PLANNING FOR INTEGRATED DEVELOPMENT IN RAMTEK TAHSIL

A DISSERTATION

Submitted in partial fulfillment of the requirement

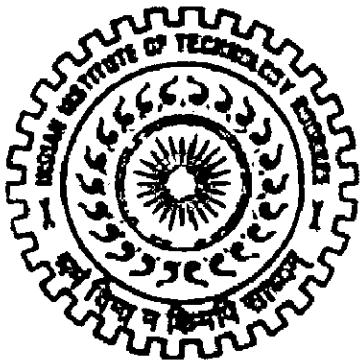
for the award of the degree

of

MASTER OF URBAN AND RURAL PLANNING

By

Kalpana N. Kawathekar



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CERTIFICATE

Certified that this report titled 'Planning for Integrated Development in Ramtek Tahsil' which has been submitted by Ms. Kalpana N. Kawathekar, in the partial fulfilment of the requirements for the award of the post graduate degree in Master of Urban and Rural Planning, in the Department of Architecture and Planning, Indian Institute of Technology, Roorkee, is the own work carried out by her under our supervision and guidance. The matter embodied in this dissertation has not been submitted for the award of any other degree.

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CANDIDATE'S DECLARATION

I hereby certify that the work, which is being presented in the dissertation, entitled 'Planning for Integrated development in Ramtek Tahsil', in the partial fulfillment of the requirements for the award of the degree of Master of Urban and Rural Planning, submitted to the Dept. of Architecture and Planning, Indian Institute of Technology Roorkee, Roorkee in an authentic record of my own work carried out during the period from August 2005 to June 2006 under the supervision of Dr. Nalini Singh and Dr. Ashutosh Joshi, Dept. of Architecture and Planning, Indian Institute of Technology Roorkee, Roorkee.

The matter embodied in this dissertation has not been submitted by me for the award of any other degree.

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Place : Roorkee

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CHAPTER 1

INTRODUCTION

1. INTRODUCTION

INTRODUCTION

Planning :

The term planning is used in different ways in various literatures.

Lewis Keeble (1983), describes it as 'Planning', in the broadest sense, is making up of ones mind what to do before doing it. Town Planning is, ideally, deciding what a town should be like before it is built, though it is fortunate and exceptional for this to be possible; it is more often, deciding in what ways a town should be kept as it is and what ways it ought to be altered.'

According to Conyers and Hills (1984) it is ..."a continuous process which involves decisions and choices, about normative ways of using available resources, with the aim of achieving particular goals at some time in future."

Some of the definitions of Planning by different authors are as follows;

1950, Simon, Herbert A.–'Planning... is the activity that concerns itself with proposals for the future, with the evaluation of alternative proposals, and with the methods by which these processes may be achieved. Planning is rational adaptive thought applied to the future and to matters over which the planners or the administrative organizations with which they are associated have some degree of control.'

1952, Redfort, Emmette S. - 'Planning is a word of many meanings. To some it means a blue print for the future; to others it means only foresight, and action with the forward policies of the government for regulation of the economy as a whole. To some it means government responsibility to take whatever action is necessary to ensure that economic

system operates efficiently, to others it means only that the government should correlate whatever functions it undertakes towards desired overall objectives.'

1958, Newman H. W. - 'Generally speaking, planning is deciding in advance what is to be done, that is a plan is a projected course of action. '

1959, Dahl R.A. – 'Planning is more and more regarded as equivalent to rational social action, that is, a social process for reaching a rational decision.'

1959, Friedman, John – ' Planning is an activity by which man in society endeavors to gain mastery over himself and to shape his collective future by power of his reason... planning is nothing more than a certain manner of arriving at decisions and action, the intention of which is to provide the social good of the society undergoing rapid changes.'

1962, Davidolf & Reiner – 'Planning is a process of determining appropriate future action through a sequence of choices.'

1963, Dror, Yehezkel – 'Planning is the process of preparing a set of decisions for the action in the future, directed at achieving goals by preferable means.'
1968, ade – 'Planning is the application scientific method – however crude – policy making. '

1969, Keeble – ' Town Planning ... as the art and science of ordering the use of land and sitting of buildings on communication routes so as to secure the maximum practicable degree of economy, venience and beauty.'
1969, McLoughlin – ' Planning ... whose main impetus is thus ... foreseeing and guiding change.'

1973, Gulick – 'Planning ...is the working out in broad outline the thing that need to be done and the methods for doing them to accomplish the purpose set for the enterprise.'

1974, Ratcliffe, John – 'Put another way, however, it is concerned with providing the right site, at the right time, at the right place, for the right people.'

In brief 'Planning ...is an attempt to formulate the principles that should guide us in creating a realized physical background for human life' –Thomas Sharp.

Planning in India is being done at the national level, state levels and at district and local levels such that a process would generate developmental impulses at all micro levels. It would help solve problem wherever they can and would involve people individually and in groups in developmental processes in each area and locality.

The micro spaces i.e. villages, communities, small towns, ethnic groups etc. are of two types:

- The first is the dynamics of history and geography. It is a space inhabited by people bound together by a set of formal and informal relations. There are rules and standards of conduct, some of them respected but may other transgressed in practice, yet, and they are community forming rules. Villagers, neighborhoods, small towns, cities, wards, ethnic communities and similar grassroots formations constitute these micro spaces. Some of them are large in scale -but the factors which bind them are essentially the same which bind small scale communities. One must, however, keep in view the limitations imposed by distance for inter personal communication.
- The second types of micro spaces are the one created by the micro processes. These are administrative regions, divisions, districts, talukas, or revenue villages. They may also be small but they have not resulted from micro processes moving horizontally but as channels for the macro authorities to wield power down to the grass roots level. These micro spaces are atomized part of the macro spaces.

District is, thus, an atomized part of the national level macro space which viewed as an instrument intervening between grassroots micro spaces, and national or international macro spaces. So the major thrust of district plan, therefore must be to

create conditions for generating micro level development initiative. It should attempt to unite the people for common causes, build their confidence, build integrated self managing micro societies and promote self reliance. Success of district plan should be seen in the degree of local initiative rather than action from above. Micro spaces or local Communities as stated earlier have wider links which wane or weaken as distance increases. The contention that the information society of our future would remove the distance factor completely is unrealistic. It is the inter personal links sustained through history, geography, culture, conventions and folk lore which give rise to a community of people. It is a natural area, a valley, a desert, a forest etc. which gives a sense of environmental unity. It is not a problem area, which gives a sense of common suffering or purposes; it is not a homogeneous culture zone either. The British and the inheritors of the British to rule a nation state have artificially created it. It is only an administrative area.

A district, thus, suffers from very initial drawbacks, for we now know that the planning is not administration. It has a human face which is plastered by theories, models, projects, management tool and techniques, abstractions; generalization giving rise to darwinism i.e. human being preying on other human being. The poverty that we witness in India is a blot on our body politic. District planning has to be a major instrument to remove it. But it can do so only if the plaster that casts its face is removed first.

Therefore, there is need, as recommended by the working group on district planning (1984) appointed by the planning commission, i.e. " District planning as a concept in decentralized and multilevel planning for taking into account the local needs and more realistically and to adopt the district as planning and development unit district plan preparation should be done with proper access to people and regard their views to the development issues in the area".

Now when the planning at district level is decentralized to local level, there is need of proper and excellent integrated framework of district plan. Integration of local plans to plan should be done keeping in view a homogeneous and equitable development of people as well as of area. It requires efficient role of planners and administration along with the people at local level. Several expert committee like Balwant Rai Mehata committee, Ashok Mehta committee, Gadgil committee, Dhantawala commitee and

Hanumantha Rao committee emphasized the need for integrated district development planning in India.

Integrated Planning As Concept:

"Integration is the practice or the tool by which the constraints are suppressed by considering each minute thing and summing up them so that working runs smoothly and efficiently".

When this concept is applied in district planning named as integrated district development planning, envisaged that constraints coming along the development processes are suppressed by giving importance to each from village level to district level and worked on such a framework which guide the development process of the district as a whole. This will ensure more realistic and holistic approach for development of each part with in the district.

Selection Of The Topic

The most important problem in all planning activities is how to ultimately integrate the projects in program in the different sectors while there is no standard way of achieving integration, certain general guidelines could be given. Usually it is stated that the sectoral priorities in an area development plan should, by and large, confirm the over all pattern envisaged at the district level. But in practice it is possible that diversified local conditions, each individual area may not necessarily follow sectoral allocations and may have to evolve their own pattern to suit their local needs. It can be done by seeing maximum synchronization of sectoral priorities and in the planning exercises at different area levels. Taluka being the smallest administrative unit with the rurban population i have selected the Taluka for study on planning for integrated development in Ramtek taluka.

At once we can emphasize on the problems which are growing with a fast pace and going to harm the development of taluka.

Following are some of the problems that concentrated my vision in this direction:

* There is a vast disparity among rural and urban areas in terms of available facilities, physical and social infrastructure.
* Development is being carried out in isolation among different planning and working institutions and there is lack of technical input in carrying out development process by panchayats in villages and blocks.
* Literacy rate and quality of education is low.
* Unemployment among youths is increasing day by day and poverty is growing in rural areas.
* The income of people that depends mainly on the agriculture is not frequent.
* The government programs do not reach at grass root level where they are actually required.

1.1 AIM

The aim of the study is to investigate the problems in the area and to provide for the removal of poverty and the overall development facilities to enable people to have a comfortable life and optimum physical and social infrastructure.
Thus aiming at socio-economic development of Ramtek Tahsil.

1.2 OBJECTIVES

1) To assess the physical, socio-economic and environmental condition of the Ramtek Tahsil.
2) To assess the available infrastructure and the facilities in the Ramtek Tahsil.
3) To assess the resources and the potentialities in the Ramtek Tahsil.
4) To forecast the demand and supply of infrastructure for the whole area and resources (with respect to Industrial development) for 2031 A.D.
5) To evolve the possible planning model/ theory for IRD (Integrated Rural Development) by providing urban amenities in rural areas.
6) To evolve the planning strategies for the Integrated Planning in Ramtek Tehsil.

1.3 SCOPE

The study may include study of Agriculture crop pattern, study of Industries, study of infrastructure, study of water resource, study of heritage components, Environmental studies like Environmental impact and risk assessment etc.

1.4 LIMITATIONS

I am going to limit my dissertation to prepare a strategy for planning in Ramtek Tahsil in order to achieve Integrated Development in Ramtek Taluka. In this I am considering the sectoral developments and connectivity of areas and Medical and Educational facilities under social infrastructure .

1.5. METHODOLOGY

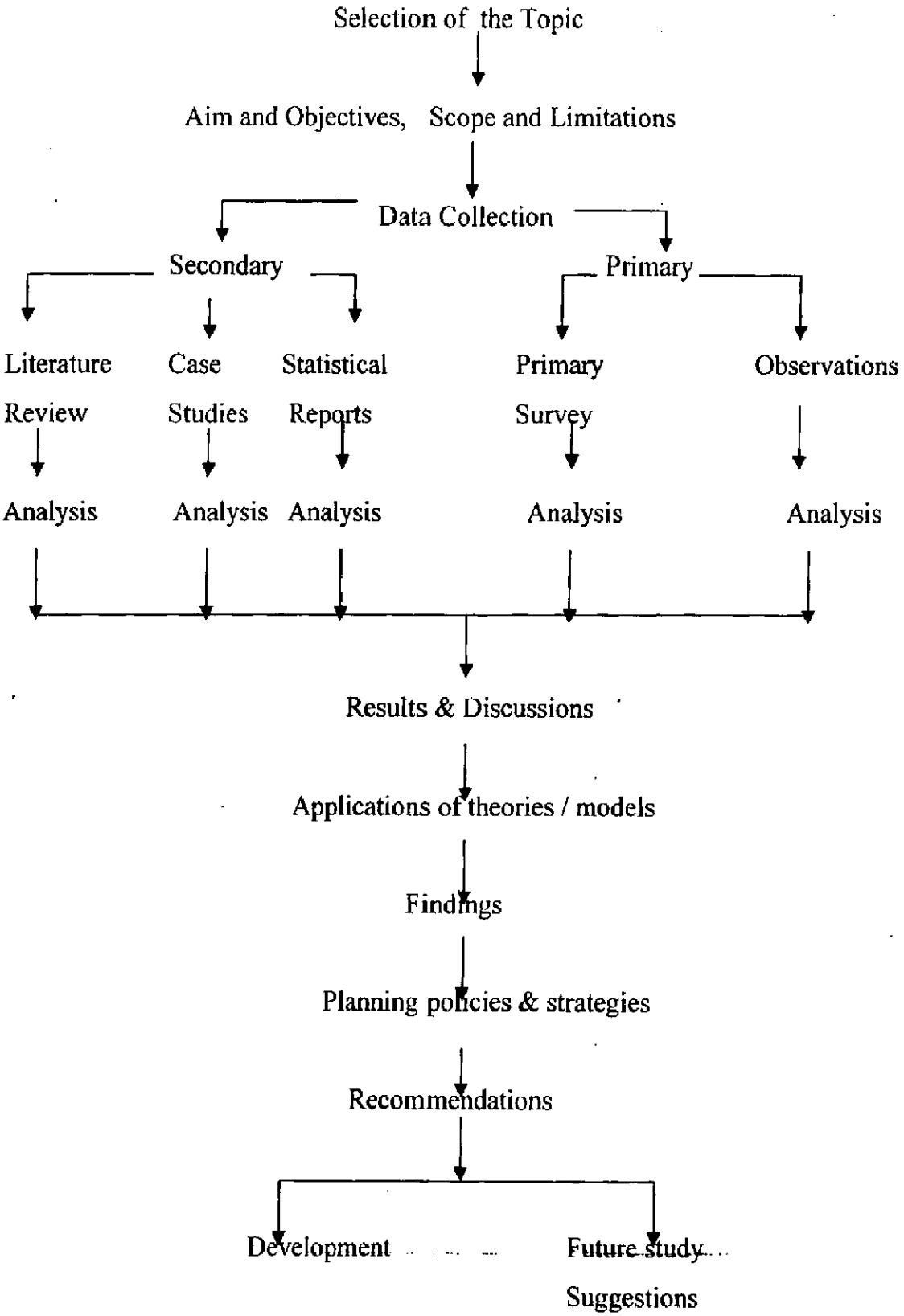


Fig. 1.1 Methodology Of Dissertation

CHAPTER 2

DATA COLLECTION

2. DATA COLLECTION

Data is Collected from the primary, Secondary as well as Tertiary Sources.

Those are As follows:

Primary Sources: Primary Sample Survey of the households (survey is conducted for 105 numbers of households)

Secondary Sources: The standard data / official data is taken from the references like (Government) official publications and / or websites. For eg. Nagpur District Census, Census of India, Nagpur District Gazetteer, Nagpur District Statistical Report, etc..

Tertiary Sources: Articles by private publishers etc, websites.

2.1 PRIMARY SOURCES

2.1.1 Primary Survey and Observations

Sample survey is undertaken for 105 households of the Ramtek Tahsil. From the primary survey following observations are made:

1. Normal size of the household is 6.
2. 60 % population is literate.
3. 75% population is involved in primary sector.
4. 50% villages have forest area.
5. 50% Villages are having approach by pucca road.
6. 100% villages have water facility in terms of wells.
7. 5 % villages have Health facilities.
8. 90% villages have Primary School.
9. 95 % villages have Electricity.
10. 35 % villages have irrigated area.

Household Survey Format is as follows :

Primary Household Survey Format (Study carried out for the fulfillment of dissertation 'PLANNING FOR INTEGRATED DEVELOPMENT IN RAMTEK TEHSIL' in Dept. of Arch. & Planning, IIT, Roorkee, by : Kalpana N. Kawathekar, ML RP II, 2005-06)

Sr. No.: Date: Village Name : Circle:

1. Demographic Characteristic

1.1 Name of the head of the household **1.2 Religion**

1.3 Address **1.4 Caste**

1.5 Family Details

Sr No	Name of Person	Relation with family head	Age (Yrs)	Married (Y/N)	Max Education attained	Monthly Income	Occupation	
							Primary	Secondary
1								
2								
3								
4								
5								
6								
7								
8								

1.6 Monthly Expenditure in Rs / month

1.6.1 Food 1.6.2 Clothing 1.6.2 Drinking

1.6.4 Transportation 1.6.5 Education 1.6.6 Health

1.6.7 Saving 1.6.8 Telephone 1.6.9 Loan Repayment

1.6.10 Recreation 1.6.11 Any other

Energy (Quantity/ month)/ Expenditure (Rs / month)

1.6.12 LPG 1.6.13 Petrol

1.6.14 Diesel 1.6.15 Electricity

1.6.16 Kerosene 1.6.17 Charcoal

1.6.18 Fuel Wood

1.7 Household Appliances

Refrigerator TV Stove Mixer/Grinder Computer

Washing Machine Cooler Geyser Microwave Tape Recorder

Any other

1.8 Livestock

Cow Buffallo Others

2. Physical Characteristics

2.1 Housing

Type		Area (Sq. ft)	Year of const (Age in Yrs)	No of floors	No. of Rooms	Condition			parking		Cost of Annual maintain	Finance
(Leasehold / Freehold/ Rental)	Detached/ Semi detached/ Apartment / Row					Sound	Livable	Deteriated	A / N A	S / N S		Bank/Self/ Ancestral /Any other

3. Physical Infrastructure

3.1 Transportation

Condition or road (Kuchha/ Pucca)	Maintainance of road (Good/ Bad/ worse/ Not any)	Vehicles owned			
		cycle	2 wheeler	4 wheeler	other

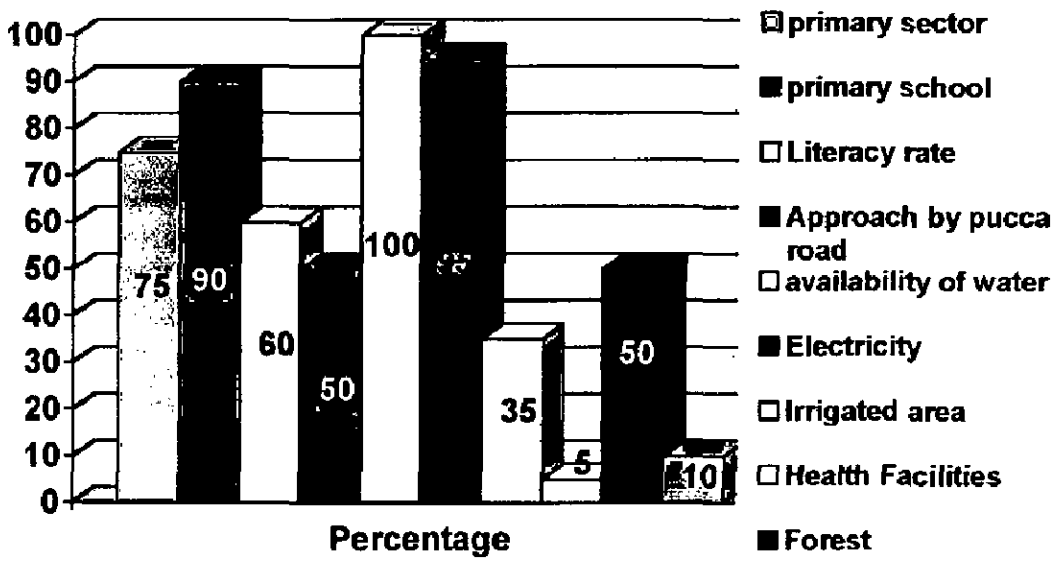


Fig. 2.2: Household Survey Observations (Source : Sample Survey of 105 Households)

2.2 SECONDARY SOURCES

2.2.1 Literature Review

2.2.1.1: DECENTRALIZED PLANNING

Planning in India since its inception has been highly centralized having been formulated at the Centre; it was also what may be called: sectoral planning. It is only recently that the idea of decentralizing the planning process has called on. As a result, the planning process got decentralized as a first step to state level planning, and apart from planning the sectors there is also emphasis now on planning for regional development with the objective of removing poverty from the backward regions and weaker sections.

Regional planning, though new to the Indian subcontinent, has made rapid strides in recent times, particularly, there is emphasis on local level planning. During the fourth Plan the emphasis was on district plans. Subsequently, the idea of planning at the micro-regional level has caught on and number of exercises are being done to undertake what are called the Block Plans. As part of this the state governments have initiated steps to plan for the blocks and have sponsored number of studies under the scheme of Area Planning for full employment and development in all respect.

A recent development in this respect is the programme of identifying the poorest of the poor households in the blocks, and to give them some schemes which are consistent with their skills, marketability of their products, services in the local areas and so on, so that; they rise above the poverty level. When one talks about planning at the local level following questions are asked: What are the goals of planning? What is the areal unit which needs to be planned and what are the strategies of planning that need to be followed in respect of the local level planning? These questions are yet to be answered fully. For, literature on local level planning is too scanty as the very idea of such planning is quite recent. The Dantawala Committee and the Ashok Mehta Committee at the government level and some writings by academicians are all that we have at present on local level planning. In view of this, the present attempt would not amount at all to a duplication of effort and resources.

Decentralized Planning In India:

All the five year plans revolve around economic growth with reduction of inequalities, removal of poverty and regional disparities. Although the priorities from plan to plan might have changed but the basic objective remained the same. Planning commission made great efforts during 1950's and 1960's to evolve a suitable methodology in decentralized planning.

The recognition of the importance of decentralized planning in India is more than a century old. During British Rule, Lord Ripon emphasised the need for decentralized planning in the resolution on Local Self-Government in 1883. Thereafter, the Royal Commission on Decentralization in 1906 forcefully advocated making village the basic unit of Local self-government. The importance of decentralized planning had received deliberate attention since independence. The details of various efforts taken by Government of India since independence are listed.

After the Community Development Programme was launched in 1952, it was realized that without an agency at the village level "which could represent the entire community, assume responsibility and provide the necessary leadership for implementing development programmes", real progress in rural development could not take place. It was against this background that a Committee headed by Balwantrai G.Mehta (1957) was appointed to make recommendations for the revitalization of the Panchayati Raj system and define its role in the development process. The report of the Committee recommended that public participation in community works should be organized through statutory representative bodies. Community development can be real only when the community exercises necessary powers through its chosen representatives. Therefore, it recommended the establishment of statutory elected local bodies. The report of the

Committee was influential in creating a three-tier Panchayati raj structure. In this *structure District Panchayat placed at the top and Grama Panchayat at the bottom. The* intermediate tier is set at- Co'mmunity Development Blocks. Most *of* the States amended their laws to cOOform to the recommendations of the Committee. Howeveliv the Panchayat-ra.i institutions could not function well as elections were either not he'P or were frequently postponed or they were denied funds or in most of the cases superceded.

The Ashok Mehta Committee Report (1978) was influential in bringing about a shift in emphasis between the first and second generation of panchayats from development per se to local Government in its full meaning. Originally, panchayats found a place only in the Directive Principles of State Policy. The 73rd and 74th Constitutional Amendments revitalized the Panchayats and Urban Bodies by giving them Constitutional status, providing for regular elections and reserving 1/3 of seats for women and introducing representation for marginalized social groups.

Serious efforts for decentralised planning started in India long ago and in 1969' the Union Planning Commission issued guidelines for preparation of district plans. Realizing that the planning machinery and competency are not yet developed at the district level, efforts was redirected in the later years to strengthen State level planning process. In the early eiqhties a Working Group under the Chairmanship of Professor C.H. Hanumantha Rao was constituted to develop guidelines for district plans. Based on the recommendations of this Committee, the Seventh Five Year Plan adopted decentralised planning at the district level as one of the major strategies to achieve plan targets.

Article 243 G relating to panchayat and Article 243 W relating to urban local bodies specifically provide for the local self-government institutions, the responsibility of preparation of plan and implementation of schemes for economic development and social justice. With the ena~tment of 73rd (Constitutional Amendment) Act 1992, the panchayats received formal constitutional recognition.

Local Planning

The Planning Commission under the leadership of Frot. Gadgil drew up a set of detailed guidelines for formulation of district plans with a premise to identify the priorities for development in the light of local potential, problems etc. Later, working group report on District Planning Under the Chairmanship of Dr. Hanumantha Rao during 1984 also recommended guideline for formulation of an ideal district plan. Panchayati Raj Institutions (PRIs) were established and powers were given so that a public participation in district planning can be achieved. The 73rd and 74th amendments further envisages the decision making powers to PRIs at the grass root level.

Objectives of local level plans :

The objective of local level plans should be to take care of what the sectoral plans failed to accomplish. Two things are implied in this:

1)Things which the sectoral plans have failed to accomplish,

2) In what manner the local plans will be effective in accomplishing what the sectoral plans have failed to accomplish. It is generally held that the sectoral plans ignore the local needs of the regions particularly the backward regions and the backward sections. The strategy followed for planning the sectors is such that it only promotes what is thought at the state level / national level. Another objective of local level planning is to link up the local planning objective with the national planning objective. The linkage could be both ways, namely, the top-down linkage and bottom up linkage.

In the matter of linking local level plans with the national level planning a basic point that needs to be kept in mind is the need for an understanding of the structures and substructures of the local region such as

- economic structure
- social infrastructure, and
- physial infrassture

Here the integration of these facilities with the productive activity embodied in the economic structure referred to above becomes important. Integration of the social and physical infrastructure with the economic structure would be achieved at the local level by planning the productions, amenities and the input supplying and output marketing institutions that fit into the new economic structure.

Importance of Decentralized planning:

Decentralized planning is the transference of some degree of administrative authority or responsibility to lower levels within central government ministries and agencies. It gives some programmes and projects or to adjust central directives to local conditions, within guidelines set by central ministry of agency headquarters. Decentralization involves planning a geographical area. 'Decentralised planning in this sense is also known as integrated area planning' (says JOSE A. M.) Infact 'area planning where there is making only decision can not be termed entirely a decentralized planning

unless it is seen as a way of increasing popular participation at all stages of planning' (Misra R. P. and Sundaram K. V., 1980)

Decentralized planning encourages the public participation in decision making process through formulation and execution of plans at grassroot level. The working Group on district planning (Planning Commission, 1984) summarises the benefits of decentralization as follows:

Decentralization enables a better perception of the needs of local areas, makes better informed decision-making possible, gives people a greater voice in decision concerning their development and welfare, serves to achieve better coordination and integrating among programmes, enables the felt needs of the people to be taken into accounts, ensures effective participation of people, serves to build up a measure of self reliance and enables better exploitation of local resources and growth potential of local area for improving productivity and increasing production.

