (1988).

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Kokrajhar	0.59	34.33	11.80	1.48	67.44	19.42	2.23	109.52	31.54
Dhubri	1.78	85.46	24.61	2.23	101.73	29.30	3.89	177.50	44.60
Guwahati	38.22	1596.57	346.49	59.01	2347.84	509.53	121.48	5383.96	894.57
Barpeta	0.57	33.55	11.53	0.69	35.34	13.18	1.37	67.38	19.41
Tinsukhia	7.30	325.26	81.73	14.22	603.62	151.68	35.63	1522.21	330.35
Dibrugarh	4.54	202.16	50.80	5.76	244.51	61.44	7.32	333.46	83.79
North Lakhimpur	1.52	73.16	21.07	3.72	157.76	39.64	6.47	295.09	74.15
Nowgong	4.45	198.42	49.86	6.68	283.44	71.22	10.02	456.53	114.72
Lumding	0.68	40.08	13.77	1.42	64.94	18.70	1.77	87.02	25.06
Hojai	0.67	39.08	13.43	1.55	70.89	20.42	2.17	106.32	30.62
Jorhat	6.49	289.05	72.63	10.01	425.06	106.81	15.46	704.81	177.11
Sibsagar	1.99	95.42	27.48	4.74	201.17	50.55	8.07	367.84	92.43
Total	112.80	5001.37	1237.72	188.44	7888.77	1923.53	381.00	16805.25	3553.88

Source: NIUA (1988).

Table - 6.4

Estimates of Physical and Financial Requirements
for Urban Roads for Horizon Years
1991, 2001, 2011 A.D.
(Selected Urban Centres of NER)

Urban Centres	1991			2001			2011		
	Physical Requirements	Financial Requirements (Rs. in lakh)		Physical Requirements	Financial Requirements (Rs. in lakh)		Physical Requirements	Financial Requirements (Rs. in lakh)	
	Road Length (km.)	Capital Cost	Maint. Cost	Road Length (km.)	Capital Cost	Maint. Cost	Road Length (km.)	Capital Cost	Maint. Cost
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Imphal	71.78	400.83	17.60	112.02	595.72	26.15	174.81	1704.39	53.57
Agartala	2065.47	285.80	12.55	86.31	358.86	15.75	113.80	508.05	22.30
Shillong U.A.	37.52	407.77	17.90	53.39	552.71	24.27	75.99	1442.22	45.33
Kohima	12.75	63.49	2.96	20.32	96.38	32.39	233.22	10.24	
Aizawl	206.53	286.73	12.59	484.73	640.89	28.14	1137.65	2757.77	86.67
Dimapur	124.36	100.91	4.70	329.04	359.51	15.78	870.60	1743.99	54.81
Karimganj	9.90	32.14	1.84	10.89	33.67	1.92	11.98	39.77	2.27
Silchar	22.87	220.01	9.66	36.53	334.65	14.69	58.33	573.93	25.20
Tezpur	34.00	178.09	7.82	56.11	279.92	12.29	92.60	496.10	21.78
Bongaigaon	21.82	89.56	4.17	33.69	186.19	8.17	52.12	308.73	13.55

Contd...

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Kokrajhar	24.20	32.77	1.87	36.59	65.19	3.03	55.34	105.87	4.93
Dhubri	40.66	82.61	3.85	50.82	98.34	4.58	63.51	186.60	8.19
Guwahati	193.02	2377.87	74.73	298.04	3496.78	109.90	460.20	6709.24	207.08
Barpeta	22.95	32.03	1.83	27.55	36.60	2.09	33.05	65.13	3.03
Tinsukhia	40.14	341.94	15.01	78.22	634.58	27.86	152.42	2267.12	71.25
Dibrugarh	48.30	212.52	9.33	61.24	257.05	11.29	77.90	350.56	15.39
North Lakhimpur	11.95	70.72	3.29	20.81	165.85	7.28	36.25	310.22	13.62
Nowgong	132.59	208.59	9.16	198.87	297.97	13.08	298.29	479.94	21.07
Lumding	121.03	38.26	2.09	151.01	62.78	2.92	188.42	84.12	3.92
Hojai	51.68	37.31	2.13	72.17	68.53	3.19	100.80	102.78	4.78
Jorhat	59.45	303.87	13.34	91.79	446.86	19.62	141.73	740.95	32.53
Sibsagar	19.80	92.24	4.29	33.72	211.49	9.28	57.42	386.71	16.98
Total	1372.76	5896.07	232.80	2343.96	9280.50	365.50	4285.50	21597.42	738.49

Source: NIUA (1988).

Only four urban centres - Aizawl, Dimapur, Guwahati and Nagaon - have an estimated road requirement in 2011 of 2767 Km. or 65 percent of the combined total for the 22 selected urban centres of NER.

The total financial requirements for road development in the 22 selected urban centres is estimated Rs. 223.35 crores (in 2011 A.D.) at constant prices. Of this the capital cost is estimated at Rs. 215.97 crores and the annual costs fror repairs and maintenance of roads is estimated Rs. 7.38 crores in 2011 A.D.

c) Street-Lighting

Urban street-lighting in the 22 selected centres as per national norms is estimated to increase from 45 thousand light points in 1991 to 1.4 lakh light points in 2011 A.D. (Table 6.5). This represent an increase of 212 percent over the reference period.

The highest number of light points would be required in Aizawl (37314) followed by Dimapur (28555), Guwahati (15094), Nagaon (9783), Lumding (6180), and Imphal (5733). Taken together these six urban centres account for 73 percent of the total urban street-lighting requirement of the 22 selected urban centres of NER.

The total financial requirements for this urban service is estimated at Rs. 97.28 crores in 2011 A.D. at constant prices of this Rs. 87.64 crores is the estimated capital cost for provision of street lighting and Rs. 9.64 crores is the annual maintenance cost.

Table - 6.5

Estimates of Physical and Financial Requirements
for Street Lighting for Horizon Years
1991, 2001, 2011 A.D.
(Selected Urban Centres of NER)

Urban Centres	1991			2001			2011		
	Physical Requirements Street Light Pt. (nos.)	Financial Requirements (Rs.in lakh) Capital Cost	Maint. Cost	Physical Requirements Street Light Pt. (nos.)	Financial Requirements (Rs.in lakh) Capital Cost	Maint. Cost	Physical Requirements Street Light Pt. (nos.)	Financial Requirements (Rs.in lakh) Capital Cost	Maint. Cost
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Imphal	2354	215.08	24.44	3674	319.65	36.32	5733	608.71	69.39
Agartala	2147	153.36	17.43	2831	192.56	21.88	3732	272.61	30.98
Shillong U.A.	1230	218.80	24.86	1715	296.58	33.70	2492	515.08	58.72
Kohima	418	43.79	5.04	666	66.47	7.64	1062	125.14	14.22
Aizawl	6774	153.85	17.48	15899	343.89	39.08	37314	984.92	112.28
Dimapur	4087	69.59	8.00	10792	192.91	21.92	28555	622.86	71.01
Karimganj	324	29.08	3.29	357	30.46	3.45	392	35.98	4.07
Silchar	750	118.06	13.42	1198	179.57	20.41	1913	307.96	35.00
Tezpur	1115	95.56	10.86	1840	150.20	17.07	3037	266.20	30.25
Bongaigaon	715	61.76	7.10	1104	99.91	11.35	1706	165.66	18.82

Contd...

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Kokrajhar	793	29.65	3.36	1200	44.96	5.17	1815	73.01	8.40
Dhubri	1333	56.97	6.55	1666	67.82	7.80	2083	100.13	11.38
Guwahati	6331	849.24	96.81	9775	1248.85	142.37	15094	2484.90	248.49
Barpeta	752	28.98	3.28	903	33.12	3.75	1084	44.92	5.17
Tinsukhia	1316	183.48	20.85	2565	340.51	38.69	4999	809.69	92.30
Dibrugarh	1584	114.04	12.96	2011	137.93	15.67	2554	188.10	21.38
North Lakhimpur	391	48.77	5.61	682	88.99	10.11	1189	166.46	18.92
Nowgong	4348	111.93	12.72	6523	159.89	18.17	9783	257.53	29.26
Lumding	3969	34.69	3.92	4953	43.29	4.98	6180	58.01	6.67
Hojai	1694	33.75	3.82	2367	47.26	5.43	3306	70.88	8.15
Jorhat	1949	163.05	18.53	3010	239.78	27.25	4648	397.58	45.18
Sibsagar	649	63.62	7.32	1106	113.48	12.90	1883	207.50	23.58
Total	45014	2877.03	327.64	76873	4438.06	505.12	140554	8763.84	963.61

Source: NIUA (1988).

Summarising the main conclusions of this chapter it may be stated as follows :

i. The urban centres of NER are steadily moving into a future of considerable population growth, territorial expansion and socio-ecnomic change.

ii. The existing aggregate urban population of 22 selected urban centres of NER is expected to double itself by the year 2001, and treble by 2011 A.D.

iii. As against only Guwahati being a 5 lakh plus urban centre in 1981, at least 5 urban centres - Aizawal, Dimapur, Imphal, Shillong and Tinsukia - are likely to reach the 5 lakh plus population class.

iv. The process of population polarisation moving the urban structure of NER towards a higher degree of primacy is projected. As against 35 per cent of aggtregate urban population (of the 22 selected centres) presently living in 15 small and medium towns (population size below 1 lakh) only 4 per cent are expected to reside in 5 such towns by the year 2011 A.D.

