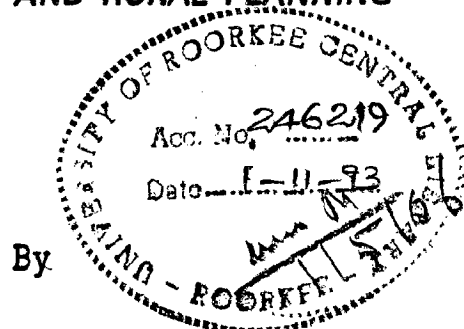


DEVELOPMENT OF MIRZAPUR-SONEBHADRA MICRO REGION

A DISSERTATION

submitted in partial fulfilment of the
requirements for the award of the degree
of
MASTER OF URBAN AND RURAL PLANNING



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MARCH, 1991

CANDIDATE'S DECLARATION


I hereby certify that the work which is being presented in the dissertation entitled 'DEVELOPMENT OF MIRZAPUR-SONEBHADRA MICRO REGION' in partial fulfilment of the requirement for the award of degree of 'Master of Urban and Rural Planning', submitted in the Department of Architecture and Planning of University of Roorkee, Roorkee is an authentic record of my own work carried out during a period of nine months from June 1990 to February 1991 under the supervision of Mrs. Pushplata, Lecturer, Department of Architecture and Planning, University of Roorkee, Roorkee. The matter embodied in this dissertation has not been submitted by me for the award of any other degree.

Dated: 20/3/91



(RAMESH CHAND VISHWAKARMA)

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.


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A C K N O W L E D G E M E N T

I wish to express my deep sense of gratitude to my guide Mrs. Pushplata, Lecturer, Department of Architecture and Planning, University of Roorkee, Roorkee for her constant valuable guidance and cooperation throughout the dissertation. Her sacrifice of her valuable time for me even in odd days can never be forgotten by me.

I would like to thank Prof. Rattan Kumar, Department of Architecture and Planning, University of Roorkee, Roorkee for giving me correct direction to conceptualise the objectives of the dissertation.

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My thanks go out to officers and officials of various Government Departments, who facilitated me to get statistical data on related aspects of my dissertation. Among them Town Planning Department, Uttar Pradesh deserves special thanks.

Date: 20/3/21


(RAMESH CHAND VISHWAKARMA)

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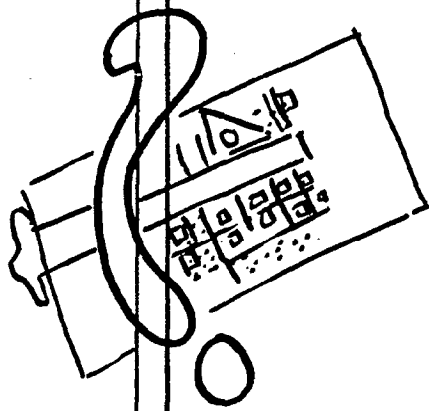
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CHAPTER I

Introduction

CHAPTER - 1

INTRODUCTION

1.1 INTRODUCTION

Growing imbalances in the development from state to state, region to region and area to area has necessiated the realisation of development programmes. Consequently, the strategies for regional development and planning have been set in the past five year plans. Division of the country into planning regions at macro, meso and micro levels as also the preparation of regional plans for some of priority areas in the country were sponsored under five year plans. While there have been only sporadic reference to rural-urban relations relations in the First and Second plan documents, the Third plan contained chapters on 'Balanced Regional Development' and 'Housing and Ruban and Rural Planning'. Third, fourth, fifth and sixth five year Nationa plans recognised the need for the development programmes in the country to be conceived in terms of regions (spatial), defined by economic, social and geographical considerations. The Fourth plan referred at length to the need for redressing inter-state and intrastate imbalances in development which included, by implication, the rural problems as well. The plan emphasized the urgent need for preventing unrestricted and chaotic growth in metropolitan cities and highlighted the necessity of regional approach to the problems of urban development. The fifth Five Year Plan accepting the Fourth Plan strategy enlarged the scope of urban development in small and medium towns for regulating the growth of big

metropolises. The Sixth Five Year Plan strived to achieve a balanced national growth, wherein development programmes for backward regions, called for special attention. Seventh Five Year Plan has recommended the preparation of district development plans for effective implementation and monitoring.

Micro level planning is still left in India. Macro and meso level planning done for development of large areas have left gaps unfilled between large industrial towns and local hamlets. This gap can be filled by micro level planning i.e. at district or tehsil level for real benefit of masses.

1.1.1 Mirzapur Sonebhadra : Micro Region

Delineation of Mirzapur-Sonebhadra region of Uttar Pradesh has been done on the basis of its socio-economic and geographic characteristics. Mirzapur-Sonebhadra micro Region comes under '11b' meso region of planning of India. Adjoining districts, Allahabad and Varanasi are much developed in comparison to Mirzapur-Sonebhadra region (Refer Table No.1.1). There is much similarity between Mirzapur and Sonebhadra district. Both districts are economically ^{backward}/. The Mirzapur and Sonebhadra districts have large amount of natural resources. Socio-economic character of people of the two districts are more or less similar. Agriculture based economy of the region with hilly topography is distinct with surrounding districts of Uttar Pradesh. A part of Sonebhadra district has been under South Eastern Resource Region (S.E.R.R.). Mizaput-Sonebhadra region has been classified as Mirzaput-Rihand region (by town and country planning department of Utter pradesh.

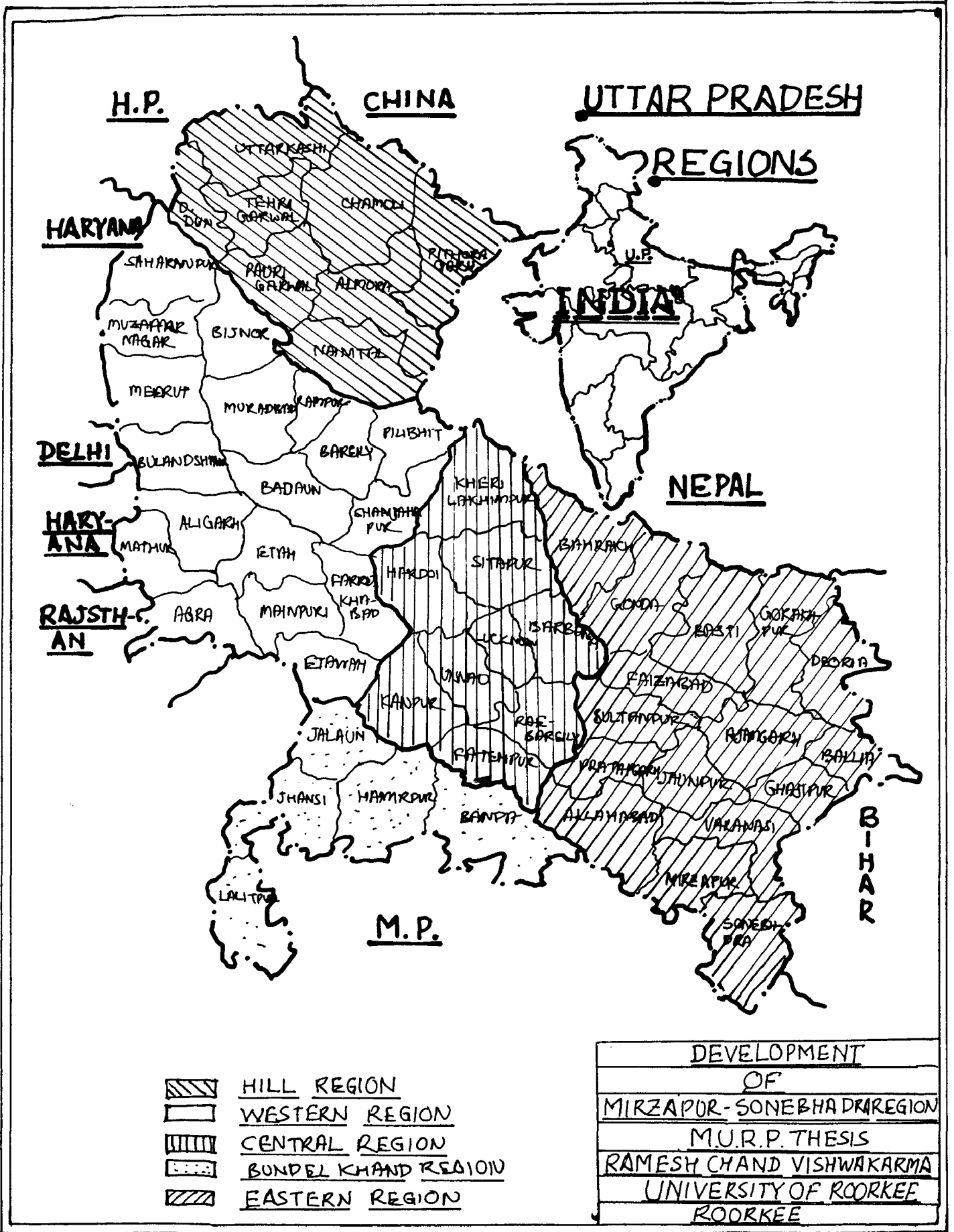
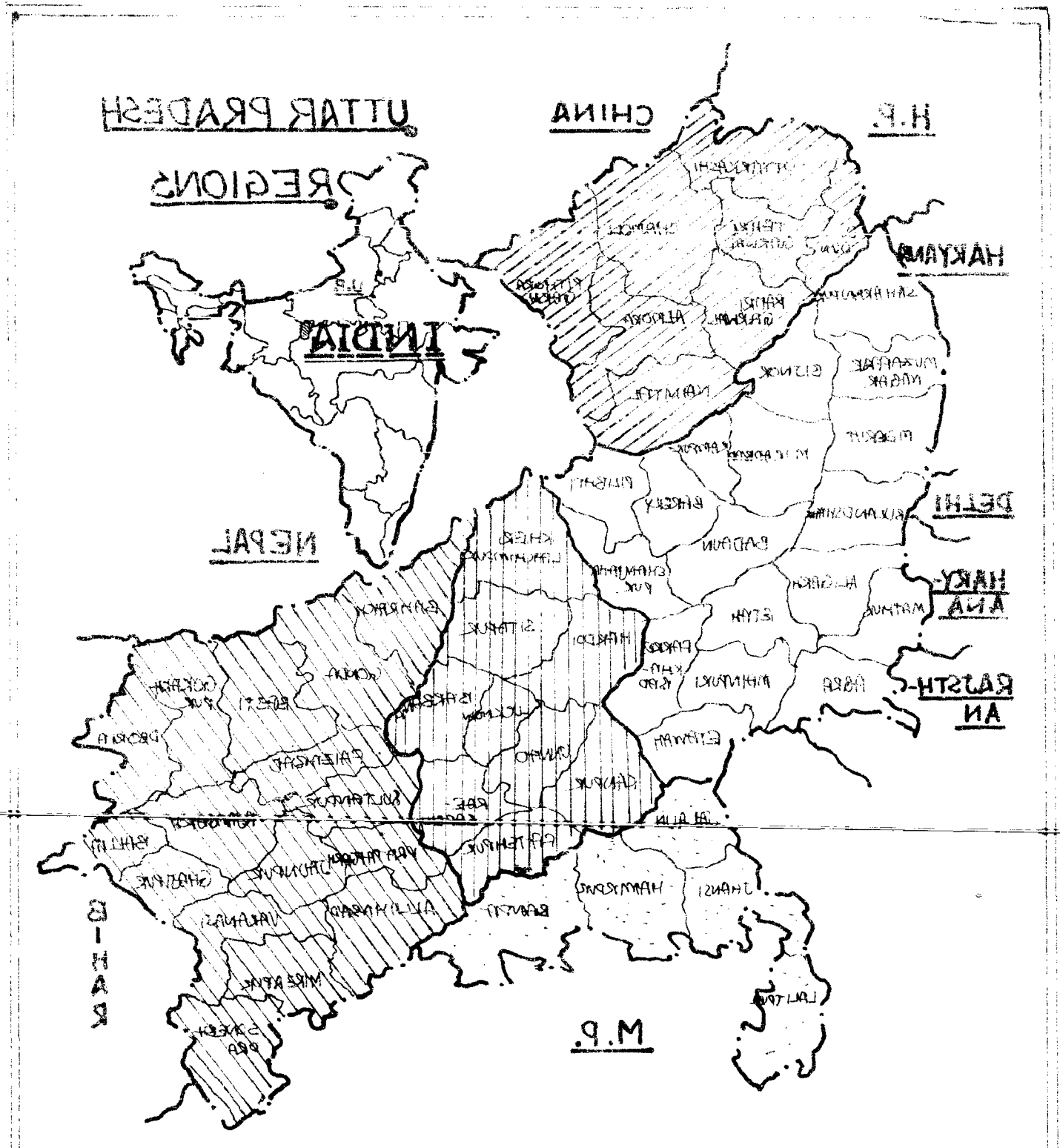







Fig. (1.1)



DEVELOPMENT
 OF
 MURP THESES
 RAMRESH CHAND VISHWAKARMA
 UNIVERSITY OF KURUKSHETRA
 ROORKEE

-  EASTERN REGION
-  BUNDEL KHAND REGION
-  CENTRAL REGION
-  WESTERN REGION
-  HILL REGION

MIRZAPUR SONE-BHADRA REGION

LEGEND



MIRZAPUR-SONEBHADRA REGION
 RIVER
 RAILWAYS B.G.M.G.
 DEVELOPMENT BLOCK
 DAM CANAL
 ROAD
 DISTRICT BOUNDARY

DEVELOPMENT OF
 MIRZAPUR-SONEBHADRA REGION
 MURR THESIS
 RAMESH CHAND YISHWAKARMA
 UNIVERSITY OF ROORKEE
 ROORKEE

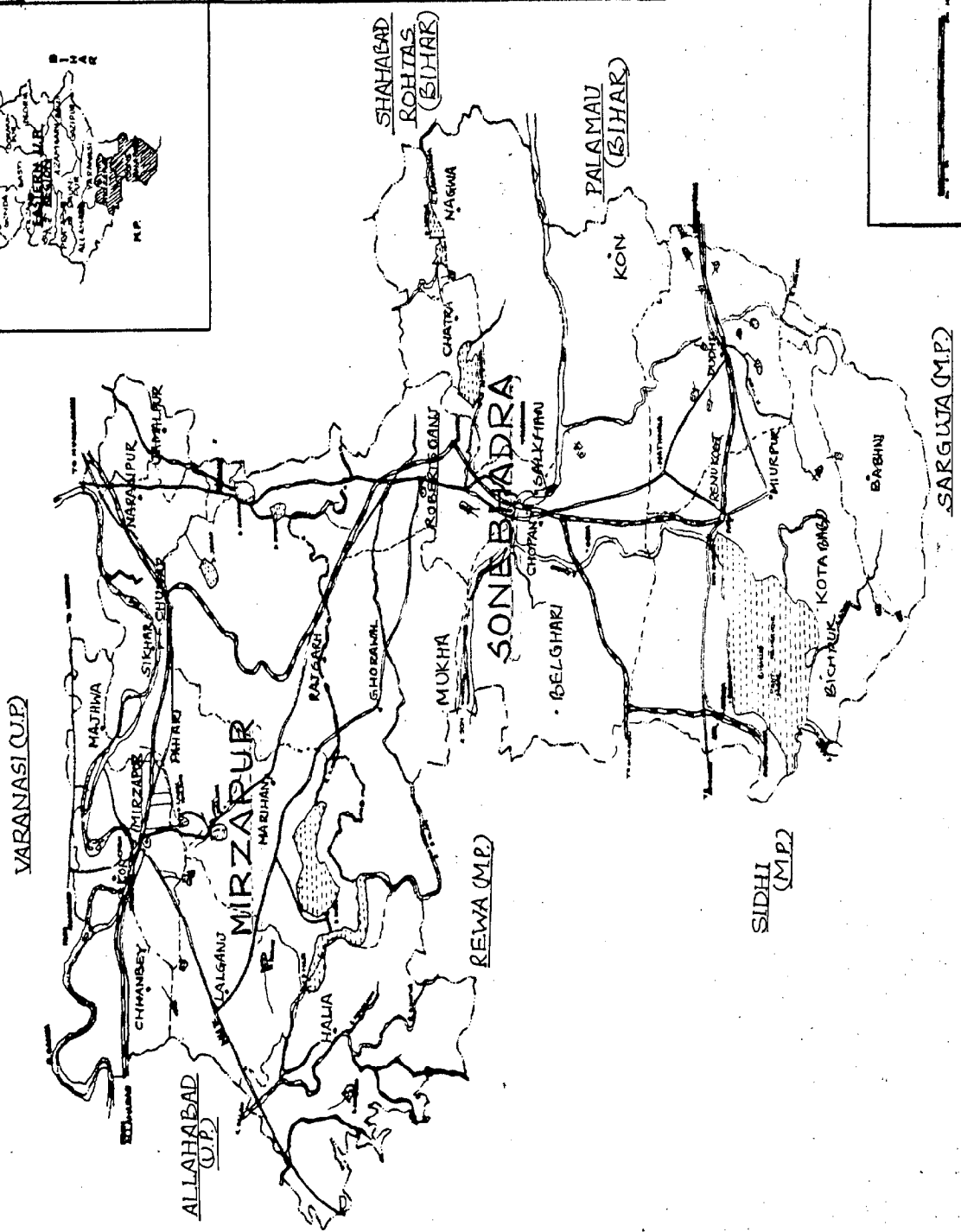
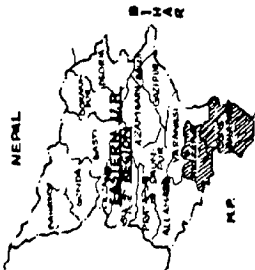


Fig. (1.2)

Table No.1.1 Comparision of the Region with nearby Districts*

Particulars	Allahabad	Varanasi	Mirzapur-Sonebhadr region
1. Total Population			
1981	3797033	3701006	2039149
1971	2937278	2852459	1541088
2. Percentage increase of Population('71-'81)	29.27%	29.75%	32.32%
3. Density Persons/Km ²	501-650	More than 650	less than 200
4. Length of Roads Per 1000 Km ²	171.5 Km	206.7 Km	73.8 Km
5. Percentage of Industries to total			
Engg.	29.1	43.3	42.1
Chemical	5.7	7.2	5.3
Mineral	7.8	2.6	-
Livestock	0.7	1.0	-
Forest	2.1	1.0	5.3
Textile	4.3	18.5	21.1
Agricultural Based	16.3	15.6	18.4
Miscellaneous	34.0	10.8	7.8
6. Percentage Population			
(i) Primary Sector	73.48	59.25	80.52
(ii) Secondary Sector	8.96	19.23	7.98
(iii) Tertiary sector	17.6	21.52	11.5
7. Literacy	25 to 35%	25 to 32.5%	20 to 25%

From above table it is clear that the Mirzapur and Sonebhadra Region is a backward and undeveloped area of the Eastern U.P. as compared to nearby districts.

* U.P. Census Hand Book.

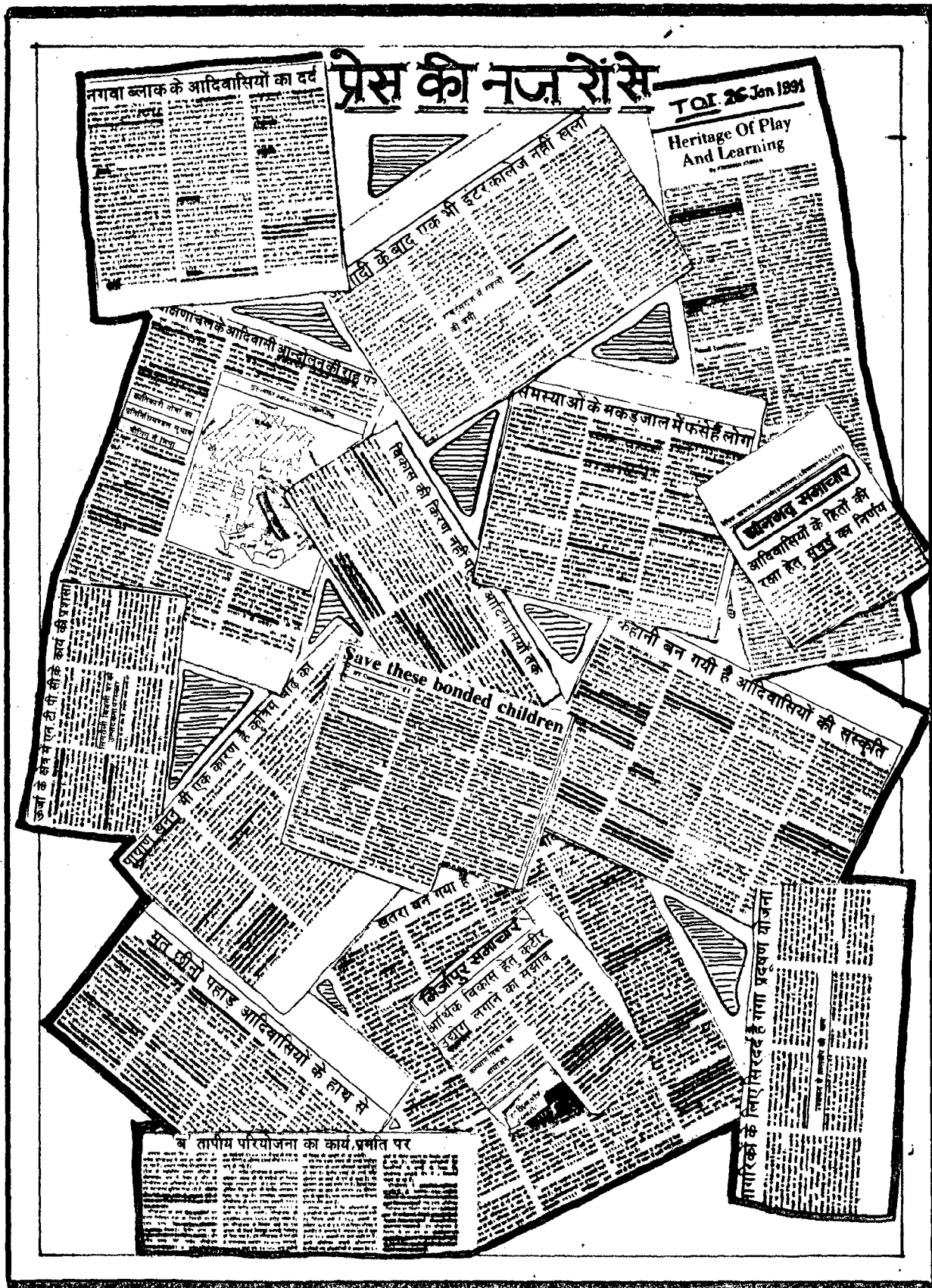


Fig. (1.3)

1.2 IDENTIFICATION OF PROBLEMS

The Mirzapur and Sonebhadra region is very rich as far as natural resources, in the form of coal mines, lime quarries, mineral deposits, water potentials etc. are concerned. Despite all these available natural resources the Mirzapur- Sonebhadra region is in a backward state of economy.

The various problems indentified in the region are as follows:

- (i) The regions is weak in industrial structure despite big natural resources.
- (ii) Infrastructures such as transport network of the region is poor leading to unbalanced development of the region.
- (iii) It is backward because of poor resources utilisation in primary and secondary sector of economy.
- (iv) In Sonebhadra district a large number of power towns coming up which are urban in nature and does not match with the surrounding.
- (v) Local people are not involved in the development process and their economic condition is almost stagnant.
- (vi) Large number of road accidents along hilly roads.
- (vii) Environmental degradation in the region due to forest buring and soil erosion etc.

1.3 OBJECTIVES

- (i) To evolve a planning strategy for comprehensive development of region.
- (ii) To develop the growth centres and nodal points with definit functions and balanced economic development of region.

1.4 SCOPE OF THE STUDY

- (i) The growth centres/points will be planned within its existing functional capabilities and ground realities and aiming for balanced development.
- (ii) The study is to assess the existing natural resources and find out potential for development.
- (iii) To prepare a environmentally compatible development plan of the region.
- (iv) Important historical monuments, natural areas of scenic beauty, wild life safary, river fronts etc. are to be developed for tourists.