2.2.1.2: DISTRICT PLANNING

Background :

Present structure of District Administration has evolved out of the one created by the British Regime ruling India. The whole administrative machinery in general and the district administration in particular was geared to serve two basic objectives; the collection of land revenue and maintenance of land records. The Indian administrative system revolves around the district as the cutting edge of government, being its "eyes, ears and hands."

District :

Each State or Union Territory in India has been divided into distinct units called "Districts", ranging in different sizes, shapes, and of diverse economic and social significance. The general administration, including land and law and order administration of the country has functioned through these units for over the years, evolving a distinct pattern of administration all over the country. Without the fundamental unity of administration characterized by these administrative units all over the country, it would have become impossible to administer, let alone plan for this vast country after we achieved independence. The amount of stability imparted to

the transfer of power as a consequence of the well-established district units cannot be underestimated.

Revenue Division / Sub-Division :

The district is geographically divided into one or more units known as Sub-divisions. The officer-in-charge of this unit is called Sub-Divisional Officer (SDO) or Sub-Divisional Magistrate (SDM). Like District collector, he speaks with the voice of the Government in his own sub-division. He is a link between the District Collector and the Tahsildar in revenue matters and the District Magistrate and the Officer-in-charge of the Police Station in matters relating to law and order.

Tahsil :

The sub-division comprises one or more *Tahsils.* A *Tahsil* is the basic unit for purposes of ganeral administration, treasury, land revenue, land records and other items of work. It has closest and widest contact with the rural population. The officer-in-charge of the hsil is called *Tahsildar.* The distinguishing function of this official all over the country is the maintenance of the Record of Rights, or the land records. In most parts of the country he is also the principal official in the district administration responsible for actual revenue collection. The administration at the *Tahsil* level is the farthest point of Government where revenue and ld questions are dealt with.

Development Block :

When considering the administrative units in a district, a very important one is the Development Block, which was inaugurated in 1950 at the commencement of the experiment on Community Development after independence. The Block, as it is usually called, was originally envisaged to contain a population of around 1 lakh, which would be provided with developmental services. The area of a Block is not necessarily a sub-set of the area of a *Tahsil* or even of a Sub-Division, though efforts are being made all over the counntry to restructure Blocks to fall within the boundaries of Sub-Divisions. Block boundaries, however, generally fall within that of a district.

As originally envisaged, almost all the developmental functionaries were attached to this office. But over the course of the years, the functionaries have tended to be absorbed back in the line departments and the Block office now represents a

comparatively ramshackle look, dealing only with Rural Development programmes, and *Panchayati Raj*. The Block comprises today of one or more BDOs along with Extension Officers and *Gram Sevaks* or village Level Extension Workers.

Pargana :

The next lower unit in revenue administration, which is however, not a mandatory division ver the country, is known as *Pargana*. The head of this unit is called supervisor quanungo. He / she is in charge of revenue administration and land records of every village within his area. He is the first line supervisor in the chain of revenue administration.

Revenue functions of a smaller group of villages are usually done by the Patwari in most parts of the country. The patwari is responsible for all the work concerned with land problems. He is the busy body of the government for the performance of a multitude of functions including collection of villages statistics. He can be called as a king pin of revenue administration.

Village :

The lowest unit for all administrative, plan and fiscal purposes in all the states in India is the village which is determined by village establishment, comprising village headman and Lekhpal.

Coordination In District Administration :

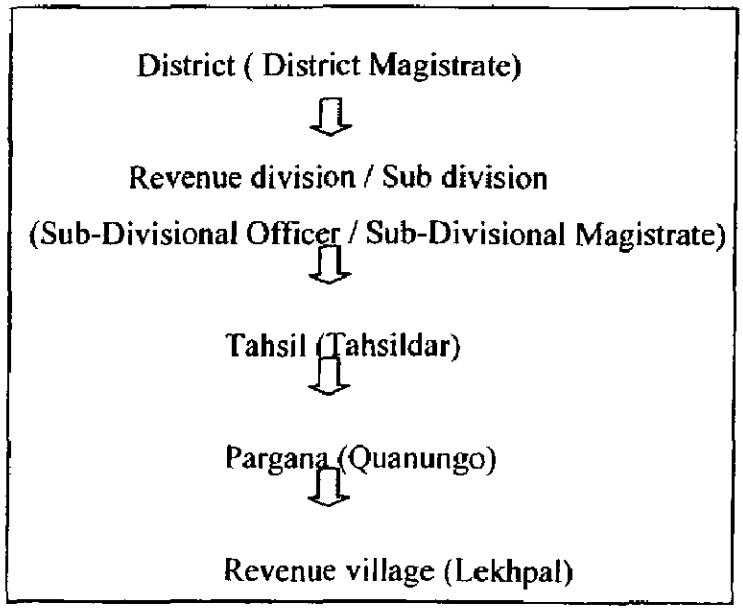


Fig. 2.3: District Administration

2.2.1.3: PANCHAYATI RAJ

Panchayati Raj And District Administration :

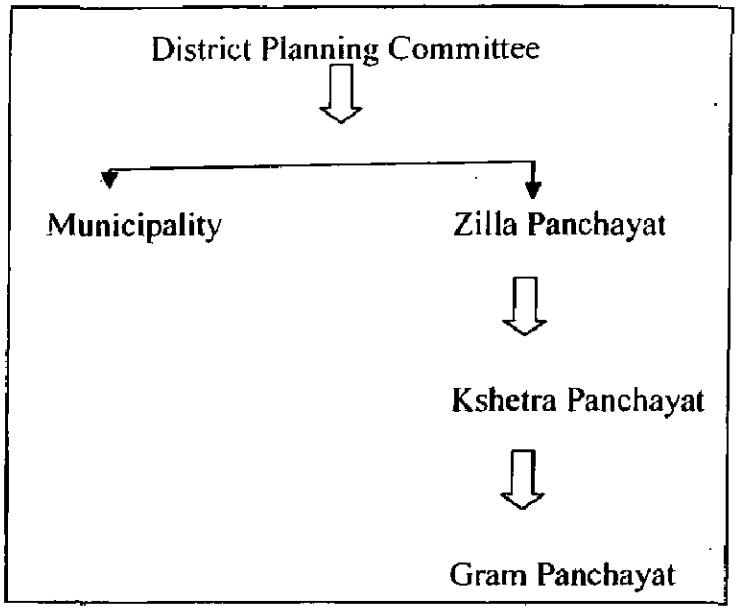


Fig. 2.4 : Panchayati Raj Institution

Panchayati Raj System In Independent India :

After independence, Community Development Programme was started in 1952 AD. But because it was not attached with the people, therefore it couldn't prove to be a success story. People took it as a burden put on them by the government. A team, under the leadership of Balwant Rai Mehta tried to find out the cause for the failure of this programme and came up with the inference that there should be an organization at village level, which would select the true beneficiaries and implement various government programmes and schemes.

This organization would act as the representative of all the villagers and should ensure the development of the villages as well participation of villagers. In this way Balwant Rai Mehta tried to achieve local self government through Panchats. This concept of local self government was the right step towards decentralized democracy. In this process, the state of Rajasthan for the first time adopted the three leveled structure of Panchayat Raj – Village Level, Intermediate Level and District level.

In 1977 AD. Ashok Mehta Committee was set up to view the making of Panchayats. The committee found that Panchayati Raj is the soul of democracy and therefore it

should be empowered with more authority. Those Panchayats which formed after 1977 AD. Are known as Second Generation Panchayats.

During the decade of 1990, it was realized that without constitutional power, self government cannot be fruitful, therefore the Central governewmnt [passed the 73rd constitutional amendment Act in 1992, which became effective from 20th April 1993.

Basic Concepts of Panchati Raj :

The basic concept of Panchayati Raj is that the villagers should think, decide and act for their own socio- economic interests. Thus Panchayati Raj Act is related to village self governance, where people in the form of an organization will think, decide and act for their collective interest. Self Government allows us to decide about ourselves without hampering others interest. Whenever we talk about collective benefit one point is clear that there is no conflict between the villagers collective interest on the side and societal and national interest on the other, rather they are complementary. Where the panchayats end their activities the state government takes them up. The state government plays their roles :

- To support the village Panchayats
- To co-ordinate the village Panchayats
- To ensure the implementation of this system.

Besides these, once the democratic institution in the villages and towns becomes strong, the people's representatives can express the problems of their constituency in a better way. This will help in policy determ i n.ltion [or national interest. This plan for *'Swaraj'* (Self- government) can't be fulfilled only by making a new law. For the success of self- government self reliance is must. The self-reliance means: every village must produce accordillg to its capacity and try to increase its capacity, which can be achieved in followillg „'ays: t on one Sloe ana Socletal

- By identifying economic and human resources of the Panchayat area,
- By estimating the capacity of these resource,
- By making decision for utilizing these resources,
- By formulating Plans
- By implementing plans
- By evaluating plans

Thus we find that self-governance is a cocept, which is the base for the success of democracy. And for self-governance Panchayati Raj System is a must.

Some Important Features of the Panchayati Raj Act:

Three Leveled System : Village level, intennediate level and district level,

Election: The representatives are elected for 5 years by the electorate of a Panchayat area.

Reservation of Seats: Some seats in the Panchayat shall be reserved for the Scheduled Castes, Scheduled Tribes and Women. The number of reserved seats for Schedules Castes and Scheduled Tribes will be proportionate to the ration of population of SCs and STs to Total Population of the Panchayat area. One third of the total seat will be reserved for women. It will include the reserved seats for SCs and STs.

Responsibility: Panchayats have two main responsibilities

1. To plan (or cconomic development and social justice
2. To implement these plans

Powers and Authorities: The Legislature of the State may authorize a Panchayat to levy, collect and appropriate taxes, tolls and fees. It may also provide the Panchayat for making grants-in-aid to foml the Consolidated Fund of the State. These funds can be used for implementing the plans to decide and act for their own socio-economic interests.

Even though Panchayati Raj Institutions were in existence since 1959, these have not acquired the status and dignity of peoples representative bodies to generate momentum through active participation of people in the development process due to lack of financial resources, insufficient devolution of powers etc. The Constitutional (73rd and 74th Amendment) Acts, 1992 which were passed by the parliament on 20th April, 1993, have given Constitutional status to these Panchayati Raj Institutions. According to these Acts, Panchaya\i Raj Institutions have been empowered to formulate and implement, *"plans for economic development and social justice"* through people's participation. Besides the 29 items as per 11 th Schedule relating to rural development and 18 items as per 12th Schedule relating to municipalities, these bodies would be required to implement *"schemes of economic development and social justice* as *may be entrusted to them."*

PLANNING UNIT:

What would be the optimum region for planning purpose ? Is it a district, block, village or a household ? All these years' Indian planners experimented with the district as a region of the planning unit. However. It has been realized that district would be too big region for purposes of local level plan though it has the necessary administrative and other infrastructure. From the point of view of the availability of the administrative infrastructure the district may be an appropriate regional unit for planning purposes, but the limitation of this is that planning of a district with a view to promoting the incomes, employment, and so on that are needed for households would be rather difficult on account of the vastness of the districts. Hence, it is now accepted that a region smaller than the district would be an ideal planning unit from the point of view of promoting the economic and social development of an individual household. This leaves actually two regional units namely the block and the; village for purposes of planning; Though village would be the most ideal unit for planning it is too early to get to this level considering particularly the availability of the needed physical, institutional and administrative infrastructure:.

Hence, planning should come down to the block level. Planning at the block level has advantages over both : district and village from the point of view of resources and the ability of the planner to identify the microscopic problems of the households. Therefore, the accent now is on planning at the blocks rather than the villages or the districts. This, however, is not the last word on the question of appropriate planning unit area.

2.2.1.4: PURA CONCEPT

President of India Dr. A. P. J. Abdul Kalam has suggested PURA concept for the development of rural areas. It is providing of urban facilities in the Rural areas (PURA).

It talks about the connectivity in terms of :

1. Physical connectivity,
2. Electronic connectivity,
3. Knowledge / spiritual connectivity or leadership And

4. *Economic Connectivity / integrated strengths to enhance the prosperity* of clusters of villages in the rural areas.

Thus for transforming India into a developed nation requires integrated actions in the following areas

1. Agriculture and food processing
2. Reliable and Quality electric power for all parts of the country.
3. Education and Health Care
4. Information Technology
5. Self reliance in critical Technologies.

2.3 CASE STUDIES

For the study of integrated planning experience in India following studies are undertaken. These are selected on the basis of identified areas of development.

For eg. :

Case study 1 : Bolpur Block (W.B.): In this case the area identified for development is Agriculture production and Livestock Industries.

Case study 2: Bahraich District (U.P.): In this study the identified area of development is Resource based Industries.

Case study 3: Solan District (H.P.): In this study the identified area of development is tourism.

2.3.1 Case Study 1: Bolpur Block, West Bengal

PROFILE:

Bolpur is one of the most backward region in West Bengal. Geography of the region is plane.

APPROACH:

There was observed a need to look for the development of this block and the study has been conducted.

Under the heading integrated plan one expects complete listing of all the proposals relating to different sectors, a mention about their relationships, sequencing and phasing. It should also give information on financial implications, regional balance and employment generation. The attempt made here is slightly different. It has not been possible by the time of this reporting to survey all sectors of the economy in detail.

POTENTIAL OF DEVELOPMENT:

Animal husbandry forms an important sector of the economy in the planned future, yet little space has been allotted to its discussion. Horticulture, fisheries and poultry farming would receive increasing attention in view of the "nutrition"' programmes of the government. But they have been hardly touched.

In some of these fields it is expected that development will take place either through the efforts of the Government or through individual efforts or other local voluntary agencies and financial institutions. All these activities provide a second bow to small and marginal farmers and landless labourers to fight the demon of poverty. AVARD does not discount their importance but pleads inability to discuss them.

OBSERVATIONS:

However, it is suggested to spend Rs. 3,00,000 on animal husbandry by the Project Implementing Agency (PIA), supplementing resources coming forth from other sources. Because the development of animal husbandry, besides being of the nature of "white crop" (milk) business, is at the base of programmes of livestock industries, dairying and nutrition, employment generation and objectives of social justice, under the Animal Husbandry Programme, the PIA would help poor individuals and/or groups of farmers to buy heifers of improved breeds, encourage the establishment of milk collection centres and the provision of basic veterinary services.

This integrated plan project proposal envisages AVARD's participation in implementing programmes in four sectors namely, agriculture, irrigation, industries and social services. Road building is abstracted from social infrastructure to be discussed in a separate section. The proposed investment on it has not been included in the project proposal for various reasons. Given cooperation, funds available with the Government under various programmes can be diverted to priority road building in the block. The Government is better equipped to maintain roads vis-a-vis a voluntary agency whose interests are to implement quick maturing projects to assist the most needy sections of the population. The inclusion of a section on roads in this document serves two purposes. First, it focusses on their importance to the success of integrated area development exercise and, secondly, it serves as a spur to take up the job urgently by the relevant authorities.

The table below sets out at one glance the distribution of total outlay under major operational heads.

Project Proposal Outlay :

Head	Rs *(000)*
Irrigation	6,052
Agricultural Development	],276
Animal Husbandry	300
Industrial Development	*750*
Social Infrastructure	500
Total:	8,878

For the irrigation projects the lift irrigation scheme and shallow tubewell irrigation Scheme is used.

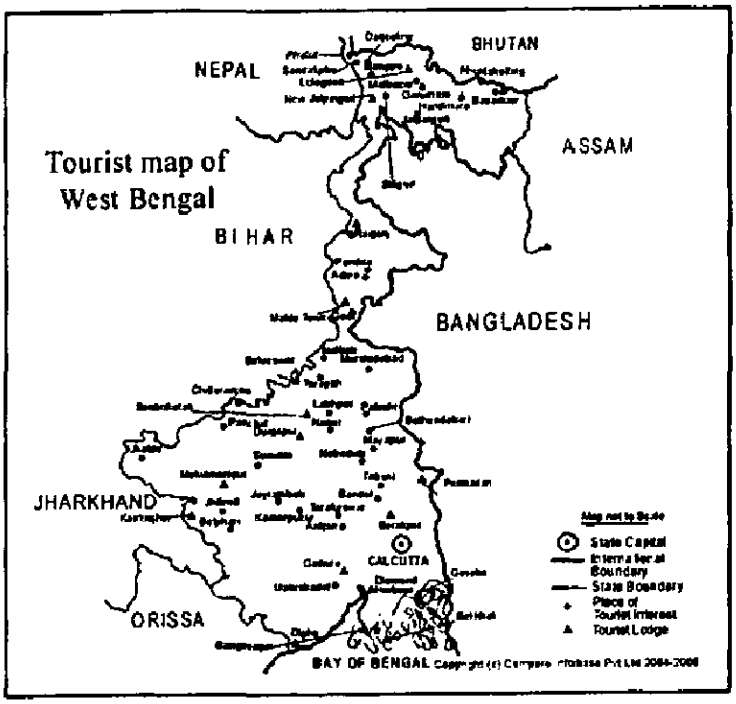
The main advantages derived from the schemes used are:

(a) They can be completed and commissioned quickly; within' 2 to 6 months.

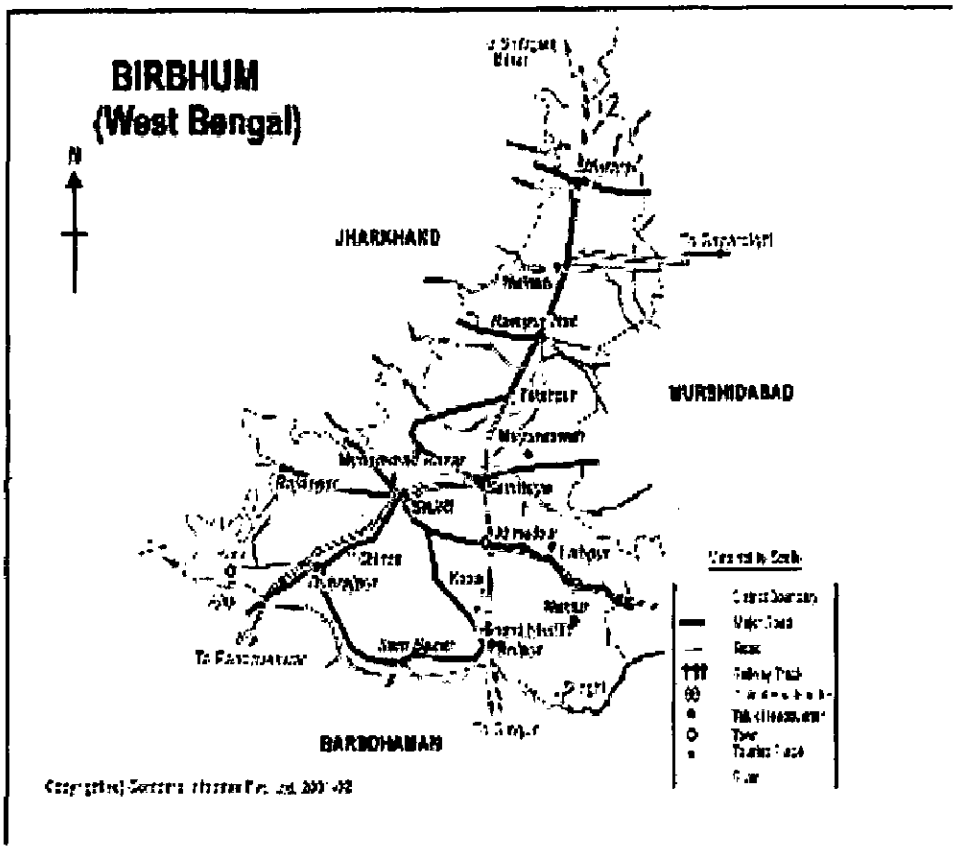
(b) They are the most suitable schemes in the areas of their location.

(c) They are economical in terms of cost of providing irrigation; about Rs 676 per acre, including overheads.

(d) They provide assured irrigation.



Map 2.2: Map showing Location of Birbhum District in West Bengal



Map 2.3: Map showing Bolpur Block in Birbhum District of West Bengal

Livestock

Development of agriculture is correlated with the development of livestock. The large number of livestock present in the district indicates that Bahraich is not only a breeding district but offers a good scope for various livestock based industries like dairy, poultry, piggery, etc.

Man-power

The availability of adequate and required nature of working force is the basic requirement for any industrial development of an area. As per 1981 census, the workers constituted 32. 8 per cent of the total population of the district.

Infrastructures

- ***Existing and Required Roads***

The existing road network of the district is inadequate. During rainy season the major portion of the district becomes cut off from the district headquarters.

The total road length of the district worked out to be 1,090 km in 1986-87.

Sirsia, Shivpur, Vishesharganj and Balha are the most undeveloped blocks with regard to road network and need immediate attention to improve road network in order to bring about economic development of the area.

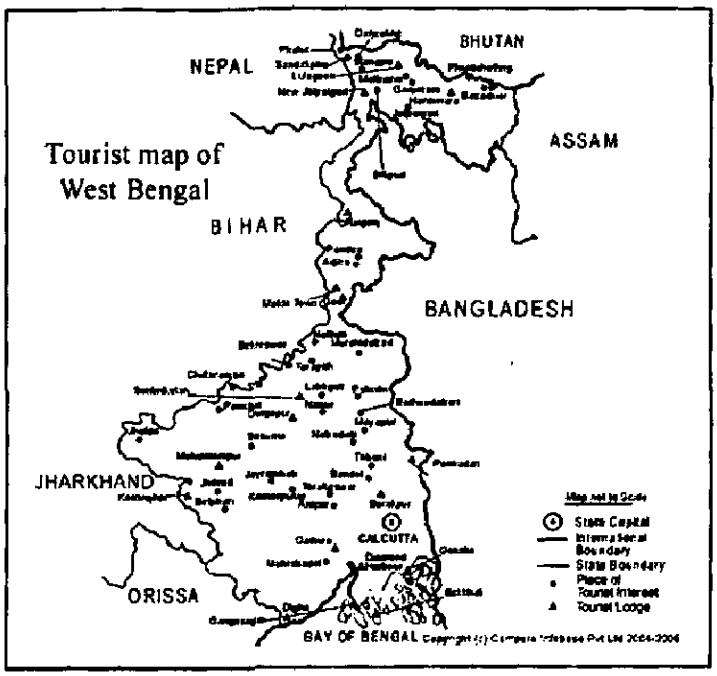
- ***Railways***

The district has a total railway line of 168 km. The district headquarters is not directly connected with state capital Lucknow by railway route. Conversion of meter gauge line Gonda Nepalganj and Bahraich - Mailani to broad-gauge will bring great impact on the economic development of the district.

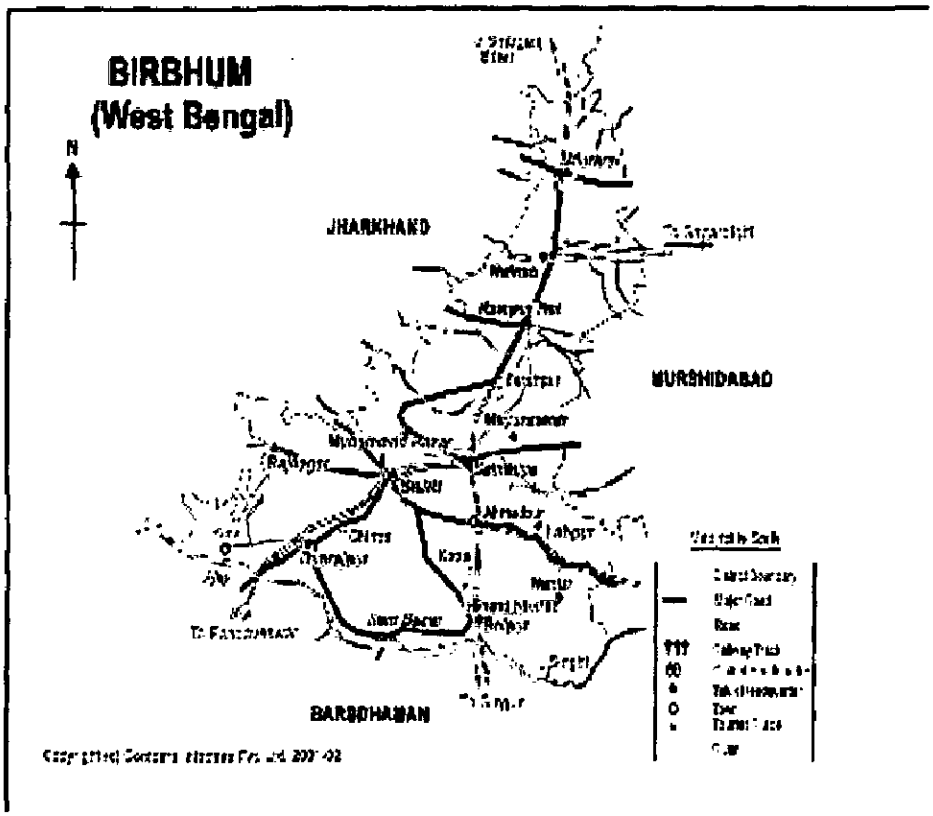
- ***Water Supply and Irrigation Facilities***

The availability of water is one of the main criteria for the site selection for industries. Hence, the study of water supply is very important. Public water supply is available to 92.23 per cent the total population of he district. The remaining population has to be provided with public water supply.