An estimation of the financial requirements for both capital and maintenance purposes for the three basic services - water supply, roads and street-lighting - in urban centres of NER reveals that for maintaining the population level for the horizon year 2011 a total of Rs. 471.66 crores for annual maintenance and repairs (at constant prices). For the individual services, the financial rquirement is as follows :

(Rs. in crores)

	Capital cost	Maintenance
Water Supply	168.05	35.54
Roads	215.97	7.38
Street-Lighting	87.64	9.64
Total	471.66	52.56

VII

URBAN REGIONAL INFRASTRUCTURE - A NORMATIVE STUDY

A major concern and one of the principal aims of any urban development policy is to bring about a steady improvement in the "Quality of life" of urban areas. Urban living standards are closely reflected in the availability of basic services like water supply sanitation, education, health and transport, and their equitable distribution in urban areas.

It has however, been observed that generally, there is a wide gap between the prescribed standards and the actual level of services in urban areas. For instance, while the urban water supply standard in Delhi, as per the Zakaria Committee, is 60 gallons per capita per day (60 G.P.C.D.), a survey conducted by NIUA indicated that certain colonies were getting even less than 10 GPCD. There could be a number of factors which affect the availability of water : its inadequacy vis-a-vis the rapidly increasing demand in the wake of rapid population growth, scarcity of resources to lay out the water supply system and administrative indifference. Similarly, within the jurisdiction of a town, one locality could have excellent, wide, pucca roads with educational and medical facilities co-existing, with other areas being devoid of metalled roads and other civic amenities.

It is understandable that for ensuring and building up the desired "Quality of Life", urban services and facilities have to be provided according to some acceptable norms and standards. An objective standard is a close approximation to human welfare and hence depends on prevailing local conditions and other detailed aspects of

the specific urban context. It is observed, however, that in many situations, the local and regional components are overlooked in the formulation of standards. For example, where certain normative standards have been recommended by advisory bodies at the national level, there is a tendency on the part of local authorities to mechanically follow these, without adapting them to local conditions.

The present study attempts a normative analysis of selected infrastructure sectors in the urban/regional context. An assessment of the actual and projected sectoral gaps for the horizon years of 1991, 2001 and 2011 A.D. has been made with respect to four critical infrastructure sector having a close bearing on urban quality of life viz. : education, health, water supply, and sanitation.

The following 13 urban centres, identified by NIUA as major centres of regional/sub-regional importance in the NER have been considered for the purpose of analysis.

New Itanagar, Guwahati, Jorhat, Tinsukhia, Silchar, Tezpur, Kokrajhar, Imphal, Shillong, Aizwal, Kohima, Dimapur and Agartala.

It is necessary to state at the outset that this study is greatly handicapped on two counts :

i. At present there are no appropriate norms and standards for urban regional infrastructure development in the NER.

ii. The requisite data on the current availability situation of various facilities in urban areas of the Region are lacking.

The empirical analysis of infrastructure norms and standards attempted here hence, takes recourse to certain normative standards which have been recommended at the national level by the Planning

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Commission and TCPO, after suitable adaptation of the same to the local situation of the Region, wherever possible. These modified and adapted infrastructure standards can serve as dependable normative guidelines for the future urban planning of the Region. At the same time, it may be stated that the present exercise has taken into consideration whatever data was available and in the context of the limited data-base, whatever was feasible has been attempted. Although the assessment of the sectoral gaps in urban regional infrastructure is approximate, it can be accepted with a fair degree of confidence as quite an accurate indication of the requirements for a steady improvement in the "urban quality of life" in the Region.

A. Education

Rising educational levels are an important pre-condition for adopting the innovations of contemporary economic development and for raising levels of productivity and mass incomes. The concentration of population in cities and towns provides in the education sector as in other fields, both dramatic economies of scale and the possibility of much greater specialisation.

For standardising educational facilities, we have considered it necessary to focus attention on the High/Higher Secondary Schools for the purpose of developing appropriate normative standards for higher and technical educational facilities in the Region. The High/Higher Secondary Schools are major "catchment areas" for the indigenous development of Institutes of higher technical and educational specialization which have a crucial role in upgrading the educational levels and making them socially productive.

The only firm norm available for school facilities at the higher secondary level has been suggested by COPP* as follows : One Secondary school of 650 seats expandable to 10000 seats for a population of 9,000 to 10,000. No separate norms for academic, engineering, medical colleges as well as Polytechnics have been recommended. Appreciating the critical role of higher/technical educational facilities in raising the productivity levels in the Region, separate normative standards consequently, had to be worked out on the basis of the existing empirical situation.

Analysis of the data on educational facilities in 13 selected urban centres of the Region was undertaken. The ratio of High/Higher Secondary schools and other higher/technical educational institutions/colleges was calculated. This exercise revealed that on an average there was :-

- One Arts/Science/Commerce/Law College for every 4 Higher Secondary Schools.
- One Medical College for every 55 Schools.
- One Engineering College for every 66 Schools.
- One Polytecnic for every 22 School.

Keeping in view the COPP norms of one Higher Secondary School for 10,000 population, and rounding off the above estimated ratios, it is suggested that the normative standards mentioned below may be accepted as reasonable approximation to the situation prevailing in the Region :

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* Committee on Plan Projects (COPP) Planning Commission, GOI.

Table 7.1

Estimates of target requirements for Education Facilities as per Norms 1991, 2001 and 2011 A.D.

Education

Urban Centres	1981 Actual Number of					1991 Required Number of				
	Sec./ Higher Sec. Schools	Arts/ Science/ Commerce/ Law Colleges	Medical College	Engn. College	Poly tec-hnics	Sec./ Higher Sec. Schools	Arts/ Science/ Commerce/ Law Colleges	Medical College	Engn. College	Poly tec-hnics
New Itanagar	-	1	-	-	-	2	-	-	-	-
Guwahati	63	9	3	1	4	85	21	1	1	4
Jorhat	11	5	-	1	1	19	5	-	-	1
Tinsukhia	20	1	-	1	1	21	5	-	-	1
Silchar	22	4	1	-	1	13	3	-	-	1
Tezpur	10	3	-	-	1	11	3	-	-	1
Kokrajhar	1	1	-	-	-	4	1	-	-	-
Imphal	54	9	1	1	-	24	6	-	-	1
Shillong	-	-	-	-	-	25	6	-	-	1
Aizawl	18	4	-	-	-	11	3	-	-	1
Kohima	11	3	-	-	1	6	1	-	-	-
Dimapur	9	1	-	-	-	9	2	-	-	-
Agartala	-	3	-	1	1	17	5	-	-	1

Contd.....

Urban Centres	2001 Actual Number of					2011 Required Number of				
	Sec./ Higher Sec. Schools	Arts/ Science/ Commerce/ Law Colleges	Medical College	Engn. College	Poly tec-hnics	Sec./ Higher Sec. Schools	Arts/ Science/ Commerce/ Law Colleges	Medical College	Engn. College	Poly tec-hnics
New Itanagar	4	1	-	-	-	8	2	-	-	-
Guwahati	131	33	2	2	7	202	51	3	3	10
Jorhat	29	7	1	-	1	44	11	1	1	2
Tinsukhia	41	10	1	1	2	79	20	1	1	4
Silchar	21	5	-	-	1	34	9	1	1	2
Tezpur	18	4	-	-	1	30	7	-	-	2
Kokrajhar	6	2	-	-	-	9	2	-	-	-
Imphal	38	10	1	1	2	60	15	1	1	3
Shillong	35	9	1	1	2	50	13	1	1	3
Aizawl	17	4	-	-	1	25	6	-	-	1
Kohima	9	2	-	-	-	14	3	-	-	1
Dimapur	23	6	-	-	1	61	15	1	1	3
Agartala	23	6	-	-	1	30	8	1	0	2

Note :i. Keeping in new the growth trend till 1987, a decadal growth rate of 50 per cent was adopted for Aizawl.

ii. The data for educational facilities in 1981 are from rspective town Dirctories of NER States.

- One Arts/Science/Commerce/Law College for 40,000 population.
- One Medical College for 6 lakh population.
- One Engineering college for 7 lakh population; and
- One Polytechnic for every 2 lakh population.

By applying the above adapted normative standards for educational facilities, the target requirements were estimated for the years 1991, 2001 and 2011 AD in the case of projected urban population of 13 major urban centres identified by NIUA, and reported in the previous chapter. The results of this normative analysis are provided in Table 7.1 which while being self-explanatory may be consulted for the situation in the individual towns.

The following four centres are well placed in terms of educational facilities till 1991 at the higher secondary level; Silchar, Imphal, Aizwal Kohima. In their case the existing number of schools is sufficient to cater to the educational requirements for the year 2001, and are only marginally in deficit to meet the educational demand for 2011 AD as per the adopted norms. It is however, extremely necessary to regularly up grade their infrastructure in terms of teaching staff, educational equipment, general facility and playgrounds.