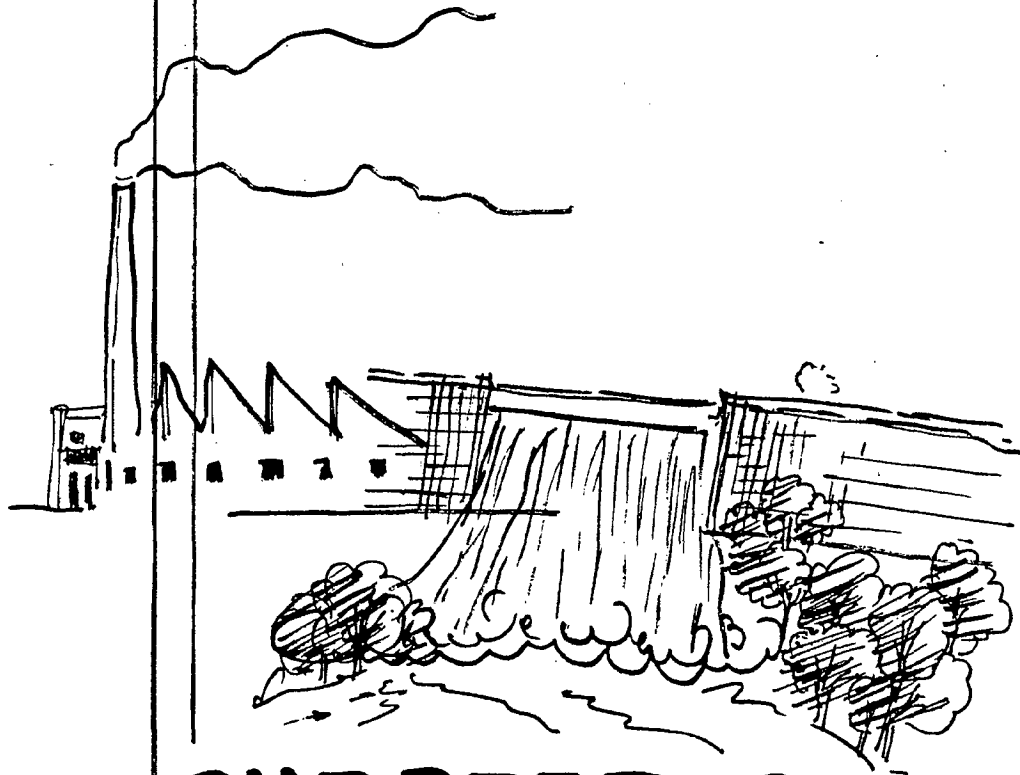
1.5 LIMITATIONS

- (i) Due to lack of time and ease of available data Development Blocks, have been taken as areal units for study.
- (ii) Absence of some published data is supplimented with unpublished records from various sources.
- (iii) Data of new district of Sonebhadra was not available in census book of 1981. So combined data of Robertsganj and Dudhi Tehsils have been used.

1.6 METHODOLOGY

Various steps are as follows:

- (i) To collect information/data on growth pattern of the region.
- (ii) To assessment of the growth trend and development potential of various nodal points, for future development.
- (iii) To explore the possibility of resource based Industries without degeneration of environment of the region.
- (iv) Proposal and recommendation.



CHAPTER-2

Mirzapur-Sone-

bhadra : A microregion

CHAPTER - 2

MIRZAPUR SONEBHADRA AS A MICRO REGION

2.1 AREA CHARACTERISTICS :

2.1.1 Physiography :

The two districts of Mirzapur and Sonebhadra lie in the south eastern part of Eastern U.P. The region lies between $23^{\circ} - 53'$ and $25^{\circ} - 15'$ north latitude and $83^{\circ} - 7.5'$ to $83^{\circ} - 32'$ eastern longitudes and covers an area of 12341.3 Km².

The physiographic setting of the region can be grouped into three distinct parts. They are :

- (i) Plains of Ganges.
- (ii) Central plateau of Vindhya and Kaimur ranges.
- (iii) South of Sone river.

The general topography of the region is varying from senile to rugged. The above mentioned districts physiographic parts are similar in their natural features. (Refer Map No.2.1)

(i) Plains of Ganges :

After Ganga & Yamuna meet at Sangam in Allahabad and proceed forward into Mirzapur District as Ganga River. It has big discharge meandering through city. The area is very fertile and plain. The wide tract of land on both sides of the river are used for agricultural purpose through out the year except for few months when flood occurs. The area has on its

southern part a rolling terrain of low altitude (about 200 metre).

Chhanbey, Mirzapur, Majhwa, Kon, Sikhar, Narainpur and Jamalpur blocks are located in this zone.

(ii) Central Plateau of Vindhya and Kaimur Ranges :

This vast plain area is situated on the elevated ranges of Vindhya and Kaimur hills. Most parts of Mirzapur district lies in this zone. Out of two tehsils of Sonebhadra, Robertsganj tehsil is situated in this area. In central plateau, upland grey yellowish, grey heavy soils on sedimentary and allied rocks; yellow reddish, yellow medium deep light textured soils in the central plateau are available.

Fissured rocks near Robertsganj in Kaimur hills are of no use. This almost plain plateau has got fertile tracts of land along the rivers and has large number of water bodies.

(iii) South of Sone River :

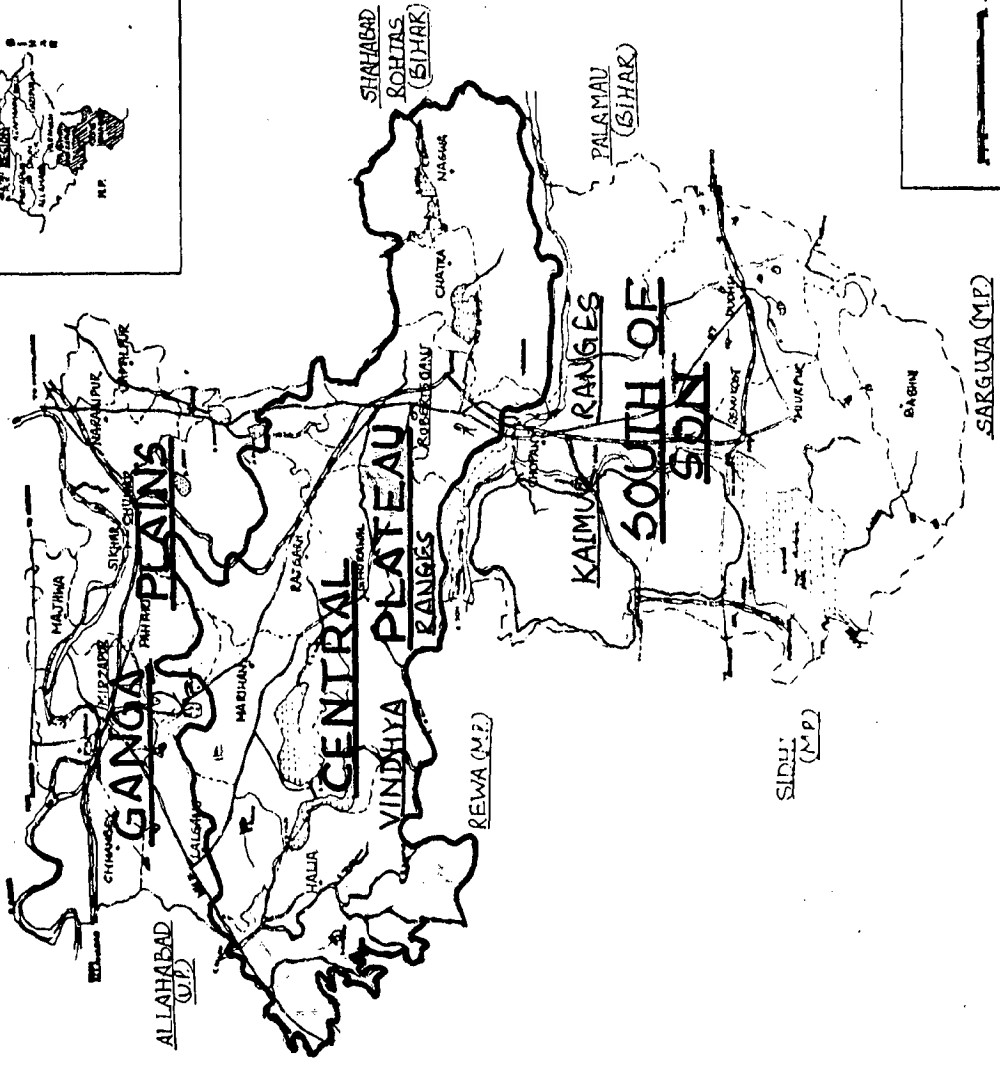
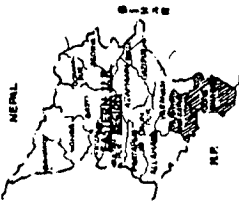
This area is at lower elevation than the central plateau and is also hilly in nature. The area has large number of tributaries of Sone river. The part of this area is having black cotton soil, red soil and metamorphic rocks. Large part of the area is rich in natural resources.

The above physiographic parts are rich in water resources such as streams, rivers, reservoirs, tanks etc. The

PHYSIOGRAPHY

LEGEND

- MIRZAPUR-SONEBHADRA REGION
- RIVER
- RAILWAYS B.G.M.G.
- DEVELOPMENT BLOCK
- DAM & CANAL
- ROAD
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DEVELOPMENT OF
 MIRZAPUR-SONEBHADRA REGION
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Fig. (2.1)

terrain of the hills is largely broken by ravines. The streams are varying in nature. The rivers and streams constitute the drainage basin of the region leading to Ganga. Rivers in this area cause severe soil erosion due to steep slopes. Cultivators generally put rams to protect fields from soil erosion.

Clay as well as black cotton soil are available in the area. Apart from lime, silica stone quarries etc. are also other important mineral reserves in this part.

The area south of Sone river is rich in coal, limestone, shale, sandstone^{stone} and dolomite etc.

2.1.2 Climate :

Climate of the region varies from plains of Ganga to Rihand. The climate of plains of Ganga is known for delightful cold weather, lengthy and almost intolerable hot summer and fairly pleasant monsoon. Whereas rest of the region is very cold in winter and very hot in summer. Monsoon period is from June to August. Central plateau is draught prone area of the region.

As per '88 report, maximum and minimum temperatures of the region are 46°C and 2.6°C . Highest rainfall was recorded in 1955 of 219.8 cm. Normal and average rainfall of the region are 113.4 cm and 86.62 cm, respectively.

The month of May-June have uncertain character of hot winds.

2.1.3 Geology :

The whole of the region is geologically rich. Plains of the region consists of Domat, Matiyar and Balua type of soils. A large number of small hills of Mirzapur district are under Vindhya ranges consists of rocks. Rock quarries for different types of sandstone, slate and kankar, maurum are available in Gangetic plains.

In central plateau, stiff to shallow red clay (ferrous in nature) gets converted into laterite and pisolithic iron ore. In the fertile strip lying at the foot of Kaimur, there are large areas of loam.

2.2 DEMOGRAPHY OF THE REGION :

Some of the important demographic character of the region are as follows :

2.2.1 Population :

The region sprawls over an area of 12,341.3 Km² of which Mirzapur and Sonebhadra ^{districts} are having area of 4,952.5 and 7,388.8 Km² respectively. The region stretches about 200 Km from north to south and 150 Km from east to west. According to 1981, the population of the region is 20,39,149 with Mirzapur and Sonebhadra having 12,61,150 and 7,77,999 respectively. The region under study is having an area of 4% of U.P whereas population is 1.84% of U.P.

Increase of population has been phenomenal in the last decade ('71-'81) about 32.32% as compared to '51-'61 and '61 - '71 when it was 22.8% and 25.6% respectively, (Refer Table 2.1, 2.2).

Table No. 2.1 Population and Villages of the Region

Census year	Inhabited villages	Population		Difference per decade		
		Total	Rural	Total	Rural	Urban
1901	4257	730962	620407	-	-	-
1911	4257	723311	668428	+ 1.0	+ 4.6	- 50.4
1921	2009	722700	646719	- 0.1	- 36.2	+ 38.4
1931	2815	786789	701956	+ 8.9	+ 8.5	+ 11.7
1941	3330	898094	798625	+ 14.1	+ 13.8	+ 17.3
1951	2865	1015236	900981	+ 13.0	+ 12.8	+ 14.9
1961	2930	1246958	1103231	+ 22.8	+ 22.4	+ 25.8
1971	2993	1541088	1355703	+ 23.6	+ 22.9	+ 29.0
1981	3024	2039149	1771484	+ 32.3	+ 30.7	+ 44.4
1901-1981	-	-	-	+170.0	+185.5	+142.1

SOURCE: District Statistical Office.

Table No. 2.2? Increase of Population in Relation to Last Decade

Year/Development block	Population						Percentage increase with last decade
	Total	Male	Female	Rural	Urban		
1	2	3	4	5	6	7	
1981	1261150	664696	59654	1088235	172915	32.32	
<u>Mirzapur</u>							
Chchanbey	135799	70119	65680	-	-	33.22	
Kone	62059	33135	28924	-	-	34.30	
Majhwa	84373	43990	40383	-	-	34.78	
Pahari	62463	33138	29325	-	-	29.80	
City	112176	59679	52497	-	-	32.11	
Lalganj	51664	27323	24341	-	-	48.67	
Holia	92902	49020	43882	-	-	29.97	
Marihan	52792	27846	24946	-	-	34.34	
Sikhar	57026	29380	27646	-	-	31.02	
Narainpur	121232	63574	57658	-	-	15.04	
Jamalpur	131203	68616	62587	-	-	22.93	
Kajgarh	124546	65635	58911	-	-	32.70	
Total Rural	1088235	571455	516780	-	-		

	1	2	3	4	5	6	7
Total urban		172915	93241	79674			
Total district		1261150	664696	596454	1088235	172915	-
<u>Sonebhadra</u>							
1981		777999	415156	362843	683249	94750	-
Ghorawal		114872	59830	55042	-	-	27.86
Robertsganj		108913	57026	51887	-	-	
Chatra		52807	27405	25402	-	-	27.38
Nagwa		42192	22024	20168	-	-	22.15
Chopan		1131842	69578	62264	-	-	41.25
Miurpur		108496	58757	49739	-	-	44.80
Dudhi		71891	37244	34647	-	-	29.53
Babhni		45706	23478	22228	-	-	28.45
Forest Village		6530	3784	2746	-	-	48.11
Total Rural		683249	359126	324123	-	-	-
Total Urban		94750	56030	38720	-	-	-
Total district		777999	415156	362843	683249	94750	-

SOURCE : District Statistical Office

2.2.1.1 Population Projection :

Table 2.1 shows that percentage of population increase with respect to previous decades is increasing fast. Due to availability of natural resources and expecting full utilisation of the same, population will increase very fast. Geometrical increase method will be most suitable for the region. Graphical method will also be suitable if it is expected to maintain present growth trend which is a sizeable one.

The projected population of the region is estimated to be 25,89,251, 32,30,259, and 40,11,462 by the year 1991, 2001 and 2011 respectively (Refer Table No. 2.3, Map No. 2.2).

Table No. 2.3 Population Projection of the Region

<u>Projection Method</u>	<u>1991</u>	<u>2001</u>	<u>2011</u>
Graphical Method	26,00,000	32,00,000	39,00,000
Geometrical Increase Method	25,78,503	32,60,518	41,22,925
Average	25,89,251	32,30,259	40,11,462

2.2.2 Settlement Pattern :

The settlements are result of physical, social and economical interaction. They have to interdepend for mutual satisfaction of their requirement. Size and distribution of these depends upon its potential of economic activities in the area (Refer Map No. 2.3).

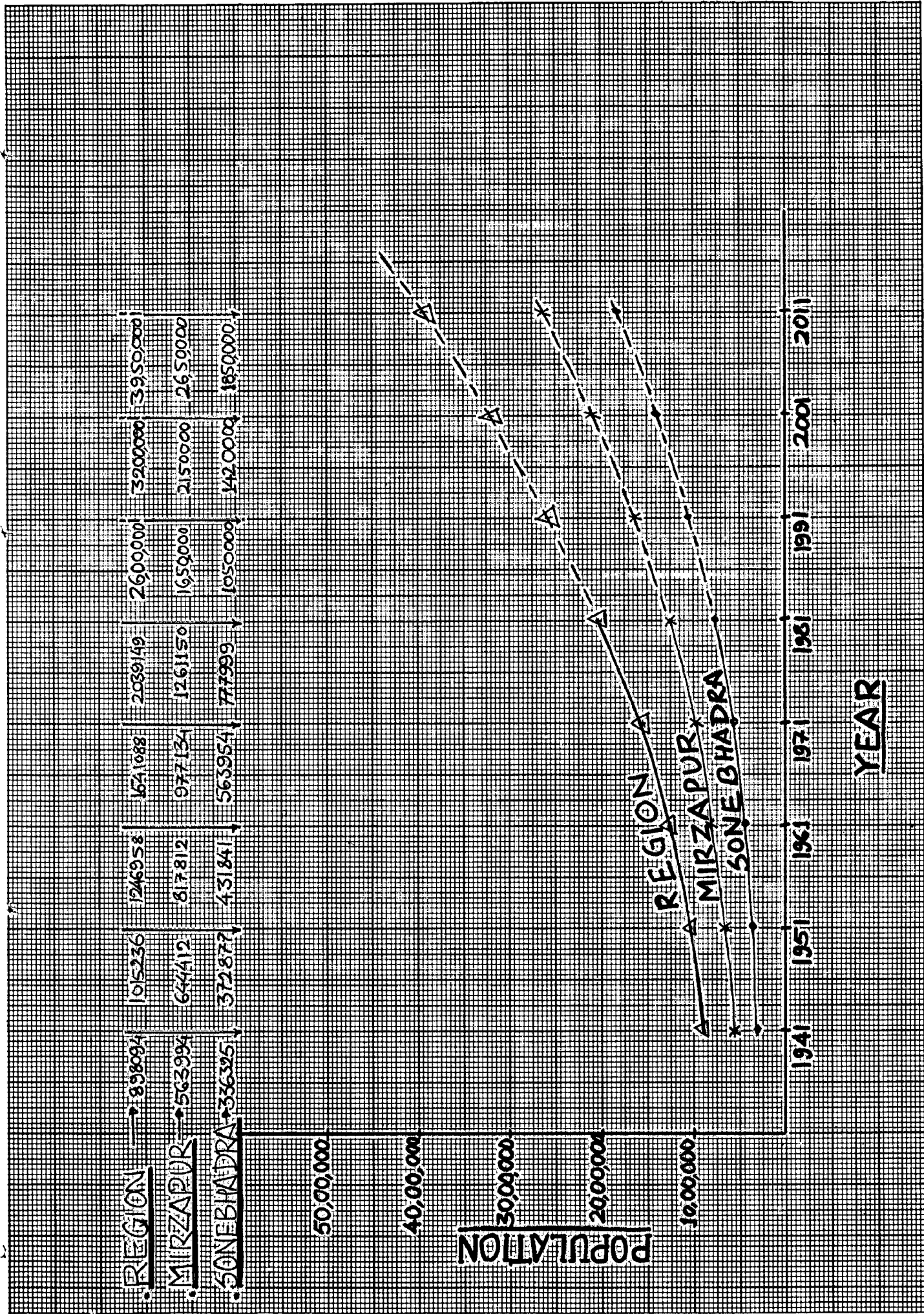


Fig. 2.2

Urban Settlement :

There are 12 urban settlements. Mirzapur is the only class I city and other urban areas are of III, IV and V category towns, (Refer Table No. 2.4).

The large number of urban centres are coming up in the southern part of Sonebhadra especially in Mirzapur Development Block along Churk-Pipri life line.

Rural Settlement :

About 87 per cent of the region lives in different sizes of rural settlements.

About 1/3 rural population settlements have size less than 500 population. About 80 per cent population is living without proper facilities. Total rural settlements of the region is 3,403 in number of which 1,420 are in Mirzapur district. Out of above settlements 379 are rural in nature and uninhabited.

2.2.3 Density and Distribution :

Population density and its distribution on land is important for balanced and economical development of region. As per '81 census, population density of the region is 180 persons/Km² of which Mirzapur has 255 persons/Km² and Sonebhadra has 105 persons/Km². The state average density is 377 persons/Km² which is much higher.

Table No.2.4 Urban Areas of the Region

Name and type	Block	Area km ²	Population		SC & SI	Literacy	
			Total	Female			
1	2	3	4	5	6	7	8
<u>Mirzapur</u>							
Mirzapur M.B.	City	38.9	127787	68879	58908	2511	48.4
Chunar M.B.	Narainpur	14.3	21307	11717	9590	605	42.9
Ahaura M.B.	Jamalpur	2.6	14345	7565	6780	1172	48.0
Kachchwa T.A.	Majhwa	5.2	9476	5000	4396	1042	59.9
Total Urban		61.0	172915	93241	79674	484	54.9
<u>Sonebhadra</u>							
Robertsganj M.B.	Robertsganj	3.0	16132	8899	7233	1284	61.4
Ghorawal T.A.	Ghorawal	3.2	3159	1805	1354	1825	60.4
Dudhi T.A.	Dudhi	2.9	7231	4109	3122	1448	57.9
Churk Gurma N.A.	Robertsganj	4.2	7852	4579	3273	-	-
Chopani N.A.	Chopan	1.2	6705	4000	2697	-	-
Obra N.A.	Chopan	9.1	22215	13014	9201	-	-
Renukoot N.A.	Miurpur	3.2	22151	13906	82455	-	-
Pipri N.A.	Miurpur	12.6	9305	5710	3595	-	-
Total Urban	-	39.4	94750	56030	38720	-	-

SOURCE: District Statistical Office

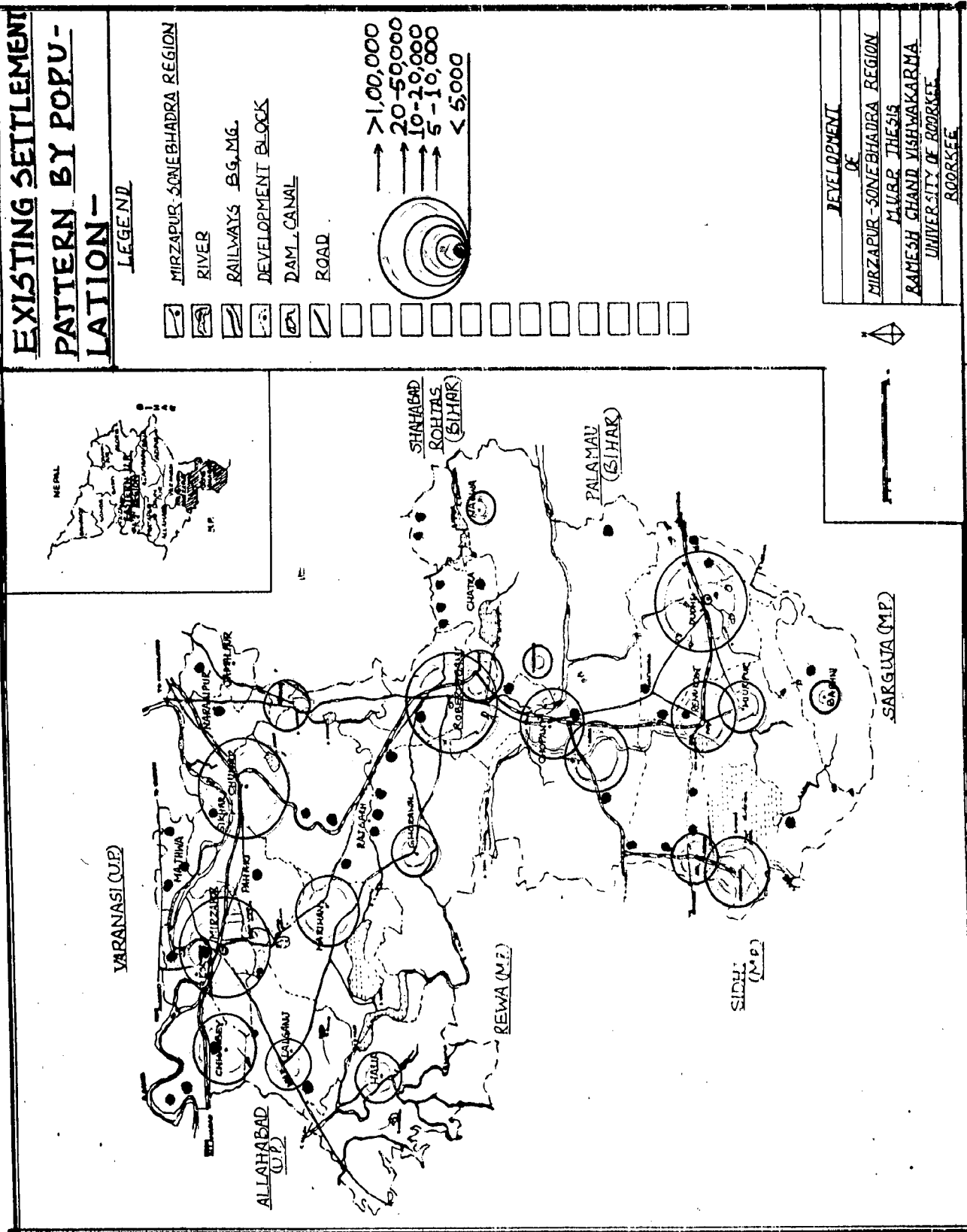


Fig. 2.3

District Mirzapur :

Blocks	Density (persons/Km ²)
Majhwa*	709
Kon*	646
Narainpur*	495
Sikhar*	492
Jamalpur*	470
Mirzapur City*	376
Chhanbey*	355
Pahari	177
Rajgarh	144
Lalganj	123
Halāa	93
Marihan	87

* The above blocks are most dense areas lying in Ganga plains of Mirzapur district.