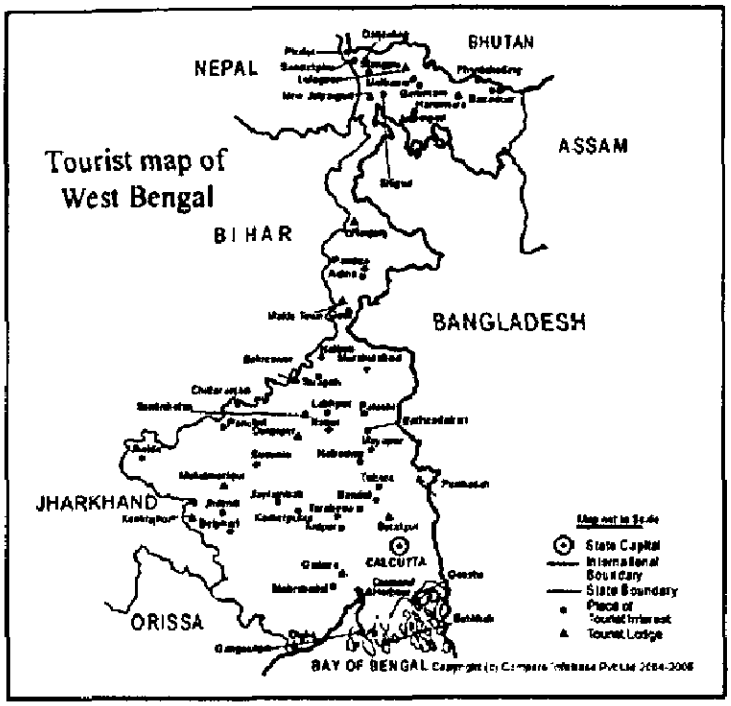
The soil of the district is generally fertile and can, by assured irrigation, be put to better and more productive use. There is a need to develop more irrigation facilities in the district.



Map 2.2: Map showing Location of Birbhum District in West Bengal



Map 2.3: Map showing Bolpur Block in Birbhum District of West Bengal



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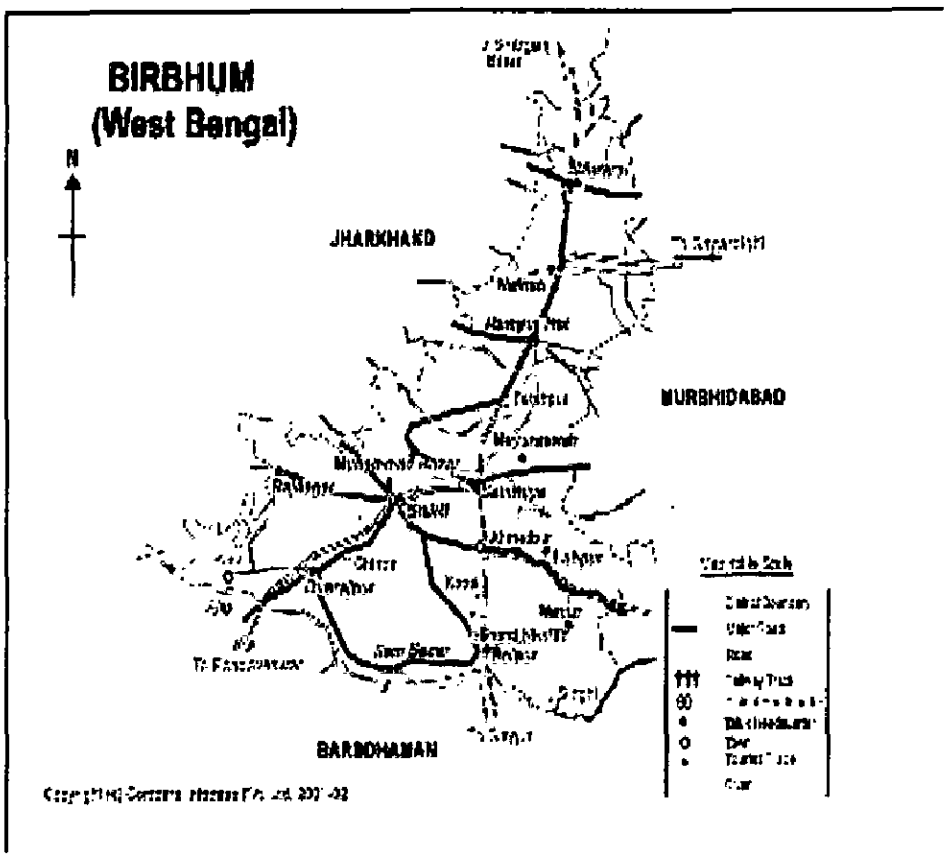
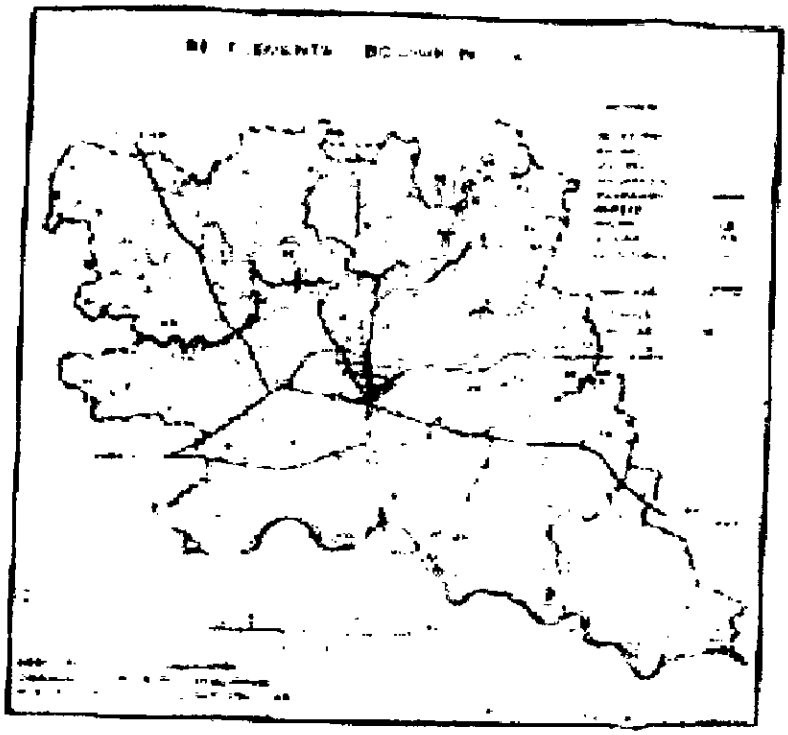
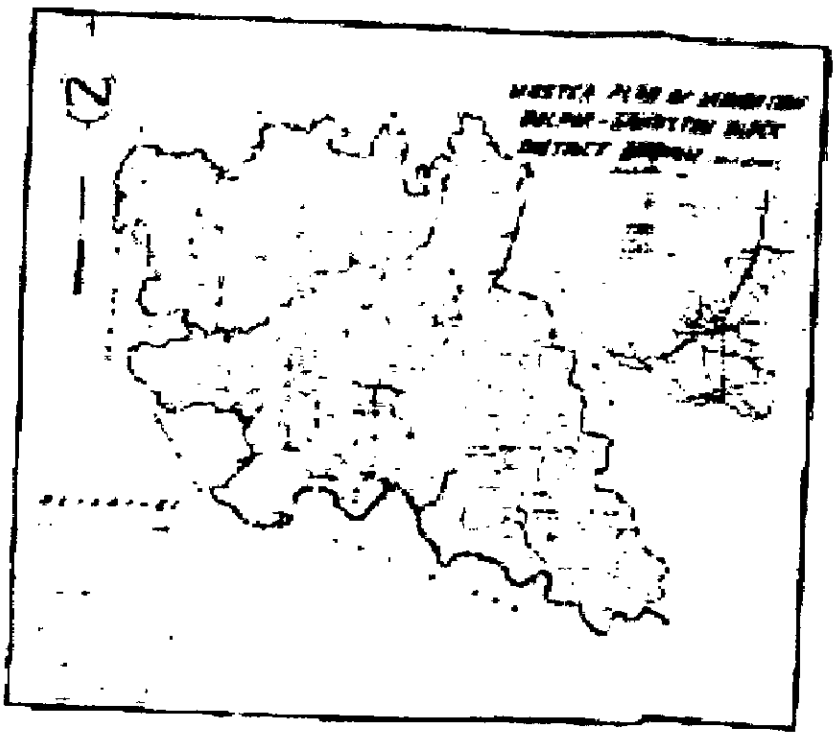


Map 2.3: Map showing Bolpur Block in Birbhum District of West Bengal



Map 2.4: Settlements in Bolpur block



Map 2.5: Master plan for developemt of Bolpur Block

2.3.2 Case Study 2 : Bahraich District, Uttar Pradesh

2.3.2.1 PROFILE

Location

District Bahraich lies in the sub-Himalayan belt along the border of Nepal and is north western-most district of Faizabad division. In shape, the district is an irregular triangle.

Climate

The average annual rainfall in tHe district is 1,135.6 mm; on an average, there are 48 rainy days in a year in the district. Maximum temperature recorded in the district was 47.6° and minimum was 0.6°. The general wind direction is from west to east.

Physiography

The geology of the district does not reveal any thing striking except ordinary Gangetic alluvium. The only mineral of importance is kankar available in limited quantity.

Demographic Structure

The total population of the district was 22,16,245 as per 1981 census comprising of 11,94,943 males and 10,21,302 females. The projected population of the district as read from the graph will be 29,06,667, 29,60,000 and 36,00,000 by the year 1990,1991 and 2001 respectively.

Historical Significance

The Dargah of Syed Salar Masood Ghazi is in Bahraich. He came to India alongwith Mahmud of Ghazni.

2.3.2.2 STUDY APPROACH:

The industrial growth of the district had been very slow in the first five decades of the twentieth century. The pace of industrialisation, however, increased in the second half of sixties. There were only 206 registered small scale industries upto 31 st July 1979,

out of which 23 units are registered under the Indian Factory Act, 1948 which provide employment to 1,450 persons.

In addition to this, there are a number of village and cottage industries which comprise of cotton textiles, leather goods, baskets, pottery, woolen blankets and metal goods such as utensil, etc. As many as 1,574 persons are engaged in such industries which are confined io 196 villages. There are 400 handlooms, 1,456 oil, 300 gur and khansari, 67 catechu, 160 brassware, 326 pottery and bangels, 2 soap, 122 footwear, 101 basket and mat units in the district.

2.3.2.3 METHODOLOGY ADOPTED:

i) Various informations about the resource potential of the district is collected from different government offices and census handbooks.

ii) The existing industrial structure of the district has been studied with the help of questionnaire.

iii) Various reasons for underdevelopment of the district have been analysed by comparing the district potential with the state average potential.

iv) After quantifying various resources of the district and comparing it with the state averaQjJ, various needs for the development of the area have been identified and based upon that future planning strategies and recommendations have been made.

2.3.2.4 POTENTIAL FOR INDUSTRIAL DEVELOPMENT:

Forest

There are abundant forests along the Nepal border. They are of considerable value and importance yielding odd forest produce in fair proportion. The existing forest resources are not being fully utilized due to lack of proper industrialisation.

Agriculture

For any rational scheme of economic development, agricultural development should be the starting point.. The economy of the district is overwhelmingly agricultural. A large area of the district is covered with agriculture only.

Livestock

Development of agriculture is correlated with the development of livestock. The large number of livestock present in the district indicates that Bahraich is not only a breeding district but offers a good scope for various livestock based industries like dairy, poultry, piggery, etc.

Man-power

The availability of adequate and required nature of working force is the basic requirement for any industrial development of an area. As per 1981 census, the workers constituted 32. 8 per cent of the total population of the district.

Infrastructures

- ***Existing and Required Roads***

The existing road network of the district is inadequate. During rainy season the major portion of the district becomes cut off from the district headquarters.

The total road length of the district worked out to be 1,090 km in 1986-87.

Sirsia, Shivpur, Vishesharganj and Balha are the most undeveloped blocks with regard to road network and need immediate attention to improve road network in order to bring about economic development of the area.

- ***Railways***

The district has a total railway line of 168 km. The district headquarters is not directly connected with state capital Lucknow by railway route. Conversion of meter gauge line Gonda Nepalganj and Bahraich - Mailani to broad-gauge will bring great impact on the economic development of the district.

- ***Water Supply and Irrigation Facilities***

The availability of water is one of the main criteria for the site selection for industries. Hence, the study of water supply is very important. Public water supply is available to 92.23 per cent the total population of he district. The remaining population has to be provided with public water supply.

The soil of the district is generally fertile and can, by assured irrigation, be put to better and more productive use. There is a need to develop more irrigation facilities in the district.

- ***Power***

There are 1,928 villages in the district as per 1981 census, out of which, 1,885 are inhabited and out of these 1,885 inhabited villages only 1,204 were electrified upto 31 st March 1988; 681 villages have yet to be electrified.

- ***Banking***

Banking facilities are available in every development block of the district. Sirsia, Nawabganj and Mihinpurwa have the least of these facilities. So, there is a need -to - open more banks and cooperative societies to facilitate the industrial development of these blocks.

The district though rich in large area of cultivable land, large forest, good climate and booned with many natural streams remained backward due to negligence in terms of resource identification and its utilization.

The industrial structure of the district is weak, a number of industries can be established because raw materials are available in plenty and the demand for them is likely to increase in future.

2.3.2.7 PLANNING STRATEGIES:

Infrastructure Development

There is always heavy traffic on state highway No. 13 connecting Lucknow to Bahraich through Barabanki. So it is proposed to widen the highway from Barabanki to Bahraich. In addition to this some new metalled roads are being proposed.

One 40 km long broad gauge railway line from Jarwal to Bahraich is being proposed to connect directly district headquarters to Lucknow, which will certainly bring about economic development of the area. In addition to this one more 38 km long meter gauge line from district headquarters to $irsia block is being proposed. One railway bridge across river Tehri and two railway bridges across river Rapti are being proposed. In addition to this it is also suggested that existing GondaBahraich and Bahraich-Mailani meter gauge railway line should be converted into broad gauge.

Type of Industries

The following industries (392) are being proposed to be established in the district.

Table no 2.1 **Forest-based Industries**

Name of Industry	Nos.	No. of Employment
Catechu	5	*200*
Plywood	2	*40*
Safety matches	2	*150*
Wood seasoning plant	4	*80*
Wooden building materials	1 *0*	*60*
Card board	4	*20*
Wooden furniture	*30*	*210*
Wooden stationary	5	*50*
Mattresses Industry	*10*	*30*
Saw mill	*30*	*270*

Livestock-based Industries

Name of Industry	Nos.	No. of Employment
Tanned leather	6	18
Leather bags	*10*	*40*
Shoe making	25	*100*
Bone mill	3	12
Dairy industry	2	*80*
Chilling plant	1	*10*

Agro-based Industries

Name of Industry	Nos.	No. of Employment
Rice mill	*50*	*1750*
Oil mill	*40*	*320*

Pulse mill	*60*	*1800*
Sugar mill	2	*1000*
Rice branoi/	4	*40*
Activated carbon	2	*20*
Maize starch	15	*75*
Corn flakes	5	*100*
Chura industry	*10*	*80*
Flour mill	*20*	*800*
Bread factory	*10*	*150*
Potatochips	5	*50*
Spice mill	6	*30*
Pickle industry	4	*40*

Other Industries :

Name of Industry	Nos.	No. of Employment
Agricultural implements	4	48
Fertilizer	2	60
Cold storage	4	200
Total number of employment generated by proposed indus trialis a *tion*		7,933

Basis for Location of Industries

To have suitable location for any industry, return cost ratio should be highest. Under cost three items can be taken as major factors:

i) Processing cost

ii) Procurement cost

iii) Marketing cost (distribution cost)

The return will be in terms of money as far as private enterprise is concerned. To get maximum social benefits, the private parties should not always be given the best

.location but sometimes the second best so that balanced growth of the district is maintained and the fruit of economic development is shared by all the sections of the society.

Location of Industries

Following assumptions have been made while deciding the location of the industries:

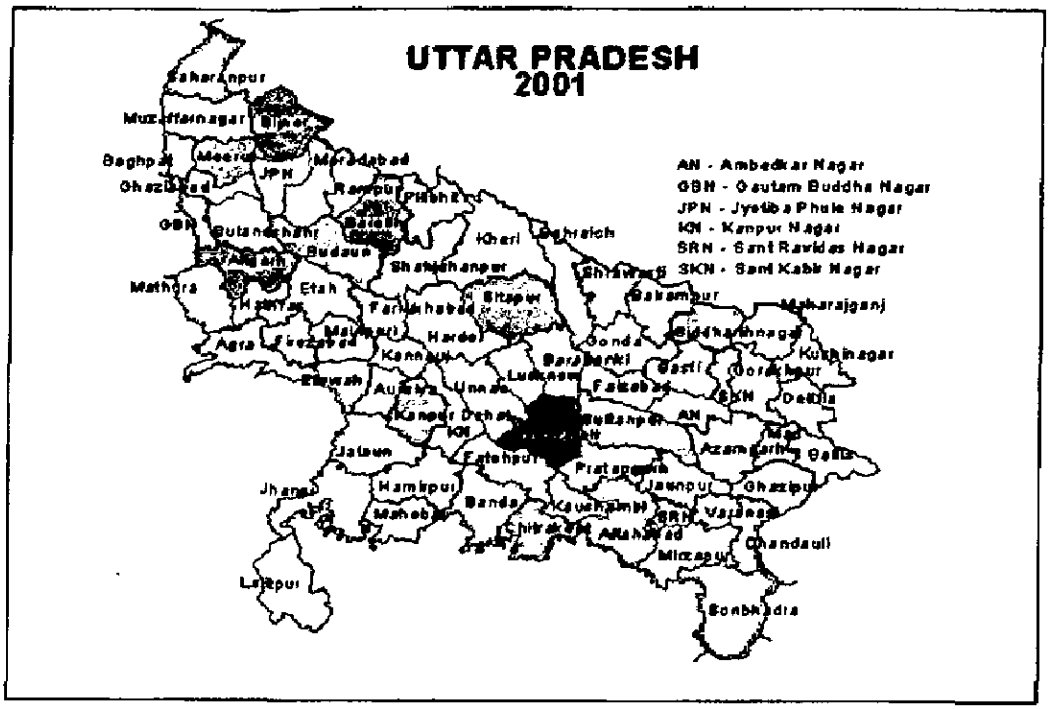
1. Processing cost remains almost the same throughout the district and only transportation cost varies.
2. Markets are fixed and alternative locations do not alter the marketability of the product.

Based upon the above assumptions the locations for various types of industries have ben suggested.

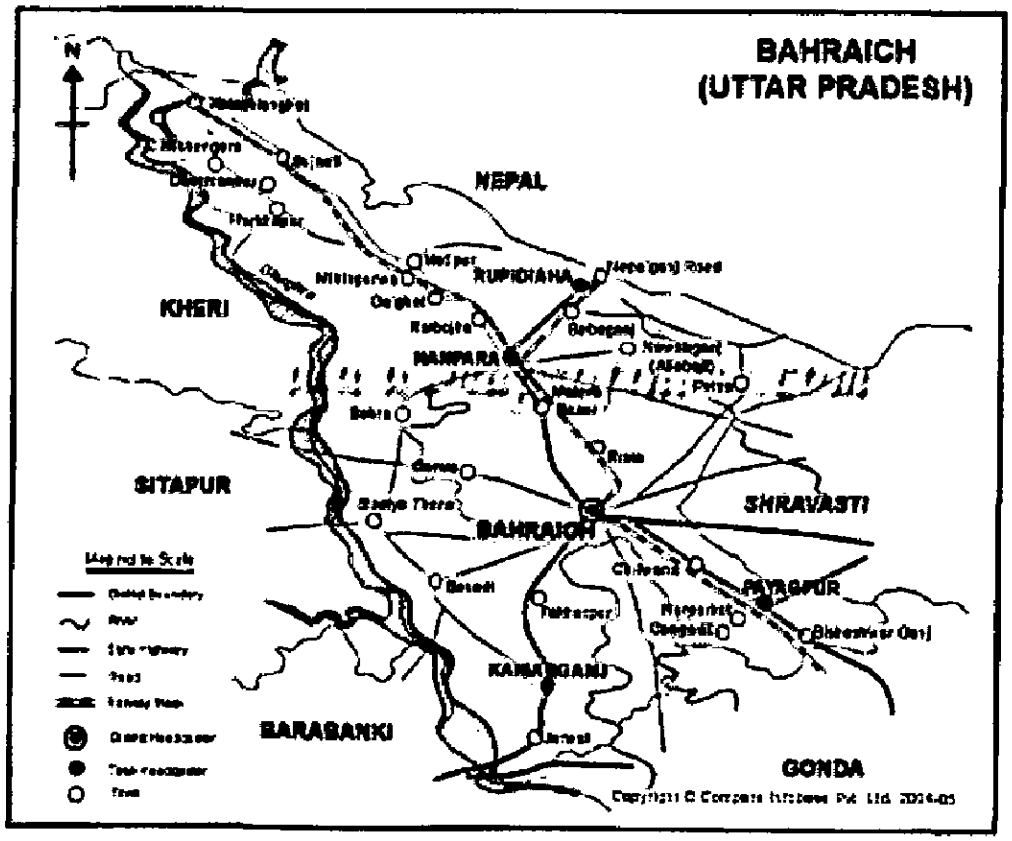
2.3.2.8 RECOMMENDATIONS FOR PHASING OF DEVELOPMENT

In the first phase, emphasis should be laid on development of agricultural resources. Farming should be encouraged by advancing loan jor agricultural purposes with liberal policies and at low rate of interest. First of all, an access should be provided to the forest by constructing some new roads.

In the second phase, emphasis should be put on livestock and agro-based industries.



Map 2.7: Location of Bahraich in UP



2.8 Map : Bahraich District

2.3.3 Case Study 3 : Solan District, Himachal Pradesh

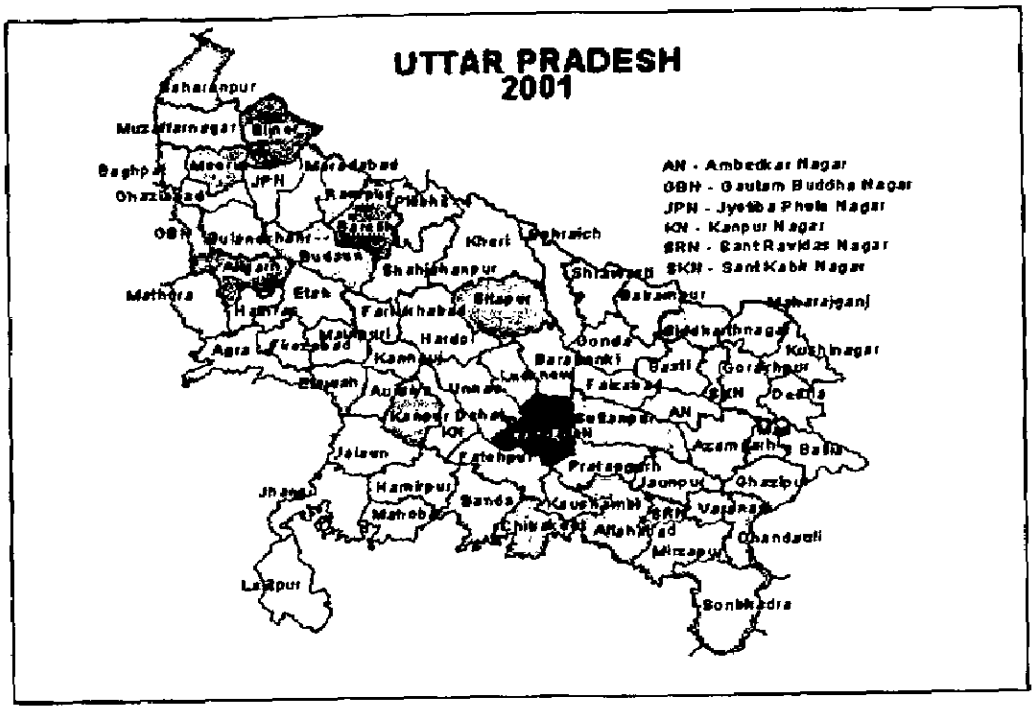
PROFILE:

Solan district is known as the "Gateway of Himachal Pradesh. The total geographical area of the district is 1936 Sq. Kms. And the population is 4,99,380 as per 2001 census. The topography of the district is mountainous with elevation ranging from 300 meters to 300 meters above mean sea level. The economy of the district mainly depends on the agriculture and horticulture while industrial activity is also growing at an encouraging pace giving it a place of pride as most developed industrial district of the state. Mushroom Cultivation has also come up in a big way in the district. Solan is known as the " Mushroom City of India"

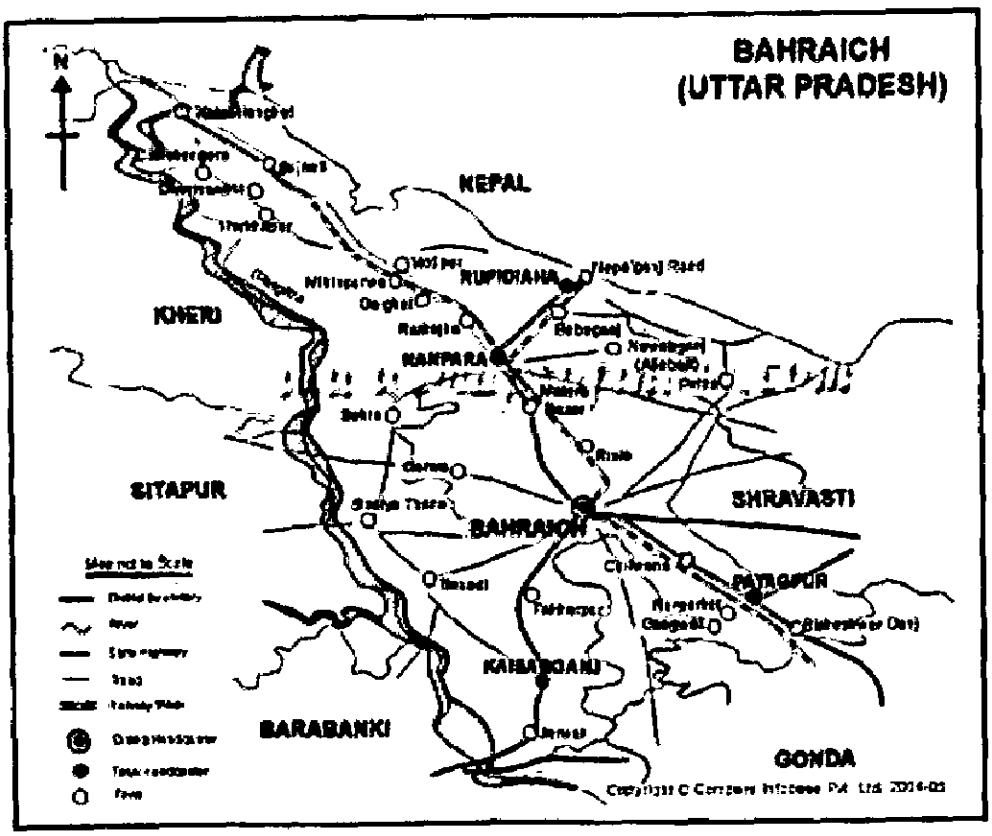
Solan District came into existence at the time of the reorganisation of the districts of the State on Ist September, 1972. The District was carved out of Solan and Arki tehsils of the then Mahasu district and tehsils of Kandaghat and Nalagarh of the then Shimla District. Administratively, the district is divided into four Sub-division viz. Solan comprising of Solan and Kasauli tehsils, Nalagarh covers the juridisdiction of Arki and Kandaghat Sub-divisions covers their respective tehsils. The total geographical area of the district according to the Surveyour General of India is 1,936 sq. km. which constitutes 3.49 percent of the total area of the State and ranks 9th amongst the district.