Both Guwahati and Jorhat are already facing an adverse situation as regards the provision of high/higher secondary schooling facilities. In Guwahati, the requirement jumps sharply from 85 schools in 1991 to 131 schools in 2001 and further to 202 schools in the year 2011. In Jorhat also the requirement of high/higher secondary educational facilities is expected to increase by about 4 times over the planning horizon years, as per norms.

Kokrajhar, situated in the tribal belt in Assam, is an interesting case where the requirements for higher education is likely to increase very rapidly and deserves the most immediate attention of the concerned Education Department of the State. Already by the year 1991, Kokrajhar would be requiring 4 high/higher secondary schools as against only one at present, and the requirement jumps sharply to 6 in 2001 and 9 in 2011, indicating an urban centre in the process of rapid educational transformation.

The sharp increase in educational facilities at the high/higher secondary level will eventually translate itself into a further heavy pressure on the technical and other vocational and training institutions in the Region. This is more so as the literate worker needs not only the ability to read, write and learn new methods, but also the tools to undertake the new task through a process of learning-by-doing, leading to rapid skill-formation and greater specialisation.

Both Guwahati and Imphal are expected to face sharp deficits in the provision of academic colleges in Arts, Sciences, Commerce and Law. The requrement for these educational services in Guwahati is projected to jump from 21 colleges in 1991 to 33 Colleges in 2001 and further to 51 in the year 2011 AD - this representing a five fold increase from existing level. In the case of Imphal the actual deficit of Arts/Science/Commerce Colleges emerges only in the horizon year 2001 and subsequently the requirement of such Colleges jumps to 15 in the year 2011, which is not an alarming situation considering the time-frame for educational planning in this case.

As regards the Medical and Engineering Colleges, the adapted norms indicate that apart from Guwahati, none of the remaining urban centres examined, qualify for the minimum population threshold required for establishing these facilities by the year 1991.

In case however, an urban centre has already acquired a service of higher order of an Engineering College, (Jorhat, Tinsukhia, Imphal, Agartala), or of a Medical College (in Silchar and Imphal by virtue of their administrative eminence, we deem this to be a welcome development. Our own opinion is that every State in the NER should eventually have at least one Medical College and one Engineering College located at an appropriate place.

B. Health Facilities

The importance of adequate provision of health and medical services in upgrading the urban quality of life needs no elaboration. It is one of the most critical regional infrastructure sectors having a significant bearing on urban living standards and well being of the population.

The medical facilities in the context of small and medium towns in India, show wide variations in terms of both terminology adopted for various levels of medical units (such as health centre, health clinic, dispensary, general/specialised hospital and intensive treatment centres), and the suggested normative standards. In many cases, the rationale of the recommended standards is not quite clear suggesting the absence of adequate criteria for the formulation of these standards.

Keeping in view the existing data on the number of hospitals and the bed strength for 23 selected urban centres of NER, it was worked out that an average hospitals has 113 beds, rounded to 100 beds per hospital.

Adjusting the standards of the COPP it is desirable to have 2.5 beds on average for every 1000 persons. In other words, on an average a standard hospital should serve a total population of 40,000. Our standarised unit of medical provision, the hospital, is deemed to possess specialised medical check-up facilities as also an emergency unit with 4 to 6 beds along with the attendent facilities attached to it.

Table 7.2 provides the data on the actual and desired requirement of hospitals and bed-strength for the 13 selected urban centres.

The table reveals that medical the health facilities in the selected urban centres are far from adequate. With the exception of Tezpur, all remaining centres shall be deficit in urban health facilities even by the year 1991. This calls for early remedial action by concerned authorities on a priority basis. While in the short-term the main focus will have to be on Guwahati, which requires 8 new hospitals by the year 1991, in the longer term, the main health crisis areas likely to emerge in 2011 are the following : Dimapur (15 times the present availability), Kohima (6 times), Silchar and Tinsukhia (5 times), and Guwahati (4 times).

Table 7.2

Estimates of target requirements for Health Facilities as per Norms
1991, 2001 and 2011 A.D.

Urban Centre	Health Facilities							
	1981		1991		2001		2011	
	Actual no. of		Required no. of					
	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds
New Itanagar	-	-	1	100	1	100	2	200
Guwahati	13	1861	21	2100	33	3300	51	5100
Jorhat	4	449	5	500	7	700	11	1100
Tinsukhia	4	36	5	500	10	1000	20	2000
Silchar	2	508	3	300	5	500	9	900
Tezpur	5	261	3	300	5	500	7	700
Kokrajhar	1	56	1	100	2	200	2	200
Imphal	-	-	6	600	10	1000	15	1500
Shillong	-	-	6	600	9	900	13	1300
Aizawl	2	237	3	300	4	400	6	600
Kohima	1	218	1	100	2	200	6	600
Dimapur	1	100	3	600	6	600	15	1500
Agartala	-	-	4	400	6	600	8	800

Note : i. Data or actual number of hospitals and bed strength is taken from the respective Town Directories of NER states.

c. Water Supply

Adequate water supply is a necassary condition for maintaining the health status of the community. The provision for supply of protected water is one of the essential responsibilities of the administrative authorities. The sources of supply of protected water in the selected urban centres of the NER are tube-wells taps, wells and tanks.

Water supply standards are formulated after making an assessment of the requirements of water for various uses : domestic, industrial and public. The basis for calculating the water supply requirement is the Zakaria Committee norms given in the Committee's Report "Augmentation of Financial Resources of Local Bodies". The Zakaria Committee suggested normative standards for water supply requirement in different grades of towns. So the future requirement is calculated by multiplying the projected population by the appropriate norm.

The actual availability and desired requirement of water supply in the selected urban centres of NER for the different horizon years is given in table 7.3.

The gross inadequacy of water supply to towns, in the water abundant NER, is all too obvious. The proportion of population served by piped water supply varies from a low of 15.3 per cent in Jorhat to 56.2 per cent in Shillong.

In Guwahati the water supply needs to be enhanced by three times of the present level by the year 1991, five times by 2001 and seven times by 2011. The situation in all other States capitals is all the more alarming. This could be said with equal seriousness about

Table 7.3

Estimates of target requirements for Water Supply as per Norms 1991, 2001 and 2011 A.D.

Water Supply

Urban Centre	Source of supply	Actual availability (MGD)	Desired requirement (MGD) 1991	2001	2011
New Itanagar	T	-	0.23	0.55	2.2
Guwahati	T	10.10	29.72	45.89	70.87
Jorhat	T,TK	0.33	6.49	10.01	15.46
Tinsukhia	T,TW	0.33	7.29	14.22	27.70
Silchar	T,TK	1.00	4.70	7.50	11.94
Tezpur	T,TW	0.06	3.80	6.27	10.35
Kokrajhar	W	-	0.59	1.48	2.23
Imphal	T/TK	1.56	8.55	13.35	26.78
Shillong	T	0.20	8.70	12.39	22.66
Aizawl	T,SR	0.20	3.91	5.87	8.80
Kohima	T	0.50	1.37	2.18	4.87
Dimapur	T,SR	0.10	2.17	8.06	27.41
Agartala	T,TW	0.11	6.10	8.04	10.60

Note: Data on actual availability of water supply is taken from the respective Town Directories of NER states.

Abbreviations Used

T - Tap Water
TK - Tank Water
W - Well Water
TW - Tubewell water/Hand pump
AR - Service Reservoir

Shillong, Imphal, Kohima, Aizawl, Agartala or even Itanagar. The places like Jorhat, Tinsukhia, Silchar and Tezpur emerge no better. Kokrajhar seems to be lacking any well organised water supply system.

A survey conducted by the NIUA, revealed that hardly 18.6 per cent of the urban population in Mizoram and 19.9 per cent in Nagaland were covered by piped water supply in 1987. The figure for Assam was 37.5 per cent, Meghalaya and Tripura were covered to the extent of 49.5 and 53.2 per cent respectively. In Manipur, the corresponding figure was 75.5 per cent. Its State capital Imphal, however, had only 40 per cent of population covered by piped water supply. Arunachal Pradesh was, of course, in a happy situation since its entire urban population was covered by this facility.

The task of water supply does not just stop at making water available. A primary job for any urban civic body is to ensure a regular supply of water which has been duly treated. Any default on this count has serious consequences for the health of the residents. In point of fact, any investment in a hygienic water supply system would automatically reduce the expenditure on the provision of health facilities.

Sanitation

Little quantitative information was available on the sanitation situation in the 13 urban places under study. A survey conducted by the NIUA, New Delhi, revealed that hardly 1.4 per cent of the urban population in Mizoram was covered by the sanitation facilities in 1987. The comparable figures for Nagaland, Manipur and Tripura were 6.2, 9.4 and 11.3. Assam and Meghalaya gave figures of 15.7 and 20.9

per cent respectively. In Arunachal Pradesh, of course, the entire population was covered by sanitation facility.

In view of the existing deplorable sanitation conditions prevailing in practically all the urban places in the NER, the provision of adequate infrastructure for refuse collection and disposal is all too essential. The use of tractors with trailors for refuse collection can be of an immense help in easing the situation. Going by the rule of thumb, one trailor-tractor can be made available for every 10,000 persons, which is reckoned as the standard population size of a viable neighbourhood unit. Working on that premise, the estimated requirement of all the 13 places for the horizon years of 1991, 2001 and 2011 are presented in Table 7.4.