District Sonebhadra :

Blocks	Density (Persons/Km ²)
Robertsganj	254
Chatra	235
Ghorawal*	156
Chopan*	88
Dudhi*	84
Miurpur*	57
Nagawa*	57
Babhani*	63

* The density in the above blocks is much lower than the average of two districts.

2.2.4 Migration :

Migration of the people from rural area to new urban centres and growth points is mainly because of poor economic level of people. People from rural areas are migrating towards various growth centres where population increase is about 45-50%.

Chopan (41.25%), Miurpur (44.8%), Robertsganj (30.12%), Dudhi (29.53%), and Babhani (28.45%) are having high percentage of population increase than the average of region. In Mirzapur district Lalganj (48.67%), Majhwa (34.70%), Marihan (34.34%), Kon (34.30%), Chhanbey (33.22%), Rajgarh (32.7%), Mirzapur city (32.11%) and Sikhar (31.2%) are the blocks having equivalent population increase to the region, (Refer Table No. 2.2).

The above blocks have shown phenomenal increase of population in the last decade.

Chopan and Miurpur Development Blocks have undergone rapid urbanisation because of large investment for power towns in the Singrauli region. Unskilled and skilled people from Mirzapur, Varanasi, Allahabad and other surrounding districts are migrating towards Singrauli region where a large number of power and industrial towns are coming up. Because of lack of skill, economic status of the migrants, the economic condition of the people in the region is low.

2.2.5 Literacy :

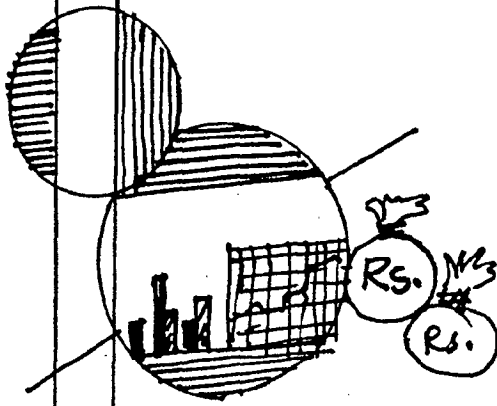
About 75% of the region are illiterate. As per '81 census, the region has got the literacy rate of 23.5% of which Mirzapur and Sonebhadra have 25.4% and 20.6% respectively.

The urban areas in the region also offer scope for absorbing a large number of illiterate in inferior jobs, Amongst females literacy rate is very low, (Refer Table No. 2.4 and 2.5).

Table No. 2.55 Literacy Rate

	Male	Female	Total
<u>Mirzapur</u>			
Rural	35.44%	9.11%	22.93%
Urban	43.97%	37.33%	40.91%
	State Average = 27.38%		
	Region Average = 23.50%		
<u>Sonebhadra</u>			
Rural	21.67%	4.71%	13.76%
Urban	55.22%	55.99%	56.35%

SOURCE : District Statistical Office



CHAPTER - 3

Economic base of the region

CHAPTER - 3

ECONOMIC BASE OF THE REGION

Economic base of the region is mainly agrarian. Manufacturing is the second largest sector of employment which includes construction industry. Cottage industry includes mainly carpet and durri manufacturing. It has been notified that carpet manufacturing industry has to be small scale industry at the end of eighth five year plan by the Government of India. In Mirzapur metal industry plays an important role in the economics of the region. Labour intensive household industries are significant in Mirzapur district whereas agricultural economy is predominant in Sonebhadra.

3.1 LOCATION AND GROWTH TRENDS OF INDUSTRIES :

In Mirzapur, labour intensive carpet and durri manufacturing, brass metal industries etc. are predominant economic activities which are discussed here (Refer Map No. 3.1, Table 3.1 and 3.2).

3.1.1 Carpet Industry :

Apart from agriculture people have made carpet manufacturing as another means of livelihood in villages. The carpet from Mirzapur-Bhadohi region are famous for their design, weaving and combination of colours in the international and national market. Some British industrialists like Tallery, Hiran and Obeetee, have established a large number of carpet manufacturing units in the area to promote this industry.

EXISTING INDUSTRIES AND POWER

LEGEND

- MIRZAPUR-SONEBHADRA REGION
- RIVER
- RAILWAYS B.G.M.G.
- DEVELOPMENT BLOCK
- DAM, CANAL
- ROAD
- CEMENT
- METAL
- ALUMINIUM BASED
- CHEMICAL
- RUBBER
- CARPET/DURRI
- HYDEL POWER
- THERMAL POWER

DEVELOPMENT OF
MIRZAPUR-SONEBHADRA REGION
MURR THESIS
RAMESH CHAND YISHWAKARMA
UNIVERSITY OF ROORKEE
ROORKEE

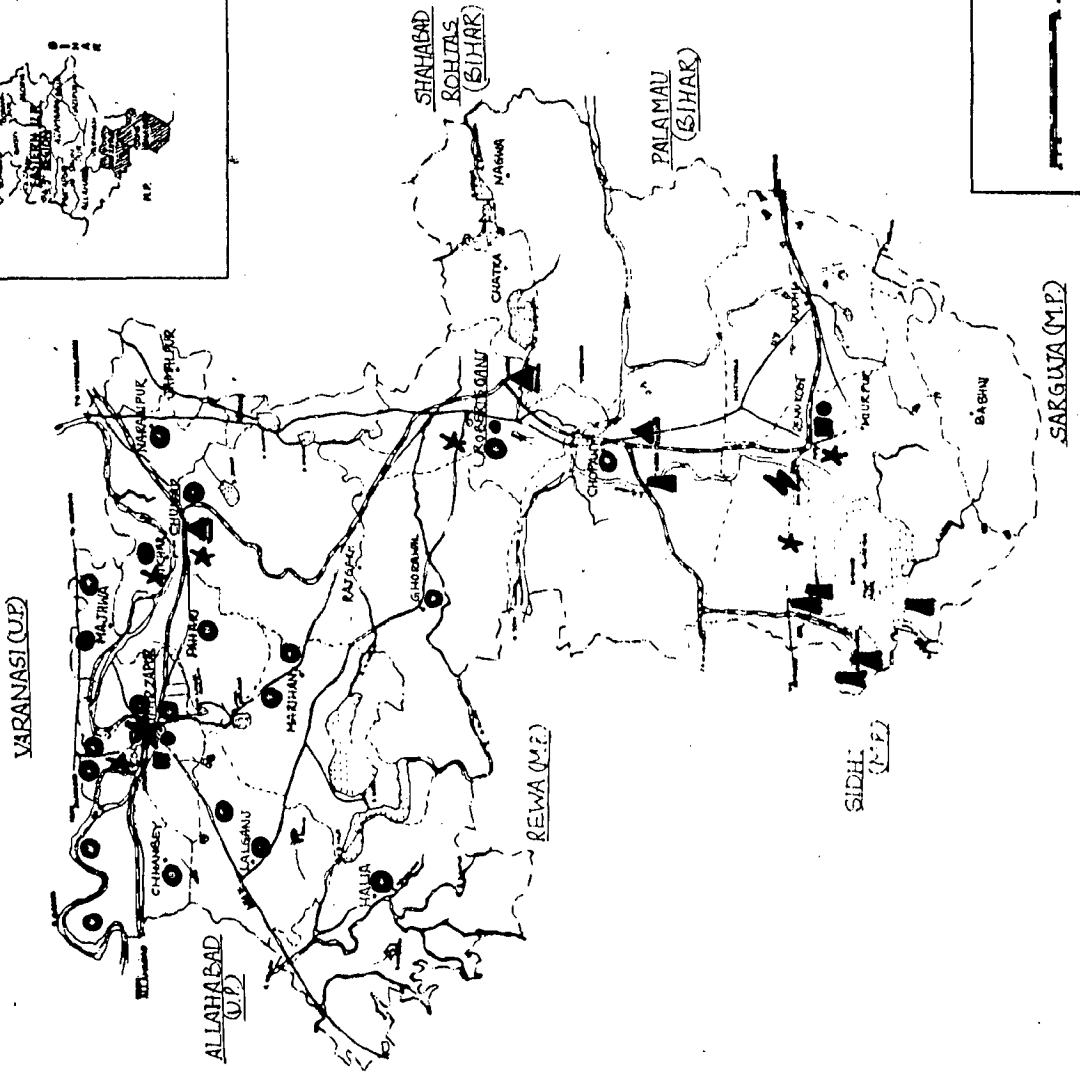


Fig. (3.1)

Table No. 3.1 : Industrial Position of the Region.

Sl. No.	Factories registered under factory Act 1984	Inference
1.	Working factories 44 Nos.	Robertsganj, Chopan, Miurpur
2.	Factories from where return recieved 42 Nos.	city, Narainpur and Rajgarh development blocks where factories are mainly situated.
3.	Average daily labourers and workers 14708	
4.	Production value 8,42,61,18,000 Rupee	

SOURCE : District Statistical Office.

Table No. 3.2 : Cottage and Small Scale Industries (1988).

Sl. No.	Type of Industry	Mirzapur	Sonebhadra
1.	Khadi and rural industries	843	-
2.	Small Scale Units		
	a. Engineering	310	72
	b. Chemical	85	15
	c. Wine	-	-
	d. Handloom Units	31	-
3.	Handicraft	91	-
4.	Others	20	10
	Total Units	1380	97
	Total population engaged	7046	297

SOURCE : District Statistical Office.

From this region carpet worth 100 crore rupee had been exported in 1980-81 alone. Thus, this industry has substantial role for foreign currency earning. In 1982, 114 crore rupee export was from carpet. There are about 400 exporters in Mirzapur-Bhadohi Belt. It is labour intensive industry where child labour has been main working force. In carpet industry about 40 to 45 per cent of investment goes to wages and labour charges. Minimum wage act has further disheartened the investors upto some extent. On the basis of one projection by 2001 about 35.5 per cent whole time workers will be in carpet manufacturing industry. There are about 100 units in Mirzapur city alone for carpet and 110 units for Durri. It is an important industry for employment of masses.

3.1.2 Metal Industries :

Metal works have been an important part of economy of Mirzapur. It comes under household industry. Mirzapur is an important centre for manufacturing Brass, Iron, Aluminium and other metal utensils and kitchenware in eastern Uttar Pradesh, Bihar, West Bengal and Madhya Pradesh.

It also is labour intensive industry. In Mirzapur about 150 units are under this industry. Number of workers in these units varies widely.

3.2 NATURAL RESOURCES :

Region is rich in natural resources. Land, water, forest, mineral etc. are available in plenty. Part of this region has been delineated under South Eastern Resource

Region (S.E.R.R.) as Sone Industrial Sub Region. The use of the natural resources out side the region has left the area underdeveloped.

3.2.1 Land Resources (Agriculture) :

The region was biggest district of U.P. In 1989, it had been divided into two districts Mirzapur and Sonebhadra. Total land available in the region is 12341.3 Km² (Mirzapur : 4952.5 Km² + Sonebhadra : 7388.8 Km²). Agriculture is the predominant use of land. In the region, net cultivated area covers about 3,83,820 hectare (Mirzapur : 207150 hectare + Sonebhadra : 176670 hectare) which constitute 31.1 per cent of total area. About 23.869 per cent geographical area of region which is otherwise culturable land is not utilised for agriculture and is wasted in form of barren and fallow land. Only 25.849 and 30.349 per cent of total sown area in Mirzapur and Sonebhadra are under multiple cropping. Kharif crop in the two districts of Mirzapur and Sonebhadra are 46.6 and 56.38 per cent of the total sown area (Refer Table 3.3, 3.4, and Map No. 3.2).

Table No. 3.3 Irrigated Area (1987-88)

	Mirzapur		Sonebhadra	
	Hectare	Percentage of total	Hectare	Percentage of total
Net irrigated area	108952	52.6	33281	18.84
Gross irrigated area	150233	72.5	45349	25.6

SOURCE: District Statistical Office














Table No. 3.4 : Land Utilisation of the Region (1987-88).

Sl. No.	Land Use Category	Mirzapur District hectare (%)	Sonebhadra District hectare (%)	Total percentage of the region.
1.	Forest	113359 (25.15%)	397142 (52.27%)	42.47%
2.	Not available for cultivation			
	a. Non agriculture use	39521 (8.78%)	41694 (5.54%)	06.75%
	b. Barren (Uncultivated)	18249 (4.05%)	33115 (4.4%)	04.21%
3.	Other cultivated land			
	a. Permanent pasture and grazing land	878 (.02%)	273 (.03%)	0.095%
	b. Tree crops and grooves	8810 (1.95%)	10598 (1.4%)	01.624%
4.	Culturable waste	17818 (3.95%)	34222 (4.85%)	04.32%
5.	Fallow			
	a. Other than current	25918	36541	
	b. Current fallow	+ 18433	+ 21505	
	c. Sum	44351 (9.85%)	58046 (7.72%)	08.52%
6.	Net sown area	207150 (46.019%)	176670 (23.5%)	31.9%
	Total area	450136	751760	1201896 (100%)

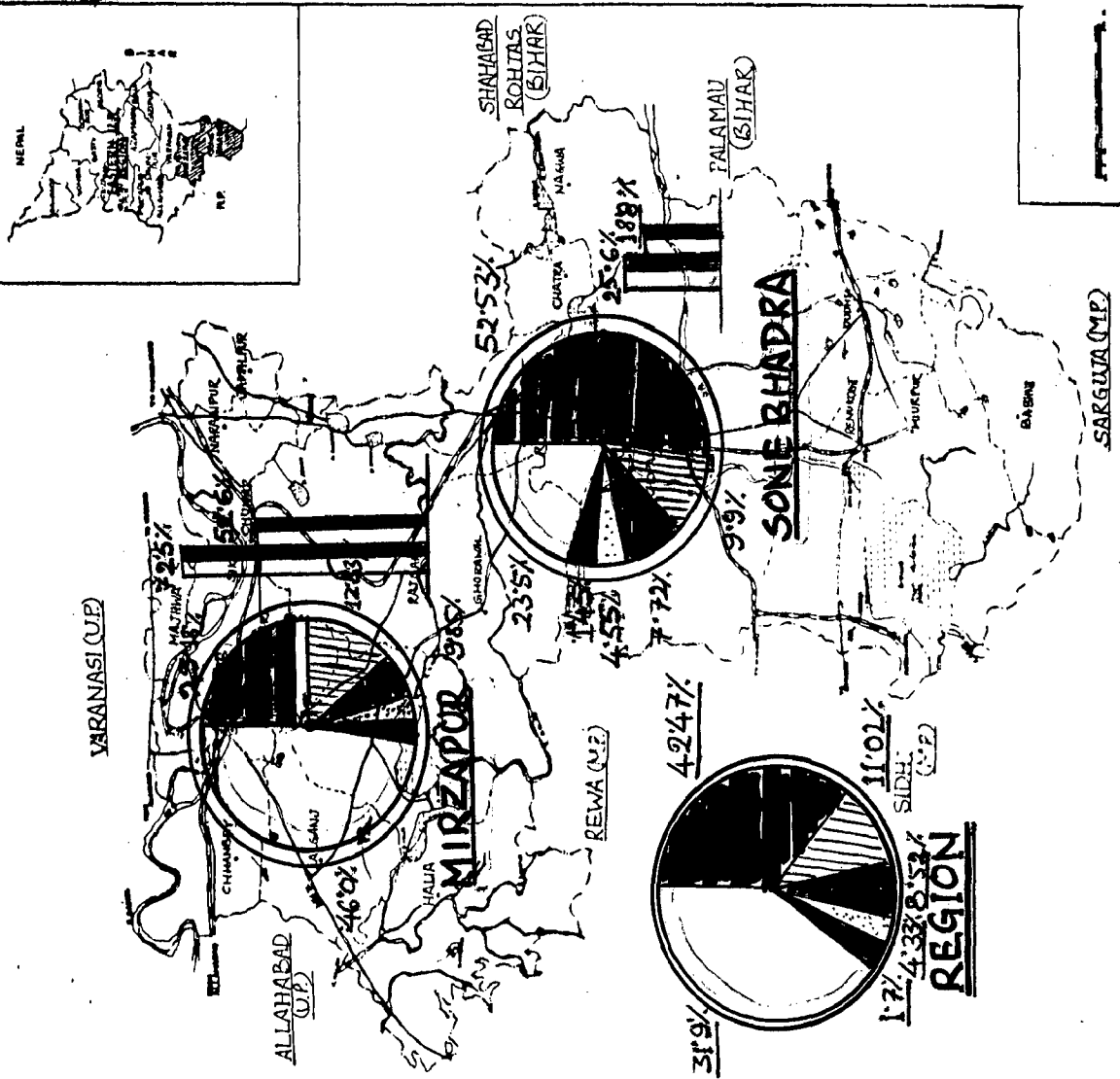
SOURCE : District statistical book.

LAND USE & IRRIGATED AREA

LEGEND

-  MIRZAPUR-SONEBHADRA REGION
-  RIVER
-  RAILWAYS B.G.M.G.
-  DEVELOPMENT BLOCK
-  DAM, CANAL
-  ROAD
-  FOREST
-  NOT AVAILABLE
-  FALLOW
-  CULTURABLE WASTE
-  OTHER CULTIVATED
-  NET SOWN
-  IRRIGATED AREA

DEVELOPMENT OF
MIRZAPUR-SONEBHADRA REGION
MURP THESIS
RAJESH CHAND YISHYAKARMA
UNIVERSITY OF ROORKEE
ROORKEE



MIRZAPUR (U.P.)

Growing of paddy till recently was done mostly by traditional methods but now high yield variety of rice has given substantial increase in production. About 65.9 per cent of working population in Mirzapur and 81.8 per cent in Sonebhadra are engaged primarily in agricultural pursuit. Due to poor irrigation and bad quality of land along with other infrastructures, there is enough potential for boosting agricultural production (Refer Table No. 3.5 for size holdings).

Table No. 3.5 Size of Holdings

Size	Less than	1 ha.	1-2 ha	2-3 ha.	3-5 ha	5 ha.
Mirzapur district	Number :	121980	32568	12291	9315	7475
	Area in: hectare	42285	44374	29945	36696	82510
Sonebhadra district	Number :	59129	24655	9889	9030	1029
	Area in: hectare	24782	35930	24285	34808	10932

Enough land is available for expansion and development of the growth points and important towns of the region in future.

3.2.2 Water Resources :

Area is rich in water resources. Water is available abundantly in large number of river, ponds, streams etc. Most of the rivers are perennial in nature.

Rainfall in the area varies widely. Area on South of Sone river gets more rain. Rivers and streams carry runoff from catchment mainly to the rivers Sone and ultimately to

Ganga River. Other important rivers flowing through the region apart from Sone and Ganga are Renu, Jargo, Belan, Garai, Karmnasha and Kanhar. All these rivers are perennial rivers.

Large number of tributaries branch off from these rivers and add to the vast water resource of the region. Due to gradual and steep slopes of the terrain rivers can facilitate, the construction of dams and reservoir for hydel station and storage structures for irrigation. The only existing hydel power station is at Pipri. It is also to be mentioned that appreciable amount of water can be made available for rural water supply.

3.2.3 Forest (Renewable Resource) :

Forest in the region is basically tropical dry deciduous type. Total 510501 hectare land of the region is under forest cover which forms 42.47 per cent of geographical area of the region. This percentage of forest cover is higher than the state (17.43%) and nation (22.73%). Most of the forest are concentrated in central plateau along the hills of Vindhya and Kaimur ranges (Refer Map No. 3.3).

Forest of the region are rich in trees like Sal, Tendu, Palas, Vijaysal, Mahua, Teak, Sisham etc. 'Sal' which is main source of industrial timber in India, is abundantly available in the hills. Mahua is one of the common tree of the region. Its flowers, juicy and sweet are eaten fresh as well as in dried state. The seeds are source of cooking oil. It is an important source for local country liquor. Other product of

the region are, Tendu leaves, Lac, resin-pigment, cane, bamboo, fire wood, medicinal herbs, Khair etc.

3.2.4 Minerals :

The Mirzapur - Sonebhadra region is rich in terms of mineral resources of the three categories (fuel minerals, metallic and nonmetallic). The region is rich in fuel and nonmetallic minerals (Refer Map No. 3.3).

(a) Coal :

Coal one of the most important energy resource of India is available in the Singrauli coal fields. Coal India Limited, which had one Central Coal Field (CCL), Ranchi for this area, has now set up a new zone Northern Coal Fields (NCL), Singrauli to look after this vast coal reserve. The Singrauli coal fields are thickest coal seam in the country with an areal extent of 2331 Km², (Refer Table No. 3.6).

Table No. 3.6 Coal Seams of the Area

S.No.	Area	Thickness
1.	Jhingurdah top seam	131 metre
2.	Jhingurdah bottom seam	9-17 metre
3.	Pani Pahari	3.95-5.9 metre
4.	Khadia	0.5 metre
5.	Purewa top	4-9.5 metre
6.	Purewa bottom	5-14 metre
7.	Turra	2-4 metre
8.	Kota	1-2 metre

Jhingurdah top seam is thickest seam recorded in India. It carries grade II coal as also inferior with occasional band of class I coal. Total coal reserve of the area amounts to 5695 million tonnes.

First coal mine of Uttar Pradesh, 'Bina' is the oldest coal mine. Now there are ten coal mines working in the area viz. Kakri, Bina, Dudhichuha, Khadia, Jayant, Morwa, Amrohi, Nigahi, Jhingurda, Gorwi. Total production from this area is 9440000 tonnes.

(b) Limestone and Dolomite :

Limestone is the most important mineral of Uttar Pradesh. Its share went to 8 per cent of total mineral produced by state. This area is rich with maximum concentration of cement grade limestone. Limestone here is mainly used for cement manufacturing. Total availability of limestone in the region at Robertsganj - Markundi and Kayrahat areas is 25 and 50 million tonnes of 9 to 15 metre thickness.



















Flux grade and SMS grade dolomite is also an important mineral of the region available in south east of Chopan, Dalla and Churk area. Thickness of dolomite reserve is varying between 6 to 27 metre. Tentative reserve of dolomite was estimated to be little more than 6 million tonnes at Bari alone.

(c) Sandstone :

It is an important building material. Metamorphic rocks of sedimentary origin in the region are main source of it. In Uttar Pradesh, it is associated with the Kaimur and Bhandar

FOREST AND MINERAL RESOURCES

LEGEND

-  RIVER
-  RAILWAYS
-  DEVELOPMENT BLOCK
-  DAM, CANAL
-  ROAD
-  FOREST
-  COAL
-  LIMESTONE-DOLomite
-  SANDSTONE
-  MICA
-  IRON
- 
- 
- 
- 
- 
- 
- 

MIRZAPUR-SONEBHADRA REGION

B.G.M.G.