Physical Features

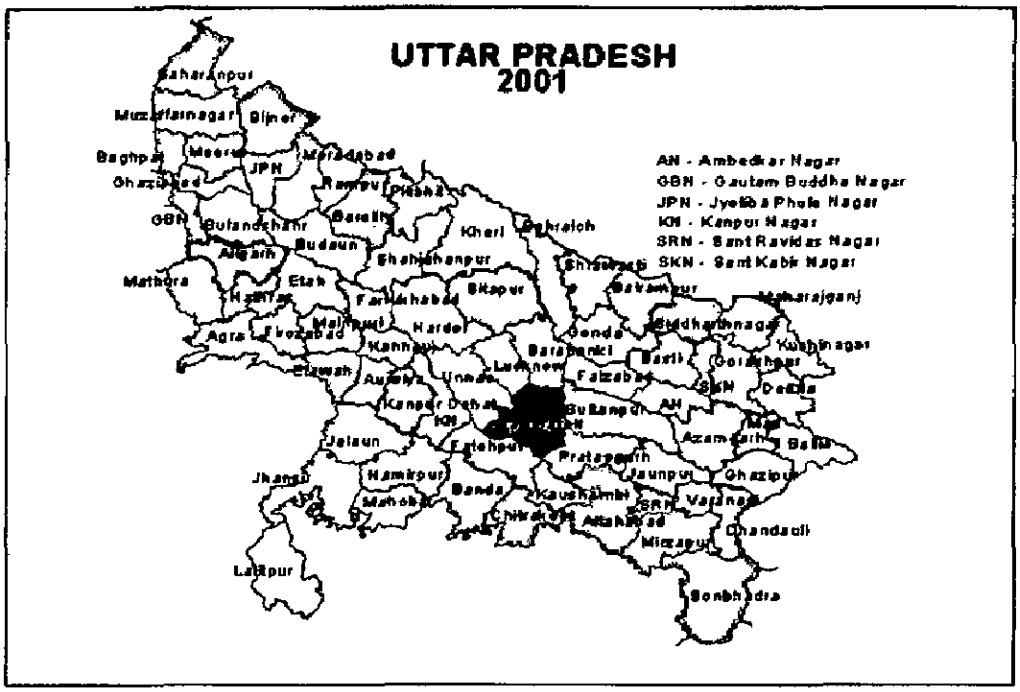
The District is bounded by Shimla district in the North and by Ropar District of Punjab and Ambala district of Harayana in the south, by Sirmaur District in the east and by Bilaspur district in the west. Mandi District touches the boundary of Solan district in norht-east. The mountain ranges lie in the outer Himalayas and are a part of Shivalik ranges. The mountains of lower elevation are found in western-southern parts of the distict comprising of Nalagarh and Arki tehsils while higher ranges start from central region and extend upto north-estern corner of the District comprising Solan tehsil and parts of Arki tehsil, Kasauli tehsil and Kandaghat tehsil which are located in north-eastern direction of the district and are having the highest ranges of the District.



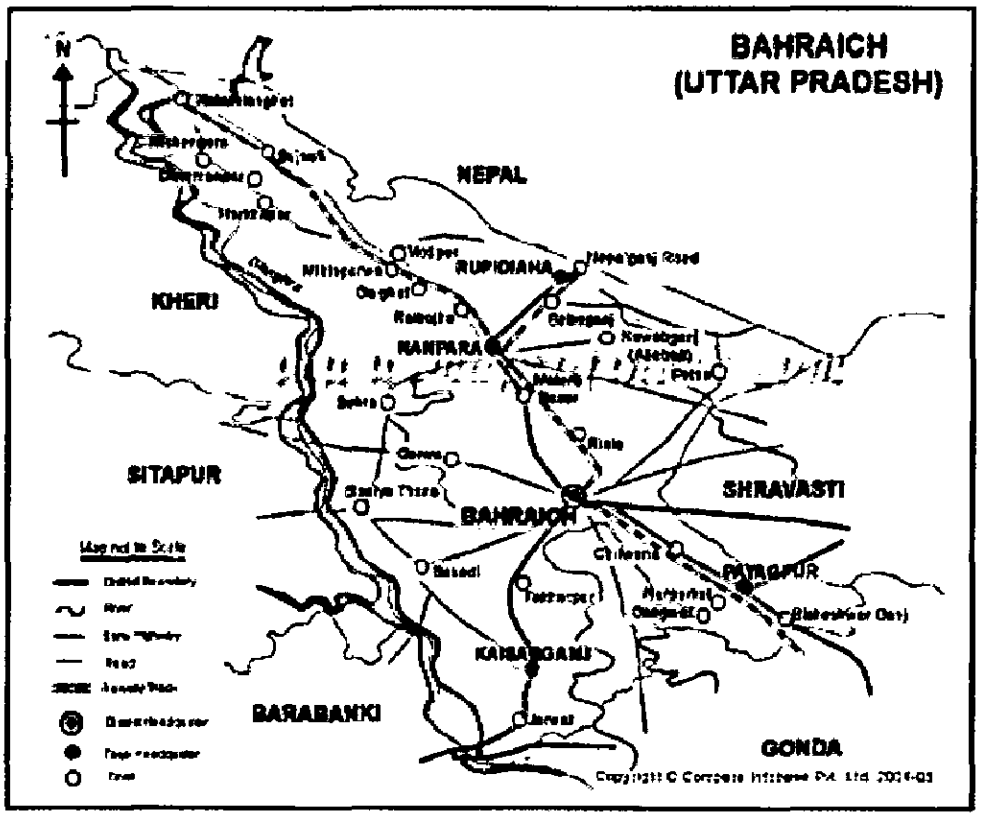
Map 2.7: Location of Bahraich in UP



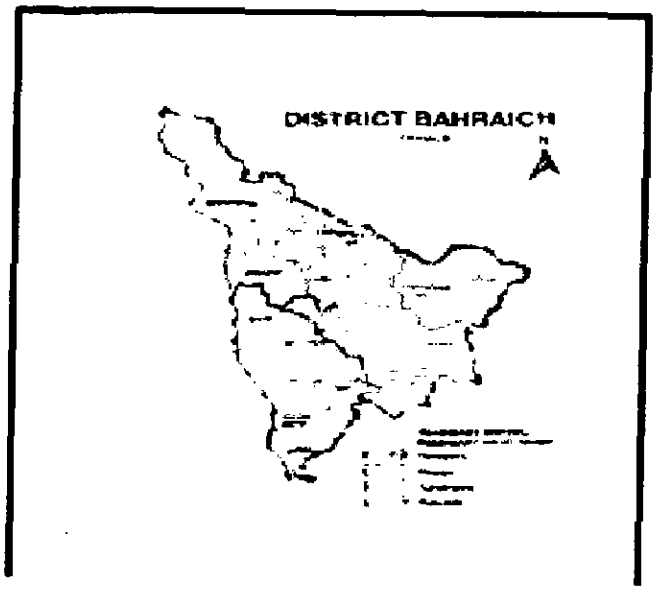
2.8 Map : Bahraich District



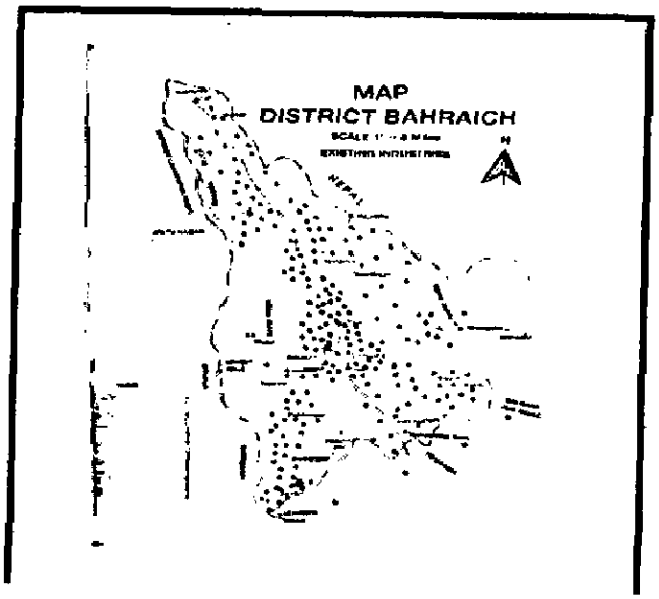
Map 2.7: Location of Bahraich in UP



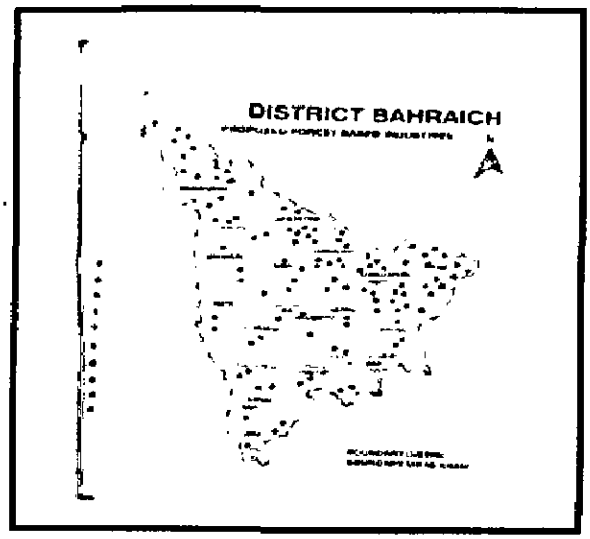
2.8 Map : Bahraich District



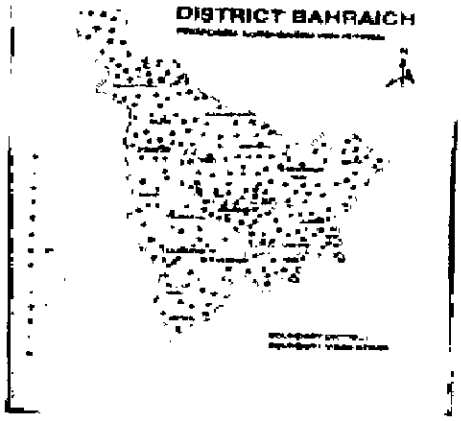
Map 2.9: Blocks in Bahraich District



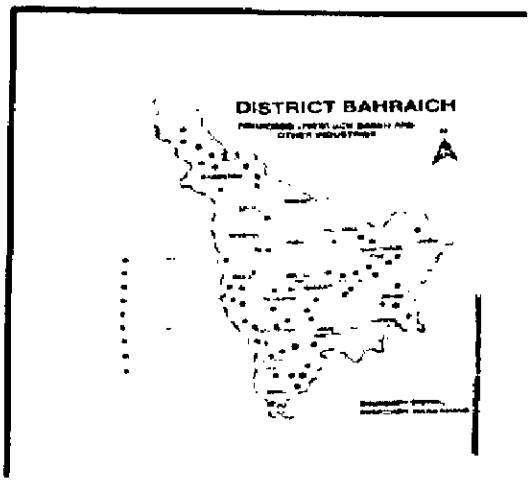
Map 2.10 : Existing Industries



Map 2.11: Proposed Forst based Industres



Map 2.12: Proposed agro based Industries



Map 2.13: Proposed Livestock based industries

2.3.3 Case Study 3 : Solan District, Himachal Pradesh

PROFILE:

Solan district is known as the "Gateway of Himachal Pradesh. The total geographical area of the district is 1936 Sq. Kms. And the population is 4,99,380 as per 2001 census. The topography of the district is mountainous with elevation ranging from 300 meters to 300 meters above mean sea level. The economy of the district mainly depends on the agriculture and horticulture while industrial activity is also growing at an encouraging pace giving it a place of pride as most developed industrial district of the state. Mushroom Cultivation has also come up in a big way in the district. Solan is known as the " Mushroom City of India"

Solan District came into existence at the time of the reorganisation of the districts of the State on Ist September, 1972. The District was carved out of Solan and Arki tehsils of the then Mahasu district and tehsils of Kandaghat and Nalagarh of the then Shimla District. Administratively, the district is divided into four Sub-division viz. Solan comprising of Solan and Kasauli tehsils, Nalagarh covers the juridisdiction of Arki and Kandaghat Sub-divisions covers their respective tehsils. The total geographical area of the district according to the Surveyour General of India is 1,936 sq. km. which constitutes 3.49 percent of the total area of the State and ranks 9th amongst the district.

Physical Features

The District is bounded by Shimla district in the North and by Ropar District of Punjab and Ambala district of Harayana in the south, by Sirmaur District in the east and by Bilaspur district in the west. Mandi District touches the boundary of Solan district in norht-east. The mountain ranges lie in the outer Himalayas and are a part of Shivalik ranges. The mountains of lower elevation are found in western-southern parts of the distict comprising of Nalagarh and Arki tehsils while higher ranges start from central region and extend upto north-estern corner of the District comprising Solan tehsil and parts of Arki tehsil, Kasauli tehsil and Kandaghat tehsil which are located in north-eastern direction of the district and are having the highest ranges of the District.

History

The district in its present form comprises of the erstwhile princely states of Bhagal, Bhagat, Kunihar, Kuthar, Mangal, Beja, Mahlog, Nalagarh and parts of Keonthal and Kothi and hilly areas of composite Punjab State which were merged in Himachal Pradesh on the Ist November, 1966 on the reorganisation of composite Punjab on the linguistic basis. Most of these princely state as per history were subjected to the onslaught of Gorkha invasion from the year 1803 to 1805. it was in the year 1815 that after the gorkhas lost to the Britishers, these states were freed and restored tot he respective rulers. Most of the states were small in area and population and were under the control of the superintendent of Shimla Hill States before Independence. Himachal Pradesh appreared on the administrative map of the country on the 15th April, 1948 and the states of Bhagat, Baghal, Kunihar, Kuthar, Mangal, Beja, Keonthal and Koti formed a part of the then Mahasu District. Nalagarh state which was merged after Independence in Patiala and East Punjab State Union later on formed a part of Punjab when the reorganisation of the states took place in 1956 and remained a tehsil of Ambala District, Kandaghat and Shimla tehsils of Shimla district like othe rhilly areas of Kullu, Lahul and Spiti and Kangra districts become part of Himachal Pradesh on the Ist November, 1972 and Solan District sprang up on the administrative map of the state. Solan District derives its name from Solan town which came into existence after the construction of the Cantonment at that palce around the last quarter of the 19th century.

Solan is the fastest growing district in Himachal Pradesh,Owing to its advantageous location and proximity to other developed district is experiencing a compratively higher growth than other district of Himachal Pradesh. Unlike other hill districts of Himachal Pradesh,Solan district has mix topographic conditions that have favoured not only the development of both horticultutre as well as agriculture but to some extent the industrial development within the district.

APPROACH:

This concept is prior to 73rd & 74th Constitutional Amendments. A detailed survey of the Model Integrated District Development Plan for Solan District was done. Various stages of IDDP - formulation have been discussed below:

In order to have speedy socio-economic development of the country and improving the quality of life of the people, employment generation, utilization of sources to the fullest extent etc. calls for the need to prepare a "Spatio Economic Plan" which would address area and location specific problems, issues, needs, preferences and priorities after considering the area specific potentials of the district. Thus, the district plan has to address itself to the following issues.

i) Integrated Area Planning as against Purely Sectoral Planning.

ii) Rural-Urban Integration.

iii) A Five Year Development Plan with a Twenty years perspective plan.

iv) Integrated District Management and the role of the democratic Institution.

The concept conceived for Solan district is in line with the Govt. of India, Recommendations of National Commission on Urbanization (NCU), 1983.

The various tasks accomplished in order to prepare an IDDP for Solan were as follows :

a) Data Base

Basic data and necessary information collected mostly through secondary surveys *from various departments of state/district, institution etc. viz. agriculture, horticulture,* industry, infrastructural facilities, demographic and occupational structure, forestry and a list of ongoing and committed programmes of all departments, at Block/Tehsil Level.

b) Appreciation and Assessment of Various Sectors of Economy

This is the one of the most important exercise in the preparation of IDDP. With the help of information and basic data collected (as listed in-a), a detailed analysis was carried out to understand and assess the existing situation of the Solan district ego the level of various infrastructure facilities available blockwise and related to each sectors spatially.

c) Identification of Critical Issues, Development Potentials and Thrust Areas

The assessment of various sectors of economy and the infrastructure facilities helped in understanding the status of development in Solan district, which indicated critical issues of each sector at the specific block level and potentials for development.

d) Formulation of Spatio-Economic Plan (SEP)

Various steps identified in the formulation of a district plan were as under. ;

*Demarcation of development activities and programmes confined in the district.

*Determination of Broad Objectives in Conformity with the objectives of the national and state plans.

*Assessment of the levels of economic development as well as socio economic infrastructure facilities.

* Assessment of district resources nature, human and economic both existing as well as potential.

* Assessment of the needs of the people and different areas within the district and

*Assessment of the financial resources available within the district and estimate the gap to be filled up by the central and central governments.

OBSERVATIONS :

Since the 73rd and 74th Constitutional Amendments came into existence after the proposal of the Solan district plan, therefore the following issues were not dealt with.

1)The "73rd and 74th Constitutional Amendments" , the . implementation of "New Economic Reforms" in the country and he "Environmental Crisis" calling for "Sustainable Development", which have revived our interest on Issues related to District level Planning and these have not been given emphasis.

2)Rural urban integration has not been achieved fully.

3) The needs and priorities of the people at the grass-root level living in villages and smaller towns, have not been " given due consideration.

4) District which holds good potential to develop into a stable, and self supporting economy capable of emergin as one of the develop district of the state have not used its potentials to the fullest extent.

Places of Tourists Interest

There are many places of tourist interest in district.

chail :- 49 Kms. from Shimla via chini bungalow and 62 killometers Via Kandaghat and is about 2150 Mtrs above MSL famous for picturesque location ,cool climate and dense forest.

Solan :-It is popular summer resort ,and situated between Shimla Kalka and NH 22 ,45Kms from Shimla and it is well conneted by rail and road .It has height of 1453 Mtrs about MSL .A twon is head quarter of district adminstartion.

Parwanoo : It is situated 3 Kms. from Ka~ka and is the gateway of Himachal Pradesh from Haryana and Punjab. NH-22 passes through industrial area in the foot hills of Kasauli at an elevation of 1,100 mts. above MSL. Other tourist places are Dagshai, Kandaghat.

Forestry and Mining

Exploitation of natural resources forms the base of all economic development. according to National forest Policy, 60% of the hill area should be developed and managed as forests. But Solan district has around 38% of area under forest. The Mineral wealth so far found, includes building stone, limestone, sand, brick clay, bajri etc. and in all there are 26 mineral based small scale industrial units in the district apart from numerous brick kilns and stone crashing mills and total revenue generated in 1990-91 was rupees 6.41 Lkahs and from forest it was Rs 1,17,365 during 1991-92

Horticulture

Horticulture though not showing very high figures, has very bright potential for development in Solan district. Various types of fruits and mushroom

production are major horticultural products. The total area under horticulture activities is 7947.85 acres' (7.26% of total cultivable area in the district) It is apparent that horticulture could ,become one of the main stays of the economy, which can be improved with strengthened infrastructure facilities. to enhance the future potentials.

STRATEGIES FOR DEVELOPEMNT:

Directions of growth in intra district level appreciations of resource availability , infrastructure, facilities, economic functions etc. indicates that solan districts established comparatively faster growth along the Baddi - Barotiwala corridor upto Nalagarh with the concentration of major industrial activities .The reasons attributed to this faster growth include a relatively plain topography and proximity to adjoining industrial districts of Punjab and Haryana and developed road network pattern and so on.

Another important corridor in the district Parwanoo-Dharampur Solan-Kandhaghat corridor.

Owing to its developed road and rail network towards Shimla (NH 22 and the only narrow gauge rail link in the state) which is the most important of the state network, the corridor has demonstrated one of the fastest growth in the district. The settlements such as Solan, Dharampur, Parwanoo hence have shown relatively faster growth than others in the district.

The *third important growth corridor established in this district can be observed along Solan-Sabathu-Kunihar-Arki corridor.*

By virtue of its better linkages, horticulture potentials and unexploited tourism potentials the settlements viz., Sabathu, Kunihar and Arki have emerged as nodal centers over a period of time.

In addition to the above mentioned three corridors, the emerging potential directions of growth in following:

the district have been observed along the

- Nalagarh - Ramesh r- Kuniha r
- Barotiw al a - K ris h an ga rh - Sab a th u - Ka n dag hat
- Kunihar-Kandaghat
- Dharampur-Kasauli- Parwanoo

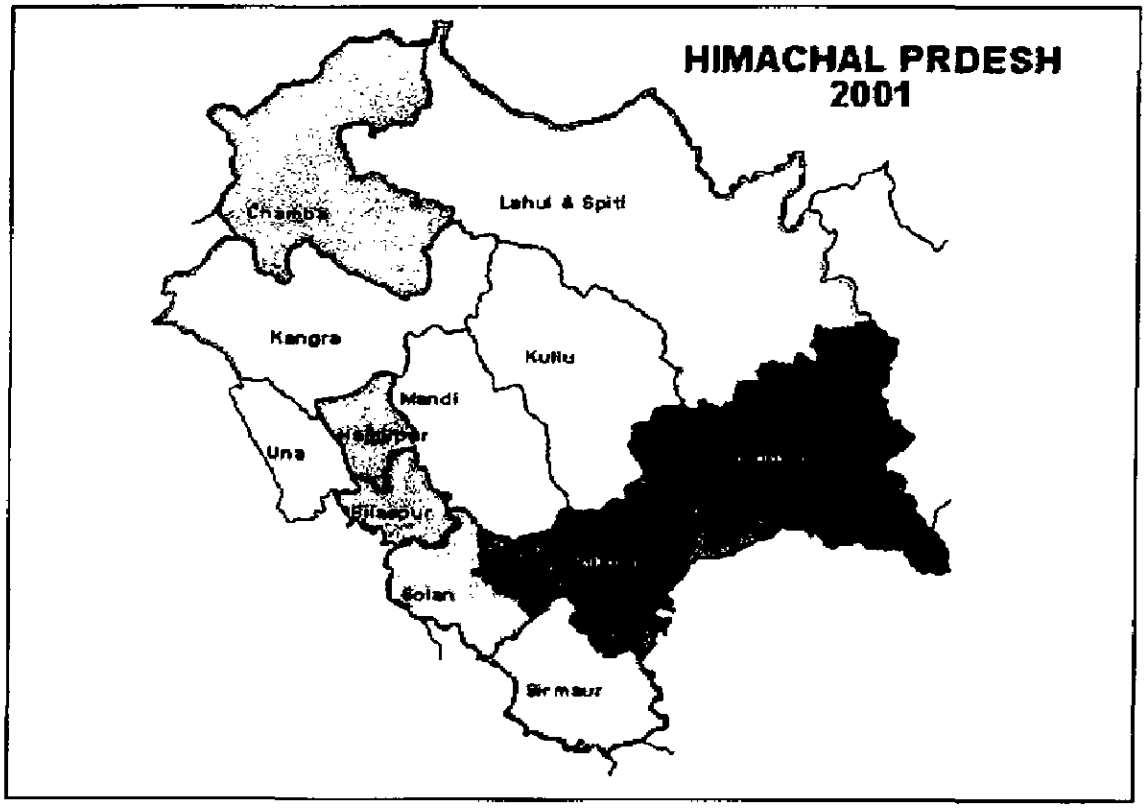
The settlements along the aboce mentioned corridor hence would also fuction as nodal centers of varring hiechrarchi level in future .