Table - 7.4

Estimates of Target Requirements for Sanitation as per Norms 1991, 2001 and 2011 A.D.

Urban Centre	Required number of Tractors/Trailors for refuse collection and disposal		
	1991	2001	2011
New Itnagar	2	4	8
Guwahati	85	131	202
Jorhat	19	29	44
Tinsukhia	21	41	79
Silchar	13	21	34
Tezpur	11	18	30
Kokrajhar	4	6	9
Imphal	24	38	60
Shillong	25	35	50
Aizawl	11	17	25
Kohima	6	9	14
Dimapur	9	23	61
Agartala	17	23	30

The method of refuse disposal has also to be worked out with care. The general refuse must be dumped separately from the organic refuse. The general refuse can be used for filling of depressions, the organic refuse should be processed through composting method and marketed as manure.

As it emerges from the discussion in this chapter, the existing level of services in all the urban places is not only low but will also suffer a decline in years to come if the curative and preventive measures are not taken with all seriousness. The indicated top periority is for supply of treated water and provision of a well organised sanitation system. The planning for health services, in terms of adequate number of hospitals with necessary provision of staff, equipment and medicines must go alongwith. Necessary care has also to be taken in respect of educational facilities, which include not only formal institutions like schools and colleges but also ploytechnics, engineering colleges and medical colleges.

VIII

URBAN DEVELOPMENT POLICIES

The aim of this final chapter is to highlight significant features of the fast changing urbanisation scenario in the NER. Policy implications of the emerging urbanisation process are inferred from the analysis presented in the earlier chapters.

The discussion is organised in two parts. The first part deals with the various States in the NER individually and the second part takes care of the NER as a whole. In each case, the discussion has three components:

i. an enunciation of the salient features of urbanisation,

ii. a review of the existing urban development policies, and

iii. a statement of proposed policies along with specific recommendations. The States have been taken up in their alphabetical order.

ARUNACHAL PRADESH

Before offering some policy guidelines it is considered necessary to recapitulate selected salient features of urbanisation in Arunachal Pradesh:

i. Hardly 6.56 per cent of the State's population (41,428 out of 631,839) is urban. It is distributed among six towns spread over a mean distance of 127 kms. A town is expected to serve an average of 543 villages since there are 3257 villages in all. The State's urban population grew by 139.63 per cent during 1971-81. This produced an absolute increase of around twenty four thousand. So we are dealing with an urban situation which is small in size but highly scattered and fast growing.

ii. All the towns are administrative centres, being at least the headquarters of a district. The role of administrative activity in the State's urbanisation is evident. Some of the district headquarters, however, do not enjoy an urban status.

iii. Towns function virtually in isolation from each other due to physiographic constraints and tribal diversity. Their functional links are stronger with the towns located in the Assam valley than amongst themselves. The State is yet to evolve an internally integrated urban system.

In the light of the above, the following recommendations are made:

i. The towns in the State may be developed primarily as service and growth centres for surrounding areas. Their interaction with villages around can be promoted through transport, production and service linkages. In view of the heavy economic cost involved in road construction, often across difficult terrain, efforts at evolving an integrated urban system, through promoting inter-turn linkages cannot be accorded a high priority. However, for connecting the various administrative centres with the State capital and also amongst themselves, the potential of civil aviation can be explored and strengthened.

ii. In view of the very small number of towns in relation to a large number of highly dispersed villages, the State may view a systematic planning of mobile services, particularly those related to health, communication and public distribution of essential commodities.

iii. At the same time, the State requires a well designed network of godowns so as to support and maintain the public distribution system, particularly when rains, floods or landslides disrupt the normal flow of commodities.

iv. The State should promote a hierarchy of towns or other central places as a mechanism for operationalising its urbanisation policies. considered in terms of the significant criteria of administrative status, transport nodality, population size, growth rate, and economic potential the following hierarchy of central places is recommended:

a. Itanagar in view if its prime position, to serve as the State capital. By virtue of its administrative importance, the town would require an increasing number of public buildings to accommodate new offices and residential units to house a fast growing population. A heavy investment in construction at this place is unavoidable.

b. Since Itanagar has a relatively weak location in relation to the physical disposition of the State, it may be desirable to devolve some of the State administrative functions to places like Pasighat, Tezu and Khonsa. The administrative, economic and service base of other district headquarters, namely Bomdila, Seppa, Ziro, Daporijo, Along and Anini should also be strengthened.

c. At the bottom of hierarchy will be the central places which will serve as the sites for godowns (for storing public distribution items). Their location is to be determined by considerations of nodality in relation to surrounding areas.

d. The State must continue with its existing policy of establishing industrial estates, for example at Naharlagun, Deomali, Pasighat, Changlung, Itanagar and Tawang. Some industries would always be located only at the site of their raw materials, such as the cement plant at Hunli. However, it may be advisable as far as possible, to develop industrial estates mainly at district headquarters so as to ensure their desired success.

e. As it emerges, the priority order of towns/central places for an effective urban development policy will be as follows :

a. the state capital : Itanagar

b. i. major district headquarters : Pasighat Tezu and Khonsa;

ii. other district headquarters : Bomdila, Seppa, Ziro, Daporijo, Along and Anini;

c. other central places providing education, health, transport, godown and mobile public distribution services : Nafra Buragaon, Tawang, Kumla (district West Kameng), Chayengtajo (district East Kameng), Sangalee, Kaloriang (district Lower Subansiri), Nacho (district Upper Subanisiri), Basar, Michuka, Tuting (district West Siang), Roing (district Dibang Valley) Nansai, Hayuliang (district Lohit), and Miao, Longding, Changland (district Tirap)

ASSAM

Assam is one of the least urbanised states of India. Only 10.29 per cent of its total population in 1981 is estimated as urban. This figure is higher than that of only Arunachal Pradesh among the various constituent NER States.

The State's low level of urbanisation is associated with its backwardness in the economic field. Its per capita income (Rs. 1762 in 1983-84) is only three-fourths of the all India average (Rs. 2201).

It is amazing that resource rich Assam should suffer in its economic growth. The factor of its neglect cannot be dismissed easily. The per capita outlay for Assam (Rs. 1146) under the Seventh Plan is lower than the average for India (Rs. 1216). It is about a half of that for the NER (Rs. 2134) as a whole.

The State's backwardness can partly be attributed to the recurrent phenomenon of floods. A regular damage to crops, settlements and roads is caused. The high frequency and close spacing of rivers further handicaps the development of rapid road and rail transport. Consequently, the urbanisation process is constrained.

Assam is a classical case where ruralward migration - in contrast to rural-urban migration generally interested for cultivation, dairying, and work on tea plantations, mining sites, and construction localities has been dominant. This has led to a consistently fast growth of population in rural areas. Urban population also increased considerably but its percentage in total population could not rise

sharply because it was accompanied by a rapid increase in rural population as well.

Most of the Assam towns are located along the Brahmputra in the form of two chains on both sides of the river. Many of them had initially come up as ferry-steamer points. In course of time, some towns emerged in association with tea plantations (Rangapara), railways (Jhogighopa, Rangiya, Chaparmukh, Furkating, Simaluguri), and mining activity (Namrup, Moran and Margherita). Two major concentrations of towns are observed around Guwahati and Dibrugarh.

The large towns owe their eminence to their administrative status, nodal position, and commercial base.

An interesting feature of Assam towns is their link-role vis-a-vis the neighbouring States. Assam is the only State which touches all the remaining six States of the NER. Hence some of its towns can be ascribed a Regional status. In particular, Guwahati, the State capital, is the biggest town of the NER. Jorhat, Tinsukia, Dibrugarh, Nagaon, Silchar, Tezpur and Kokrajhar are the other central places of strategic importance. All of them are nodal entry points for Assam's neighbouring States.

Towns of Assam are growing fast. The State's urban growth rate of 54.37 per cent was higher than the national average of 46.24 per cent. Surely urbanisation is going to assume a bigger dimension in years to come. And for this, a systematic effort at its planning and development is imperative.

An examination of the Seventh Plan document of Assam shows that

only Rs. 10 crores has been allocated directly for urban development out of a total outlay of Rs. 3550 crores. This works out to not even one per cent of the total. It is suggestive of the low priority accorded to urban development under the Plan.

The State's present major urban development activities, earmarked for financial assistance, are as follows :

i. to cover six towns, in addition to the five in the Sixth Plan, under the Integrated Development of Small and Medium Towns Programme;.

ii. to bring slum localities in 49 surveyed towns under the Environmental Improvement of Slum programme;

iii. to improve and construct roads, drains, markets, public toilets, and a truck terminus under the Development Programme for Guwahati Municipal Corporation;

iv. to prepare master plans for various towns;

v. to extend special benefits of urban development to towns in the hilly Karbi Anglong district and especially backward tribal areas; and

vi. to supply tractors with trailors for carriage of garbage/night soil in some select towns.

Evidently the State is implementing mainly the Centrally sponsored schemes under the urban development programmes. Some special attention is being given to Guwahati, the State capital, and to some towns in the hilly parts of the State. Financial allocations are at present far from adequate in every case.