DEVELOPMENT BLOCK

DAM, CANAL

ROAD

FOREST

COAL

LIMESTONE-DOLomite

SANDSTONE

MICA

IRON

DEVELOPMENT OF

MIRZAPUR-SONEBHADRA REGION

MURP THESIS

RAMESH CHAND YISHWAKARMA

UNIVERSITY OF ROORKEE

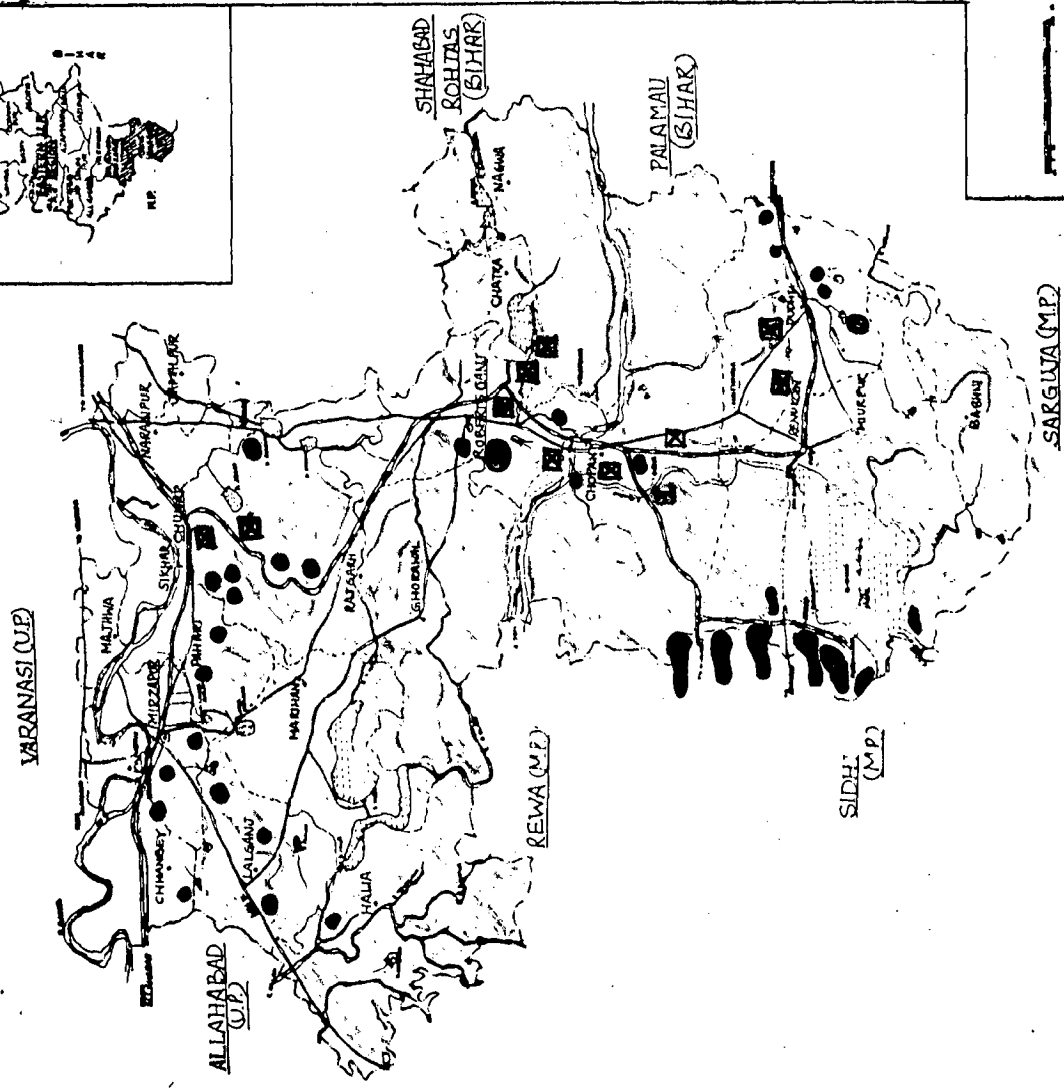
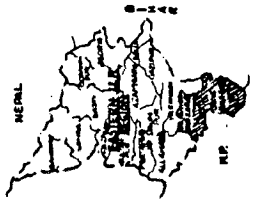


Fig. (3.3)

sandstones of Vindhya ranges. Glass-sand is manufactured from sand available in Sone valley.

(d) Mica :

Very small amount is available near Vairi and Mothihari.

(e) Iron :

Haemetite quartzite formation at Obra locality.

3.3 HUMAN RESOURCES :

In terms of employment primary sector is largest. Next important sector from point of view of the size of employment is service sector. About 20 per cent working population is in this sector.

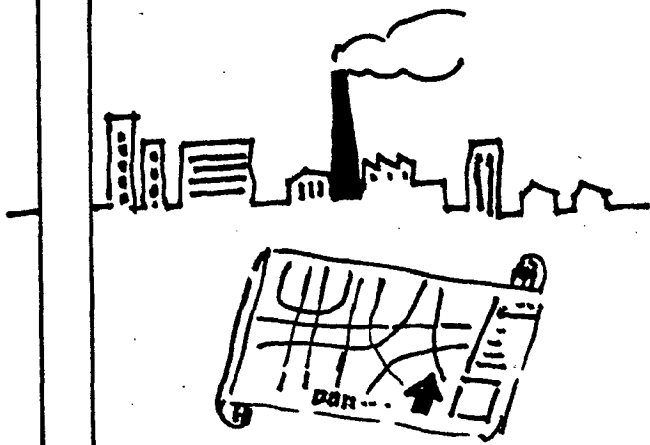
In 1987-88, number of applicants registered at employment exchange was 59979. Informed vacancy in Mirzapur and Sonebhadra are 260 and 382 respectively. Persons employed in Mirzapur and Sonebhadra are 96 and 496 respectively. Thus from the above figures it is evident that about one per cent of registered persons are employed every year.

Therefore, future strategy for employment generation has to be such that not only those registered, but unregistered persons which are large in number also get employment. Underemployment and unemployment has to be removed by proper employment schemes and infrastructure development programmes. Occupational character of the region has been shown in Table No. 3.7.

Table No. 3.7 : Occupational Pattern (1981).

Sl. No.	Groups	Mirzapur (%)	Sonebhadra (%)
1.	Agriculture		
	i. Farmer	157393 (38.1)	145669 (48.4)
	ii. Agricultural labour	114754 (27.8)	100491 (33.4)
	iii. Live-stock	1763 (0.4)	1019 (0.3)
	iv. Quarrying	1103 (0.3)	693 (0.2)
		274926	247872
2.	Industry		
	i. Household	45965 (10.9)	5835 (1.9)
	ii. Other than household	28442 (6.9)	17011 (5.6)
	iii. Construction	3806 (0.9)	2252 (0.7)
		77313	25096
3.	Trade and commerce	13074 (3.2)	7607 (2.5)
4.	Transport, Storage and Communication	6142 (1.5)	3624 (1.2)
5.	Others	96207 (23.3)	47985 (15.9)
	Grand Sum	467662	332148

SOURCE : District Statistical Office.



CHAPTER-4

Infrastructures in the region

CHAPTER - 4

INFRASTRUCTURES IN THE REGION

4.1 TRANSPORT AND COMMUNICATION :

The Mirzapur - Sonebhadra region does not have good transport and communication network. The region being big in areal extent and there are certain gap zone which are totally unserved.

4.1.1 Roads :

Road network of the region is segregated mainly in extreme north and extreme south. There are certain bottle necks which have to be improved. Table No. 4.1 shows the availability of roads in two districts of the region.

4.1.2 Railways :

The region has total broadgauge track length 273.6 Km. (Mirzapur : 170 Km + Sonebhadra : 103.6 Km). One metre gauge lone 9.6 Km long is from Chilh to Madhosingh junction. Only one route serves the entire region from Mirzapur city to extreme south Singrauli, Shaktinagar and Dudhi towns.

In Mirzapur - Sonebhadra region four zones of railways are as follows :

1. Northern Railway - Mugalsarai - Mirzapur - Allahabad and Chunar to Chopan.
2. Eastern Railway - Chopan - Renukoot - Vindhamganj
3. North Eastern Railway - Chilh - Madhosingh (Varanasi)
4. Central Railway - Chopan - Singrauli - Katni (M.P.)

Table No. 4.1 Surfaced Roads of Mirzapur-Sonebhadra Region

Sl. No.	Department	Category	Mirzapur (Km)	Sonebhadra (Km)	Region (Km)
1.	Under PWD	National Highway	148.0	-	148.0
		State Highway	87.8	87.2	175.0
		Major District Road	50.0	284.0	334.0
		Other District Road	630.0	308.8	939.8
2.	Under Local System	District Council	94.0	22.0	116.0
		Municipality	109.0	54.0	163.0
3.	Other Department	Irrigation	74.0	24.0	98.0
		Others	107.0	6.0	113.0
		TOTAL	1308.8	786.0	2094.8

SOURCE : District Statistical Office

Existing road and Railway network indicate that they are for connecting the project areas only. This trend may look economical but is not in the interest of the people for integrated development. Only one express train (Triveni Express) runs to Singrauli and Shaktinagar on alternate days. Another Express train (Muri Express) on Renukoot-Chopan-Mirzapur route is available. Singrauli, Shaktinagar, Renukoot, Dudhi and Chopan interlinks are important for transport of raw material and manufactured goods via Chunar junction on Delhi-Howrah main line. With urbanisation and development of this region the present rail and road networks are proving inadequate. Increasing number of accidents at the bottleneck near Markundi-Chopan stretch need immediate attention. Improper hilly roads and heavily loaded transport vehicle's rush, along the stretch are main reason for accidents. There is only one old bridge across the Sone river near Chopan. It is weak structure but due to nonavailability of alternate route whole of southern Sone valley has to depend upon this bridge. (Refer map No. 4.1)

4.1.3 Air Transport :










No major aerodrome is in the region, only an airstrip at Jhingura in Mirzapur district is available and that too is not functioning.

4.2 SOCIAL INFRASTRUCTURES :

Social infrastructures in the region is poor. Educational and medical facilities are not available to some of the blocks completely.

EXISTING TRANSPORT NETWORK

LEGEND

-  MIRZAPUR-SONEBHADRA REGION
-  RIVER
-  RAILWAYS B.G.M.G.
-  DEVELOPMENT BLOCKS
-  DAM, CANAL
-  ROAD
-  NATIONAL HIGHWAYS
-  STATE HIGHWAYS
-  MAJOR DISTRICT ROAD

DEVELOPMENT OF
 MIRZAPUR-SONEBHADRA REGION
 MAUR THESIS
 RAMESH CHAND VISHWAKARMA
 UNIVERSITY OF ROORKEE
 ROORKEE

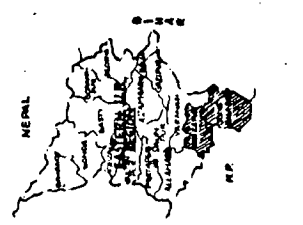
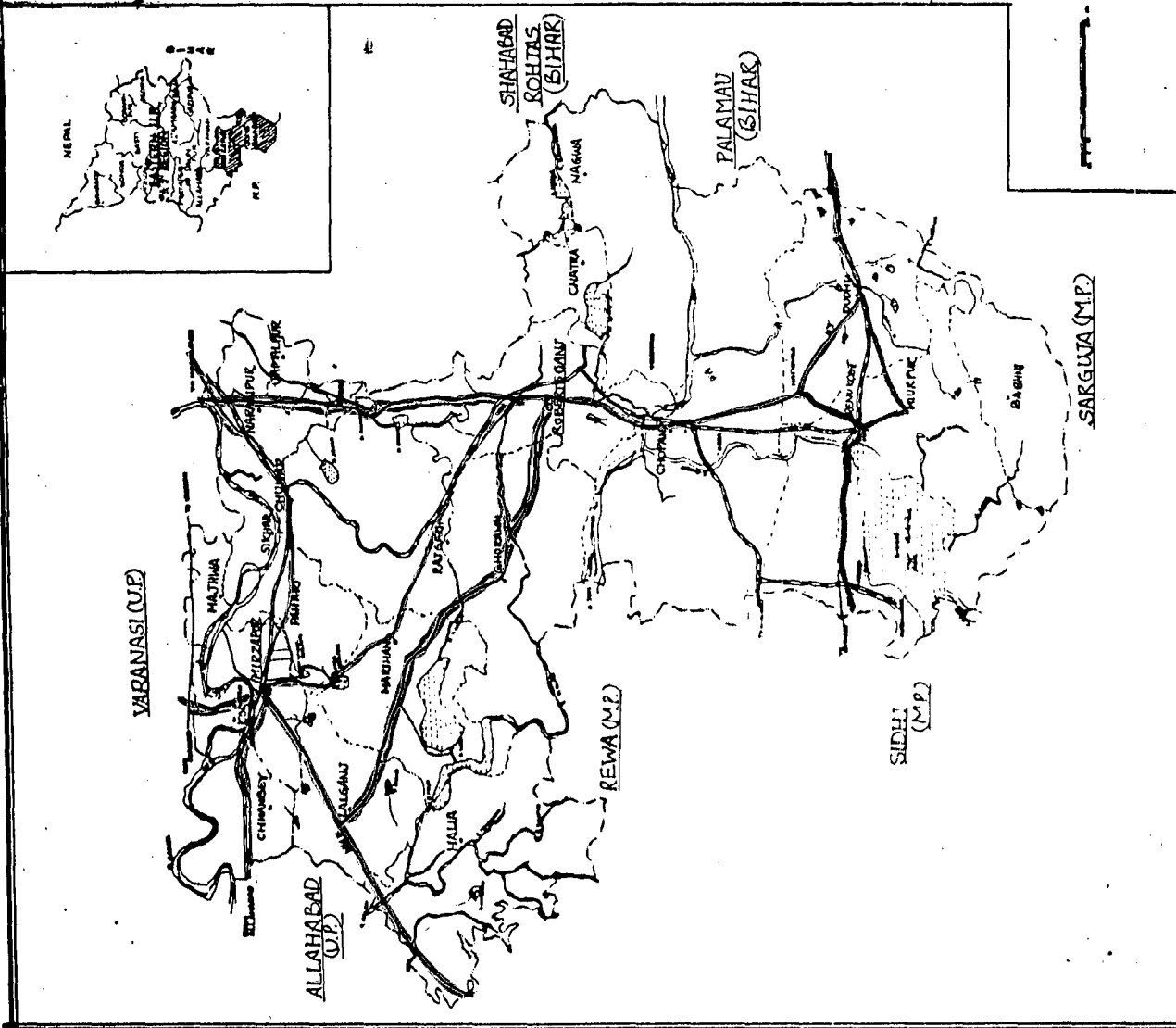


Fig. (4.1)

4.2.1 Education :

The region has 23.50 per cent literacy rate. Educational facilities are not available to the remote areas. Educational facilities, available in the Mirzapur and Sone-Bhadra region are shown in Table No. 4.2.

Table No. 4.2 Educational Facilities

Educational facilities	Mirzapur			Sone Bhadra		
	Rural	Urban	Total	Rural	Urban	Total
Junior Basic School	872	86	958	637	23	660
Senior Basic School	173	25	198	82	13	95
Higher Intermediate	39	19	58	15	14	29
Degree College	-	3	3	-	2	2
I.T.I.	-	1	1	-	1	1
Polytechnic	-	1	1	-	-	-

SOURCE : District Statistical Office

In Sonebhadra district, Mirpur and Dudhi Blocks have Girls Senior Basic School one each and rest of the six blocks of the district do not have even a single girls senior basic school. Nagwa, Chatra and Babhani blocks of Sonebhadra district do not have any High School.

In Mirzapur district, Pahari, Lalganj, Majhwa and Marihan, blocks are having poor educational facilities.

4.2.2 Medical Facilities :

The medical facilities are concentrated at local service centres of the region. For important and higher treatment

Table No. 4.3 : Number of Student in the Region :

Sl. No.	Students	Sonebhadra			Mirzapur			
		Rural	Urban	Total	Rural	Urban	Total	
1.	Junior Basic School	Boys	80981	4608	85589	123587	6001	129588
		Girls	25801	1050	26851	40509	2810	43319
2.	Senior Basic School	Boys	15201	405	15606	31767	520	32287
		Girls	3336	117	3513	8655	275	8930
3.	Higher Secondary School	Boys	5961	11021	16982	15703	20940	36643
		Girls	1437	503	1940	4397	1127	5524
4.	Degree College	Boys	-	2110	2110	-	3661	3661
		Girls	-	305	305	-	507	507
5.	I.T.I.	Boys	-	-	450	-	-	450
		Girls	-	-	-	-	-	-
6.	Polytechnic	Boys	-	-	-	-	-	190
		Girls	-	-	-	-	-	-
7.	Educational Training Centre for women		-	-	-	-	-	20

SOURCE ; District Statistical Office.

Table No. 4.4. : Number of School and College Per Lakh Population.

Sl. No.	School/College	Mirzapur	Sonebhadra
1.	Junior Basic School	76	84.8
2.	Senior Basic School	16	12.2
3.	Higher Secondary School	4.5	3.7
4.	Degree Colleges	0.2	0.3

SOURCE : District Statistical Office.

Table No. 4.5 : Medical Facilities in Mirzapur-Sonebhadra region.

Sl. No.	Description/ System	Mirzapur			Sonebhadra District		
		Dispensaries/ Hospitals	Primary Health Centres	Beds	Dispensaries/ Hospital	Primary Health Centres	Bed
A. <u>ALOPATHIC</u>							
1.	Rural	5	26	124	4	14	112
2.	Urban	17	3	590	13	4	236
	Total	22	29	714	17	18	348
B. <u>AURVEDIC</u>							
1.	Rural	41	-	140	12	-	58
2.	Urban	4	-	48	2	-	42
	Total	45	-	188	14	-	100
C. <u>UNANI</u>							
1.	Rural	3	-	4	1	-	4
2.	Urban	-	-	-	-	-	-
	Total	3	-	4	1	-	4
D. <u>HOMEOPATHY</u>							
1.	Rural	17	-	-	17	-	-
2.	Urban	1	-	-	1	-	-
	Total	18	-	-	18	-	-

SOURCE ; District Statistical Office.

people depend upon Varanasi and Allahabad. No specialised treatment centre is available in the region. Villagers are completely out off from these facilities due to their poor socio-economic conditions. Family and Child Welfare Centres, sub-centres 598 in number are situated in rural areas. A large number of Registered Medical Practitioner are of help for the remote area people with affordable medical facilities.

4.3 UTILITY SERVICES :

4.3.1 Water Supply :

Despite large amount of water resources available in the region rural area are very much affected specially in hot summer when main source of drinking water, wells, rivers, reservoirs and partly ground water are main source of water supply for the urban people. Mirzapur city water works is depending on Tanda fall reservoir and being used for drinking water supply. Sone river is being used for water supply to Chopan town only. Rihand river is used for water supply to Pipri and Obra, whereas Govind Ballabh Pantagar is used for water supply to other power towns along its boundary viz. Anpara, Renuagar, Shaktinagar etc.

4.3.2 Drainage and Sewerage Facilities :

There is not much problem of drainage in the region. Mirzapur city does not have any sewer line so far. People use septic tanks in city. Majority of the people of poor economic condition in the villages do not have even such system.

Only planned townships coming up in south Sonebhadra have sewerage system and drainage. Ganga and other rivers are used for disposing sewage. The industrial waste and sewage of the region is disposed off in river Ganga and other rivers flowing through the region.

4.3.3 Electric Supply :

Total 42.5 per cent villages in Mirzapur and 33.6 per cent villages in Sonebadhra are electrified, (Refer Table No. 4.6).

Larger number of power stations have come up so sufficient electricity will be available for future development in the region. Table 4.7 shows electricity consumption in various sectors.

4.4 RECREATION :

The region has wide potential for development of recreational facilities mainly for outdoor and regional level. Outdoor will consist of play ground and stadium, parks, garden, health resort, camping site, falls, dams and reservoirs, river side, hills etc. There is enough potential for development of places with historical, religious archeological importance and scenic beauty as tourist places.

Some important places of the tourist interest in the region are as follows :

- 1) Vindhychal Sidhpeeth : 6 Km. west of Mirzapur railway station. About 4-5 lakh people every year make trip to the place.

Table No. 4.6: Electrified Villages in Mirzapur and Sonebhadra Region.

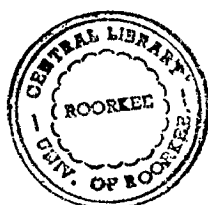
Sl. No.	Electrified Villages	Total Number of Villages in	
		Mirzapur	Sonebhadra
1.	As per Central Electricity authority	729	445
2.	With L.T. Mains	547	394
3.	Energised Pump Sets	3444	587
4.	SC/ST/Towns/Villages	403	309
5.	Per person Electricity consumption	1141 Kwh	1893 Kwh

SOURCE : District Statistical Office.

Table No. 4.7 : Electricity Consumption in Various Sectors.

Sl. No.	Sectors	Mirzapur Sonebhadra (Consumption in Kwh)	
1.	Domestic	38540	14824
2.	Commerce	11520	8405
3.	Industrial	1310300	1405200
4.	Public Lighting System	560	400
5.	Agriculture	71010	40500
6.	Water Works etc.	6750	3500
	Total	1438680	1470839

SOURCE : District Statistical Office.



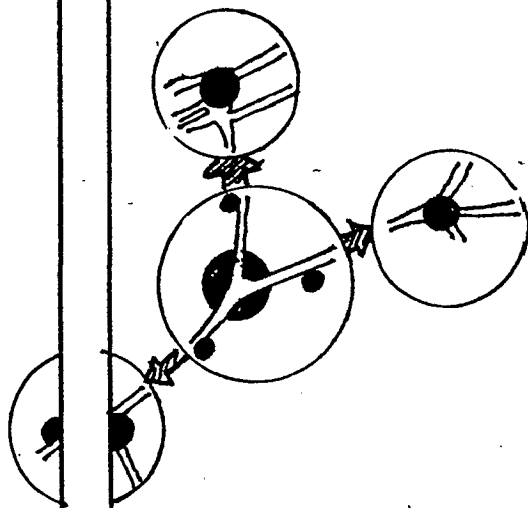
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- ii) Chunar : Humanyu's first struggle against Afgan's in Bundelkhand and Second struggle was at Chunar. In 1561, Chunar was Bairamkhan's Military outpost.
- iii) Birohi : 12 miles west of Mirzapur Railway station, Religious place, palace of Birbal.
- iv) Bhuli : South of Adalhat, two most ancient caves.
- v) Ahraura : Minor Rock Edict of Ashoka period.

Few small dams and reservoir have been developed as places of attraction for tourists.

Belan river valley is an important place from archeological point of view where a number of caves and rock shelters of lower paleolithic period are located.

'Kantit Sharif' is another important religious place where Dargah of Khwaja Ismile Chisti' is situated. On the eve of annual 'Urs' first chadar is presented by majority community Hindu. About 4 lakh people visit this place every year.



CHAPTER-5

Development Potential and Planning issues

CHAPTER - 5

DEVELOPMENT POTENTIAL & PLANNING ISSUES

GENERAL :

Development of the region for long term have to incorporate the economic self reliance and social justice with the aim of high rate of growth to improve standard of living. Development potential of the region can be exploited by number of ways. But, here approach is spatial planning for balanced economic development of the region with available resources and without degeneration of environment. Resource utilisation should involve the local people to avoid migration towards urban centres/growth centres and nodal points.

For this, potential and strength of growth centres has to be assessed. These growth centres should be established and should be self-sustaining in nature. This can be achieved by setting up resource based industries. The industrial products and their raw material need a good transport and communication network for quick and easy disposal of the same. For transport and communication network along with other infrastructure developed in the region need a large number of human resource i.e. manpower. All these will certainly boost the economy of the people. The general people will now depend less on land. The surplus income will alleviate their economy. Unemployment, underemployment and many other social evils will be removed.

Here, comes the environment which if not protected and controlled will deteriorate general living condition. It has to

be kept in mind that developments should not be totally at the cost of environment. It should commensurate with the healthy environment. Deforestation, soil erosion, water, air, land and noise pollution etc. must be controlled.

The region has wide scope and potential for development. Following are the issues which are to be studied.

5.1 STRENGTH AND POTENTIAL OF VARIOUS GROWTH CENTRES :

According to Niles M. Hanson, where growth is polarised in geographical space around nodes it may be called growth centres. The growth centre strategy is based on spontaneous growing intermediate size cities and towns. Growth centres serve as regional centre for absorbing migrants. Growth of the centres are indicated by population size, industries, manufacturing units, income of the people, economic activities, employment generation capacity, public investment etc.

Criteria for designation of growth centres are many but few important ones are as follows :

- (i) Per capita income is high
- (ii) Growth rate is high
- (iii) Rapid rate of increase of population
- (iv) Sufficient size to support a wide range of activities
- (v) High potential for sustaining growth
- (vi) Potential for spilling growth into the surrounding area
- (vii) Potential for integrating its economy with regional economy.

Here, it is worth mentioning that

- there is no unambiguous entity termed growth pole and/or growth centre in agropolitan approach of regional planning.
- There is no universal procedure for identifying growth centres.
- there is no irrefutable case for singling out isolated town for preferential treatment.
- chief criteria should not be development potential but development worthiness to fulfil wider national and regional growth.

Spatial dimension of regional planning will also be looked into for resources are space bound.

These growth centres should be able to radiate economic development and should be dynamic in nature.

5.1.1 Analysis of various growth centres in the regions :

Study of the functional heirarchy of urban and rural settlements in the region gives an idea of socio-economic organisation under which they are operating. The determination of exact pattern of settlements requires sophisticated mathematical and modelling analysis of data on input and output ratios, inter and intra regional flow of goods and services, growth potential etc. In absence of data on these aspects, a simple empirical methodology has been evolved. In this methodology aim is to bring out the level of disparities between

various settlements on the basis of availability of certain common functions.