Spatio economic plan (SEP) indicates broad settlements development strategieis at distruct level with a view to achive balance development within the district The SEP

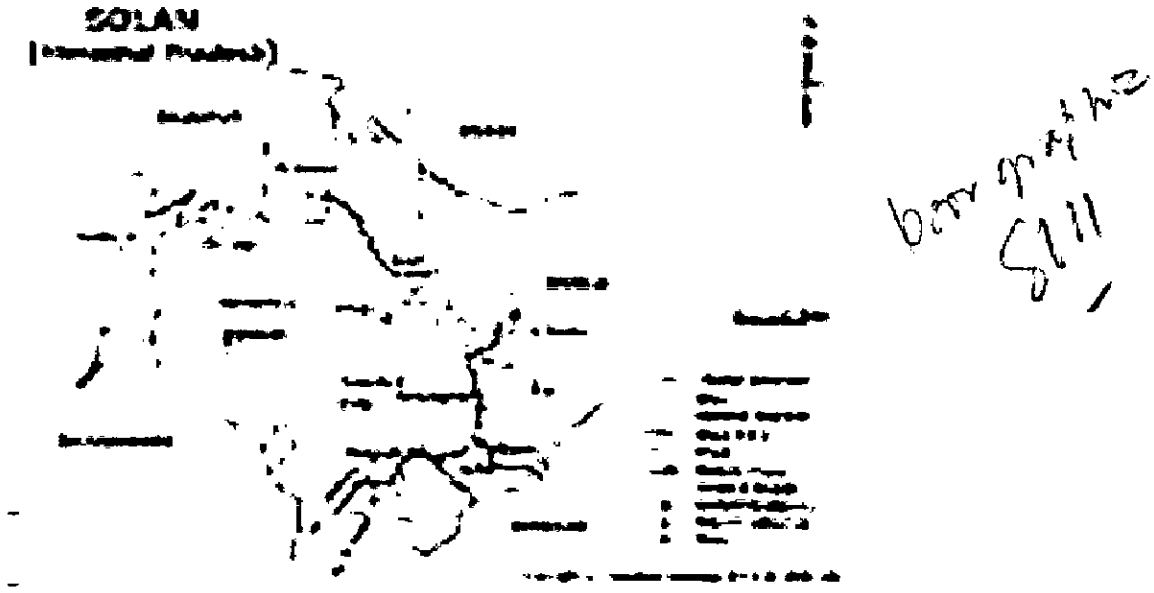
also indicates broad strategies to be taken by 2011 in all the identified sectors for the balance development strategies helped in identified the programmes for next five years and lead to formulation of integrated district development paln. sectoral strategies at the block level and settlement development strategies.

2.3.4: Case Studies : Inference

Backwardness is generally the result of deficiency in natural resources. Economic development of any area is a function of resource availability or resource utilization. If these drawbacks could be removed by extension of infrastructural arid institutional facilities or by improving the qualities and by rationalizing in space it is expected that the developmental process in the area will be considerably strengthened. So, resource based industrialisation can be a strategy for the development of a backward area. Bahraich is one of the fifteen backward districts of eastern Uttar Pradesh.



Map 2.15: Location of Solan District in H.P.



Map 2.16: solan district

Table 2.2: Case Study analysis

Particular	Case Study		
	Bolpur Block	**Bahraich District**	**Solan District**
1. Profile	Bolpur is one of the most backward region in West Bengal. Topography of the region is plane.	District Bahraich lies in the sub-Himalayan belt along the border of Nepal and is north western-most district of Faizabad division. In shape, the district is an irregular triangle.	Solan district is known as the "Gateway of Himachal Pradesh. The topography of the district is mountainous with elevation ranging from 300 meters to 3000 meters above mean sea level.
2. Approach to Study	To complete listing of all the proposals relating to different sectors, a men-tion about their relationships, sequencing and phasing also give information on financial implications, regional balance and employment generation.	To study the existing condition of industrial development and potential for development.	In order to have speedy socio-economic development to address area and location specific problems, issues, needs, preferences and priorities after considering the area specific potentials of the district.

3. Potential of Development	Animal husbandry, horticulture, fisheries and poultry farming would receive increasing attention in view of the "nutrition"' programmes of the government.	Forest, Agriculture, Livestock, Man-power and Infrastructure development.	Cooridoors of tourist potential are : Nalagarh - Ramesh r-Kuniha r Barotiw al a - K ris h an ga rh - Sab a th u - Ka n dag hat Kunihar-Kandaghat-Dharampur-Kasauli-Parwanoo
4. Observations	Project proposal envisages AVARD's participation in implementing programmes in four sectors namely, agriculture, irrigation, industries and social services.	Type of Industries industries proposed to be established in the district. Forest-based Industries Agrobased Livestock based Other Industries	The "73rd and 74th Constitutional Amendments" , the . implementation of "New Economic Reforms" in the country and he "Environmental Crisis" calling for "Sustainable Development", which have revived our interest on Issues related to District level Planning and these have not been given emphasis. Rural urban integration has not been achieved fully.

Inference	Backwardness is generally the result of deficiency in natural resources. Economic development of any area is a function of resource availability or resource utilization. If these drawbacks could be removed by extension of infrastructural arid institutional facilities or by improving the qualities and by rationalizing in space it is expected that the developmental process in the area will be considerably strengthened. So, resource based industrialisation can be a strategy for the development of a backward area. Bahraich is one of the fifteen backward districts of eastern Uttar Pradesh.

CHAPTER 3

PROFILE OF THE RAMTEK TAHSIL

3. PROFILE OF RAMTEK TAHSIL

Ramtek Tahsil is a part of Nagpur District of Maharashtra located in central India. Economy of the Tahsil is Agriculture based (Primary Sector). Urbanization in the Tahsil is %. Infrastructure is insufficient. Ramtek being a historical and religious place it has pilgrimage importance. It is a Tahsil headquarter and a Community Development Block.

3.1 Location

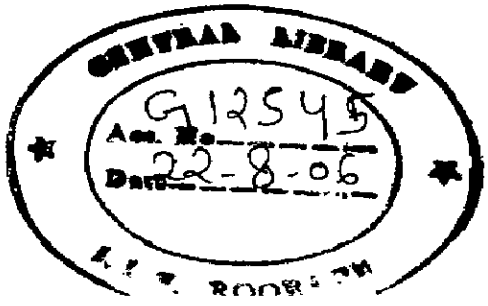
Ramtek taluka is located on the east of Nagpur city in the Nagpur District. It is connected with the Madhya pradesh on North, Bhandara district of Maharashtra on East, Parshioni Taluka of Nagpur District on West and Mouda Taluka from Nagpur District on South.

3.2 Historical significance

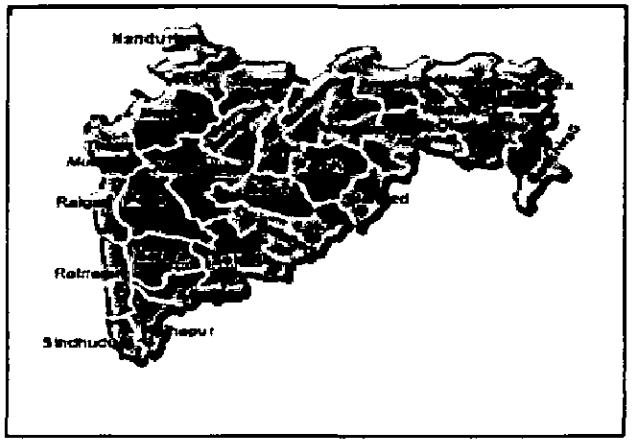
Ramtek region has a rich cultural background and its heritage in architecture. It was an important site in the Vidarbha Region.

The area is rich in natural resources, and rich architecture of various periods. In the Mourya period, this area was under great Ashoka. The architectural history dates back to the Satvahana period (250 A.D.). The excavated site at Mansar shows the evidences of a rich architectural development in that period. The Devakulam (Royal Temple) and the palace complex show that this area was an important political center in that period.

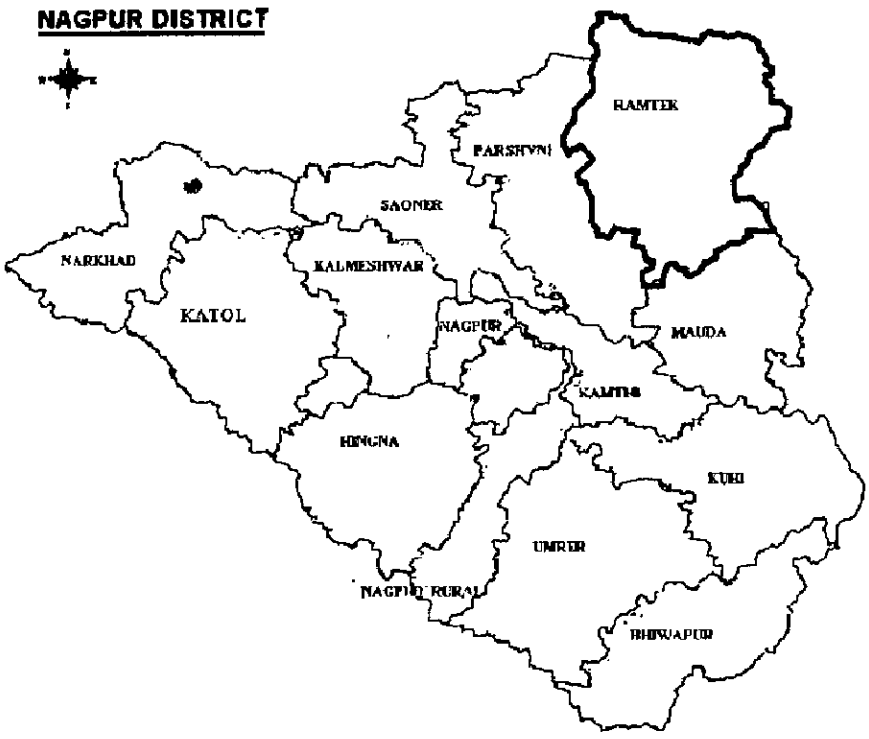
After the fall of Satvahana, the next rulers were the Vakatakas of Purika from Central India. They defeated Satvahanas in 350 A.D. and established their empire in vidarbha up to the some parts of Deccan. After the first Vakataka ruler Pravarsen- I, this empire got divided into 4 parts. The archaeological findings show that the one capital was the Vasim in Vidarbha and other one was Nandivardhana near Ramtek. Other two places are still unknown. In 395 A.D. the Vakataka ruler Rudrasen- II, shifted his capital to Nandivardhana. This was the time when this area was of utmost



Location of Maharashtra in India
(Source: Census of India maps 2001)



Nagpur District in Maharashtra
(Source: Census of India maps 2001)



Ramtek Taluka in Nagpur Distrrict (Source: Census of India maps 2001)

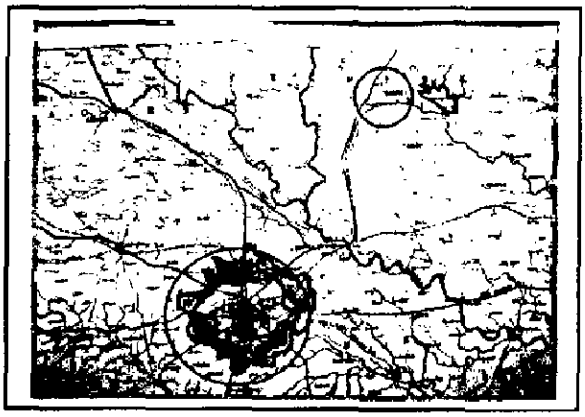


Fig 3.3: Connectivity of Ramtek to Nagpur

(Source Nagpur Reginal planning board 2001)

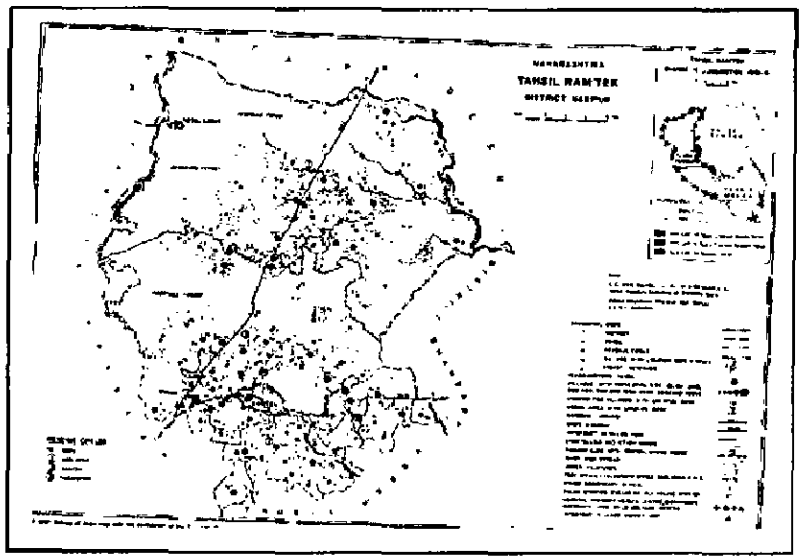


Fig.3.5: Ramtek Tahsil –Map (Census of India 1991)

The Yadavas were prolific temple builders. They propagated a style of temple building known as Hemadpanthi named after the Aamatya Hemadri, minister to the Mahadev and Ramachandra Yadav. Hemadri hailed from Vidarbha.

After the falt of Yadavas, till the entry of the Mughalason the historic scene, the gonds chieftains of the central India were free from any political dominance.

Even during the hey- dey of Yadavas rule, they werte never completely sub-judged. The gonds were divided into 2 classes- the Raj gonad and khatoles of these the Raj Gonds has intermarried into a few Rajput clans of central India and styled themselves as 'Kshatriyas'.

The Gond territory was devided amongst several chieftainsor Rajas. Ramtek was under the Gond house of Devgad (Devgad was under the house of Gadha- ruled by the famous Rani Durgavati). When Gadha passed under mughal rul, so did Devbgad. *According to Ain – E – Akbari, Jatba ruler of Devgad possessed 2000 horses, 50,000* foot soldiers and 100 elephants. Jatba extended his kingdom till Nagpur and constructed a fort as out post.

Jatba's grandson, Bakht Buland was driven out of Devgad in the war of succession, he appealed to the Mughal emperor Aurangzeb, a staunch Sunni Muslim agreed to help Bakht, but on condition that it would continue to marry amongst the Raj Gonds. Bakht Buland extended his Kingdom. It included the present day districts of Chindawada, Baitul, Nagpur, Soni, Bhandaraand Balaghat.

He founded the city of Nagpur and later shifted his capital there. He died in 1706 A.D.. Ramtek appears to be a pleasure resort for the Gonds.

Gond rule in Vidarbha came to an end in the mid eighteenth century when the Marathas under Raghuji Bhosala –I, made forays into the reion. Raghuji- I had sought service under Chand Sultan, the successor of Bakht Buland. On the death of Chand Sultan, the war broke out between the rulers legitimate and illegitimate progeny. Rani Ratan Kuwar the dowager asked aghuji for help. The Rani in turn granted him a third part of her Kingdom. (156 villages). Raghuji Bhonsala and the Marathas were therefore established at Nagpur. Later under he brought Akbar and Burhan (the two sons of Chand Sultan) to his direct protection and care. He eventually took over the entire territory and the Gond house of Devgad shaded into insignificance.

The power of center for Vidarbha was now at Nagpur (1748A.D.).

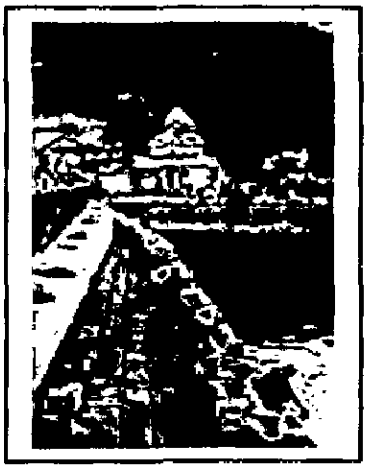
Table 3.1: Important areas in Ramtek Tahsil (Source: Nagpur Gazetteer)

Period	King	Important Areas
Mourya	Ashoka.	
Satvahana		Mansar
(250 A.D.)		
Vakatakas	Pravarsen- I	Vidarbha up to the some parts of
(350 A.D)		Deccan.Devided into 4 parts
		1) Vashim in Vidarbha .
		2)Nandivardhana near
		Ramtek
		(Other two are unknown)
Vakataka	Rudrasen- II,	Nandivardhana
(395 A.D)		
Kalachuries	Buddha raja	Nandivardhana
of Mahishmati		
(550 A.D)		
Maheshwar		Vidarbha
Rashtrakuas		Vidarbha
Chalukyas	Pulkeshin II	
of Kalyani		
Paramras of Dhar		Vidarbha
Yadavas	Ram Chandra	Vidarbha
(1204 A.D)		
Gonds	Bakht Buland	
Mughal	Aurangzeb	
Maratha	Raghuji Bhosala –I	
(18th Century)		
British		Nagpur Province
Post Independence		Municipal Council

Fig.

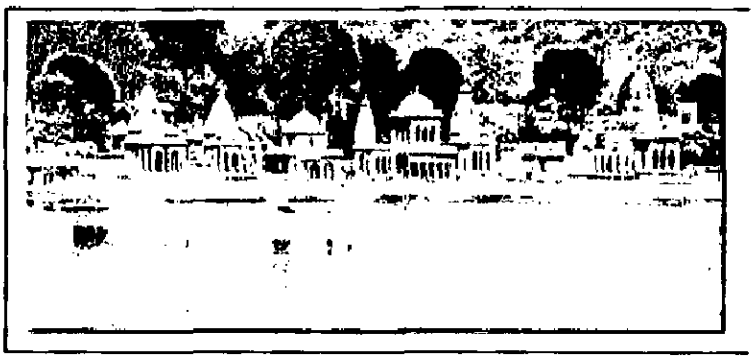
Gate to Ram Temple

Areal View of Hill RamGiri Temple



Ambala Lake

Ram Temple



Ambala Tank and Temples

3.3 Religious Significance:

Ramtek experiences a great festival period during three major festivals of regional importance and other local festivals. Those festivals are Ramavami, Dashahara and tripuri poornima.

The festival of Ramnavami is the most important festival in Ramtek which attracts pilgrims from all areas (villages and Nagpur). Almost 50,000 pilgrims visit the area on this day. But, there are no facilities for these pilgrims in the area.

Dashahara festival is a very important festival as it is believed that lord ram killed the demon ravan on this day. This myth is being transformed into a festival of regional level importance. This is the only place in Ramtek region where they kill ravan on this day. Traditionally people from 'akhada' used to participate into the traditional games and then the festival used to end.

Tripuri poornima is a festival which is associated with the myth that lord shankar killed the demon Tripoorasoor on the hill. So the Tripoor is made and burned on the shikhara of Ram temple as a symbol to destroy all bad things happened. This mid night all the pilgrims and all the residents gather on the gadkhot. For this festival the ritual bath on Ambala lake is considered to be very pure and pius.

3.4 Physiography

3.4.1 TOPOGRAPHY:

Topography of the Ramtek tehsil shows hills and plain land.

Ambagad mountain range tracts in the west side of the region. The various hills – Kaikai hills, Ramgiri hills, Nagarjun hills, Hidimba hills cover the area.

3.4.2 CLIMATE:

Climate of this region is hot and dry. It becomes hot in summer and cold in winter. Maximum temperature in the summer goes to 45 D.C.

Average Rainfall: 114 mm

Rains in year 2003 (mm)

Average Rains – 1222.3mm (Days of rains – 52)

Total Rains – 1224.4

3.4.3 GEOGRAPHY:

Geography of Ramtek tehsil shows the presence of minerals such as manganese and dolamite etc.

3.4.4 GEOLOGY:

Soil is mainly black cotton type. Tehsil has manganese ore mines.

3.4.5 RIVERS AND OTHER WATER BODIES:

The Sur river and Kapila River flow through the region. It has no of lakes ponds and wells 1729 Hactares in area.

3.5 Demography

3.5.1 POPULATION DISTRIBUTION

Table no.3.2 : Population distribution as per gender

	Total Population
Total	151586
Male	77014
Female	74572

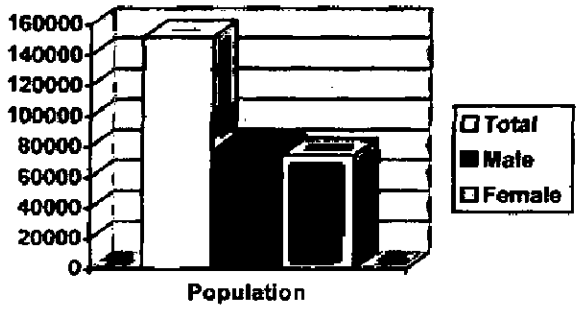


Fig. 3.2: Male Female Distribution of Total Population

(Source : Nagpur District statistical report 2003-04)

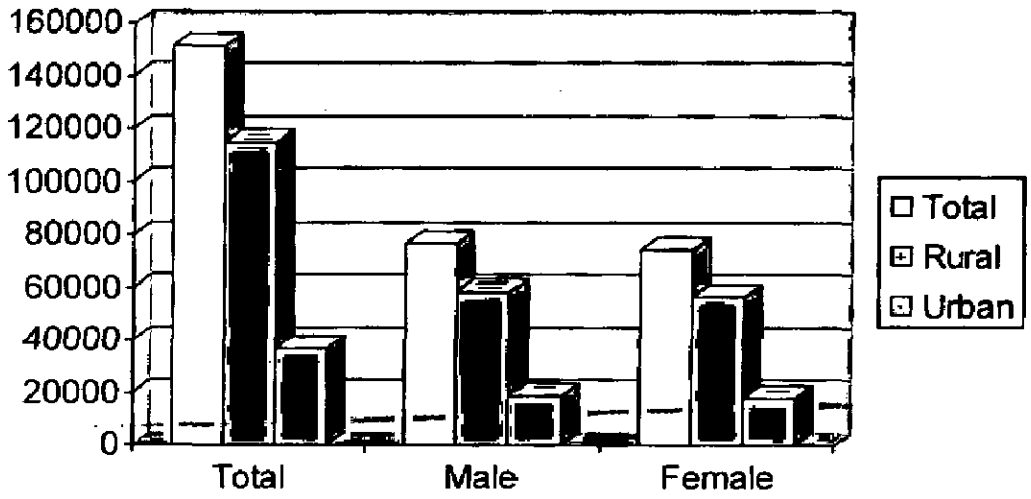


Fig.3.3: Distribution of Population among Male &Female and Urban & Rural

(Source : Nagpur District statistical report 2003-04)

Table No 3.3: Area, Population R/U, villages, Towns, and Nos of Households

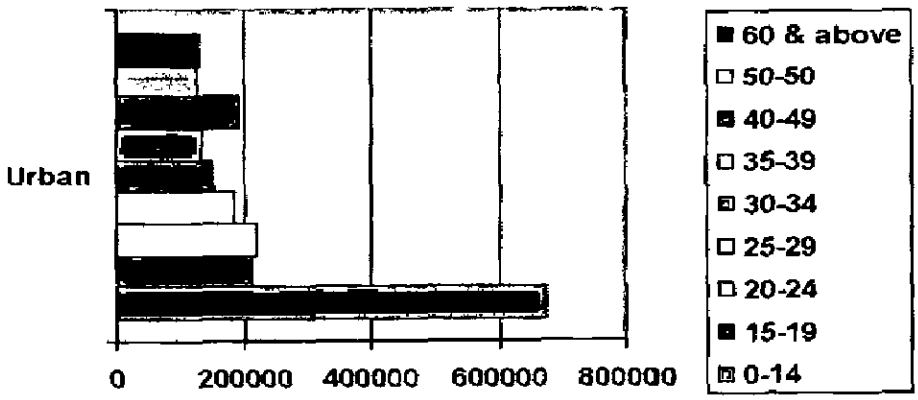
(Source: Nagpur District Statistical Report, 2003-04)

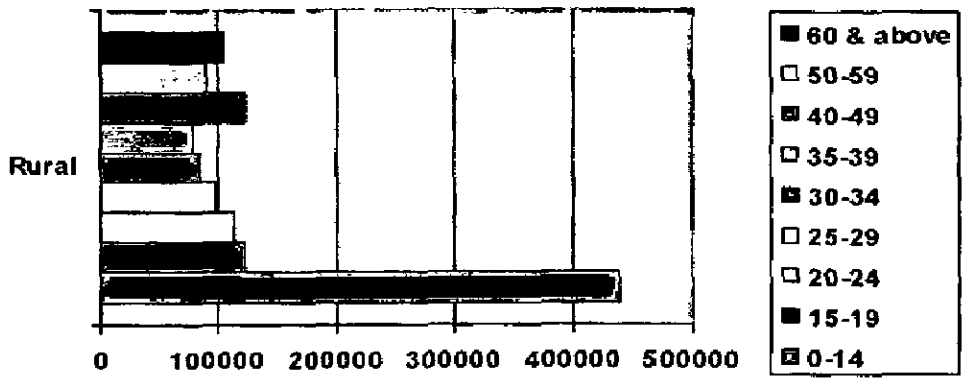
Sr No.	T/R/U Ramtek	Area in Sq.km.	Population			No. of Villages Inhabited / Uninhabited	No. of Towns	No. of occupied houses '000	No. of house holds '000
			Total	Male	Female				
1	T	1141.56	151586	77014	74572	137 / 17	4	24	26
	R	1119.95	114980	58371	56609	137 / 17	-	19	20
	U	21.61	36606	18643	17963	-	4	5	6

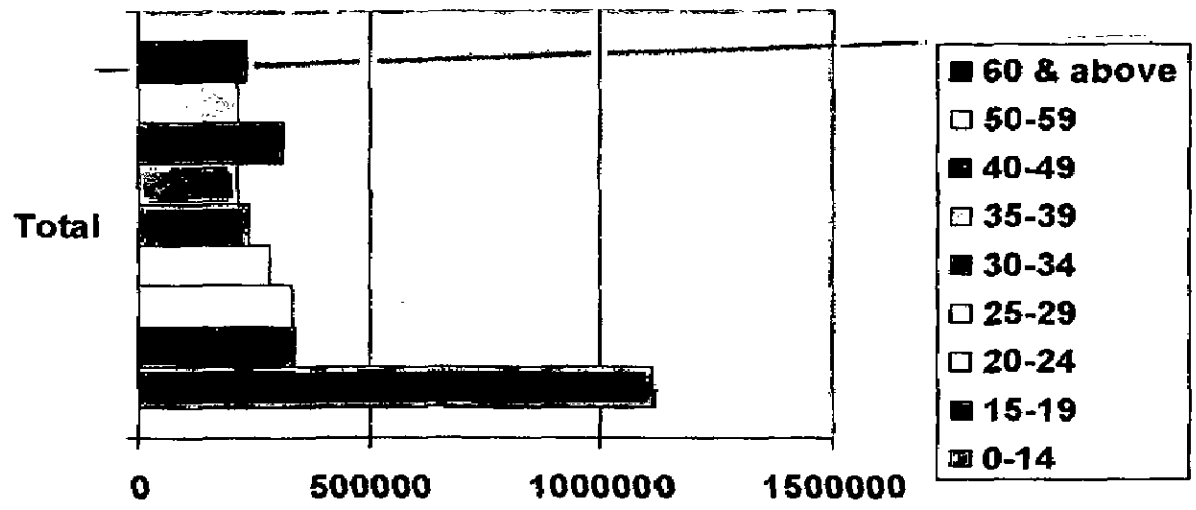
Table No. 3.4 : Age wise distribution of population in Nagpur District