On the other hand, the urban problems of the State are mounting. Most of the towns are subject to flooding. Their sanitation problems are acute. There is no respite from a haphazard physical growth of towns. Prompt and effective measures to control urban problems are called for. This is particularly so when many of the Assam's towns

are to play a Regional role vis-a-vis not only their own State but also the neighbouring ones.

The problem of flooding has to be solved through watershed management at the Regional level. This requires inter-State collaboration in afforestation, soil conservation, and regulation of water channels.

The sanitation problem is to be managed at local level. In particular, the government's scheme to supply tractors-with-trailors to some select towns to carry garbage is appreciable and can be extended to all the towns.

The haphazard physical growth of the cities is to be checked through strict zoning under the master plans. The problem is most acute in Guwahati where a number of depressions, which earlier used to hold flood waters, have been filled and built over by structures. This has led to an increased incidence of flooding in the city since the excess water now invades the residential localities instead of getting captured in land depressions.

Above all, any urban development policy for Assam must give due weightage to the Regional role of some of its towns, such as Tinsukia, Jorhat, Tezpur, Kokrajhar and Silchar, in addition to Guwahati. And for that reason, these places deserve a priority in the allocation of funds for urban development.

It is recommended that the hierarchy of urban places for priority in development and financing in the State may be as follows :

i. the State Capital : Guwahati;

ii. other places of the Regional importance : Tinsukia, Jorhat, Tezpur, Kokrajhar and Silchar;

iii. the remaining district headquarters, subdivisional headquarters and other towns, in that order.

MANIPUR

The urbanisation pattern of the Manipur displays a number of distinctive features. Significant among these may be listed below :

i. In a relative sense, Manipur is the most urbanised State of the NER. In 1981, 26.42 per cent of its population was urban as compared with 11.92 per cent in the NER and 23.31 per in India. The issues relating to urban development naturally assume greater significance in its case;

ii. There are 32 towns in the State. Among these, 23 are located in the Manipur Central district alone. The remaining nine are scattered in other districts. This represents the contrast between the Manipur basin and its surrounding hill areas in terms of population density, kind of society (non-tribal and tribal), and the level of economic development;

iii. Imphal, the State capital, located in the heart of the Manipur basin, enjoys a high degree of primacy. Its population is more than seven times of the second town of Kakching. It is surrounded by a large number of towns located along the major road routes radiating out from it. In point of fact, any plan for Imphal has to be a part of a comprehensive plan for the Imphal region as a whole;

iv. Manipur is noted for a rapid pace of urbanisation. During 1971-81, its urban population grew by 165.36 per cent. This development is attributed mainly to the emergence of 24 new towns during the period. Imphal itself had grown by 56.05 per cent.

v. On the whole, urban growth in the State is noted in situations : (a) in and around Imphal, (b) along the Kohima - Imphal National Highway, and (c) at district headquarters.

Evidently three basic issues emanate from our understanding of the urbanisation process in Manipur :

i. a large share of urban growth is concentrated in the Manipur basin, in and around Imphal, giving rise to a variety of urban management problems, particularly as the basin is prone to flooding;

ii. a high frequency of new towns, each requiring substantial funds to carry out its civic obligations; and

iii. a virtual absence of towns over large are infrastructure as in the hilly region, depriving the inhabitants of urban facilities and services.

What would be the desirable urban development policy under such conditions? Before an effort is made to answer this question, it is imperative to consider the State policies in this regard. It is noted that the State government is seized of the problems and contemplates a number of measures for the purpose. The major among these are follows:

i. a multipronged effort at solving the problems of Imphal relating to drainage, water supply, sewerage, housing, commercial centres, bus terminus, recreation sites, etc., and toward that end to review the Master Plan for Greater Imphal : 1976 to take care of new situations which emerged during its implementation stage ;

ii. to provide for a new capital complex to accommodate the Secretariat, the High Courts, and the Legislative Assembly at one place ;

iii. to bring several towns, namely Bishnupur, Ukhrul, Nambol, Moirang, Churachandpur and Thoubal, under the Integrated Development of Small and Medium Towns programme, in addition to Kakching and Jiribam where this programme is already in operation;

iv. to prepare master plans, especially for district headquarters;

v. to bring the entire slum population under the Environmental Improvement of Slums programme by the year 1990;

vi. to strengthen the financial, technical, and administrative base of new civic bodies; and

vii. to frame a human settlement policy for the year 2001.

An outlay of Rs. 7.45 crores has been earmarked for urban development in the State under the Seventh Plan. This amounts to hardly 1.75 per cent of the total plan outlay. It signifies that while the State government appreciates the gravity and diversity of

problems associated with the urbanisation process, this appreication is not matched by requisite funds. Allocation of larger funds in favour of urban development is strongly recommended.

A significant development in the State is that Imphal has crossed the stage of being a single primate unit to be managed internally. Rather it has emerged as an urban agglomeration surrounded by a large number of towns in close proximity. A time has come when a "Regional Plan of Imphal" as opposed to a city master plan, will be a more appropriate thing to formulate. This would amount to planning Imphal as an urban system.

There is a strong case for a "human settlement policy" for the State wherein the hierarchy of towns and rural service centres is identified for planning and development. As recommended for other States of the NER, Manipur can also adopt the administrative hierarchy of various places as representing the overall functional hierarchy of settlements.

The State must consider implementation of "growth centre" strategy, particularly for its hill districts. Several places here have a mix of a church, school and dispensary. Such places can be further strengthened in their central functions. In particular, these very places can be made to grow into collection and processing centres of the local produce.

In final analysis, the hierarchy of growth centres in Manipur will be as follows :

i. Imphal and its satellite towns;

ii. District headquarters : Senapati, Ukhrul, Chandel, Churachandpur, and Tamenglong;

iii. Subdivisional districts : Tadubi, Saikul, Kangpokpi (district Senapati), Chingai, Kanjong, Phungyar, Kosom Khullen (district Ukhrul), Tengnoupal, Chakpikarong (district Chandel), Parbung, Thanlon, Henglep, Singngat (district Churachandpur), Tamei, Tousem, Nungba (district Tamenglong), and Jiribam (district Manipur Central)

MEGHALAYA

The salient features of the Meghalaya urbanisation may be listed as follows :

i. With 18.07 per cent of its population living in towns, Meghalaya is more urbanised than the NER (11.92 per cent) although its urbanisation level remains lower than that of India (23.31 per cent).

ii. The urbanisation scenario of the State is dominated by Shillong, which with a population of 174703 in 1981, shared more than 70 per cent of its urban population. Tura comes next but its population is just one fifth of Shillong's. All the remaining five towns are smaller than 20,000 in population.

iii. Among the State's seven towns, Shillong is the capital; Tura, Williamnagar, Nongstoin and Jowai are district headquarters; and only Cherrapunjee and Baghmara are without an administrative status.

iv. The urban population of the State recorded a rapid growth rate of 63.98 per cent during 1971-81.

It is observed that the State lags behind India on a number of socio-economic parameters. Its literacy rate, per capita income, and diversification of economy are of lower order. The infrastructural development index of the State is not even two-thirds of the country's average. This is represented by a distinctly low percentage of villages which are electerified, or provided with piped water supply, or linked by a metalled road. A great effort is required to lift the whole system.

Another peculiar feature of the State is that its entire land is owned by individual tribes and there is no government land. Hence land has to be acquired for any development project. The payment of due compensation invariably raises the project costs to very high levels.

Nevertheless the State is endowed with a variety of natural resources, enjoys a locational advantage, and has the political will to grow fast. It has accorded a very high priority to human resource development, particularly through education and road transport facilities, under the Seventh Plan.

In all likelihood, the State will continue experiencing rapid urban growth in years to come. A number of new towns along the Guwahati - Shillong - Silchar National Highway, on the border between Meghalaya and Assam, and along the Meghalaya - Bangladesh international border may emerge. The existing towns will grow to bigger size.

The State should prepare itself for such a situation. A desired direction can be given to the urbanisation process. But before that is deliberated, we may have a look at the State's existing urbanisation policies.

The main urban development activities of Meghalaya include :

i. implementation of the schemes relating to Environmental Improvement of Slums in Shillong, Jowai and Tura;

ii. coverage of Shillong and Tura under the Integrated Development of Small and Medium Towns Scheme;

iii. preparation of master plans for Shillong and Tura and of base map of Mairang;

iv. construction of office buildings at the five district headquarters;

v. provision of infrastructure in the district and other administrative headquarters;

vi. development of a satellite township to Shillong to accommodate district level offices presently located at the State capital.

The approved Seventh Plan outlay for urban development is Rs. 4 crores out of the total outlay of Rs. 440 crores. This makes less than one per cent of the total.

As it emerges, many of the State's urbanisation policies are the replica of what is being done at the all India level. Some urban problems specific to the State are also being taken care of. The need is to have a more comprehensive view of the whole matter. Our effort here would be to spell out the major parameters of an urbanisation policy which the State may consider for implementation. These include:

i. development of Guwahati - Shillong - Silchar National Highway as the main industrial - urban belt of the State by way of taking advantage of the existing interstate transport linkages;

ii. incentives to interstate industrial - urban ventures at places like Byrnihat (East Khasi Hills), Damra (East Garo Hills), and Phulbari on Meghalaya - Assam border;

iii. promotion of processing, Packaging and related service industries to promote trade at legal check posts, such as Dawki, on the Meghalaya - Bangladesh border; and

iv. adoption of a hierarchical growth centre strategy in which Shillong remains at the top, with Tura and Nongstoin at the second level to take care of the Western and Central parts of the State respectively, and with the remaining administrative centres placed at the third level.