For analysis of urban settlements on the basis of the adopted methodology, ten functions in order of importance for industrial-cum-urban development have been selected. These functions are :

	<u>Function</u>	<u>Weightage</u>
1.	Population	100
2.	Employment	90
3.	Transportation	80
4.	Communication	70
5.	Medical facility	60
6.	Education	50
7.	Bank	40
8.	Recreation	30
9.	Water supply	20
10.	Sewerage	10

The above weightage assigned are in accordance of importance in an industrial cum urban character of settlements. Rank of all settlements are found on the basis of numerical value of the function assigned. Then all the functions have been integrated on scale based on their weights and a final ranking of all settlements have been done on the basis of total attained relative values.

$$\text{Relative value urban settlement} = \frac{\text{Functional weightage}}{\text{Rank number}}$$

Table No. 5.1 Analysis of Urban Centres

Sl. No.	Name of Settlement	Population	Employment	Trans- portation	Communi- cation	Medical facilities	Rank	Rank	Rank	Rank	Rank	Rank	Rank
		(Wt. = 100)	(Wt. = 90)	(Wt. = 80)	(Wt. = 70)	(Wt. = 60)							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Population	Workers employed	Km.	P.Q. + Tele- graph	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
1	Mirzapur (Municipal Board)	127787	1290	162	1436	1	1	1	1	1	1	1	1
2.	Chunar ('')	21307	410	24	47	5	3	47	5	56	3	3	3
3.	Ahaura ('')	14345	653	5	30	4	6	30	7	8	9	9	9
4.	Kachchwa(T.A.)	9476	1010	2	18	3	7	18	8	74	2	2	2
5.	Robertsganj(M.B.)	16132	191	8	176	7	5	176	4	56	3	3	3
6.	Ghorawal(Town area)	3159	153	2	7	8	7	7	10	34	5	5	5
7.	Dudhi (T.A.)	7231	41	5	11	9	6	11	9	28	6	6	6
8.	Churk (N.A.)	7852	153	30	47	-	2	47	5	16	8	8	8
9.	Chopan(N.A.)	6785	1291	16	38	2	4	38	6	4	10	10	10
10.	Obra (N.A.)	22215	-	-	263	-	4	263	2	50	4	4	4
11.	Renukoot(N.A.)	22152	209	-	-	6	-	-	3	24	7	7	7
12.	Pipri(N.A.)	9305	-	-	215	-	-	215	3	24	7	7	7

Contd..../

Sl. No.	Name of settlement	Educational (Wt. = 50)		Bank (Wt. = 40)		Recreation (Wt. = 30)		Water supply (Wt. = 20)		Sewerage (Wt. = 10)	
		Total Schools/Colleges Rank	Total Rank (Urban + Rural)	Cinema + Park Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
		13	14	15	16	17	18	19	20	21	22
1.	Mirzapur (Municipal Board)	108	1	19	1	19	1	15.00	1	0.50	2
2.	Chunar('')	19	2	2	3	8	5	0.50	3	0.25	3
3.	Ahaura('')	4	7	2	3	7	6	0.25	4	0.25	3
4.	Kachchwa(I.A.)	4	7	2	3	5	7	0.25	4	0.50	2
5.	Robertganj(M.B.)	11	3	2	3	14	2	0.75	2	0.25	3
6.	Ghorawal(I.A.)	7	5	1	4	4	8	0.00	5	0.00	4
7.	Dudhi(I.A.)	6	6	1	4	10	4	0.50	3	0.50	2
8.	Chark(N.A.)	4	7	3	2	4	8	0.75	2	0.75	1
9.	Chopra(N.A.)	6	6	1	4	8	5	0.75	2	0.50	2
10.	Obra(N.A.)	8	4	3	2	10	4	1.00	1	0.75	1
11.	Renukoot(N.A.)	6	6	3	2	12	3	0.75	2	0.50	2
12.	Pipri(N.A.)	4	7	1	4	4	8	0.75	2	0.50	2

Table No. 5.2 : Relatives Values.

Sl. No.	Name of urban settlement	Popu- lation R.V. 3	Emplo- yment R.V. 4	Trans- portation R.V. 5	Commu- nication R.V. 6	Medical R.V. 7	Educ- ation R.V. 8	Bank R.V. 9	Recr- eation R.V. 10	Water supply R.V. 11	Sewe- rage R.V. 12	Total R.V. 13
1.	Mirzapur (Municipal Board)	100.00	90.00	80.00	70.00	60.00	50.00	40.00	30.00	20.00	5.00	545.00
2.	Chunar (")	25.00	18.00	26.70	14.00	20.00	25.00	13.33	6.00	6.80	3.30	158.00
3.	Ahaura (")	16.60	22.50	13.30	10.00	6.67	7.14	13.33	5.00	5.00	3.30	102.00
4.	Kachchwa (T.A.)	14.28	30.00	11.43	8.75	30.00	7.14	13.33	4.28	5.00	5.00	129.20
5.	Robertsgan (M.B.)	20.00	12.85	16.00	17.50	20.00	16.67	13.33	15.00	10.00	3.30	144.55
6.	Ghorawal (T.A.)	8.33	11.25	11.42	7.00	12.00	10.00	10.00	3.75	4.00	2.50	80.22
7.	Dudhi (T.A.)	10.00	10.00	13.33	7.77	10.00	8.33	10.00	7.50	6.80	5.00	88.63
8.	Churk (N.A.)	11.10	11.25	40.00	14.00	7.50	7.14	20.00	3.75	10.00	10.00	134.69
9.	Chopan (N.A.)	9.09	45.00	20.00	11.67	6.00	8.30	10.00	6.00	10.00	5.00	131.06
10.	Obra (N.A.)	50.00	45.00	20.00	35.00	15.00	12.25	20.00	7.50	20.00	10.00	234.73
11.	Renukoot (N.A.)	33.30	15.00	-	23.30	8.57	8.30	20.00	10.00	10.00	5.00	133.65
12.	Pipri (N.A.)	12.50	15.00	-	23.30	8.57	7.14	10.00	3.75	10.00	5.00	95.4

Final ranking of the urban centres in decreasing order of relative values is as follows :

<u>Urban Centre</u>	<u>Rank</u>
Mirzapur	1
Obra	2
Chunar	3
Robertsganj	4
Churk	5
Renukoot	6
Chopan	7
Kachchwa	8
Ahraura	9
Pipri	10
Dudhi	11
Ghorawal	12

Table No.5.3 Three distinct groups of urban settlements

Sl.No.	Relative values	Urban settlements
1.	More than 40% of total maximum R.V. (More than 218,00)	Mirzapur and Obra
2.	40% to 25% of total maximum R.V. (218,00=136.25)	Chunar, Robertsganj, Churk Renukoot, Chopan, Kacchwa
3.	Less than 25% of total maximum R.V. (less than 136.25)	Ahraura, Pipri, Dudhi Ghorawal.

From the above analysis it is evident that Mirzapur city and Obra are highly urban in nature. Other urban centres in second and third groups are growing fast these days. The low percentage of maximum total relative value of the urban settlements indicate that settlements are weak in basic infrastructures like, transportation, Power, Water supply, Sewerage system, Education and Medical facilities, Banks, etc. The existing infrastructures are not coping with the urban population pressure.

Secondly, existance of particular infrastructures have not been fully decided by urban population criteria, rather industrial development (especially power production centre) had been the major deciding factor in installation of a particular infrastructure of the settlements. Chunar cement factory, Churk Cement factory, Obra Thermal power plant, Chopan Railway Junction, Hindustan Aluminium Company, Renukut, Rihand Hydel Power Plant at Pipri are important locations for which infrastructures have been mostly installed. No specific attempt has been made to improve the condition of larger urban settlements, which attract population due to the availability of diversified economic activities but inadequate infrastructure. Thus low level of infrastructures in larger urban settlements is not able to serve common urban population.

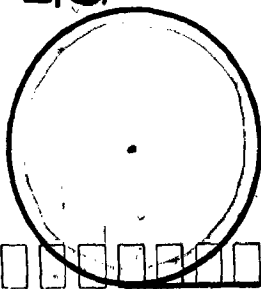
Therefore, interaction between rural and urban settlements is weak and has resulted in a backward state of economy of the region. So to make such urban centres more functional and service oriented, infrastructures are must.

URBAN SETTLEMENT PATTERN IDENTIFIED

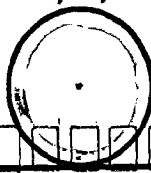
LEGEND

- MIRZAPUR-SONEBHADRA REGION
- RIVER
- RAILWAYS B.G.M.G.
- DEVELOPMENT BLOCK
- DAM, CANAL
- ROAD

FIRST GROUP



SECOND GROUP



THIRD GROUP



DEVELOPMENT OF	
MIRZAPUR-SONEBHADRA REGION	
MURAR THESIS	
RAMESH GHAND YISHWAKARMA	
UNIVERSITY OF ROORKEE	

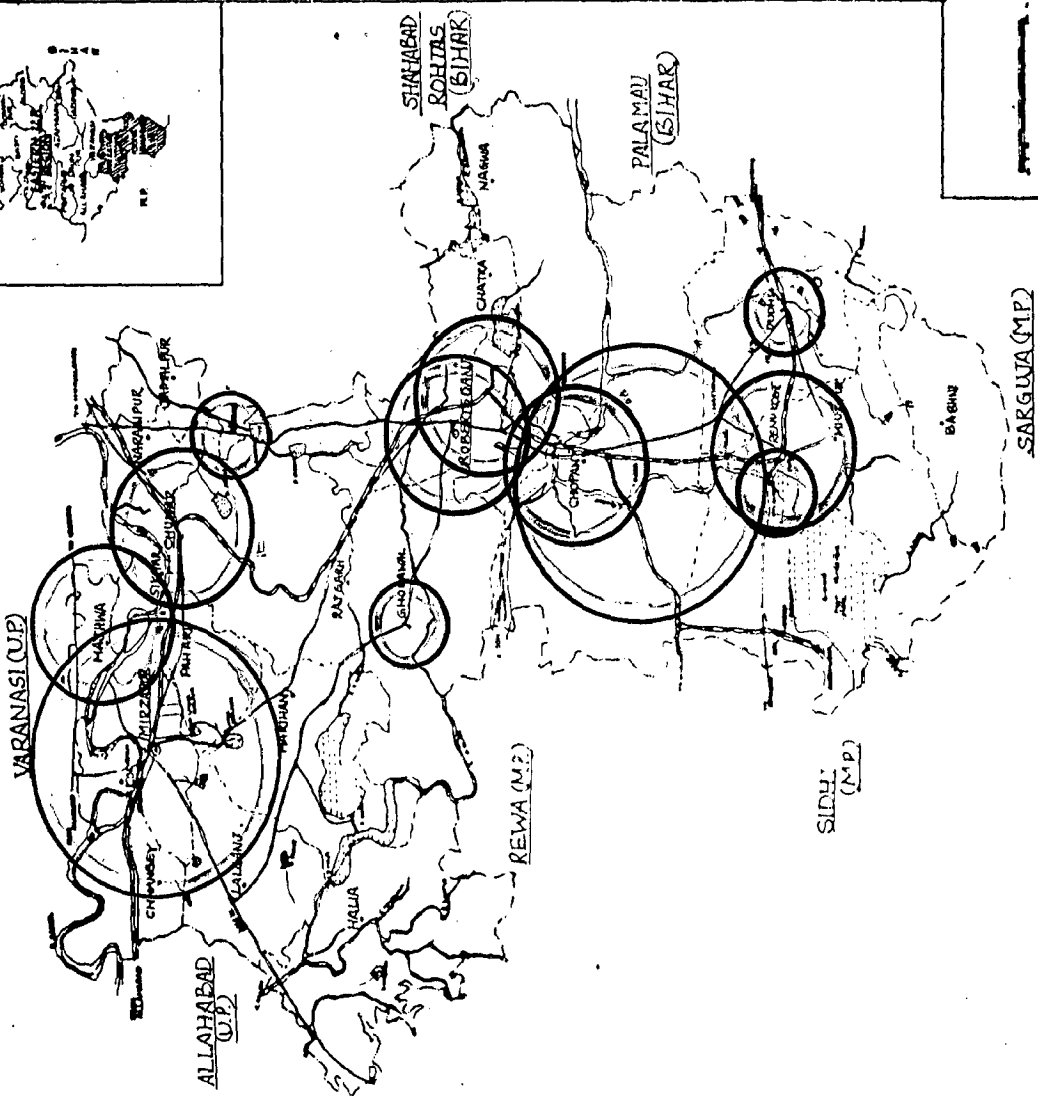


Fig. (5.1)

The above urban centres have potential to support the surrounding service centres. These urban centres are localised due to lack of proper infrastructures and their potential has not been utilised fully for regional economy.

5.2 INDUSTRIAL CONDITION AND RESOURCES :

Mirzapur Sonebhadra region is weak in industrial structure despite a lot of natural resources. People are mainly dependent on primary sector.

Availability of raw materials, cheap and easily available labour, concerned efforts of some leading industrialist, government promotion for developing industries, financial corporations etc. has attracted enterpreneuers. Due to intensified and early programmes, promising private industrialist Late Sri. G.D. Birla took up Hindustan Aluminium Company (HINDALCO) at Runukoot in 1960. He also established a thermal power station at Renusagar to supply electricity to 'HINDALCO' which also caused to develop a number of anciliary industries in the area.

Agarwal Transformer Company and Electric and Sefton Mills Company Limited, Mirzapur are medium scale industries in city.

In addition to power plants at Obra, Anpara, Shaktinagar, Pipri, cement factories at Chunar, Churk, Dalla, are other large scale industries in the region.

Small scale industries are significant in the urban centres. Kanoria Chemicals Ltd., at Renukoot, Chaurasia Rubber Industries, Pathrahiya, Kaimith Solvex Company, Jangi Road, Mirzapur are some of the important one in the region. Cottage industries are important source of income for rural masses. Durri and Carpet manufacturing is the main constituent of it.

Potential industrial resources are grouped under following categories besides basic supporting industrial resources i.e. land and human.

- a. Energy resources (Coal and water).
- b. Economic mineral deposits.
- c. Other natural resources.

All the above resources have been discussed in previous chapters.

In Mirzapur city, Rubber Industry, Transformer Industry, Brass Metal Works, Carpet Industry, Kaimith Chemical Industry are main industries. At Chunar, Ceramic and China Clay Industry, Stone Dressing Industry, Carpet and Cement manufacturing are important industries. At Churk, cement and carpet manufacturing are main industries. Chopan, Obra and Anpara are not having any important industries.

Resource based industries which can be put into the area are as follows :

- (i) Power Sector.
- (ii) Coal Based Industries :
 - A. Hi-tech Carbon.
 - B. Methenol plant.
 - C. Mini Steel plant.
- (iii) Non Coal Based Industries :
 - A. Based on Aluminium plant at Renukeot.
 - Paint, Pigment, Vanadium and Titanium industries.
 - B. Dolomite :
 - Fertiliser, Chemical, Iron and Steel plant, insecticides, tiles, chips etc.
 - C. Lime Stone :
 - Cement, iron and steel fertiliser, Bleaching powder, soda, etc.
 - D. Stone-chips, slabs :
 - Building construction.
- (iv) Forest Based Industries :
 - A. Match Box : Salaiwood
 - B. Kattha and Kutch : Khair
 - C. Rayon or Pulp : Wood, NaOH (Caustic Soda), CaCO_3 (Calcium Carbonate), Lime Stone, Coal.
 - D. Lac : Ranginee insect, Kushmi insect.
 - E. Tenduleaves : Bidi
 - F. Gum and Rasin : Adhesives
 - ~~G. Wine-Plant : Mahua-fruit.~~
 - H. Oxalic Acid Plant : Saw dust, HNO_3 (Nitric Acid) NaOH (Caustic Soda).

I. Sports Goods : Forest Wood.

The above industries are possible in the region and can be established.

5.3 TRANSPORTATION NETWORK :

Transport network is life line for the development in the region. Inadequacy of transport network has been discussed at length in previous chapters. Agricultural and industrial production and their distribution is related to the development of an efficient transport system of region. This vital economic infrastructure in the region is not able to connect the important centres so the development of the region is not balanced one. Mirzapur city and Chunar are well served by rail and road but other areas are still cut off. Fast development on south of Sone river is not linked with main line of broad gauge. Nagwa, Babhni, Ghorawal, Halia Blocks are very poor in road service.

For a balanced development of the region above blocks have to be well served at least by a major district road with good network of other district roads and village roads, to bring 'Adivasis' of remote villages into main stream of development. Spatial distribution of network is to be kept in mind otherwise remote hilly forest villages will remain unserved.

Nodal points with high urban character must be well connected for future development. --Bottleneck of Markundi-- Chopan stretch is accident prone so it must be improved.

Two parts of Sonebhadra district (one north of Sone and another south) must have other connections apart from Chopan bridge.

Resources of the region must be able to reach the production distribution and consumption centres with least time and economically.

Accident prone areas of the hilly roads should be properly designed and maintained and special care must be given in monsoon season on these roads.

No aerodrome is in the region. There is need of one air-strip near Sonebhadra district headquarters to serve south.

5.4 MANPOWER :

Majority of the population mainly depending upon agriculture have very low level of income.

In its quest for fuller and more productive employment, the region faces three distinct but interrelated problems. Firstly, the labour force forms a low proportion of total population. Secondly, a substantial proportion of population under and unemployed. Thirdly, the productivity of those employed is in general, very low. The above three problems are responsible for low per capita income and slow rate of growth of region.

a. Low rate of labour participation :

Reason for it are age structure of population and low activity rate among adults.

b. Unemployment and underemployment :

Unemployment of rural people in villages is high and they are migrating towards various urban centres along the main corridor between Mirzapur and Sonebhadra. They are working as wage earner and often in labour intensive jobs.

Underemployment for agricultural labour is being supplimented by Carpet and durri manufacturing and other household industries.

c. Productivity :

The unavailability of proper food, shelter, clothes, health and education all facilities has certainly affected the rural masses. Above minimum requirements are even lagging in Adivasi area. Due to lack of proper infrastructures, agricultural produce remains unsold and thus income is further negated.

The manpower of the region can be fully utilised by providing them training facilities, education, substantial loans by banks etc.

5.5 ENVIRONMENT :

Development often makes environment unbalanced. In the name of development, deforestation, urbanisation, soil erosion, air pollution, water pollution, stone quarrying mining, noise pollution, water logging etc. have affected the region.

Deforestation:

Forest cover (42.49%) of the region is fast shrinking in south of Sone river. Power townships are expanding and in turn the food and fuel requirement of Adivasis in surrounding villages is met by forest cutting.

Soil Erosion:

It is due to deforestation, stone quarrying and mining especially in Shaktinagar area.

Water and Air Pollution:

Mine blasting, smokes from power plants chimneys, stone quarrying and vehicles flying on roads are chief cause of air pollution.

Anpara, Shaktinagar, Dalla, Renukoot, Chapana, Mirzapur city are much air polluted urban centres.

Drinking water quality of Anpara, Renukoot, Shaktinagar area is not good, it is polluted by dust particles. People use filtered water.

Mining:

A lot of forest covered land is depleting into useless land due to mining and quarrying. Land reclamation methods are not being used in the Singrauli region. Fissured rocks which are broken by blasting are simply lying on land.

Dams and Reservoir:

The high dams in the region have depleted the forest cover at Rihand and Sirsi dam sites. The environment of the

surrounding dam area has caused water logging.

Many other environmental problems, viz. depleting variety of leopards found in hills, fishes in rivers and flood prone village are increasing, are to be looked into. And the development should not be at the cost of environmental degradation of the region.

CHAPTER-6

Planning Proposals and Recommen- dations

CHAPTER - 6

PLANNING PROPOSAL AND RECOMMENDATIONS

The Mirzapur - Sonebhadra region has enough potential for development. Southern part of Sonebhadra district has been exploited rightly for fuel and mineral reserves. Consequently the area has got urban character locally. This has given unbalanced development and unplanned spatial growth in economic and urban rural interaction and co-existence. Comprehensive planning with due care of spatial aspect has to be the approach here for economic development plus institutional change and cultural progress of the region.

The various issues discussed in previous chapter are identified to fulfill the objective of balanced development of the region.

6.1 NODAL POINT/GROWTH CENTRE IMPROVEMENT AND ESTABLISHMENT OF NEW ONES IN GAP ZONES :

The existing growth foci are to be improved and strengthened so that they are better equipped for innovative functions. New growth foci to be established in the area where they have failed to emerge due to various constraints.

6.1.1 Strengthening of existing growth centres :

Among the various existing growth centres analysed, only Obra and Pipri are not developed haphazardly. Rest of the urban growth centres are unplanned and haphazardly developed.

These centres have not really established themselves as growth focci/centre. Among the existing growth centres Renukoot, Chunar, Mirzapur city and Robertsganj have really come up as growth centre in region. These have wide potential under second group of settlement. Therefore, it is required to plan these townships with regional perspective as well.

6.1.2 Establishing new growth focci :

Proposed new growth centres to be developed in first order are Chopan, Dudhi, Halia, Marihan, Ghorawal, Anpara and Ahraura. These towns are to be main supporting regional centres to coordinate the second order new growth centres. In second order growth centres to be developed are Kon, Lalganj, Kachhwa Rajgarh, Chatra, Belghari, Shaktinagar and Miurpur. Third order growth centres will serve as local service centre and/or central village.

Proposed pattern of settlement will consist of five order of settlement growth centre, growth point, market town local service town and service village. 21 such centres have been identified in the region. Service villages have not been assessed and left for grass root planning. (Refer Map 6.1 for proposed settlement pattern).