(Source : Nagpur District Statistical report 2003-04)

Age group	Total	Rural	Urban
0-14	1112837	439327	673510
15-19	336826	123335	213491
20-24	333674	112889	220785
25-29	281218	96425	184793
30-34	236696	83827	152869
35-39	211715	78470	133245
40-49	314092	123155	190937
50-59	214938	89722	125216
60 & above	234283	104435	129848


Urban
0
200000
400000
600000
800000
60 & above
50-50
40-49
35-39
30-34
25-29
20-24
15-19
0-14


Rural
0
100000
200000
300000
400000
500000
60 & above
50-59
40-49
35-39
30-34
25-29
20-24
15-19
0-14


Total
0
500000
1000000
1500000
60 & above
50-59
40-49
35-39
30-34
25-29
20-24
15-19
0-14

3.5.2 POPULATION DENSITY

Table no. 3.5 : Population density (Source: District Statistical report, 2003-04)

	Population / sq.km.
Total	112
Rural	87
Urban	1141

3.5.3 SEX RATIO

968 Females for 1000 males. (For Nagpur district sex ratio : 933) (Source: District Statistical report, 2003-04)

3.5.4 SC AND ST POPULATION ('000)

Table 3.6: SC and ST Population ('000)
(Source: Nagpur District Statistical report, 2003-04)

		Total	Male	Female
SC	Total	17	8	8
	Rural	12	6	6
	Urban	5	2	2
ST	Total	47	24	23
	Rural	42	21	21
	Urban	5	2	2

3.5.5 LITERACY

Literacy in the ramtek Tahsil is 72.67 % (Census 2001)

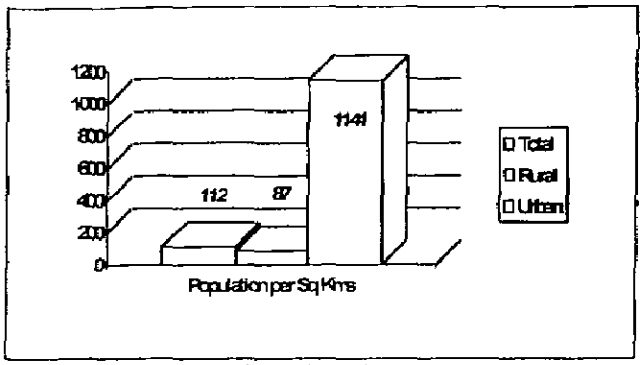


Fig. 3.5: Population density (Source: Nagpur district Statistical report 2003-04)

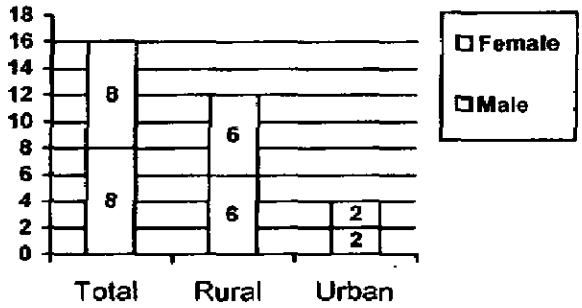


Fig. 3.6: SC Population in '000 (Source: Nagpur district Statistical report 2003-04)

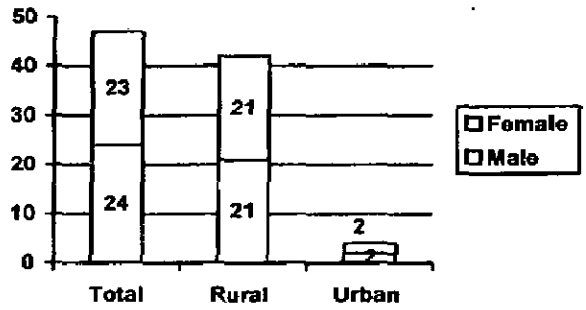


Fig. 3.6: ST population '000(Source: Nagpur district Statistical report 2003-04)

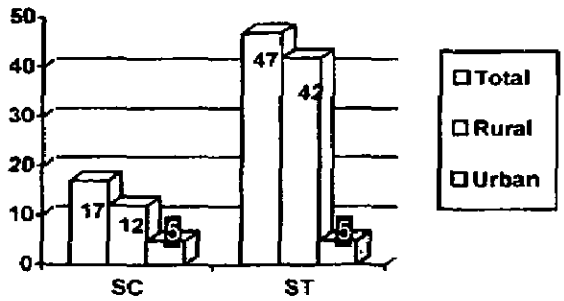


Fig. 3.6: SC and ST population in RAmtek Tahsil '000
(Source: Nagpur district Statistical report 2003-04)

3.5.6 OCCUPATIONAL STRUCTURE

Table 3.7 :Sectorwise division of workers as per the 1991 census ('000) (% given in bracket)

(Source: District statistical report 2003-04)

Particular	Primary Sector			Secondary sector			Tertiary Sector			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
T	309 (37)	235 (71)	544 (47)	197 (24)	38 (11)	235 (20)	331 (40)	59 (18)	389 (33)	837 (100)	331 (100)	1168 (100)
R	264 (75)	219 (92)	483 (82)	41 (12)	12 (5)	53 (9)	45 (13)	7 (3)	52 (9)	350 (100)	238 (100)	588 (100)
U	45 (9)	16 (17)	61 (11)	156 (32)	25 (27)	181 (31)	286 (59)	52 (56)	337 (58)	487 (100)	93 (100)	580 (100)

Table 3.8 : No of workers and non workers as per 1991 Census ('000)

(Source: District statistical report 2003-04)

Sr No	Tehsil/ District	Particulars	Working class						
			Farmers	Farm laborers	Poultry, Forestry, Fishery, Gardening, stc.	Mining works	Household Industries workers	Other than household business	Construction works
1	2	3	4	5	6	7	8	9	10
1	Ramtek Tehsil	T R U	6 174 190	15 183 246	9 29 8	7 20 --	2 8 6	11 44 28	8 19 3

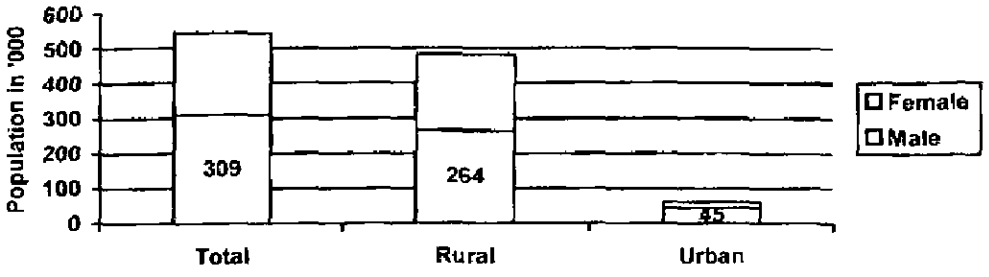
Table Continued.....

Sr No	Tehsil/ District	par tic ula r	Working Class						
			Commer ce & Business	Transp ortatio n	others	Sum of all (4 – 13)	Worki ng outsid e border	Total non workin g	Total pop (14 -16)
1	2	3	11	12	13	14	15	16	17
1	Ramtek	T	23	10	42	552	69	679	1277
		R	13	6	21	521	46	488	1078
		U	13	4	21	96	8	200	304

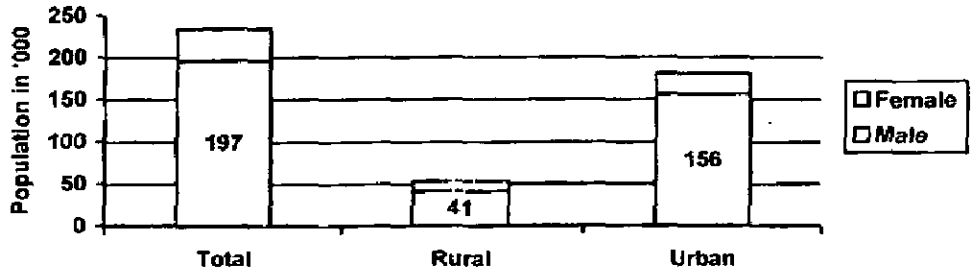
Table 3.9 : Number of workers in nine categories of economic activities in Ramtek Tahsil, 1991.

(Source: District statistical report 2003-04)

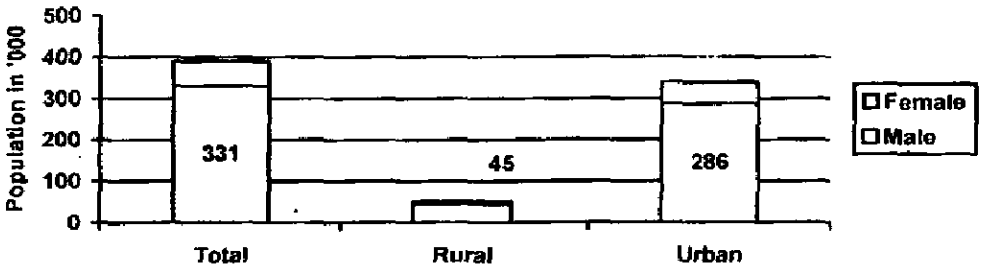
Sr. No.	Category of Economic Activity	Number of workers	%
1	Cultivators	17361	31.45
2	Agriculture labourers	18272	33.11
3	Live stock, forestry, Hunting and plantations, orchards and allied activities	2905	5.26
4	Mining and quarrying	1974	3.58
5	Manufacturing, processing, servicing and repairs in household industry	799	1.45
6	Manufacturing, processing, servicing and repairs in other than household industry	4368	7.91
7	Constructions	1941	3.52
8	Trade and Commerce	2291	4.15
9	Transport, storage and communications	1007	1.82
10	Other services	4280	7.75
11	Total main workers	55198	100



Primary Sector Total Population- 544



Secondary Sector Total Population- 235



Tertiary Sector Total Population- 389

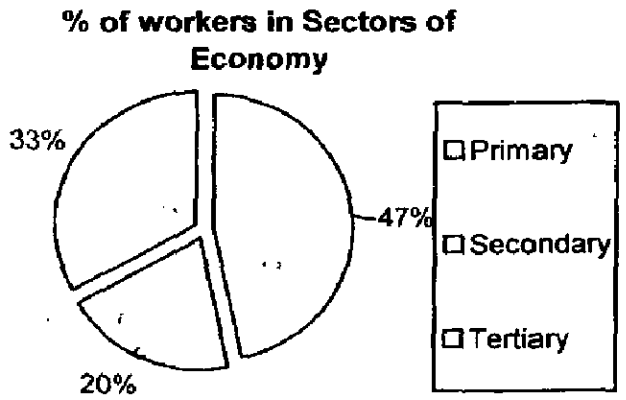


Fig. 3.7: Sectorwise division of workers

(Source: Nagpur District Statistial Report 2003-04)

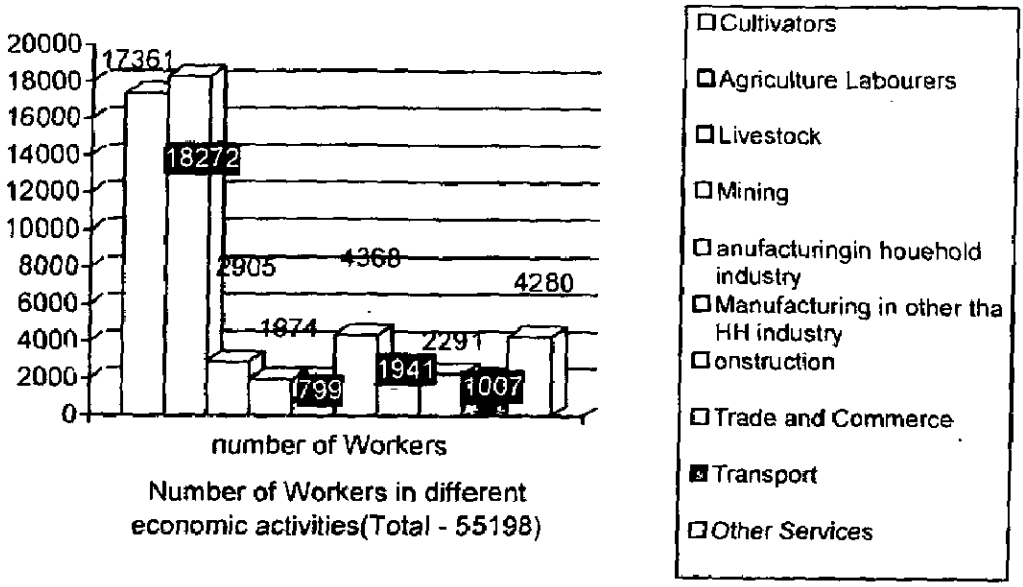


Fig. 3.9 : Number of Workers in economic activities

(Source: Nagpur District Statistical Handbook 2003-04)

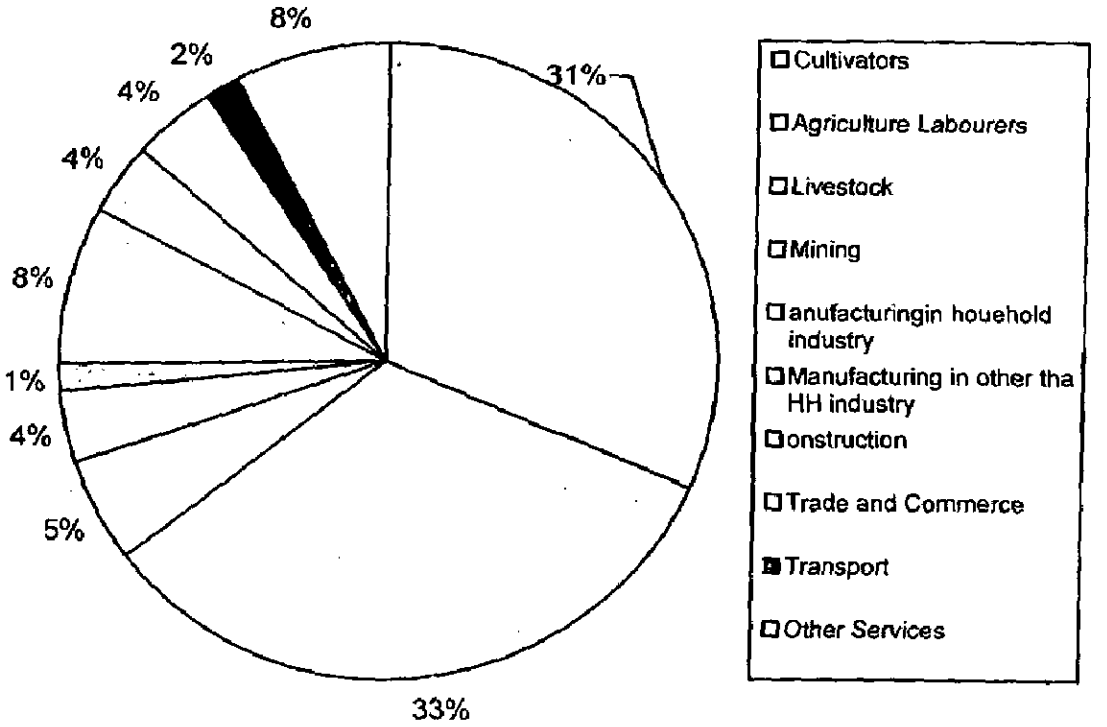


Fig. 3.10 : % of Workers in economic activities

(Source: Nagpur District Statistical Handbook 2003-04)

Table 3.10: Total Nos of employees in different Economic Activities in Nagpur District for financial year 2004

(Source: District statistical report 2003-04)

Sr No	Business Activity	Nos. of Employees	%
1	Agriculture	3672	1.72
2	Mining	12134	57.02
3	Manufacturing	36829	17.30
4	Electricity, Gas	7693	3.61
5	Construction	7396	3.47
6	Households, Hotel	3894	1.82
7	Transport, Guarage	44411	20.87
8	Finance and Tax	17653	8.29
9	Public and private works	79110	37.17
10	Others	---	---
11	Total	212792	100

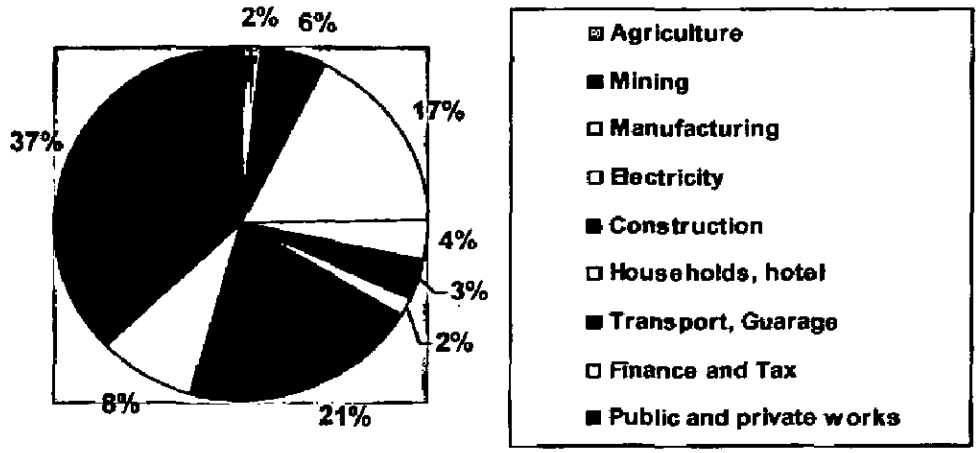


Fig 3. Percentage of employees in different Economic Activities in Nagpur District for financial year 2004

(Source: District statistical report 2003-04)

3.6 Administrative Structure

District Headquarter - Nagpur

Ramtek Tehsil with Headquarter Ramtek.

Ramtek is also a Community Developemnt Block (CD Block).

Distance from district headquarter – 42 kms by Road and 46 kms by Rail.

Ramtek Tehsil has three circles namely Deolapar, Ramtek and Nagardhan

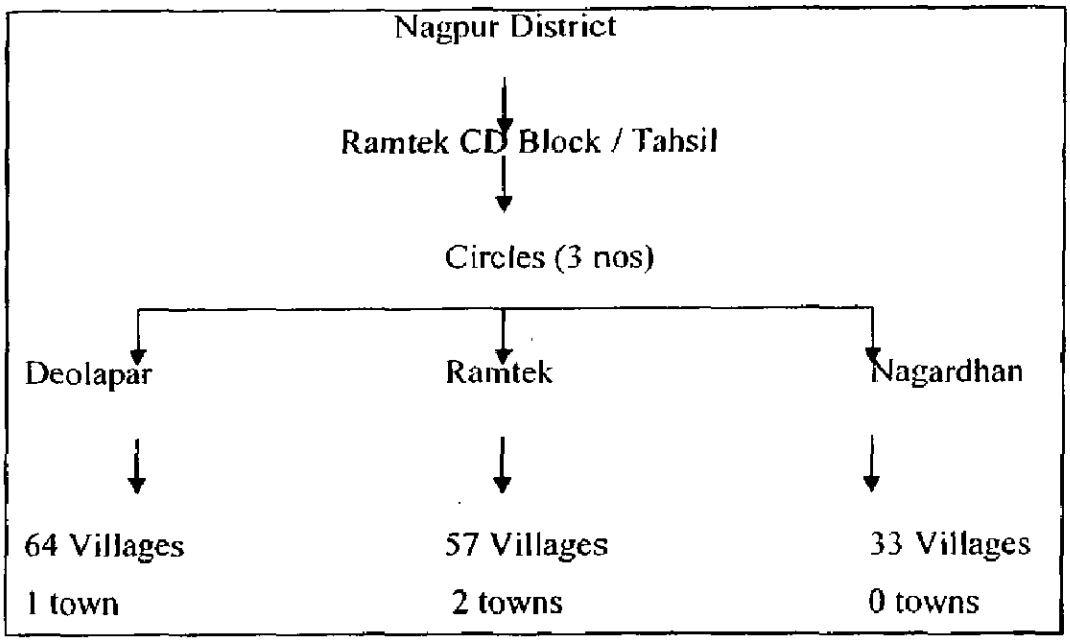


Fig. 3.12: No. of villages and towns under different circles of Ramtek Block.
(Source: District statistical report 2003-04)

Table 3.11: No. of villages its population and households in different circles of Ramtek Block.
(Source: District statistical report 2003-04)

Circle / Block	**No. of villages Under circles/ Block**	**Population**	**Households**
Deolapar Circle	64	34558	6658
Ramtek Circle	57	36247	7591
Nagardhan Circle	33	26484	5328
Ramtek Block	154	97289	19637

3.7 Landuse

Landuse: in 1998-99 (Area in Hectare)

Table 3.12: Landuse in Ramtek Tahsil 1998-99 (Area in Hectare)

(Source : Nagpur District Statistical Report 2003-04)

Total Tahsil area	: 114290
Forest Area	: 61407 (51%)
Village Area	: 52,669.77 (137 villages)
Town Area	: 216.1 (3 towns)
Water Bodies	: 1729 (9%)

3.8 Agriculture

Total cultivable land : 36989

Land under cultivation : 29208

Land with more than single crop : 7386

Cultivators and agricultural labourers: 35633

Cultivators and agricultural labourers per 100 hectares of cultivable area : 127

Land not useful for cultivation

a)	Land for non Agriculture use	: 8710
b)	Land not fit for cultivation	: 1532
c)	Total (a + b)	: 10242

Non Cultivable land

Currently non cultivable	: 854
Other	: 1244
Total	: 2098

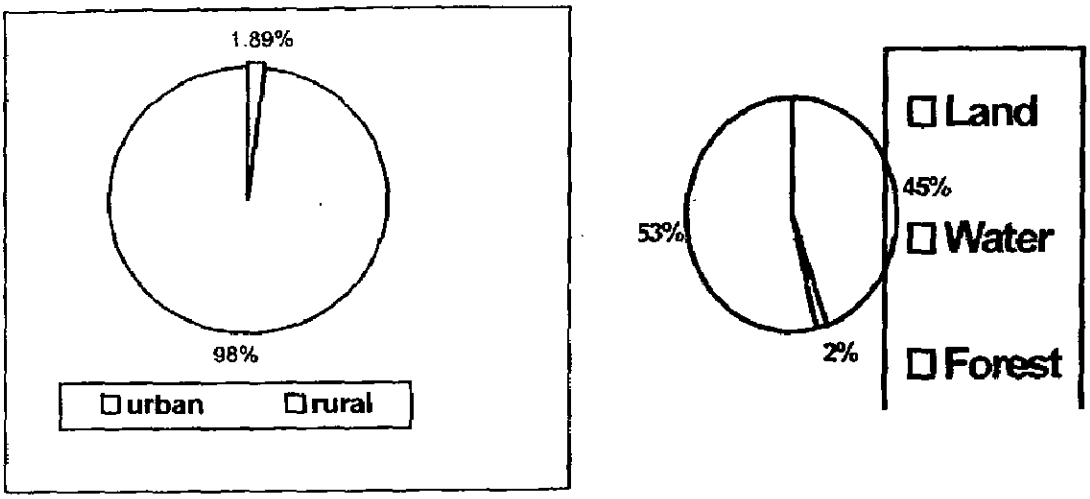


Fig. No 3.13: Landuse in Ramtek Tahsil 98-99

(Source : Nagpur District Statistical Report 2003-04)

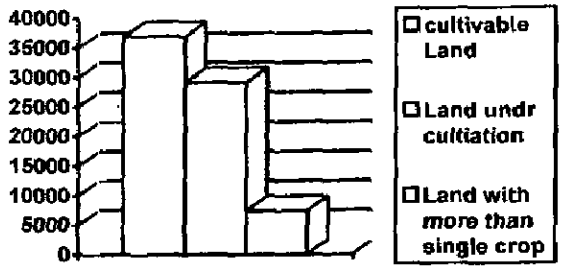


Fig. No 3.14: Existing Agriculture Pattern and Production in Ramtek Tahsil 98-99

(Source : Nagpur District Statistical Report 2003-04)

Other than non cultivable land (Area in Hectare)

a)	Cultivable but not cultivated land	: 5225
b)	Used for feeding animals	: 3652
c)	Land under fruit gardens and plants but not included in cultivable	: 2458
d)	Total	:11335

Cultivable Land

Single Crop	: 29208
More than one crop	: 7386
Area under cultivation	: 36594
Total Cultivable Land	: 38989

Crop Pattern : Kharip 107
: Rabbi-46

Agriculture production: 1998-99 (in Hectares):

Total Production - 116 tonnes, Price in Rs. - 14,11,000.

Table No 3.13 :: Existing cropping pattern and production in 1998-99

(Source : Nagpur District Statistical Report 2003-04)

Sr. No.	Type of Crop Production	Crop	Area in Hectares
1	Maximum productive crops	Rice	9750
		Wheat	5814
2	Medium Productive Crops	Jawar	402
		Cotton	1000
		Rabbi Jawar	386
3	Minimum productive crops	Tur	2450
		Mug	40
		Udid	32
		Other beans	307
		Soyabin	3700

		Jawas	697
		Teel	12
		Sugarcane	8
		Cotton	100
		Harbhara	4304
		Other pulses	155
		Bhuimug	69
		Other Galit crop	9293
		Til	82
		Sugarcane	66
		Tomato	229
		Chilli	311
		Sunflower	26
		Jawas	1244
		Onion	8
		Cotton	7676
		Other fiber crops	115

Area under different types crops 1998-99 (in Hectares):

Table 3.14: Area under different types of crop

(Source : Nagpur District Statistical Report 2003-04)

Total Masala ingredients	341
Total Foodgrains	15707
Total Pulses	4579

Total oil Crops	10714
Total Vegetables	648
Total Fruits	1327
Total Eatables	1808
Total non-eatable crops	18505
Total Fiber crop	7791

Irrigation:

Total irrigated land : 8152 (22.28% of cultivable area)

Percentage of villages having irrigated area : 93.53 %.