As such, the growth centre hierarchy will be as follows :

i. Shillong;

ii. Tura and Nongstoin;

iii. Other administrative centres : Dadenggiri, Betasing, Baghmara (West Garo Hills district), Resubelpara, Williamnagar (East Garo Hills district), Riangdo (West Khasi Hills district), Nongpoh, Mairang, Mawkyrwat, Cherrapunjee (East Khasi Hills district), and Jowai, Amlarem, Khliehriat (Jaintia Hills district)

MIZORAM

Mizoram is distinguished by an overwhelming predominance of tribal population : 93.55 per cent of the total population. This is the highest percentage for any State in India. Equally striking is the share of tribal population in urban population : 89.05 per cent. This again is by far the highest proportion for any Indian State. By that token, urbanisation in Mizoram is characteristically native, a feature which is rare in most tribal parts of India.

The other notable features of the Mizoram urbanisation are as follows :

i. Almost one-fourth of the State's population is urban. In other words, the urbanisation level of the most tribal State of Mizoram is higher that of the country.

ii. There are six towns spaced at a mean distance of about 64 kms. from each other. All are administrative centres and most of them are located on the Silchar - Aizawl - Lunglei National Highway.

iii. Aizawl, the State capital, is the biggest. It shares nearly two-thirds of the total urban population in Mizoram. It is more than four times bigger than the second town of Lunglei.

iv. Although Mizoram towns are comparatively small in population size yet these cover extensive areas : Aizawl 110 Kms., Lunglei 85 kms., and Saiha 53 kms. There is abundance of urban land for development.

v. The State's urban population recorded a phenomenal growth rate of 222.61 per cent during 1971-81. This is attributed partly to the emergence of four new towns. Equally critical has been the rapid growth of Aizawl whose population grew by 134.70 per cent during the decade. This can be explained first by the expansion of its administrative functions, secondly by the extension of its territorial jurisdiction from 18 kms. in 1971 to 110 kms. in 1981, and thirdly by some influx it experienced because of the disturbed conditions in the coutryside.

Although Mizoram is undisputedly backward at present due to its physical remoteness, an agricultural economy which is on a low productivity scale, and politically disturbed conditions till recently yet it is poised for fast development in years to come. It is carrying out meaningful programmes to replace shifting cultivation by a settled one; it is strengtheing its infrastructure base of power, transport, and communication; and it is eager to promote industry. In this task, the State is favoured by the homogeneity and high literacy rates of its population, a variety of physical resource base, and liberal financial assistance from the Central government. The process of economic growth would provide a stimulus to urbanisation which needs to be given a proper direction.

A perusal of the State documents shows that the government is aware of the growing urban problems but it is yet to frame a long term urbanisation policy. Its major concerns in this regard are as follows :

i. to execute and complete the Aizawl Capital Expansion Project, particularly by constructing new buildings to accommodate the government offices, and by raising an adequate number of dwelling units to house the government employees;

ii. to construct in phases, 200,000 running metres of link steps to connect residences and office buildings with the main roads due to the hilly terain in Aizawl.

iii. to work out a sanitation plan for Aizawl;

iv. to prepare base maps for mofussil towns in the State for the purpose of designing the Town Master Plans; and

v. to provide financial assistance to local bodies for both remunerative (e.g. construction of shops and market centres) and non-remunerative (e.g. road construction) schemes.

The State's approved outlay for urban development (including the Capital Expansion Project) is Rs. 5.50 crores under the Seventh Plan. This comes to barely 2.12 per cent of the total outlay.

Against the background of what has been stated above, we may now deliberate over some critical issues relevant to any possible urbanisation policy for the State. The first issue pertains to consolidation versus dispersal of settlements. As early as 1966, the Study Team under the chairmanship of Tarlok Singh had recommended regrouping of small and highly dispersed villages so as to reduce the cost in provision of education, health, water supply, and postal services. Likewise, a regrouping of village clusters into central places in order to facilitate the task of providing urban services and also to function as viable centres of industrial production based on local resources may be given serious consideration.

In the same vein, one may reflect over the increasing concentration of population in Aizawl. The process is being helped not only by the growing administrative and economic functions of the place but also by a liberal allotment of urban land for house building in this capital town. As a result, an increasing number of people from the countryside are tempted to migrate here. What may be required now is to strengthen the economic base of Aizawl, through ancillary industry in particular, and to regulate its physical growth in the most appropriate manner so as to minimise the future costs of providing services.

In other words, any urbanisation strategy for Mizoram has to be geared to the objective of economic development at minimum cost.

Looking at the physical resource potential of State, coupled with its homogeneous and literate society, one can be optimistic on this count. The need is to adopt policies which may include among others: (i) thrust to industry and trade at Aizawl; and (ii) development of a number of fairly well distributed central places acting as industrial and service centres for local areas. To begin with, each of the assembly constituency or the development block could have one such place each. Alongwith, the service and production base of the existing district headquarters can be further strengthened.

This automatically gives a three tier heirarchy of development centres, including the State capital, district headquarters, and the block centres. It is reiterated the State may better opt for a policy of centralisation rather of dispersal at every hierarchical level to its own economic advantage.

The proposed hierarchy of development centres or central places can be detailed as follows :

i. Aizwal

ii. the district headquarters of Lunglei and Saiha;

iii. the subdivisional/block headquarters of Lokicherra, Marnit, Wedst Phaileng, Reilk, Kolasib, North Thingdawl, Darlawn, Aibawk, Serchhip, Thingulthliah, Ngopa, Champai, and East Lungdar (district Aizawl), West Bunghmun, Tlabung, Lungsen, Hnahthial, (district Lunglei) Chawngte, Lawngtlai, Sangau, Tuipang (district Chhimtuipui).

NAGALAND

The State of Nagaland is noted for several distinctive features which have their own implications for any urban development policy. The notable among these may be listed as follows :

i. In 1981, 15.52 per cent of the State's population was urban. A phenomenal urban growth rate of 133.95 was recorded during 1971-81. This rate was almost double of that for the NER as a whole.

ii. Nonetheless the State has only seven towns against 1112 villages. This gives one town for very 159 villages. The mean intertown distance is 52 kms.

iii. In line with the site pattern of settlements in general, all the towns (barring Dimapur) are located on the ridge crests or spurs. This contrasts with the valley location of most of the towns in Arunachal Pradesh.

iv. All the towns, with the sole exception of Dimapur, are district headquarters. On the other hand, Phek is the only district headquarters which had not acquired an urban status by 1981.

v. The present district headquarters have been the tribal centres of respective tribes. The State's territorial organisation for administration has appropriately been done in a manner that various districts have predominance of specific tribes and their traditional centres function as district headquarters. For example, Kohima district is inhabited largely by Angmis, Phek by Chakhesangs, Mokokchung by AOs, and Mon by Konyaks. This is not to deny the presence of other tribes in various districts but just to indicate their relative dominance in each case.

vi. The State has witnessed an impressive increase in the number of districts and their subdivisions since its emergence in 1963. A corresponding increase in the number of administrative centres and government employees was the logical outcome. The State has at present one government employee for every 17 persons or for every three households. These ratios are roughly four times of the Indian average.

Now we may state some of the policy implications of the above observations. These include :

i. Although currently at a low level of urbanisation, Nagaland is urbanising fast. This process should be given a further stimulus for a rapid socio-economic transformation of the State. In particular, some of the existing rural service centres can be induced to grow into towns so as to achieve a dispersed pattern of urbanisation;

ii. Since the State has a well structured hierarchy of administrative centres, this may be directly adopted as a mechanism for operationalising the 'growth centre' strategy. Under such a scheme of things, administrative centres would be required to function as production, service, and nodal transport centres for their surroudning areas in cosonance with their administrative status;

iii. A natural corollary to the increase in the number of administrative centres and of the government employees therein is an intensified demand for new public buildings to house offices and for residential units to accommodate employees. The problem is common to all administrative centres but is more acute in places of higher administrative order. Construction would be an important activity in all administrative centres in years to come.

iv. Above all, one cannot overlook the difficulties caused by the location of settlements, both urban and rural, on the crests or spurs of the ridges. Inter-settlement transport linkages become expensive to construct. The problem of water supply assumes a bigger dimension. Settlements themselves become vulnerable to landslides or land slipping under conditions of steep slopes, soft ground and intense rainfall. In brief, the per unit cost of any urban development scheme is invariably high.