Functional character of proposed settlement :

(a) Growth centres :

These centres have regional and extra regional character to serve as district headquarter or heavy national and state level function. These are to be well served by railways and

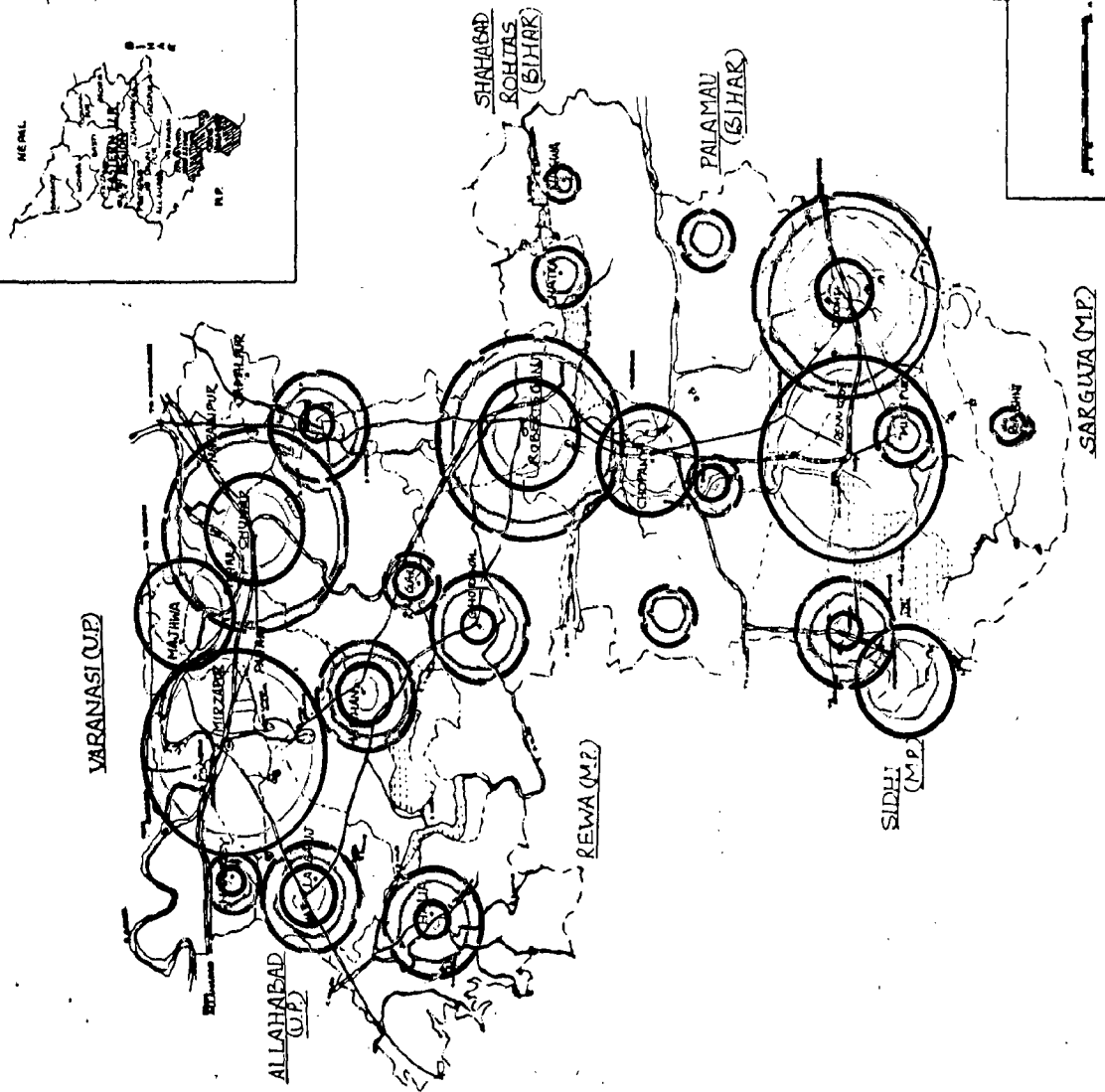
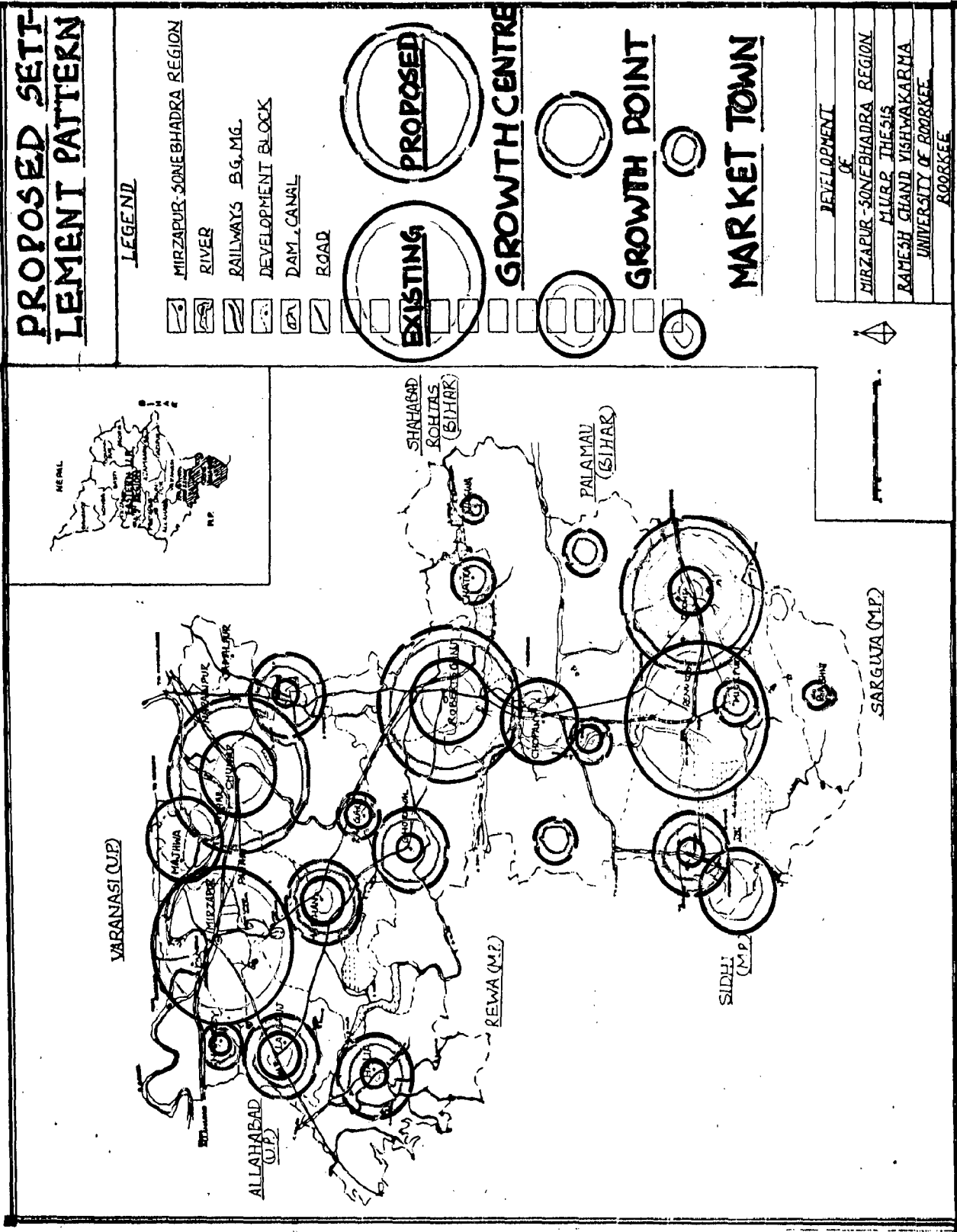


Fig. 6.1

(b) Growth points :

Urban centres functioning as District headquarter or important industrial towns as regional centres and within the population range 50,000 to 1,00,000. These are to be an important seat at sub-regional level with all facilities to serve as administrative unit also.

(c) Service centres :

These towns, urban and semi-urban centres functioning as sub-divisional head quarter or other important centre with population range 20,000 to 50,000. These will serve as market for agricultural produce.

(d) Market centres :

These are to serve at block level to fulfill as collection centres of village produce and reinforcing structure for their economic and social welfare. These market centres are within a range of 5 to 10 kilometre from the villages.

(e) Service villages :

These are to coordinate the inter dependence of villages around them.

6.2 INDUSTRIAL DEVELOPMENT OF THE REGION :

For fast economic growth industries based on resources (natural and human) will be setup at specific locations. (Refer Map 6.2, 6.3 for proposed industrial location of in the region).

6.2.1 Power sector :

For industrial development power is important factor of production and proximity near industrial locations eliminate losses and dependable power supply.

Proposed sites for power station :

(i) Kota Babu thermal power plant (2000 MW) :

Kotababu town lies in Miurpur Development block and is served by road. This site is suited for thermal power station because land (1600 hectore), water from G.B. Pant reservoir (0.63 m³/day) and coal from singrauli (6-8 million tonnes/year) are available here.

(ii) Sarpatia Hydel power plant (300 MW) :

Sarpatia town is suitable location for hydel power plant. The area can be developed by constructing a dam across the river 'Kanhra' before discharging into Sone river. Basin for reservoir is available as contours also are favourable.

(iii) Salkhan mini hydel power plant (200 MW) :

Topography of the area is suitable for constructing a dam across 'Ghaghar' river. Town is approachable from Markundi. Topography favours for flood control also.

(iv) Mukha mini hydel power plant (200 MW) :

Water from dam across 'Belan' river is available for power production as the river is perennial. The area is under developed and situated near Ghorawal Block headquarter and to be developed as first order transport towns.

6.2.2 Coal based industries

Map No. 6.2 and 6.3 shows location of various coal based industries.

1. Hi-Tech Carbon Plant at Belgarhi and Mirchadhuri to be set up for manufacturing electrical equipments, carbon brushes etc. Coal is available from Bina, Kakri and Singrauli coal belt.
2. Methenol Plant at Vikasnagar is to be proposed which is 20 km. from Shaktinagar on Renukoot-ⁿA~~n~~para Stretch.
3. Mini Steel Plant at Miurpur to be proposed. The raw material to be brought from Palamu district of Bihar and coal from Singrauli. Water is available from 'Lauwa' river and dolomite from Chopan-Churk area.

6.2.3. Non-coal based industries

1. Paint and Pigment Industries, Dudhi

Resources available from Renukoot. The product can be well circulated to the eastern U.P., Bihar and M.P.

2. Chemical and Fertiliser Plant, Chopan

Electricity will be available from Obra Thermal Project and Dolomite from Chopan-Dala-Churk area. Other raw material to be brought from various collection centres.

3. Cement Plant

Requirement of a mini cement plant with capacity of (100 tonnes/day) is as follows -

Land	-	4 acre
Power	-	4 MWH

Limestone	-	39,000 tonne/per anum
Clay	-	3,560 "
Coal	-	5,940 "
Gypsum	-	1,485 "
Manpower	-	15,000 person directly involved
		1.5 x 15000 person indirectly involved.

All the above requirements are fulfilled at Kon, Chatra, Sarpatia, Mukha. Manpower for these cement plants will be supplemented from training mainly local people.

4. Stonechips, Slab, Tile industry

To be established at Robertsganj, Halia, Marihan Rajgarh, Lalganj, Barkacha, Chunar, Shakteshgarh, Ashtabhuja, Birohi, Pahari etc. it will be subsidised and export oriented.

6.2.4 Forest based industries

Industries has to be situated near source of raw materials so that finished goods and materials are only transported to consumption centres (Refer Map No. 6.3 for locations of forest based industries).

Proposed Industries

Locations

- | | | |
|---------------------------------|---|--|
| 1. Match box industry | - | Nagwa, Babhni and Ahraura |
| 2. Katha manufacturing Industry | - | Nadhira, Babhni, |
| 3. Rayon and pulp industry | - | Miurpur, Chatra, Markundi and Belgarhi |
| 4. Lac industry | - | Halia, Nawgawa, Belgarhi, Kone, Nagwa and Shahganj |

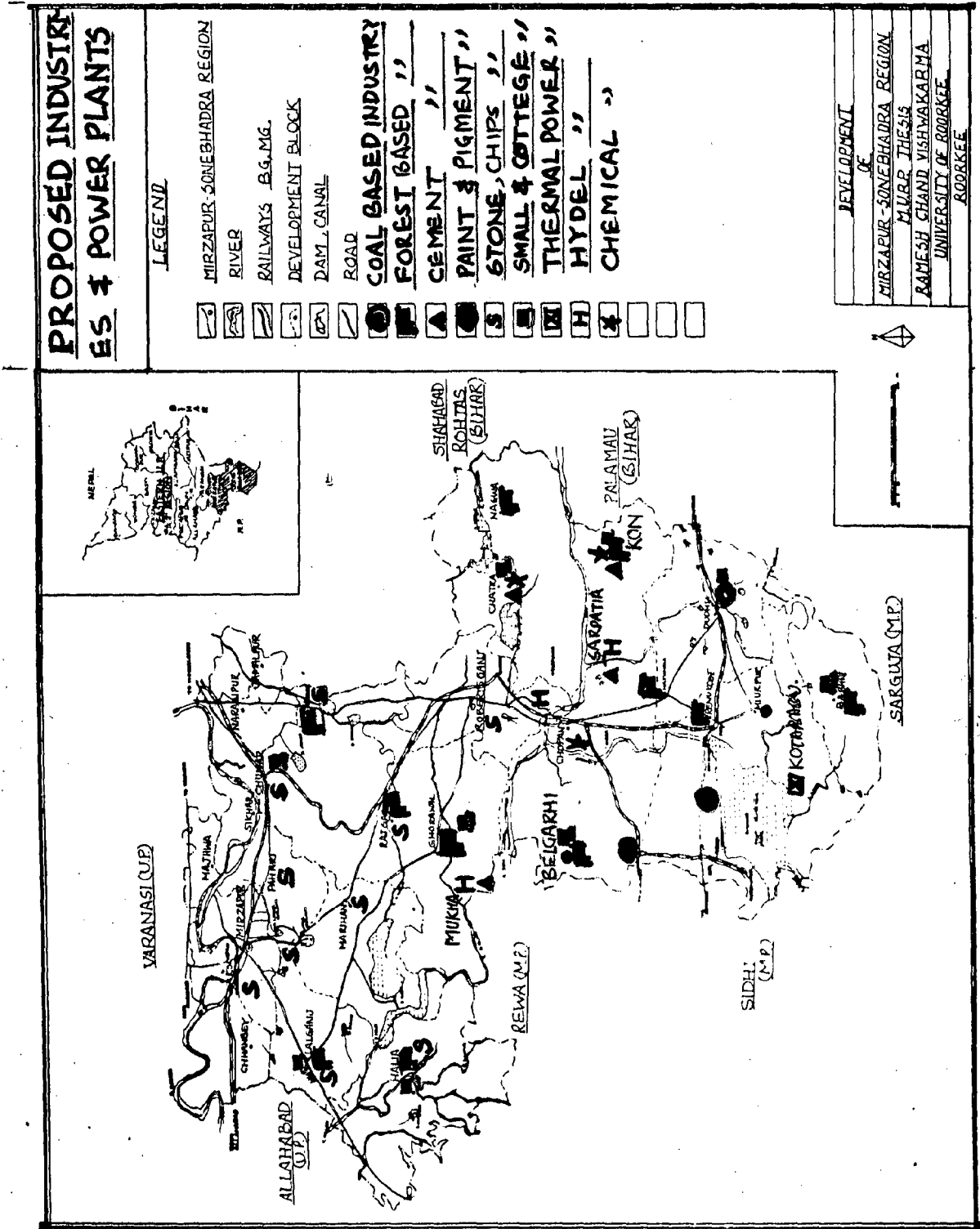


Fig. 6.2

PROPOSED FOREST & COAL BASED INDUSTRIES

LEGEND

- MIRZAPUR-SONEBHADRA REGION
- RIVER
- RAILWAYS B.G.M.G.
- DEVELOPMENT BLOCK
- DAM & CANAL
- ROAD
- MATCH BOX
- KATHA-KHAIR
- RAYON-PULP
- LAC
- DISTILLERIES
- SPORTS GOODS
- OXALIC ACID
- TENDU LEAVES
- HIGH TECH CARBON
- MINISTEEL PLANT
- METHANOL PLANT

DEVELOPMENT OF
 MIRZAPUR-SONEBHADRA REGION
 MUGGER THESIS
 RAMESH CHAND YISHYAKARMA
 UNIVERSITY OF ROORKEE
 ROORKEE

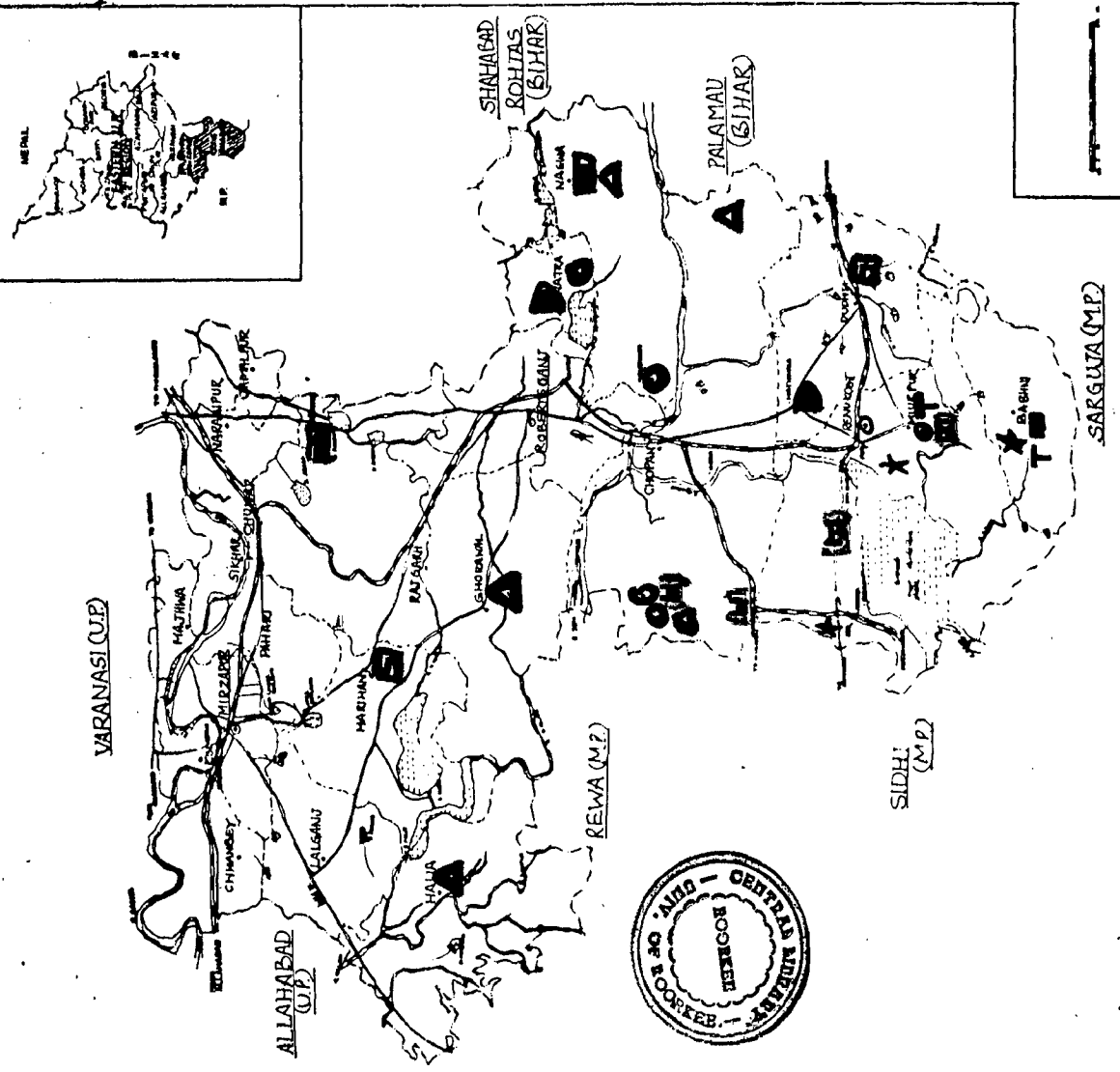


Fig. 6.3

- | | | |
|--------------------------|---|----------------------|
| 5. Tendu leaves industry | - | Miurpur and Babhni |
| 6. Distillery | - | Hathinala and Chatra |
| 7. Oxalic acid plant | - | Murdhwa (Renukoot) |
| 8. Sports goods | - | Marihan and Dudhi |

6.3 TRANSPORTATION NETWORK :

Proposed network for industrial and urban-rural development

6.3.1 Railways

The existing railway in region are single line and not electrified except Delhi-Howra main line. It is proposed, that a new railway line Renukoot-Miurpur-Nadhira-Bichpur-Shaktinagar to be constructed. This will serve the power towns proposed and development of the area will take place. It will facilitate transport of coal and other mineral deposits in the area.

The existing railway line are to be made double line to serve the increasing demand of traffic along Chunar-Chopan-Renukoot-Dudhi stretch (Refer Map 6.4 for transport network).

6.3.2 Roads

State Highways :

Existing state highways are unable to cope increasing demand of traffic. One state highway is proposed between Renukoot-Anpara-Katni (M.P.)

Major District Road :

Marihan-Belgarhi-Anpara stretch of major district road is to have better link between the proposed townships and for resource mobilisation. Robertsganj-Chatra-Kon-Vindhamganj stretch is for development of Adivasi area and better communication link of north and south of Sone river. Above two stretch will reduce traffic load on Markundi-Chopan bottleneck also.

Airstrips :

Jhingura (Mirzapur) airstrip be made functional and another airstrip has been proposed at Robertsganj district headquarter. The Robertsganj area being plain and is suitable for the purpose.

6.4 EMPLOYMENT :

The employment policy and measures for promotion of employment have to include the following :

1. Increase in investment activity
2. Full utilisation of available production capacity
3. Avoidance of capital intensive technique
4. Promotion of labour intensive units such as carpet, handicraft and small scale industry.
5. Credit and other assistance through banks and different organisations.
6. Assisting the eligible persons for business items, like Readymade garment, electronic manufacturing etc.

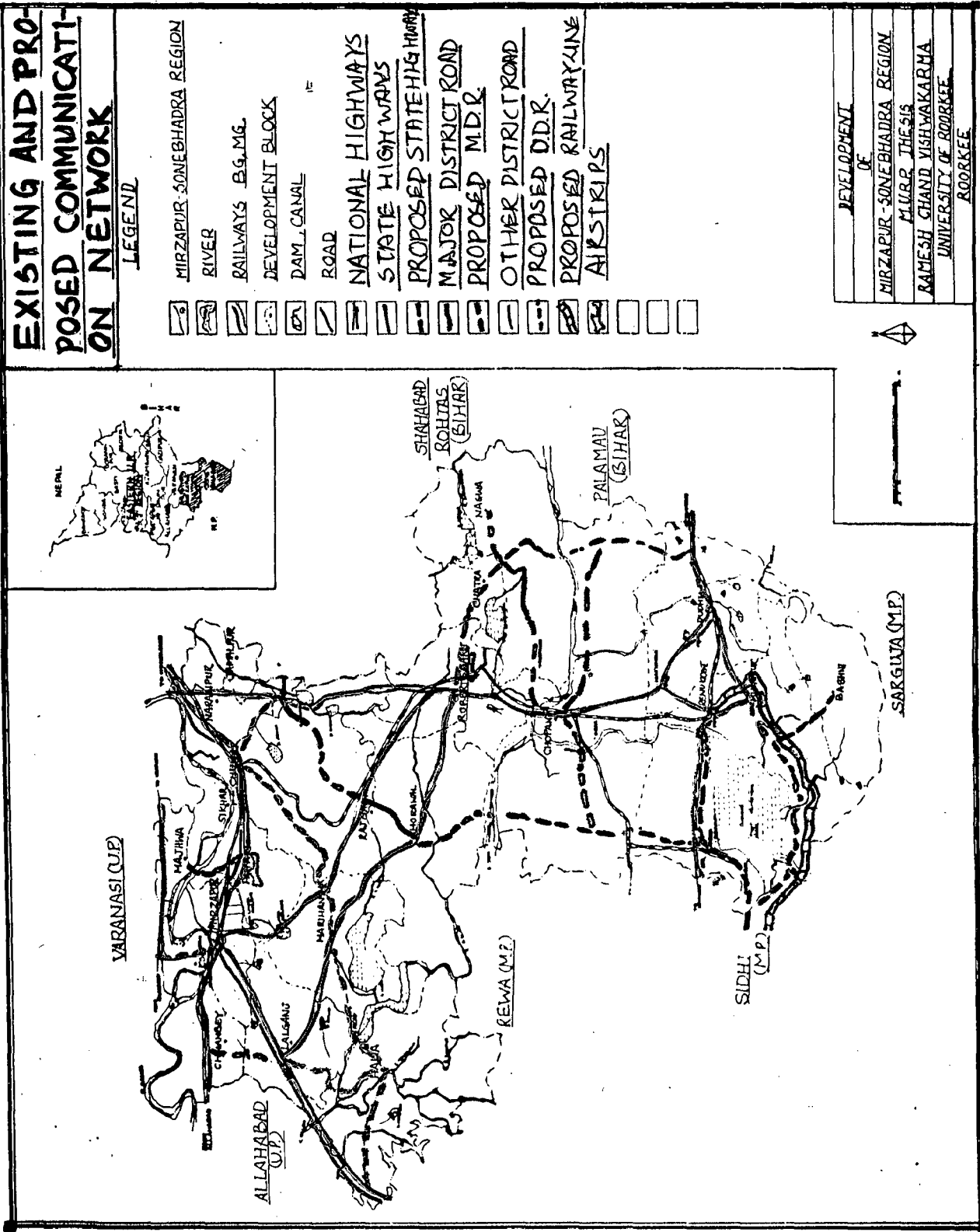


Fig. 6.4

7. Education and training to improve employability of young persons.
8. Special employment programmes to solve problem of unemployment on basis of part time, full time jobs, as well as self-employment.
9. Support mechanism from surrounding districts of the region in terms of advanced technical and innovative know-how.

Small and cottage industries are one of the best options for employment of the rural people. These will include readymade clothes, glass bangles, yarn production, metal works, carpet and durries etc.

Employment through contractors in the various capital intensives organisation is also important for Adivasi and rural people. Transport services, tourist spots and infrastructure development can be another employment generating sector for the people.

6.5 ENVIRONMENT :

For good environment of the region we have to take the following measures on each issues.

Forest conservation :

This replenishable resource should be conserved and used only for forest produce collection. Encroachment to forest area should be made a cognizable offence. Deforestation should not be allowed and contain it with strict

vigilance. Social forestry should be popularised among rural areas as a source of income.

Water and air pollution :

Plants and industries in the region must have electric-fume rejector. Polluted water from industries should conform to minimum national standard (MINAS) recommended by Govt. of India.

Mining :

A large number of 'Ghost towns' will come up along the mineral reserves after the reserve depletes. Therefore these reserve area must have some such industries like power plants, manufacturing industries for sustenance in long term. Land reclamation techniques should be used just after mining completes for maintaining the land resource.

Dams and Reservoir :

Small size dams along the rivers have been used for preventing floods in the low lying area and power production. These dams and reservoirs are not to cause water logging in the agricultural fields around the area.









Proposed Dam Sites :

Sarpatia, Salkhan and Mukha have followed the above requirements. (Refer map No. 6.5)

Wild life sancturies in hills of Halia and Ghorawal blocks be developed for protecting Leopards and Nilgai found in the region.