Total Irrigated wells : 1650

Irrigated wells not in use : 304

Wells with pumps (diesel or electric) : 1740

Other wells : 25

Horticulture:

(Source : Nagpur District Statistical Report 2003-04)

Total Fruits production : 1327 Hectares

Types of fruits produced mainly are mango and orange.

3.9 Livestock

(Source : Nagpur District Statistical Report 2003-04)

Total Animals livestock : 84081

Total Animal Husbandary : 41345

Table 3.15: Total Animals livestock : 84081

(Source : Nagpur District Statistical Report 2003-04)

Sr No	Type of Animal	Nos
1	Total Cows and Buffalo	59446
2	Ship	6
3	Goat	24077
4	Others	552
5	Hens	40851

Veternary Clinics 4 nos and Hospitals 5 nos are provided in Ramtek Tahsil.

One mobile Hospital is also there.

3.9.1 *FISHERIES*

2003 values (Source : Nagpur District Statistical report 2003-04)

Area under fishing : 1729 Ha

Production : 300 lakh

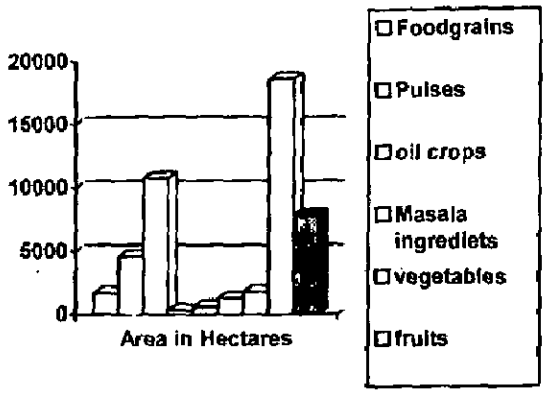


Fig.3.15: Area under diff types of crops in Hectares

(Source : Nagpur District Statistical Report 2003-04)

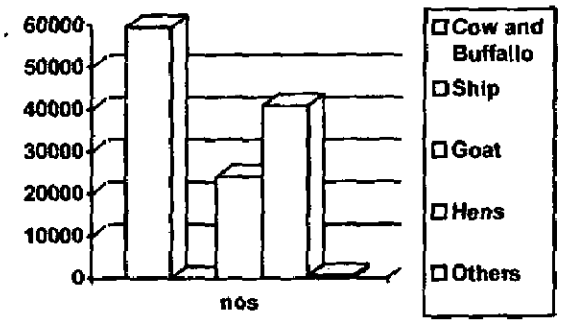


Fig. 3.16: Livestock in 1997

(Source : Nagpur District Statistical Report 2003-04)

3.10 Industries

3.10.1 TYPES OF INDUSTRIES

Types of industries based on the natural resources available in the tahsil in addition to commercial industries are:

Agriculture and allied Industries - Sugar mill, rice mills, Textile mills, printing, looms, Hanlooms,

Others - Eatables

Livestock Based Industries - fishery, milkmaking, poultry, leather industry.

Forest based industries - Tobacco industry, paper industry, wooden materials industry, saw mills.

3.10.2 LEVEL OF DEVELOPMENT

Industrial Growth and Development

The industrial growth of the Tahsil had been very slow in the first five decades of the twentieth century. The pace of industrialisation, however, increased in the eighties.

3.10.3 RESOURCE POTENTIAL FOR INDUSTRIAL DEVELOPMENT

Forest

53.72 % of the land is Reserved forest. It is of considerable value and importance yielding forest produce in fair proportion. The existing forest resources are not being fully utilized due to lack of proper industrialisation.

Agriculture

34.11 % of the land is deveoted to agricultural activities.

Livestock

Development of agriculture is correlated with the development of livestock. The large number of livestock present in the tahsil indicates that Ramtek is not only a breeding

area but offers a good scope for various livestock based industries like dairy, poultry, piggery, fishery etc.

Man-power

The availability of adequate and required nature of working force is the basic requirement for any industrial development of an area. As per 1991 census, the workers constituted 46.82 % of the total population of the Tahsil.

3.10.4 INFRASTRUCTURE

3.10.4.1 Physical

Transportation:

47.48 % of villages are having approach by pucca road and 57.83 % of villages are having bus stop.

Water Supply and Irrigation Facilities

The availability of water is one of the main criteria for the site selection for industries. Hence, the study of water supply is very important. Public water supply is available to 2 % the total population of the Tahsil. Irrigated area is 22% of the cultivated area. The remaining population has to be provided with public water supply. The soil of the district is generally fertile and can, by assured irrigation, be put to better and more productive use. There is a need to develop more irrigation facilities in the district.

Power

96.4 % of the villages from Ramtek tahsil are electrified.

3.10.4.2 Social

Health

Health Facilities are very poor in Ramtek Tahsil. On an Average 10 kms of distance required to travel to reach the Primary health Facility. Only 2.16 % of villages have Primary Health Facilities

Education

85.61 % villages have primary education facilities.

3.10.4.3 Economic

Banking

Banking facilities are available at few places like tahsil headquarter ramtek, Mansar, Deolapar and Nagardhan etc. So, there is a need to open more banks and cooperative societies to facilitate the industrial development of these blocks.

3.11 Tourism

3.11.1 RESOURCE

Ramtek Tahsil has many tourist attractions like pilgrimage sites, water bodies - lakes, natural hilly terrain, reserved forest and Totladoh.

3.11.2 INFRASTRUCTURE

Physical and social infrastructure is insufficient. Because of the negligence of the working bodies the tourist potential of the tahsil has not been utilized to its potential.

TEHSIL AT A GLANCE

Table 3.16: Tahsil at a glance (Source : www.maharashtragovt.com)

1)	Total Population	127782
2)	Total area is sq km.	1141.56
3)	Density of population per sq km	112
4)	Sex Ratio	941
5)	Urban Proportion	23.86 %
6)	Proportion of scheduled caste	13.13 %
7)	Proportion of scheduled tribes	36.68 %
8)	Proportion of literates	60.42 %
9)	Work partciation rate (main + marginal workers)	46.82 %
10)	% of villages having primary school	85.61%
11)	% of villages having PHS	2.16 %
12)	% of villages having well	100%
13)	% of villages having post office	18.71%
14)	% of villages having bus stop	56.83%
15)	% of villages having approach by pucca road	47.48 %
16)	% of villages having electricity for domestic purpose	96.4 %
17)	% of villages having forest area	51.80 %
18)	% of villages having irrigated area	93.53 %
19)	GramPanchayat	53 Nos
20)	Panchayat Samiti	Ramtek
21)	Nearest Police Station	Ramtek, Devlapar
22)	Post Offices	14
23)	Primary Schools	127
24)	Secondary Schools	10
25)	Higher Secondary Schools	24
26)	Colleges	3
27)	Industrial Training Centres	1
28)	General Hospitals	Humanbeings 10. Veternary 9

29)	Transportation	Motor , Railway
30)	Co-operative Societies	63
31)	Co-operative Factories	1
32)	Women Associations	89
33)	Young Associations	77
34)	Villagers religious Associations	114
35)	Libraries	3
36)	Nearest Railway Station	Ramtek 3 Km
37)	Main Occupation	Farming , Farm Worker
38)	Total sarpanch	50
39)	Total Police Patil	123
40)	Total Kotwal	24
41)	Chairman Co-operative societies	48
42)	Talathis	25

CHAPTER 4

DATA ANALYSIS

4. DATA ANALYSIS

Data analysis is done in order to know the present status of the tahsil and also to assess the comparative position with respect to other regions. It is also important to know inter-group and intra-group disparities in order to know the specific problems related to a particular group. It is also equally important to know the trend which should incorporate so that a holistic development of Tahsil can be achieved.

4.1 Resources

4.1.1: HUMAN RESOURCES

Table 4.1 Decadal Increase in population since 1951('000)

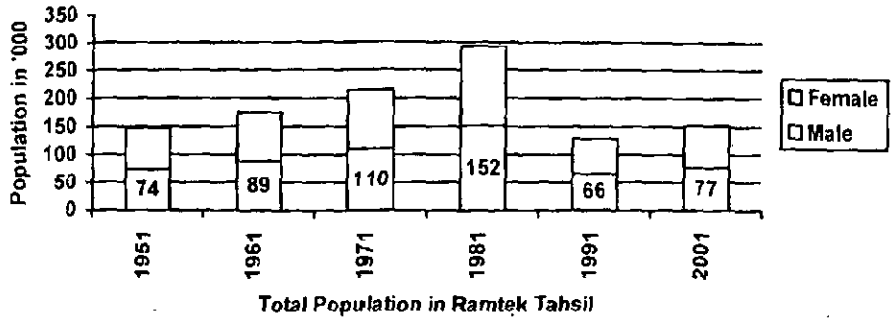
(Source: Nagpur District statistical Report 2003-04)

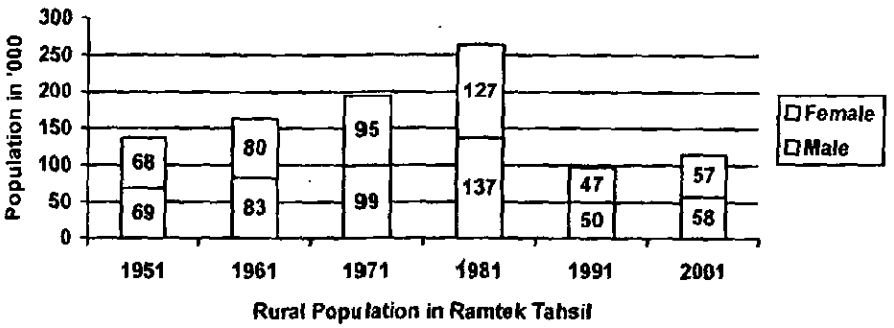
Sr No	Tehsil/ District	Year	Total			Male			Female		
			T	R	U	T	R	U	T	R	U
1	Ramtek	2001	152	115	37	77	58	17	75	57	18
	Tehsil	1991	128	97	31	66	50	16	62	47	15
		1981	293	264	29	152	137	15	141	127	14
		1971	214	194	20	110	99	11	104	95	9
		1961	175	163	12	89	83	6	86	80	6
		1951	147	137	10	74	69	5	73	68	5

Table No. 4.2 Yearly difference in population since 1951('000)

(Source: Nagpur District statistical Report 2003-04)

Sr No	Tehsil/ District	Year	Popln /sq.km.	Females per 1000 males	Decadal		
					T	R	U
1	Ramtek	2001	133	974	18.75	18.56	19.35
	Tehsil	1991	174	939	--	--	--
		1981	116	928	36.78	36.07	43.68
		1971	84	945	22.40	18.94	70.44
		1961	75	966	19.19	19.18	19.24
		1951	63	986	--	--	--





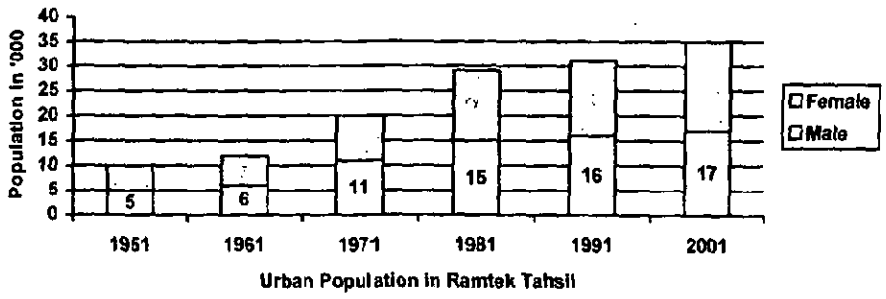


Fig 4.1: Population total (District statistical Report 2003-04)

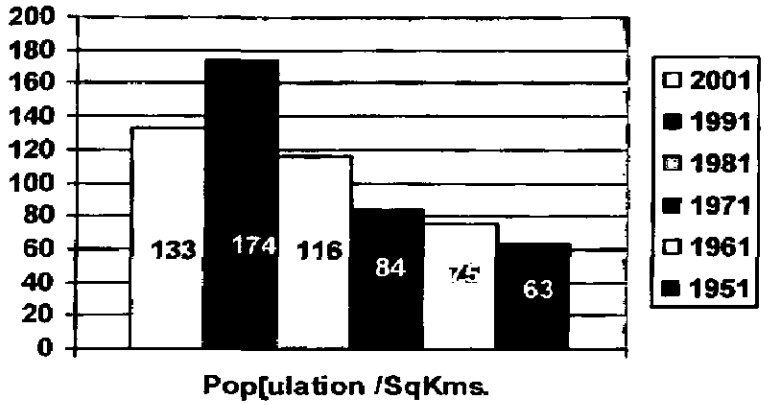


Fig 3.3 : Population per sq kms (Source: Ngpur District statistical Report 2003-04)

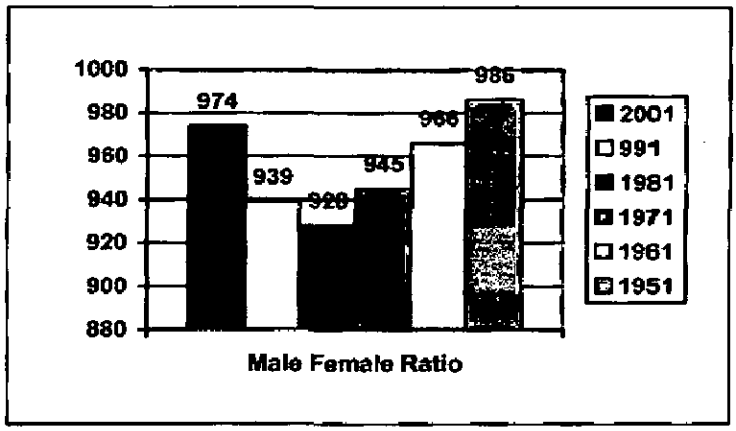


Fig.3.5 :Sex Ratio (District statistical Report 2003-04)

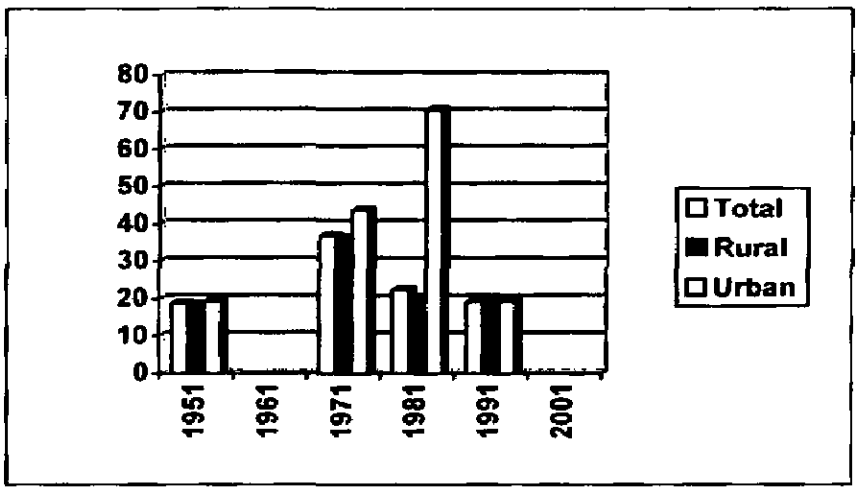


Fig : Population total (District statistical Report 2003-04)

4.1.2: PHYSICAL RESOURCES

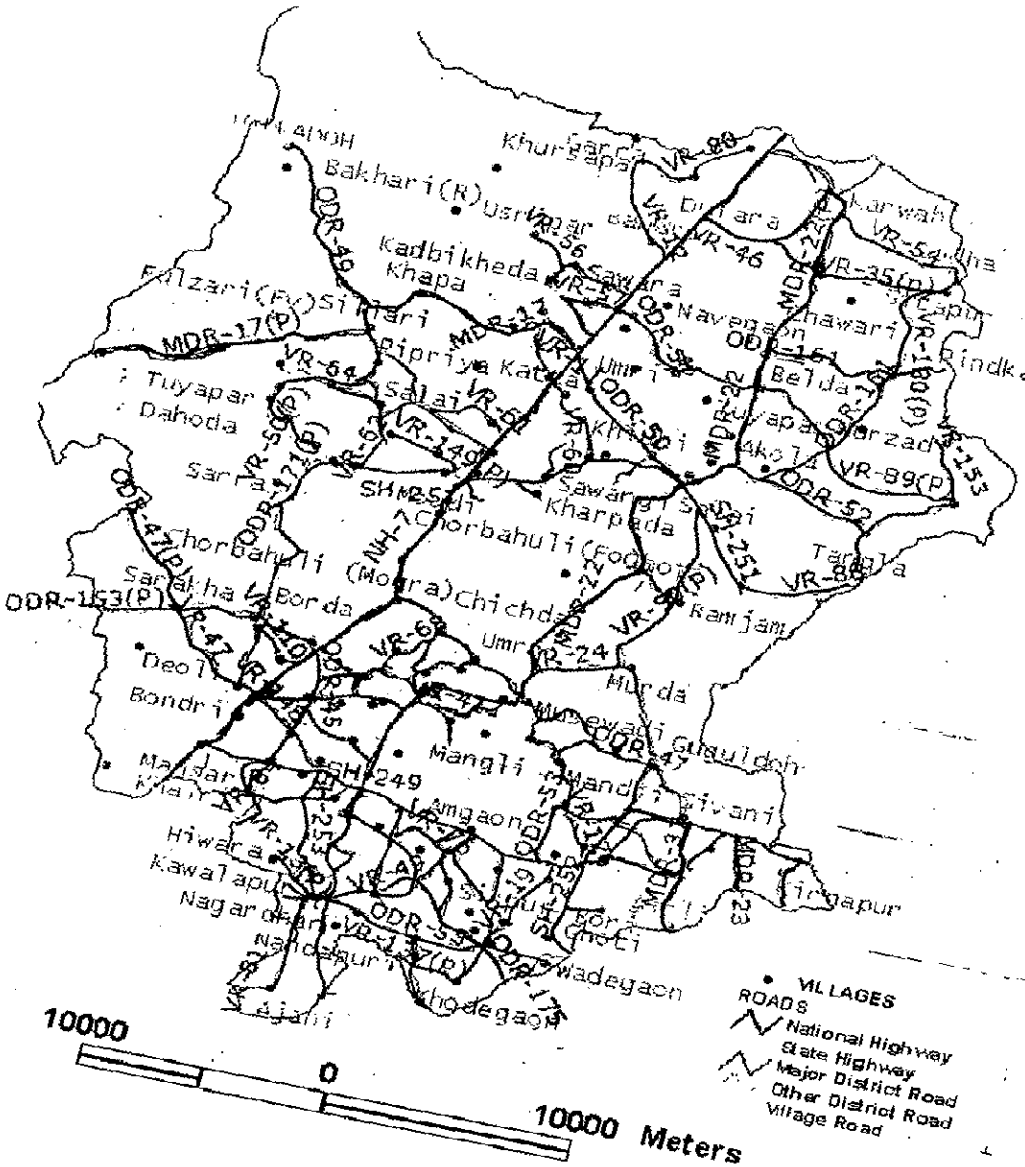
Rural Road Transport Network :

Transport is an essential prerequisite to development but it is not sufficient in itself. Transport alone cannot stimulate economic growth unless other elements required for the development process also become available simultaneously. The impact of transport network will be felt fully only if other services, amenities and facilities are also made available at the same time. Among these the important ones are ewlectricity, telephone, communications, banking service and credit, efficient marketing and distribution centres, effective law enforcement and social services like education, health and welfare for the needy.

The rural road network should be so planned that the facilitites of health care, education, agriculture extension services, post offices and market centres are available to the population within reasonable distances. An economic analysis of road construction and location and scale of facilitites has to be made and the rural development to be planned as an integrated system in which roads provide vital linkages.

While road development is highly rewarding in economic terms it is also quite costly. It is therefore, essential to plan the road network so as to get maximum benefits from investment. An approach has beeen proposed by the author for this purpose and it is demonstrated by application to study area ie. Ramtek Tahsil. Area of tahsil is 54440.36 Hectares and its population is 1.51 Lakhs(Census 2001 provisional). Ramtek is a community development block (CD Block). It has three Circles : Deolapar, Ramtek, Nagardhan.

The approach envisages selection of growth centres in the area which would serve as nuclei of growth in the surrounding villages. The growth centres should be well distributed in the areaand should be within walking distance from the villages it is meant to serve. The growth centres have then to be linked to each other and to the main urban centres in the area. In the present study the area has been divided into hexagons having a side of 4 kms. Thus all villages will be within 4 kms of an all weather road, involving a walk of about one hour. T such hexagons have been formed, some of them partial. A growth centre has been selected for each hexagon for its growth potential not necessarily situated in the centre of the hexagon.



N.

RAMTEK TAHSIL, DISTRICT NAGPUR.

MAP : EXISTING ROAD NETWORK PLAN.

As an index of growth potential a 'centrality score' was calculated for all habitations within the area normally with a population of more than 1000. A few exceptions had to be made to this in sparsely populated zone in the north side of the study area. Centrality score is based on weights assigned to the following criteria – Education, health, Post & Telegraph, market days, communication, power supply.

The weights assigned in computing the centrality score are as follows:

Table 4.3: Weightage of amenities

	Amenities	**Weights**
I.	Educational Facilities	
1.	Primary or elementary school, kindergarten, prebasic, pre-primary, junior basic	1
2.	Senior basic school, junior high school, middle school	2
3.	Matriculation or secondary	3
4.	Higher secondary, intermediate, college, pre- university	4
5.	College graduate level and above	5
6.	Industrial school and training school	4
7.	Other educational institution	2
II	Medical Facilities	
1.	Hospital	5
2.	Maternity and child Welfare Centre	4
3.	Maternity Home	3
4.	Child welfare centre	2
5.	Primary Health Centre	2
6.	Health Centre	3
7.	Primary Health Sub- centre	1
8.	Dispensary	4
9.	Family Planning Centre	2
10.	Registered private practioner	1
11.	Subsidised medical practioner	1

table continued ....

III.	Post & Telegraph	
1.	Post office	1
2.	Telegraph office	2
3.	Post & Telegraph Office	2
4.	Post office with Telephone connection	3
IV.	Day or Daus of Market	
1.	Once a week	1
2.	Twice a week	2
3.	Three to four Days	3
4.	Permanent or daily	4
V.	Communications	
1.	Bus stand	1
2.	Railway station	3
VI.	Nearest Town	
1.	Nearest town at a distance of more than 10km.	1
2.	Nearest town at a distance of 5 to 10 km.	2
3.	Nearest town at a distance of less than 5 km.	3
VII.	Power Supply	
1.	Electricity for domestic purpose	1
2.	Electricity for agriculture	1
3	Electricity for other purposes like indusrtrial, commercial etc.	2
4.	Electricity for all purposes listed above	3

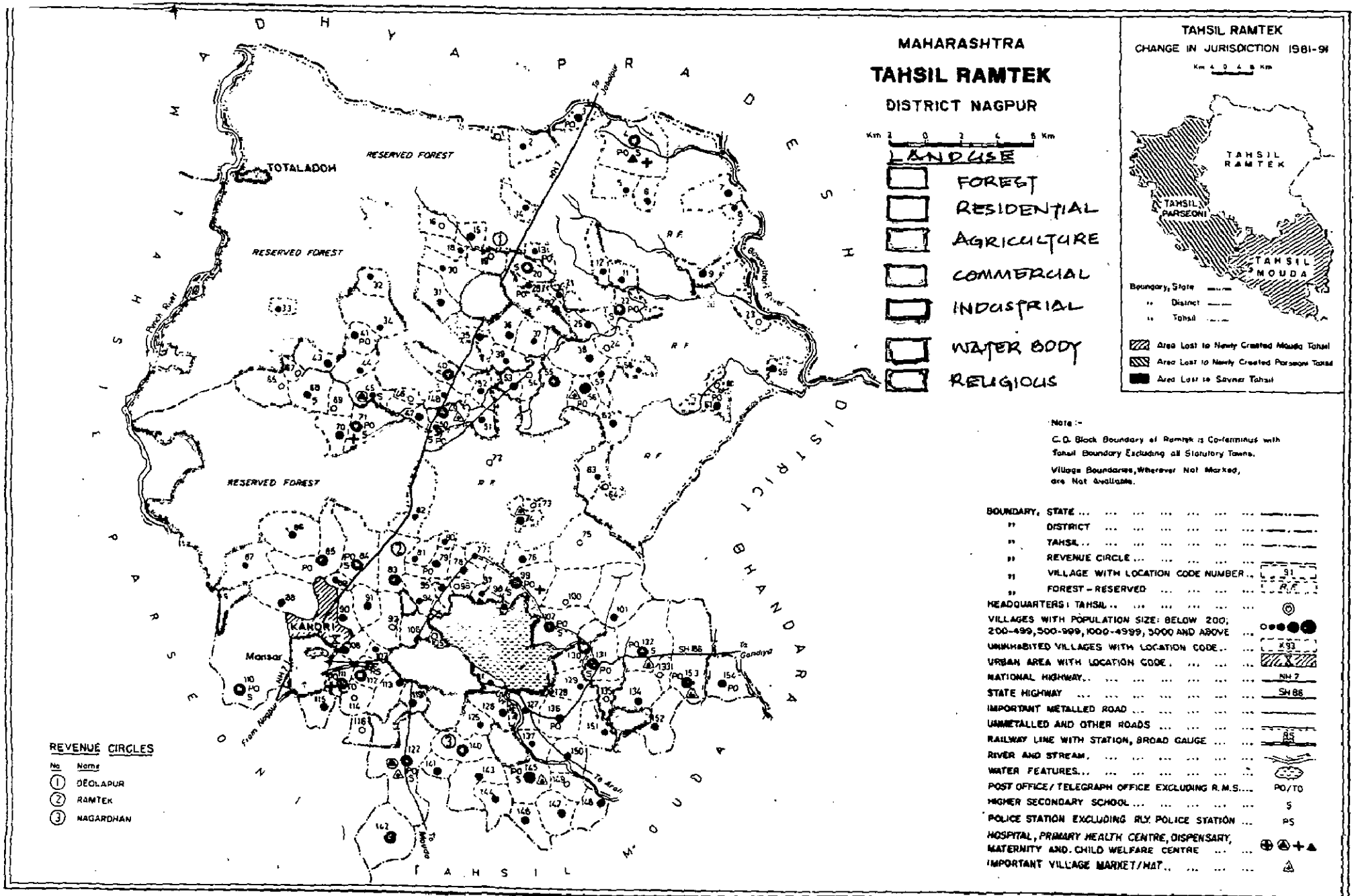
The centrality scores were calculated in all for 139 villages. Out ofthese the selected locations were marked on a map of the tahsil. In each hexagon, a growth point is then finally selected, taking into account the 'centrality score' as well as the location. As far as possible a growth point and / or centre are located near the centre of the hexagon, but this was not possible in all case. The growth centres finally selected and their population and centrality scores are given in fig.