An understanding of the State's urban development policies is a prerequisite for any recommendation on this count. A perusal of the relevant State documents on the matter indicate that following are its major concerns :

i. to construct a New Capital Complex of Kohima, as an adjunct to the existing town;

ii. to build an adequate number of office and housing units at all the administrative centres;

iii. to prepare master plans for all the towns so as to chalk out schemes for checking their haphazard growth, providing adequate civic amenities, and renovating the existing developed sites, including burial grounds;

iv. to implement the proposals of the already prepared master plans of Kohima, Dimapur and Mokokchung;

v. to construct market complexes at the district headquarters of Mokokchung, Tuensang, Mon, Phek, Wokha, and Zunhebato on the lines as already done for Dimapur; and

vi. to provide protection to all the towns against landslides and erosion caused by heavy and intense rainfall.

The present report commends all this. It underlines the exigency of accomplishing all what has been stipulated. At the same time, the report emphasises that concern ought to be directed to the far too inadequate resource allocation for the purpose : only Rs. eight crores out of a total of Rs. 400 crores in the Seventh Plan. The realisation of even modest urban development objectives will require additional resources, specially in view of the peculiar context of towns in hilly and tribal States like Nagaland.

We also recommend that the urban development activity in the State should be viewed as an integral part of the administrative process, industrial location and infrastructure construction. All these dimensions of the State planning should operate in unison so as to impart the necessary dynamism to the overall system.

Lastly, it is our firm belief that the State offers a favourable ground for the practice of 'growth centre' strategy. The overall situation is in such a formative stage that it can be moulded into any desired direction. The 'growth centre' strategy will not only disperse urbanisation but will also go a long way in meeting the rival aspirations of various tribes concentrated in specific areas. This would also help in reducing the sharp urban - rural disparity that obtans in the State. In our opinion, the 'growth centre' strategy for

the State can follow a hierarchy which is consistent with the administrative status of different places. Accordingly, the following order of hierarchy is recommended :

i. the state capital : Kohima

ii. lhe district headquarters : Mon, Mokokchung, Tuensang, Zunheboto, Wokha and Phek; and

iii. the subdivisional headquarters : Tizit, Champang (district Mon), Tulstan, Mangkulemba, (district Mokokchung), Longleng, Longkhim, Norlak, Shamatorr, Kiphibve (district Tuensang), Aghunato (district Zunheboto), Bhandari (district Wokha), Meluri, Pfutsero (district Pkek), and Peren (district Kohima).

Keeping in view the functional importance of Dimapur, it may be elevated to the status of district headquarters by way of carving out a new district out of the existing Kohima district. In addition, Kohima and Mokokchung towns hold a great potential as tourist centres by virtue of their scenic beauty, mild climate, and easy access. Concious efforts in this direction will certainly bring dividends to the State economy.

TRIPURA

The most striking feature of Tripura is its conspicuous remoteness from the main body of India. The State is 70 per cent hilly and tribal. Over two-thirds of its population is displaced from East Pakistan, now Bangladesh. Only-third is native and largely tribal.

Tripura is one of the more populous but less urbanised States of the NER. Only 11.99 per cent of its total population was recorded as urban in 1981.

The State's urban population is distributed amongst ten towns. The capital towns of Agartala is the biggest. Its growth rate is also the highest among all the towns.

All the towns of Tripura are administrative centres, being headquarters of the State or districts or subdividions. In addition, these function as market centres.

It is notable that most of the Tripura's towns historically grew around royal palaces as nucleus. Every time the Tripura princely state was invaded by the Muslims of the Ganga delta, its rulers shifted to new safer places. A new capital was raised in the process. The emergence of Amarpur, Agartala, Dharmanagar, Kailasahar, and Udaipur is explained on these lines.

Now all the towns are located close to the Indo-Bangladesh border. Before Independence, these places were the exchange points of trade between the tribals of the Tripura princely state and the inhabitants of the former Bengal province unde the British.

All Tripura towns find a location on some river. The rivers are prone to floods. Thereby towns are susceptible to floods.

Urban population of Tripura grew by 38.93 per cent during 1971-81. This rate was the lowest for any State in the NER. The economic stimulus for towns to grow is scare. Inmigration to them is explained largely by inflow from Bangladesh. Some additional inmigration is attributed to the security problems in the countryside.

Agartala, being the State capital and offering considerable employment opportunities, is the main receipient of inmigrants. This has led to a haphazard growth of this city. An intensive planning effort to correct the situation is imperative.

The absence of towns in the tribal east of the State cannot be missed. This represents an imbalance not only in the distributon of urbanisation process but also in overall development.

Here it may be pointed out that the headquarters of the newly organised autonomous district, covering the tribal territory, is not centrally located to the physical disposition of the area to be served. It is being developed in quite a in close proximity to Agartala. Such a decision may be administratively convenient but cannot be justified on other grounds.

After a brief review of the urbanisation in the State, we may have a look at its urbanisation concerns. These may be stated as follows :

i. The haphazard physical growth of towns, particularly of Agartala, is worrying. The nature of inmigration, emanating

largely from Bangladesh, and political constraints in dislocating anyone from the occupied space make the task difficult.

ii. Among the various urban problems, housing is rated as number one. Not only is there a growing demand for additional houses, especially by government employees, but an acute scarcity of construction materials like cement, steel and bricks is also met with.

iii. Most of the towns are handicapped by some or other locational disadvantage. Their proximity to the international border facilitates inflow from across. Their location on the rivers make them floodprone. Their concentration in the State's western periphery deprives a large part of Tripura of advantages which flow from the proximity to a town.

Accordingly, the enunciated urban policies of the State are as follows :

i. to promote housing activity and strengthen civic infrastructure at Agartala;

ii. to provide essential civic amenities to the other nine towns through their Notified Area Committees;

iii. to declare some additional places, namely, Kumarghat, Teliamure, Melaghar and Manu Bazar as towns so as to disperse urban facilities; and

iv. to constitute an effective organisational set up for urban development.

The State's concern for problems relating to urbanisation is impressive. However, hardly 1.59 per cent (Rs. 7 crores out of a total of Rs. 440 crores) of the State's Seventh Plan outlay is earmarked for urban development. One wonders if the stipulated objectives can ever be achieved by such an inadequate funding. A substantial increase in allocation for urban development is imperative.

Secondly, the location of the headquarters of the autonomous hill district in close proximity to Agartala deserves a second thought. It would be more appropriate if it is located in the heart of the area to be served.

Lastly, by its very physical, demographic, and administrative disposition, the State should have two different kinds of urbanisation policies : one for the plain tract and the other for the hilly-tribal autonomous district.

In the case of the former, the economic base of the towns needs to be strengthened through promotion of industry, and in the latter case, a growth centre strategy will be of real help.

Some nodal locations, quite uniformly distributed, should be identified nad provided with the requisite facilities and appropriate production base. A tentative list of these places would include Panisagar, Kumarghat, Salema, Chhamanu, Kanchanpur (North Tripura district), Dumbunagar, Bagafa (South Tripura district) and Teliamura (West Tripura district).

IX
THE NORTH EASTERN REGION

The NER is evidently a less urbanised but fast urbanising part of India. The existing towns are growing rapidly in general. Simultaneously many new towns have evolved from the village stage. A strong association exists between the administrative status of towns and their growth behaviour. One can easily infer that administrative centres can be confidently adopted as growth poles/centres for the socio-economic transformation of their surrounding areas.

There can be no two opinions about the desirability of promoting the urbanisation process in the NER. Towns will evolve and grow even otherwise in this Region where efforts are being made to develop the resource base, to extend the transport links, to disperse the community services, and to intensify the administrative activity.

Indeed towns have to serve as nodal points for breaking the isolation of most parts of the Region, for stimulating their economic growth, and for making urban services accessible to as many people. Equally crucial is their role as federating centres where people of all regional, ethnic and tribal diversity come into contact with each other and participate in the process of the Region and nation building. Naturally all these considerations are to guide the formulation of any urban development policy for the Region.

It is axiomatic that urban development in the Region has to be a part of the overall development strategy. True that the local problems of towns are to be taken care of and the town-countryside as well as intertown linkages should be strengthened but all this has to be done in conjuction with the policies relating to rural development,

industrial location, transport extension, and service provision. Since the Region is in an initial phase of development, it is rather easier to manipulate its system to achieve the desired objectives. Now is the time when an integrated view of development matters should be taken. This moment must not be missed.

An appreciation of some specific problems of the NER is imperative. All its constituent States, barring Manipur and Tripura, have been carved out of the old Assam. Interstate rivalries, by reason of such an evolution, are easy to understand. For that rason, any urban development policy for the Region has to be framed in a manner that it is acceptable to its all members, and does not generate any feeling of suspicion or discrimination.

Secondly, the topographic conditions of the Region are such that the per unit cost of any infrastructure develpment is high. Hence bigger allocation of funds for this sector is not only justified but also necessary.

Thirdly, the NER is an area of long time distances by reasons of its physical lay out, dispersed population distribution, and lack of transport facilities over extensive areas. Any urban development policy for the Region must reduce distances to urban facilities and intensify space relations.

Above are, a variety of strategic considerations are involved in any scheme of things relating to this sensitive border Region. The presence of security forces in large number is inevitable. The occasional bouts of insurgency and associated law and order problems

are not absent. Some movement of people across the Burma and Bangladesh borders is an open secret. Smuggling, using the border towns as base, cannot be denied. This includes trafficking in drugs to which many a youth is getting addicated. The problem is more serious in urban places. One wonders if there could be a special policy for the border towns.