EXISTING & PROPOSED DAMSITES:

LEGEND

-  RIVER
-  RAILWAYS B.G.M.G.
-  DEVELOPMENT BLOCK
-  DAM, CANAL EXISTING
-  ROAD
-  PROPOSED DAMS
-  HYDEL POWER TYPE
-  IRRIGATION

DEVELOPMENT
OF
MIRZAPUR-SONEBHADRA REGION
MURR THE SIS
RAMESH CHAND VISHWAKARMA
UNIVERSITY OF ROORKEE
ROORKEE

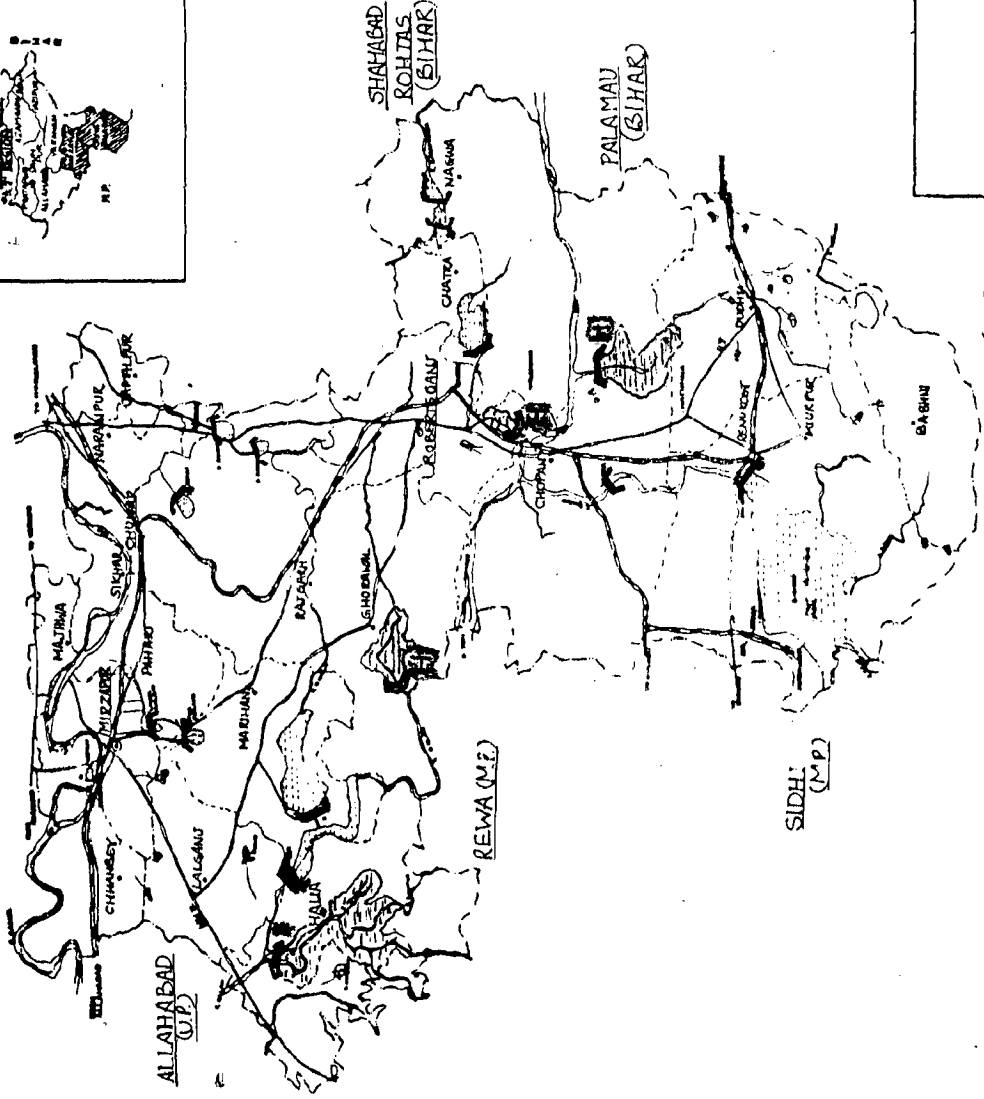
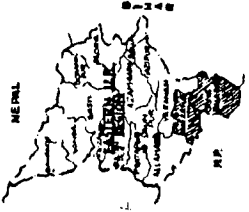


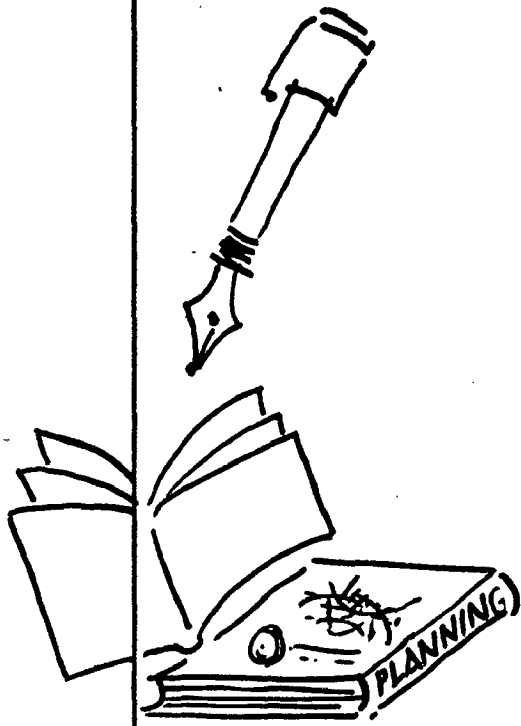
Fig. 6.5

Healthy environment is to be created by developing tourist resorts at irrigation dam sites like Sirsi, Ghagraul, Khajri, Ahraura, Sarpatia, Sankhal, Mukha etc. and at water fall sites viz. Vindham, Ashtabhuja, Chunar, Tanda etc.

One dam has been proposed for irrigation at Naugawa to serve draught prone area.

6.6 RECOMMENDATIONS :

- (i) A development authority to be set up in the region to look after growth and control immediately.
- (ii) The region needs capital investment for balanced development at various growth potential centres to support economic activities.
- (iii) Resource based manufacturing and labour intensive industries along with transport sector will be supporting economic development of people through entrepreneurs from within and outside the region.
- (iv) Expand the educational and training centres so that skilled, technical, administrative and other personnel come from within the region.
- (v) Master plan for utilisation of water resources and for agricultural produce boosting should be made.
- (vi) Tourist spots should be integrated by good socio-economic infrastructure of the region.



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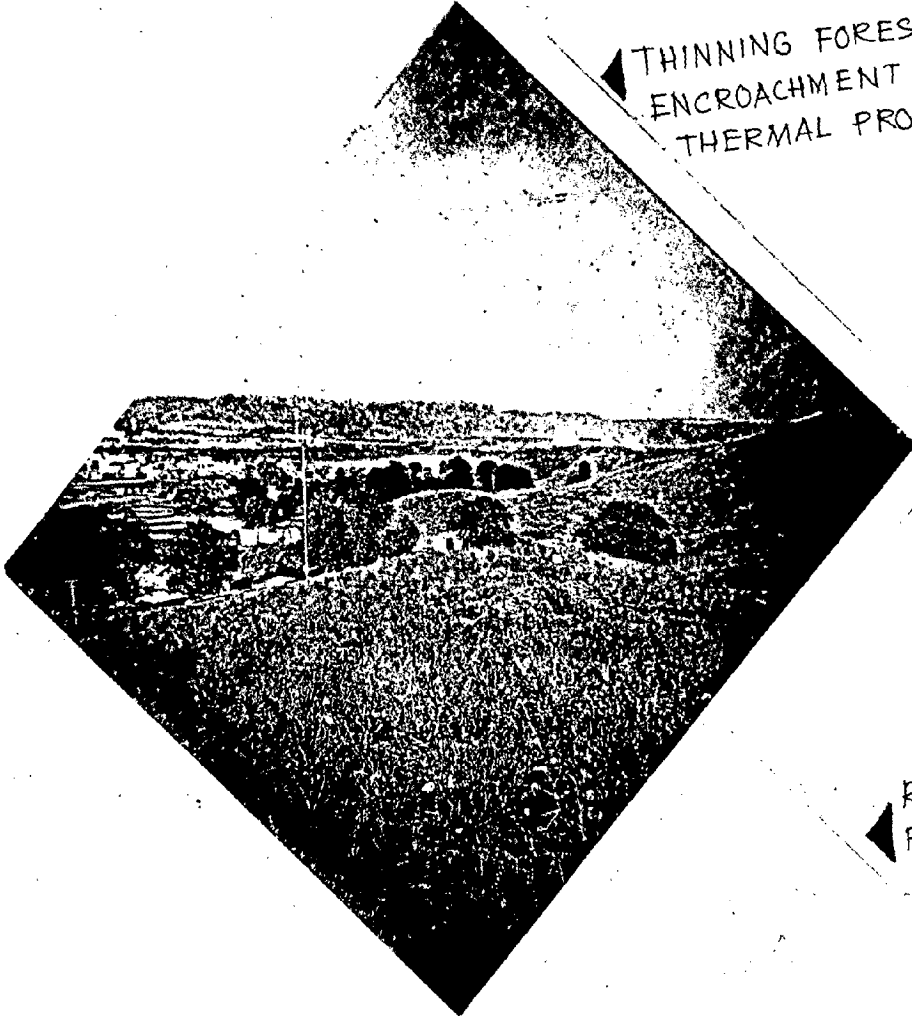
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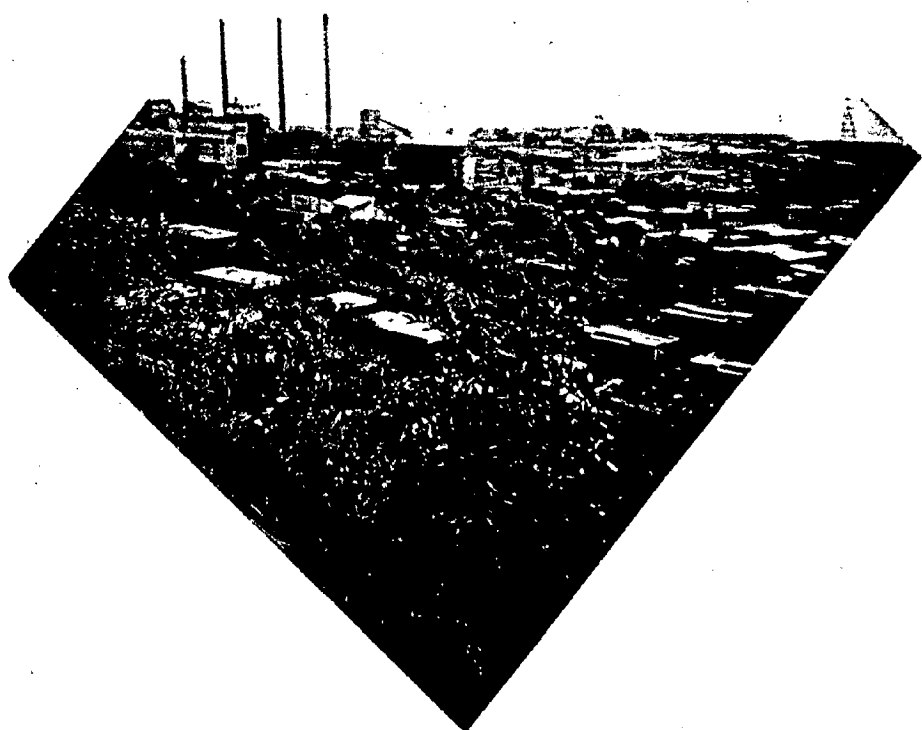
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Appendix ...

THINNING FOREST AND
ENCROACHMENT : ANPARA
THERMAL PROJECT, ANPARA



RENUSAGAR THERMAL
POWER COMPANY
LTD. : POWER
SUPPLY TO
'HINDALCO'



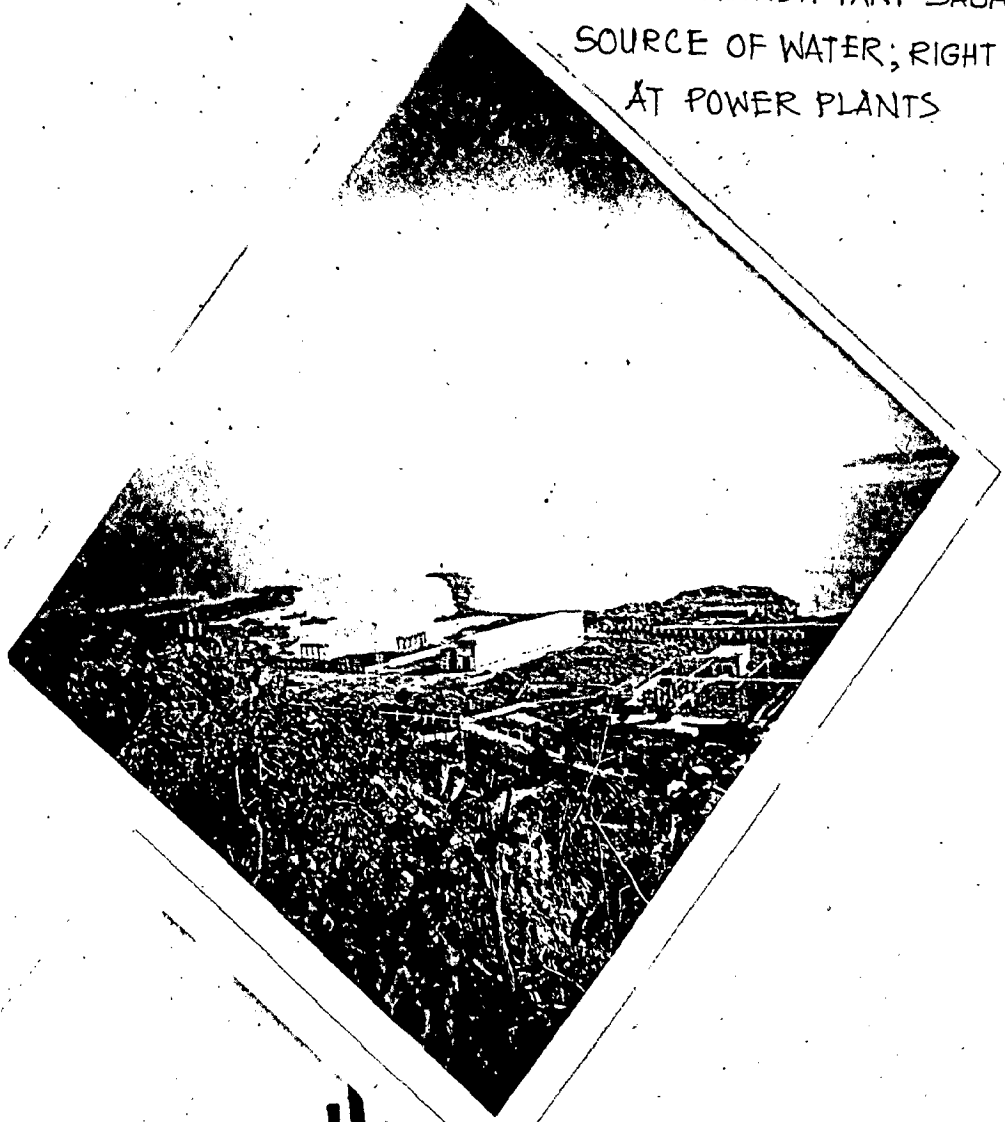


◀ DEFORESTATION DUE TO
COAL MINING

THINNING FOREST AND
DEVELOPMENT TOWARD
GHOST TOWNS. ▶

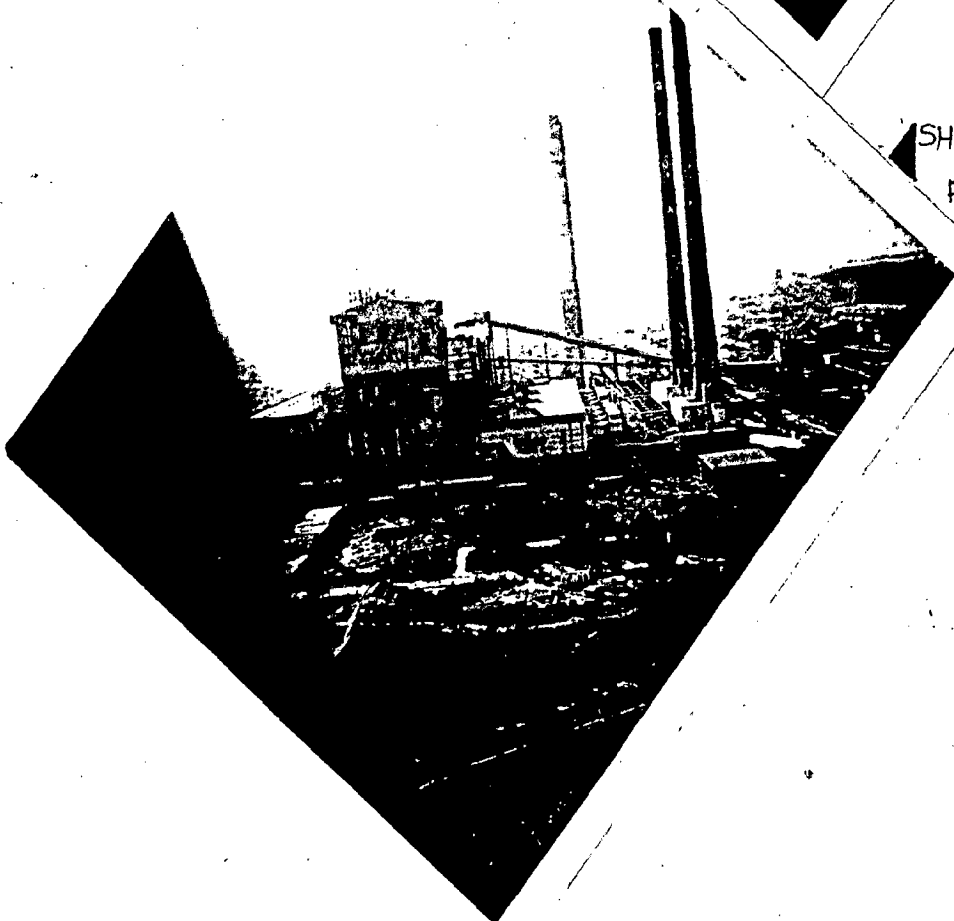


GOVIND BALLABH PANT SAGAR:
SOURCE OF WATER; RIGHT USE
AT POWER PLANTS

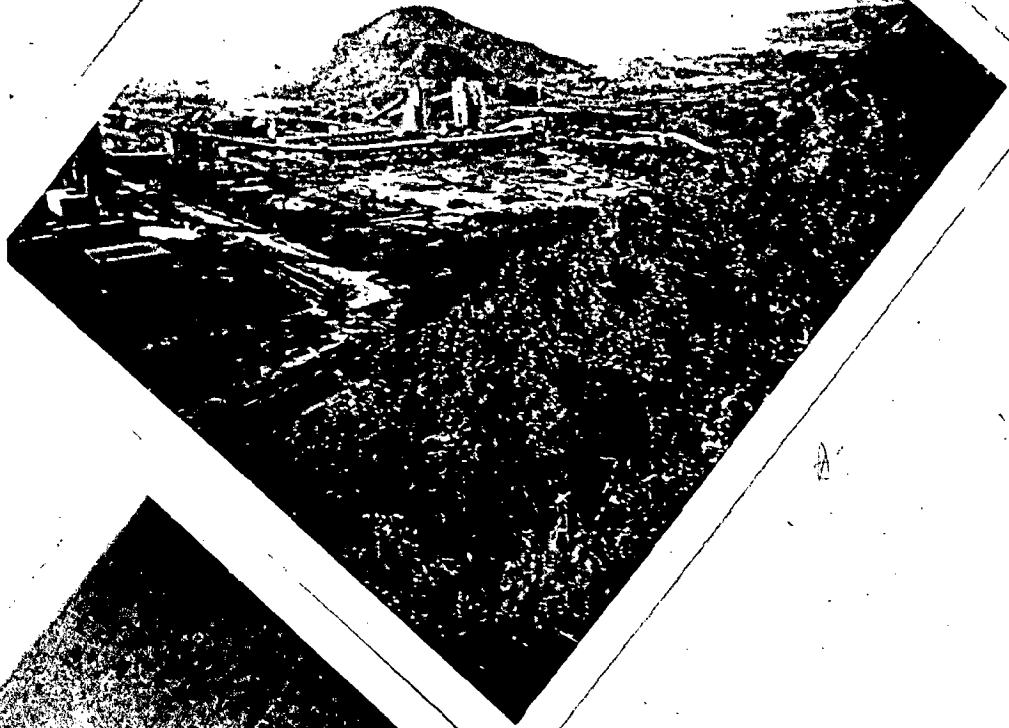


SHAKTINAGAR SUPER THERMAL
POWER PLANT :

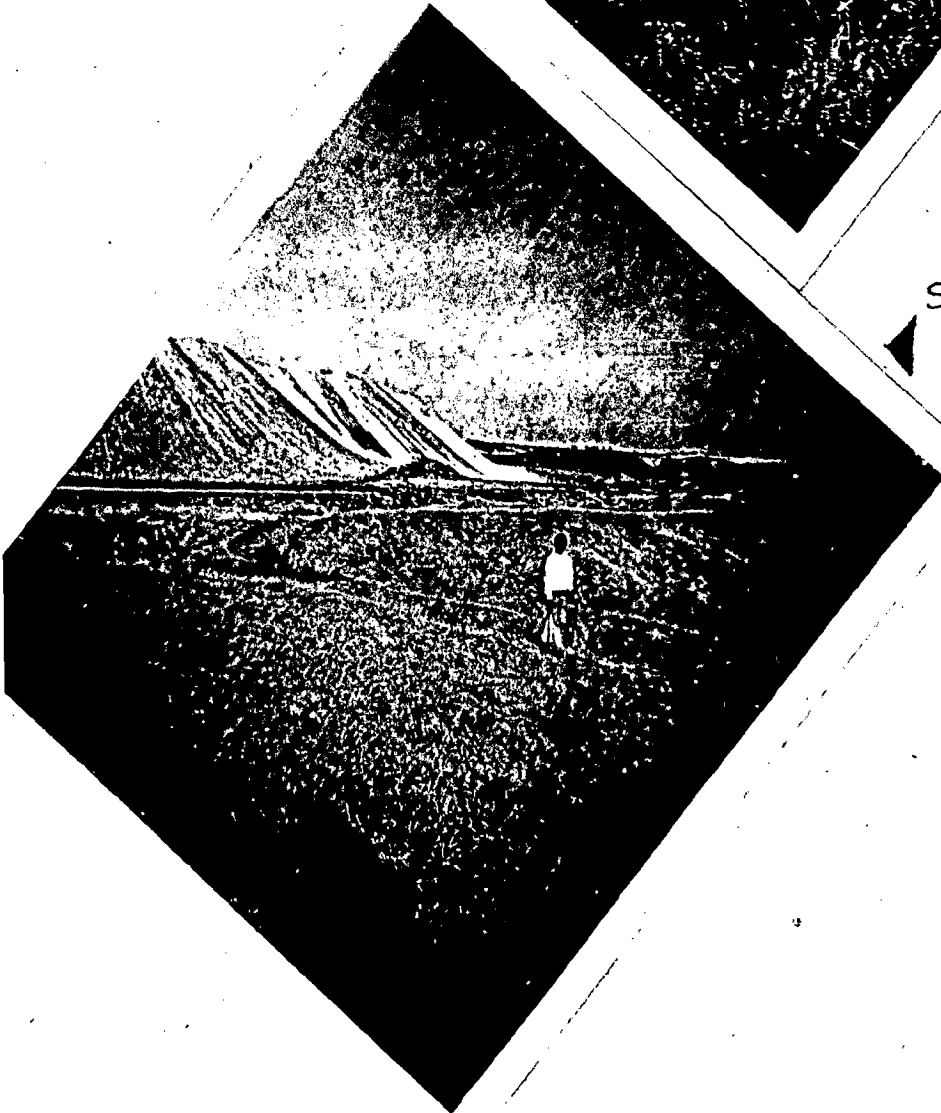
AIR POLLUTION



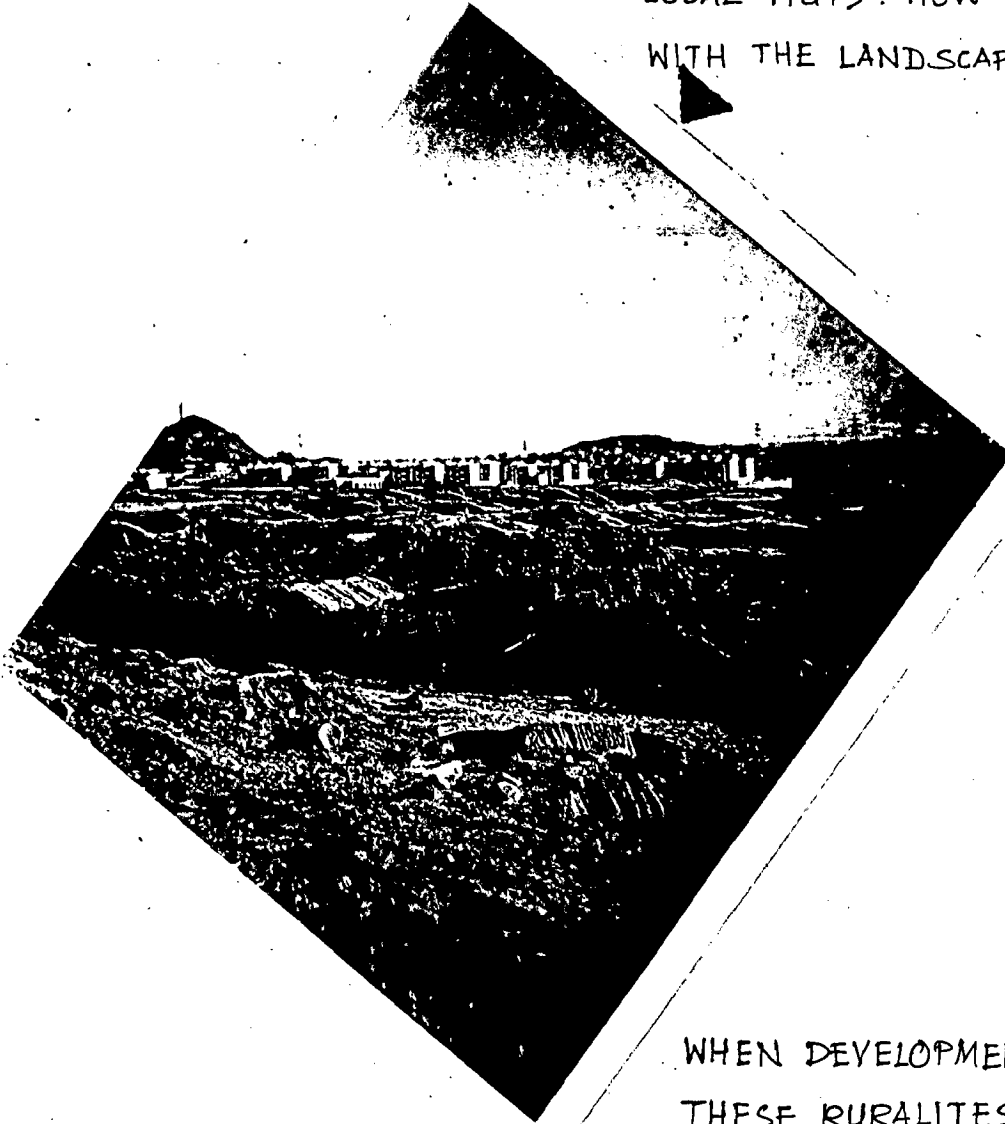
▲ VIEW OF SHAKTI-
NAGAR TOWNSHIP



▲ SINGRAULI COAL-MINES:
SOURCE OF POLLUTION

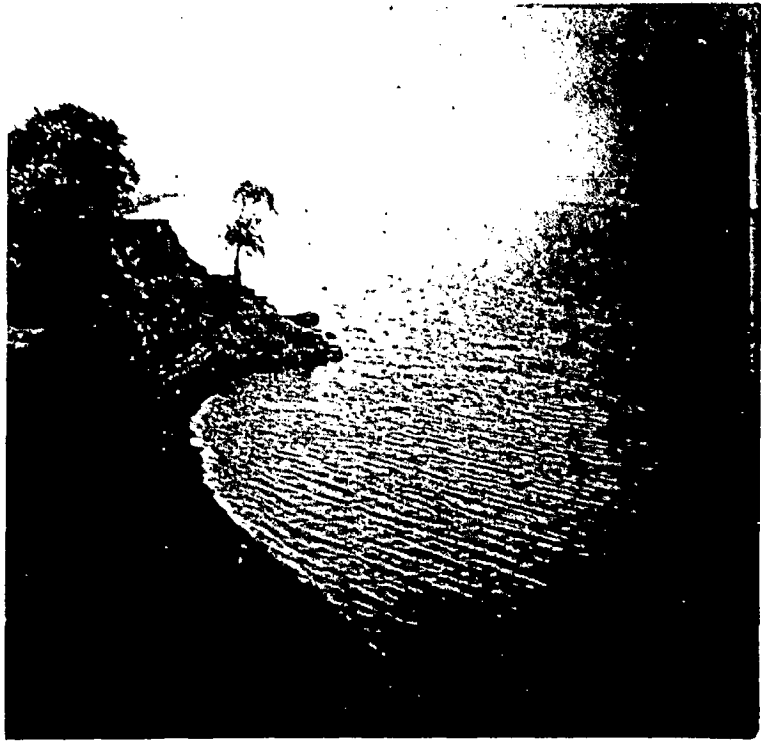


LOCAL HUTS : HOW FAR MATCH
WITH THE LANDSCAPE ?

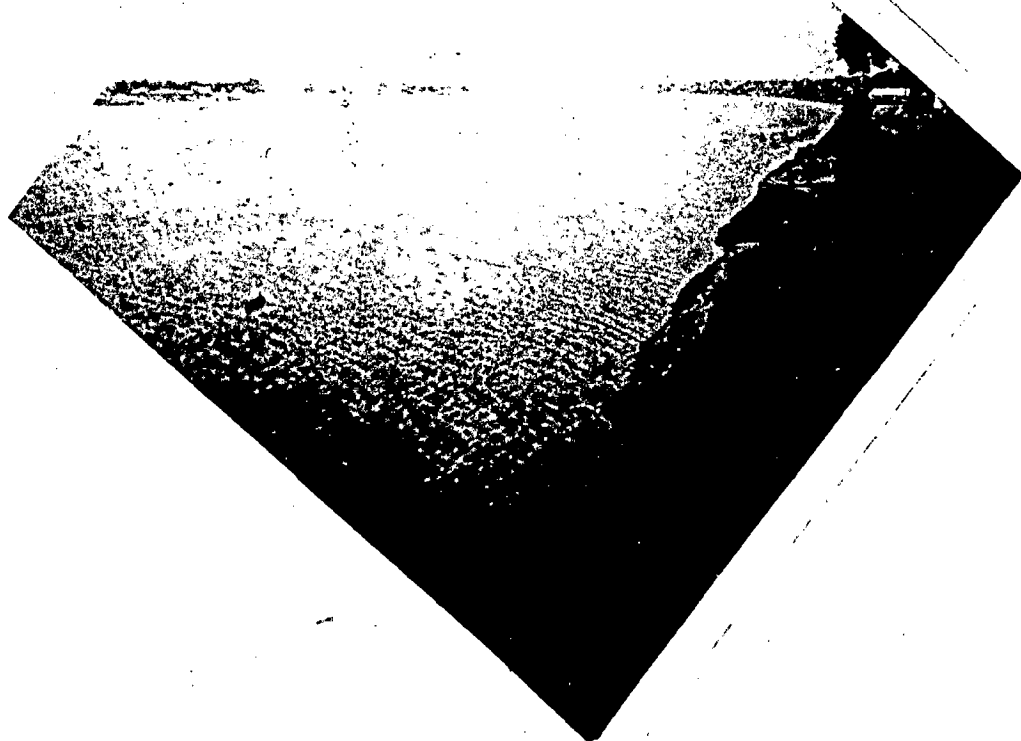


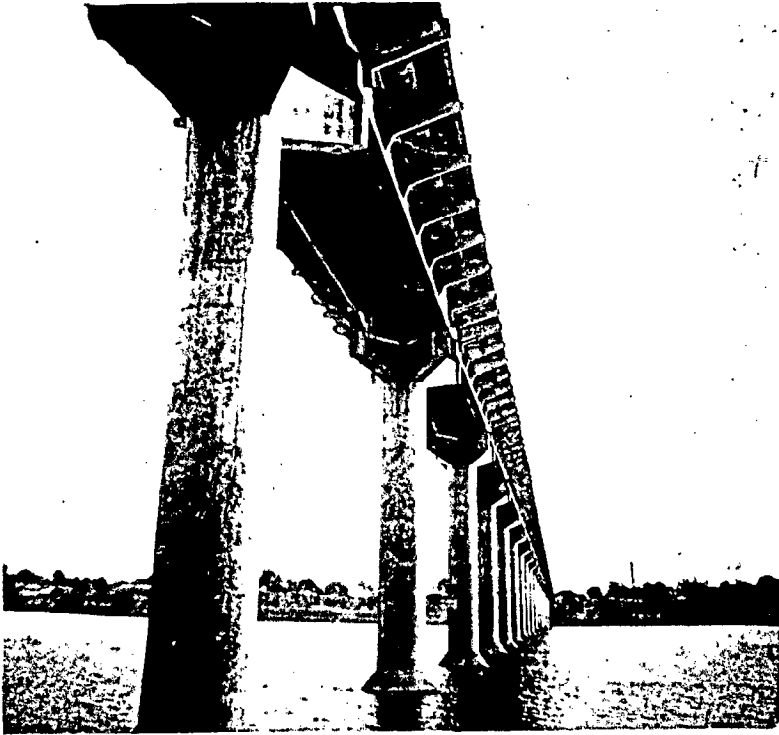
WHEN DEVELOPMENT WILL COME TO
THESE RURALITES ?





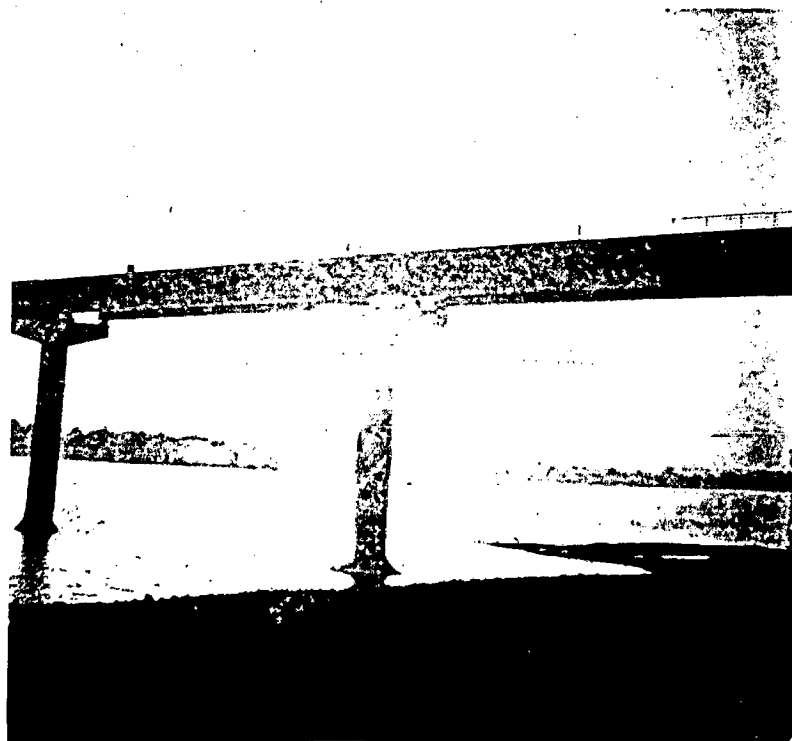
▼
GANGA RIVER - FRONTS
(RIGHT BANK)



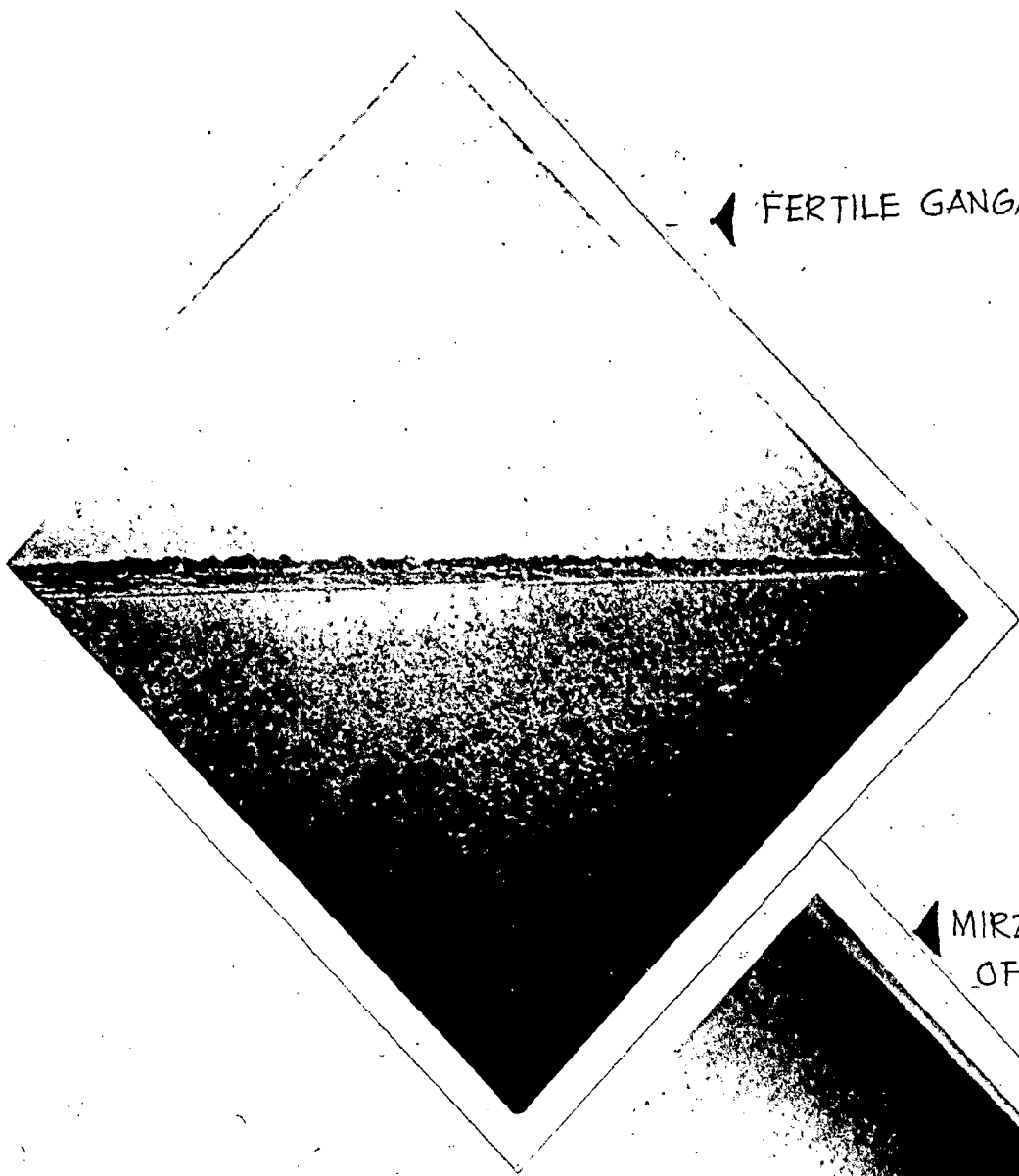


◀ SHASTRI SETU ON GANGA RIVER TO CONNECT MIRZAPUR CITY AND KON BLOCK

FERTILE GANGES PLAINS ▶



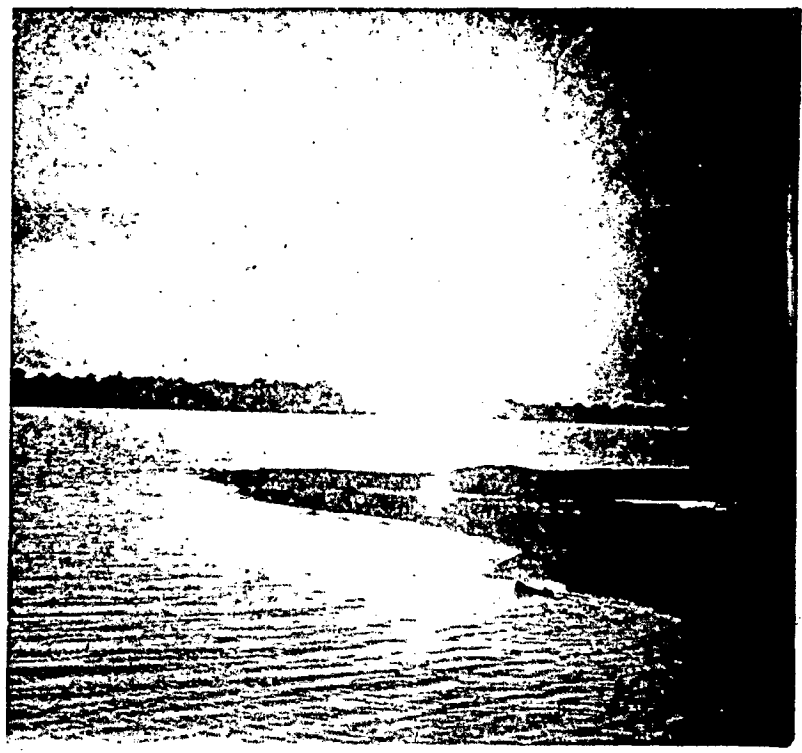
← FERTILE GANGA PLAINS



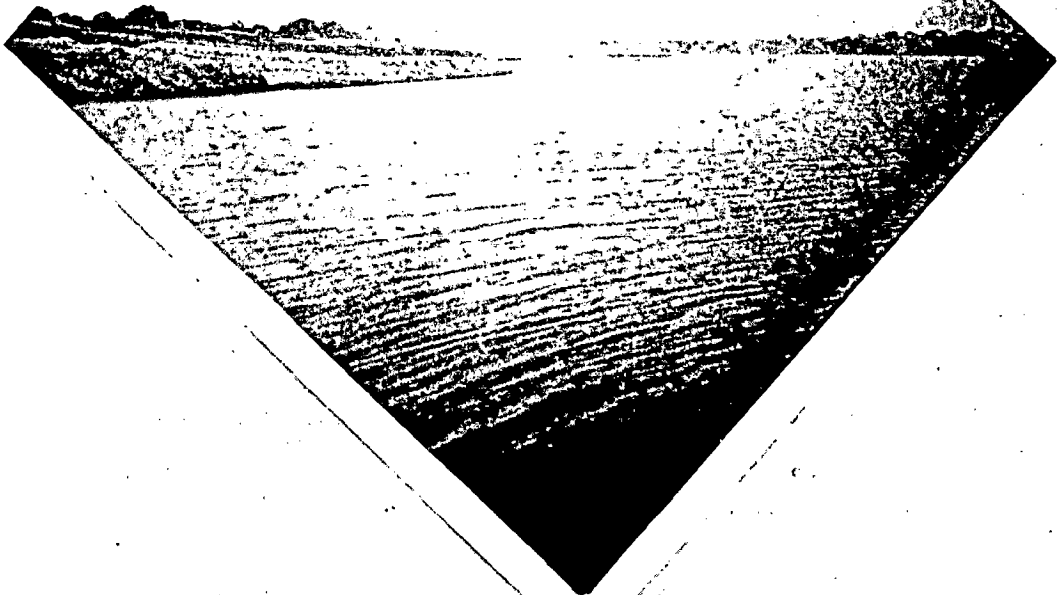
← MIRZAPUR CITY GHATS OF GANGA RIVER

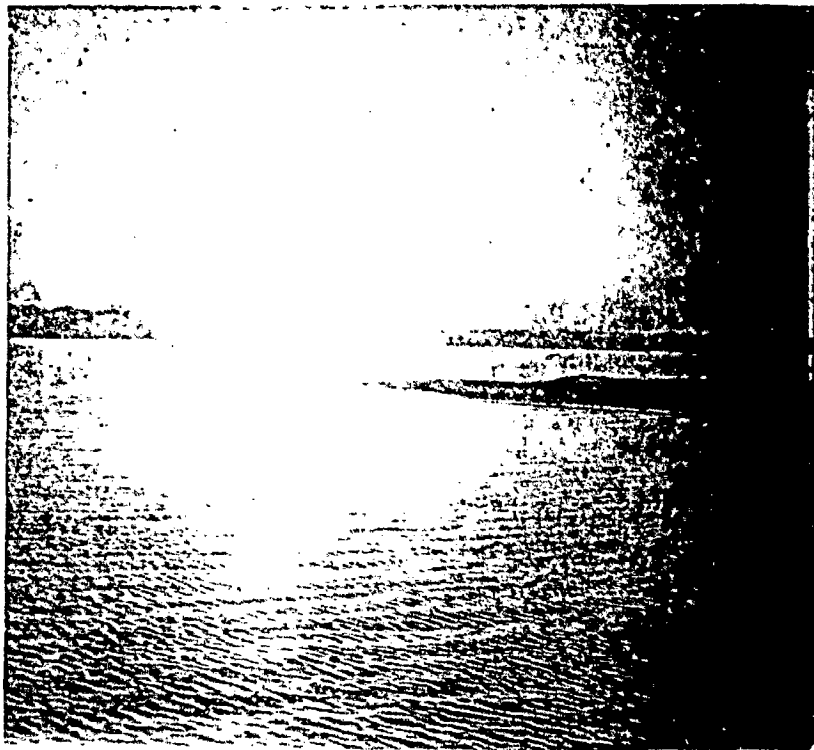


RIVER FRONTS,
SCENIC BEAUTY



GANGES PLAINS PRONE TO
FLOOD IN MONSOON





SONE RIVER WITH WIDE
FLANKS

Law, Revenue Judicial Govt. Department	Transport and Communication		Storage facilities	Service and Utilities			Specialised services and skills	
	Transport	Communication		Water supply	Housing	Electrification		Recreation
11	12	13	14	15	16	17	18	19
Divisional Headquarter or District Headquarter, District Police Headquarter, Regional Bus Stand	Rail head/ National Highway/ State Highway/ Regional Bus Stand	Divisional P and I Headquarter or District P.O. and Telegraph and Telephone Direct Trunk call facilities with national metro-path Centres and foreign urban centres	Large scale godown warehouses	Protected water supply	All Industrial workers	Adequate power supply	National or Regional park Stadium, Museums and conservation of monumental buildings if any	Specialised workshop, Eye, Dental Clinic Bar-Association.
Distt. Headquarter, District Police H.Q. District Courts	Bus stand, State Highway National Highway, Railway Station	District P.O. and Telegraph, Direct Telephone, Link with growth centres	Large scale godown one Warehouse	Protected public water supply	All Industrial workers	Adequate power supply	District park	General workshop.
Subdivisional HQ, sub-divisional police HQ, sub-divisional Courts	Regional Roads, Distt. Roads, Bus stands, Riv. Station	Sub-P.O., Telegraph office/ Telephone	Small scale godown	Protected water supply + private water supply	Priority Basis	Adequate power supply	Children parks	Auto repair workshop
Block HQ, small industrial Town	District Road, Regular Bus stand Riv. Station with feeder Road	Branch P.O./ Telegraph/ Telephone	Nil	Protected water supply (Industrial town)	Township for Industrial workers	Adequate power supply	Play Fields	Petrol/Diesel pump/ Auto repair small shops.

PROPOSED FUNCTIONAL HEIRARCHY

Sl. No.	Level of Settlement	Population Range	Influence Radius	Distributory Facilities	Trade and Commerce	Rural Development extension work, agricultural credit institutions	Industrial Development Corporation	Education	social services Health
1		3	4	5	6	7	8	9	10

1. Growth Centre
 10000-1,00000
 70 kms
 Specialised retail shopping and whole-sale distribution
 Several Banks
 Divisional Head-quarter or District headquarter or Industrial centre of National Importance
 Industrial Area
 Agriculture, Engg. College, Medical College, Degree Colleges, Polytechnics, State Hospital with specialized hospital facilities
2. Growth point
 5000-10000
 30 kms
 Wholesale distribution and retail shopping
 Several Banks
 District-head-quarter (medium scale industrial centre)
 Industrial Estate
 Degree College Polytechnic, I.I.I., Inter College, H.S.
3. Market Centre
 2000-5000
 20 kms
 Wholesale agricultural product distribution/marketing retail shops
 Banks, wholesale market regulated market
 Sub-divisional/Block Head-quarter
 Small Industrial Park
 Degree College Inter College H.S., I.I.I.
4. Service Centre
 1000-2000
 10 kms
 Retail shops and consumer Cooperative
 Town Bank Block Head-quarter, Rural mainly to Credit Society total consumption dairy products, vegetables
 Micro Industrial Park/Rural Industrial Estate
 Inter College H.S., P.S.
 Primary Health Centre with bed facilities

Appendix ...