In brief, the matters relating to socio-economic transformation, ethnic compatibility, interstate rivalries, strategic considerations, and meagre available resources are to be reconciled in formulation of any urban development policy for the Region. One may ask as to what could be the respective role of the Central and State Governments and of the individual municipal bodies in this task? What kind of urban management will be most effective in such a situation? Should urban development policies consciously aim at preservation of tribal culture in areas and how?

A critical review of the urban development policies being followed by the NER States shows that although the urbanisation patterns, procesess and problems are quite specific in every case, the urban development programmes undertaken by them are almost the same. For example :

i. Practically all the States are eager to construct a new capital or to raise a new capital complex in close proximity of the existing one. This is sought under two considerations. First, the available office space in the existing capitals is far too inadequate for the rapidly expanding administrative machinery. Secondly, the existing capitals have recently experienced such a haphazard growth that it would be easier to build a new planned capital town than to correct the distortions in the present one. One can also appreciate the desire of the newly formed States to have new capitals. They do take a cue from Assam which built Dispur as an administrative adjunct to Guwahati.

ii. All the State governments accord a high priority to construction of dwelling units for their employees. This is because the towns adopted as the capitals of the newly formed States were earlier only district headquarters. These did not have adequate housing facility to fulfil their obligations as the capital of a State. As their commercial and industrial functions also expanded, the scarcity of houses became more acute. Such a situation has been effectively articulated by the government employees.

iii. Participation in the Centrally sponsored programmes, such as Integrated Development of Small and Medium Towns and Environmental Improvement of Slums, is common to all the States. The financial burden of these programmes is reduced for the State governments through matching contributions by the Central Government.

iv. The need to prepare master plans for the major towns, and to draw base maps for many of the small towns has been stressed in plan documents of all the States. In point of fact, comprehensive master plans are already ready for quite a number of towns but little has been done by way of their implementation.

v. All the States accord an equally how priority to urban development in their plan allocations. Hardly one or two per cent or even less of their Seventh plan outlay has been allocated to this sector. This is in continuation with what was done in the previous plans. It is in consonance with the scheme of things at the national level.

As a consequence, all urban develolpment schemes are taken in piecemeal manner with limited impact. Things seems to be worsening in spite of stipulated investment. This need not have been so because the States in the NER differ, among other things, in their urbanisation level, urban growth rate, kind of towns, and associated magnitude and nature of urban problems. Their plan document should have reflected the specificity of their urban problems and programmes. The proportionate share of funds allocated to urban development could also vary.

All this raises one critical question : what to do?

Before this question in answered, we may stress the need for a change in the perception about the role of urbanisation in the development process. Urbanisation is not merely a situation to deal with but is also an efective agent for generating economic growth, bringing about social change, and crystallising political process. In the context of the NER, it is also to be appreciated that urbanisation relocates disperssed rural population at a few nodal points called as towns. Such a process of population redistribution reduces the cost of providing employment, services and security.

The above recommended change in perceptions will go a long way in dealing with the current and emerging urban scenario much more effectively.

In terms of policy prescriptions, it may be reiterated that the urbanisation situation of the NER is to be taken care of at three spatial scales :

i. the Regional level, in respect of high order services and high cost industry which require collaboration between the constituent States of the NER;

ii. the State level, where growth centre strategy is desired for stimulating economy and providing the requisite services in and around the select nodal places; and

iii. the individual town level, wherein local problems of water supply, drainage, protection against floods and/or landsliding, sanitation, housing and transport are to be solved.

Under such a scheme of spatial organisation, all the seven State capitals in the NER are to be adopted as the places of prime

importance at the Regional level. These are to function not merely as State headquarters but also as powerful growth poles for their States. At the same time, these have to equitably share the locationing of the highest order technical, training, educational, health and financial institutions meant to serve the entire NER.

In addition, some other places enjoying strategic location, and endowed with efficient transport linkages, and experiencing fast economic and demographic growth should also be adopted as Regional centres. As per our analysis, these places include Tinsukia, Jorhat, Tezpur, Kokrajhar, and Silchar in Assam, Dimapur in Nagaland, and Dharmanagar in Tripura.

Next in hierarchy would be the middle level growth centres. These would essentially be the district headquarters (excluding the Regional centres mentioned above) in various States. In addition to their normal administrative functions, these must have at least : (i) a regulated agricultural market; (ii) an industrial estate; (iii) an industrial training centre; (iv) a hospital; (v) a college; and (vi) a telephone exchange.

At the third and lowest order of hierarchy would be the growth points which enjoy the administrative status of a subdivision or development block or circle, as the case may be in different States. The important functions to be located at these places would include : (i) agricultural/forest produce collecting and processing centre; (ii) primary health centre; (iii) post and telegraph office; (iv) high school; (v) bus stand; (vi) bank; (vii) community centre and above all; (viii) government supply centre, with an attached (rural) godown

storing commodities of public distribution system, to meet any exigency caused by disruption in transport.

It is evident that the hierarchy of growth centres will follow the existing hierarchy of administrative centres. In an undeveloped area like the NER, the functional importance of places is in virtual conformity with their administrative status. Another advantage of this scheme would be an automatic coordination between the administrative and development processes. The task of identifying growth centres through any rigorous technique is rendered redundant. Even if such an exercise was undertaken, in all probability, the administrative centres could automatically emerge as viable growth centres.

A meaningful collaboration between the constituent States of the NER is imperative for a successful urbanisation policy. The element of such a collaborative effort would include : (i) identification of higher order Regional centres and allocation of appropriate functions to them at a shared cost; (ii) installation of large scale industrial units as a joint enterprise; (iii) adoption of suitable schemes on interstate basis to take care of the power, water supply, fuel, and food requirements of towns; (iv) interstate transport with fewer barriers; and (v) management of physical resources, particularly, power generation and flood control, on intestate basis.

Equally essential is to strengthen the local roots of urbanisation in the NER. The avenues of urban investment should be promoted among the natives. This is best done by giving a greater stimulus to small and medium towns since the large towns will continue

receiving non-local population by virtue of their strong extra-regional linkages.

One conspicuous feature of the NER is the presence of security forces in large numbers throughout. This is likely to remain so in future also for strategic reasons. A virtue can be made out of this necessity. The security forces generate a massive and regular demand for a variety of items, including meat, eggs, fruits, liquor, uniforms, belts, socks, among other things. It will be worthwhile to explore if the industrialisation in the NER can be linked with this demand. Industry will be assured of a large and lucrative avenue of disposal, and urbanisation in the Region would have a sound industry-base in the process.

The long distances and tedius journeys involved in all parts of the NER has also been highlighted. Even the headquarters, as in Arunachal Pradesh, may function in virtual isolation from the State capital. Such a situation cannot be allowed to persist for long. The immediate solution lies in an impressive promotion of helicopter service at a subsidised rate in the initial stage. Things can be made cost effective later when the road or rail services are adequately available and the paying capacity of the people rises.

Apart from the general policies enunciated above, there is an imperative need for institutional financing of urban infrastructure investment in order to ensure a regular flow of funds for urban projects in critical areas including shelter, water supply, sewerage, drainage, sanitation and urban renewal in the larger centres in the NER.

In this context the North Eastern Council (NEC) may consider formation of an Urban Infrastructure Development Finance Corporation for the Region, which may be established as a public sector undertaking under the auspices of NEC. The main objective of the Corporation may include:

i. to provide such financial assistance by way of loans and advances to urban local bodies in the Region, for their development schemes as the Corporation considers necessary;

ii. to provide technical and other assistance and guidance to urban local bodies in the matter of their urban development schemes;

iii. to monitor the progress of development schemes;

iv. to undertake urban development schemes in collaboration with urban local bodies or with public undertakings on such terms and conditions as the Corporation deems fit.

The financial structure stipulated for the Corporation is that while NEC may provide the equity; participation may be secured from selected financial institutions (LIC, GIC and UTI) and also from the development banks, in particular.

Initially the Corporation may arrange requisite funding for planning and development of individual towns and disburse these in a manner which helps the coordination of different urban development activities at the identified places. Some of the schemes which maybe funded on uniform basis for various States include:

i. construction of houses for government employees for all the State capitals and district headquarters;

ii. construction of godowns at every subdividisonal/block/ circle headquarters for storing commodities of public distribution system to ensure a regular and uninterrupted supply; and

iii. supply of tractors with trailors for garbage disposal for all the towns, particularly those having a population of 20,000 or above; and

iv. provision of funds for helicopter service between places.

In view of the increasing significance of urbanisation in economic and social development of the NER, there is a strong case for the NEC to create a high-level advisory capacity for urban research and training. An Urban Development Advisory Unit for the NEC, with representation from national urban development and research institutions, is hence, proposed for the purpose. One severe constraint experienced in recommending any development policy for the NER has been the lack of requisite data. The North East Council may consider establishment of an Urban Information Cell to collect all necessary data about towns, assess their resource situation, and monitor their development programmes. One very efficient way of generating this kind of data is to go in for aerial photography of all the towns. If these photographs are taken over regular intervals, data over time can be generated at a low cost in short time.

Lastly, the North East Council should function as a nodal agency for disbursing all funds, coming from outside the State sources, for urban development. This would help in proper channelisation of the available resources.