Credits of villages

Table 4.4: Credits of villages based on amenities available

Village Name	Village No.	Ed.	Med.	Water	P & T	Marketing	Cm.	Road	Nearest Town	Elect.	Total
Khurs apar	1	1	0	1	0	0	0	0	1	1	4
Garra	2	1	0	1	0	0	0	0	1	2	2
Manegaon Tek	3	1	0	1	1	0	1	1	1	1	7
Karwahi	4	3	4	1	1	0	1	0	1	3	14
Dulara	5	1	0	1	0	0	0	0	1	2	5
Chawari	6	1	0	1	0	0	0	0	1	2	5
Lodha	7	2	0	1	0	0	1	0	1	2	7
Sitapur	8	1	0	1	0	0	0	0	1	2	5
Pindkapar	9	1	0	1	0	0	1	0	1	2	6
Karajghat	10	Uninhabited									0
Navegaon Kh.	11	1	0	1	0	0	0	0	1	2	5
Goreghat	12	1	0	1	0	0	0	0	1	1	4
Navegaon	13	1	0	1	0	0	0	0	1	1	4
Bandr	14	1	2	1	0	0	1	1	1	2	9

a											
Sawara	15	1	0	1	0	0	0	0	1	3	6
Usripar	16	1	0	1	0	0	0	0	1	2	5
Bakhari (R)	17	Uninhabited									0
Kadbikheda	18	1	0	1	0	0	0	0	1	2	5
Kamthi	19	1	0	1	0	0	0	0	1	1	4
Wadamba (Malgujari)	20	3	0	1	0	0	1	1	1	2	9
Junewani	21	1	0	1	0	0	1	0	1	2	6
Belda	22	3	2	1	1	0	1	0	1	2	11
Murzad	23	0	0	1	0	0	0	0	1	2	4
Lakhapur	24	1	0	1	0	0	1	0	1	1	5
Tuyapar	25	1	0	1	0	0	0	0	1	2	4
Khirsadi (Rithi)	26	Uninhabited									0
Umri	27	1	0	1	0	0	1	0	1	2	6
Wadamba Rayatwari	28	1	0	1	1	0	0	1	1	2	7



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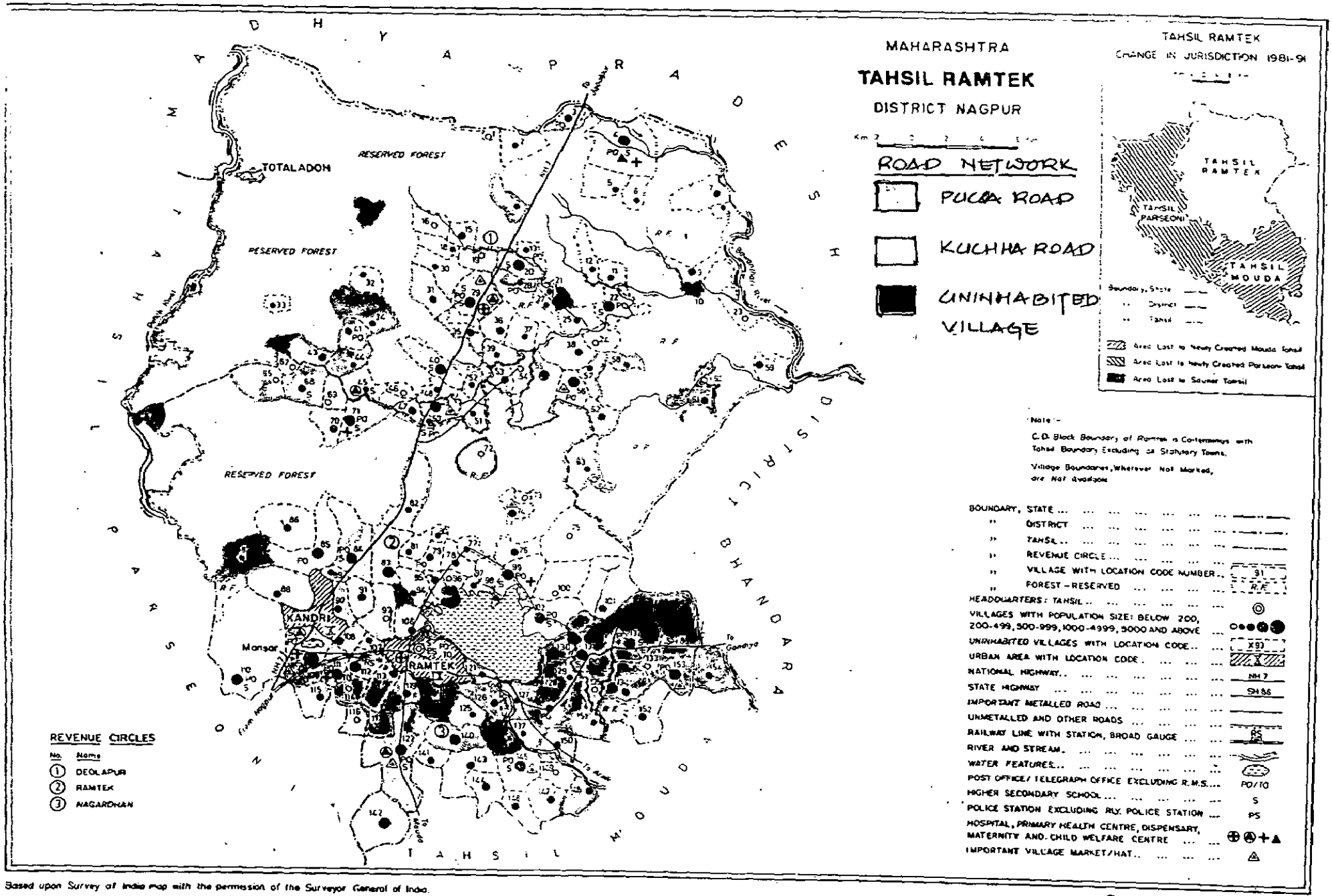

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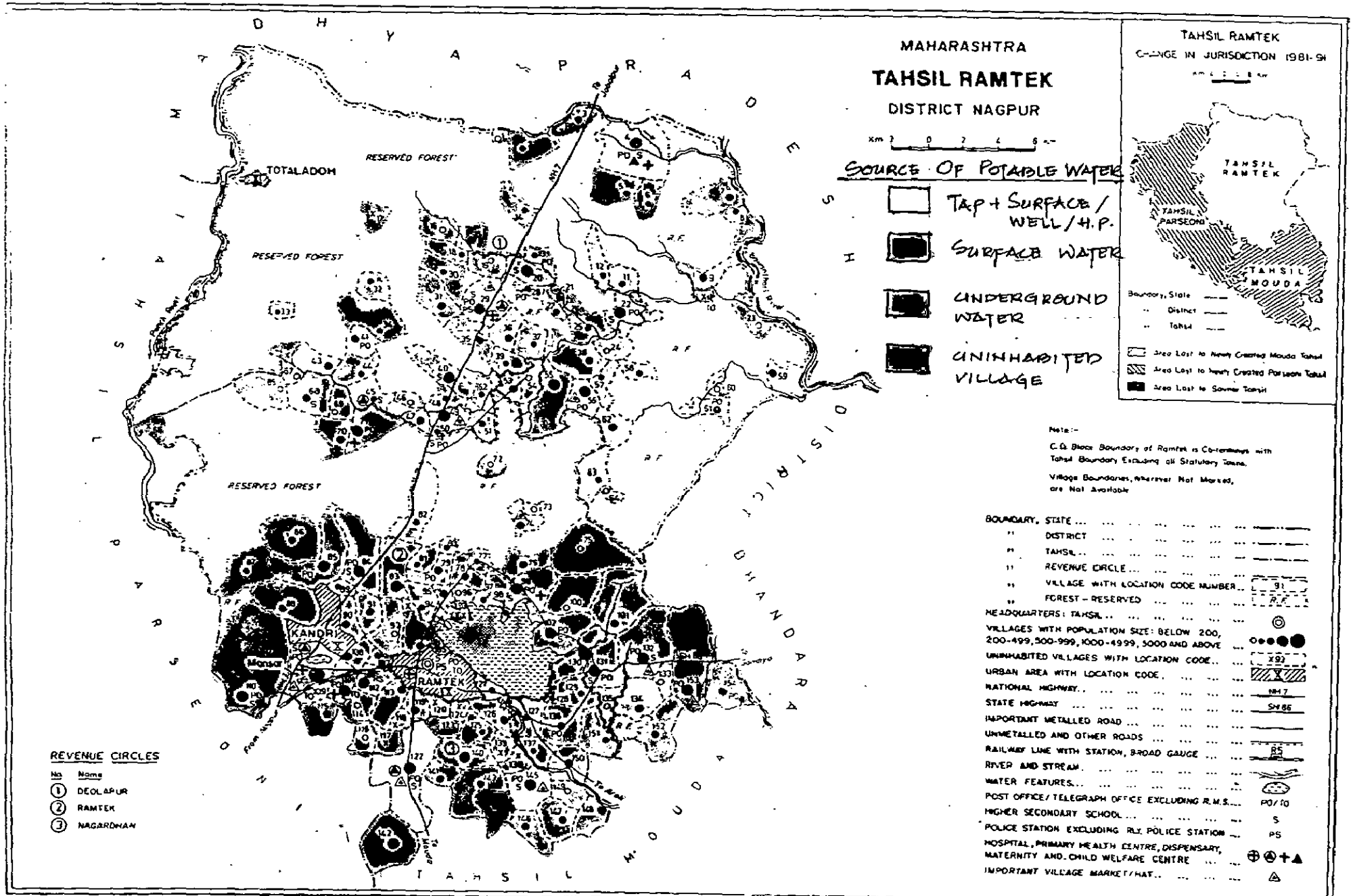

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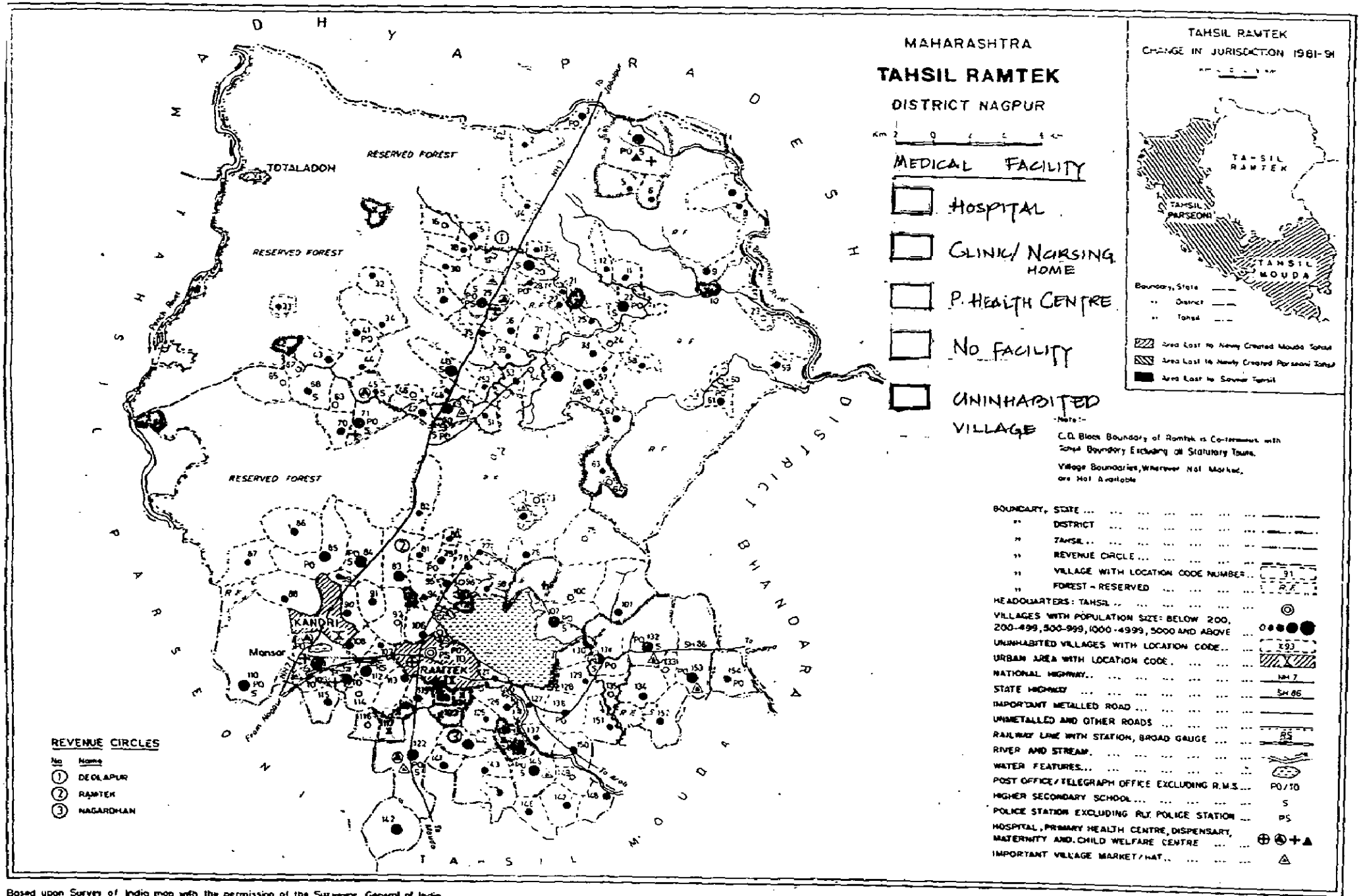

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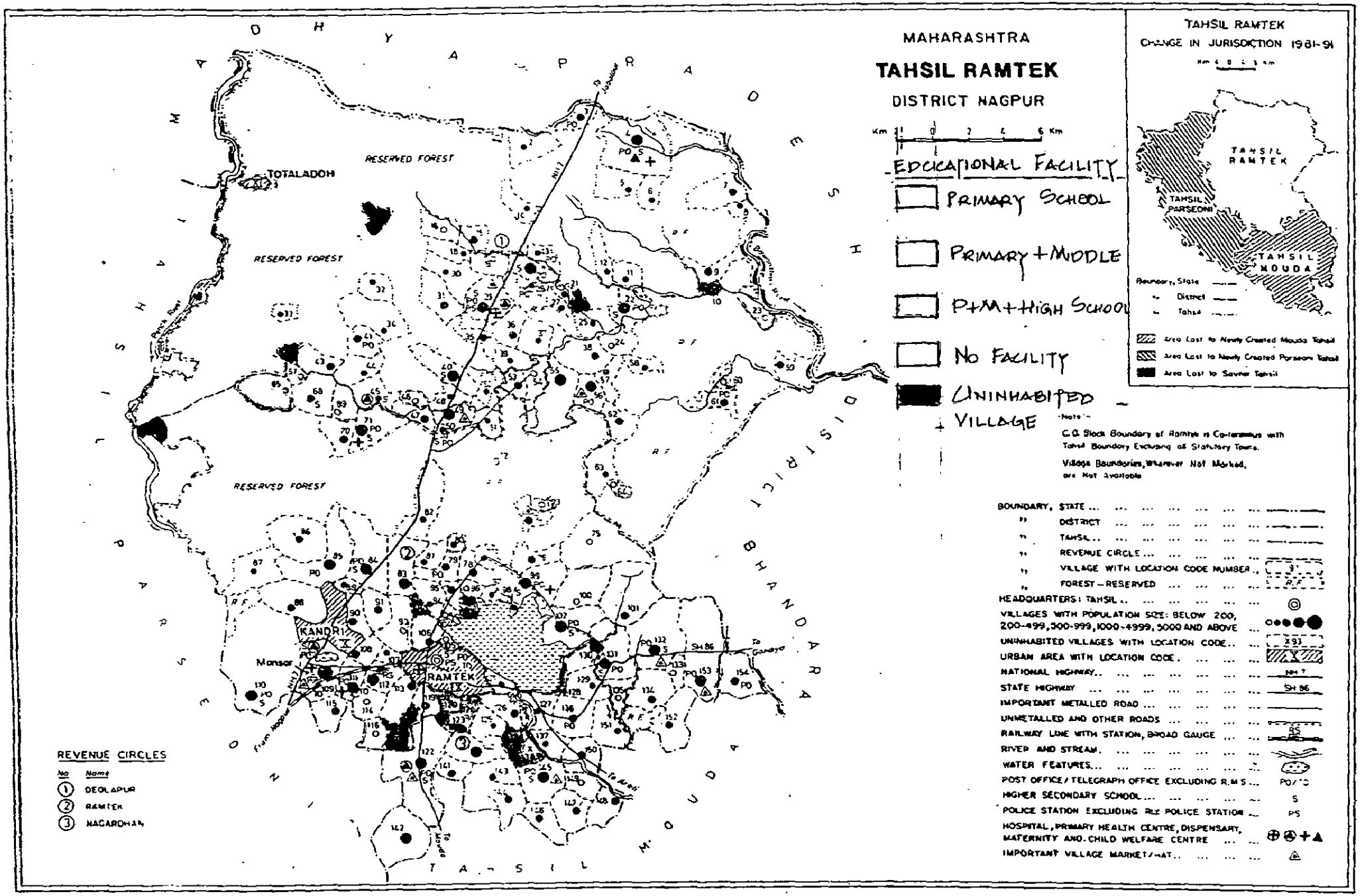

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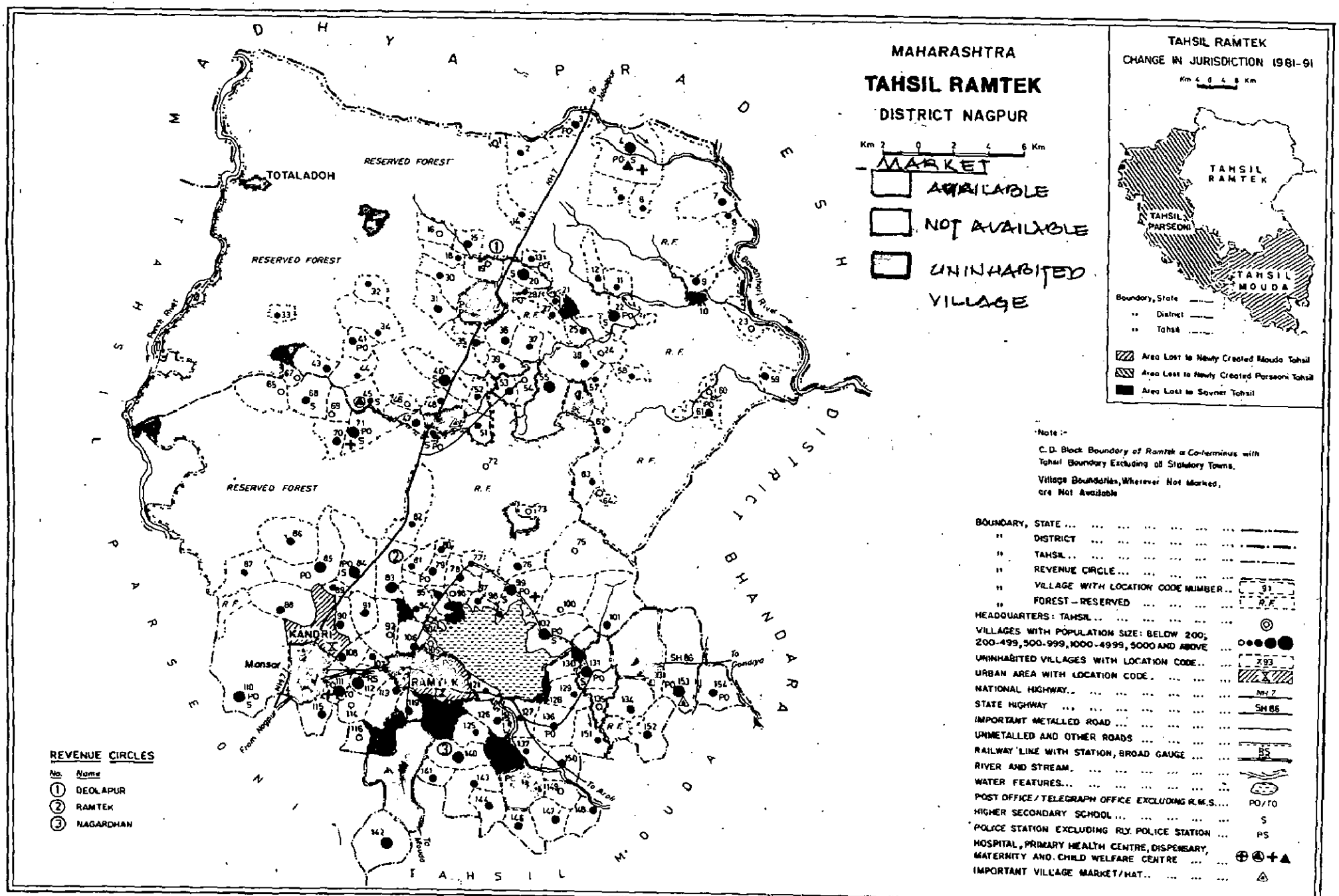

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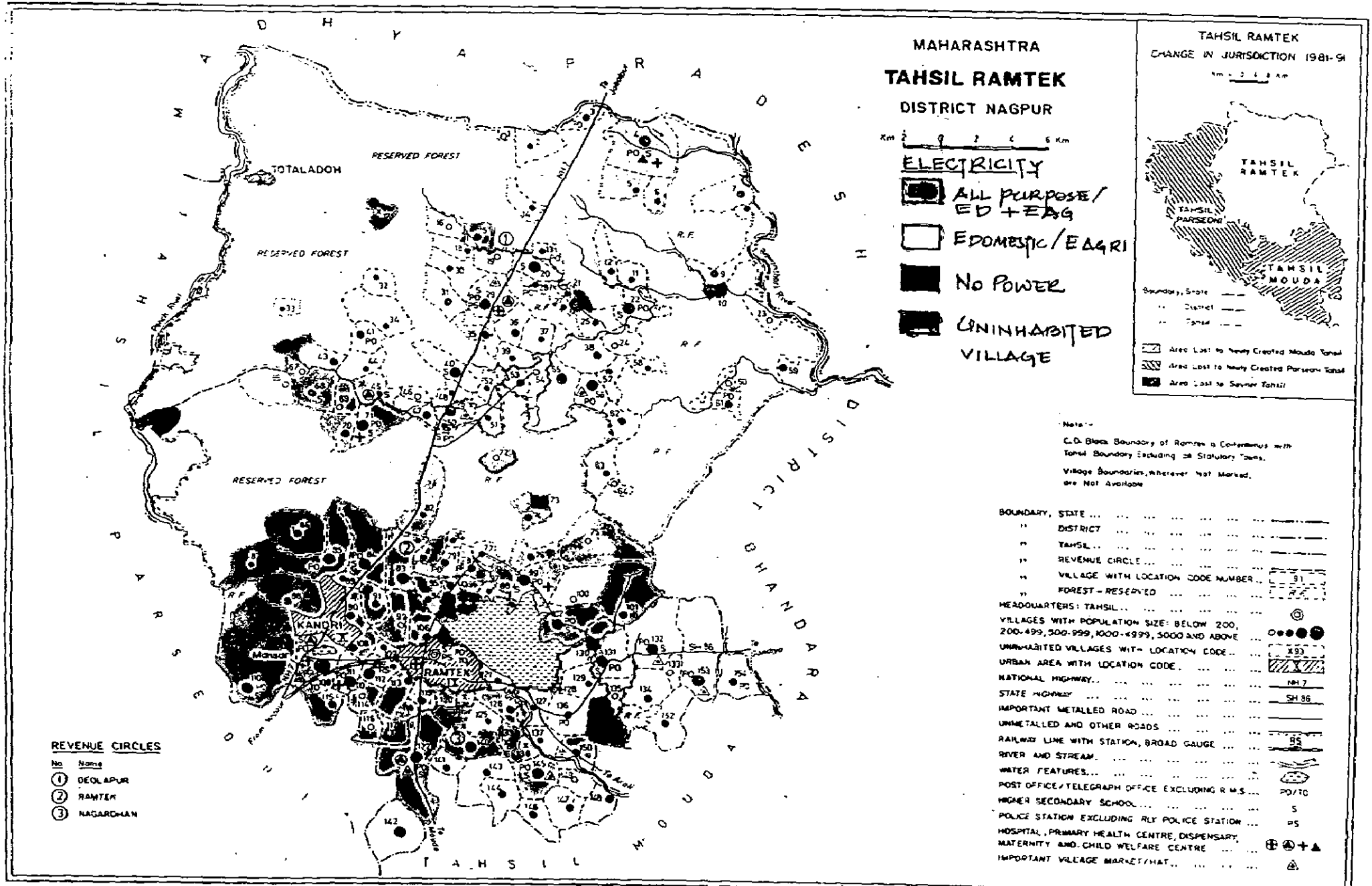

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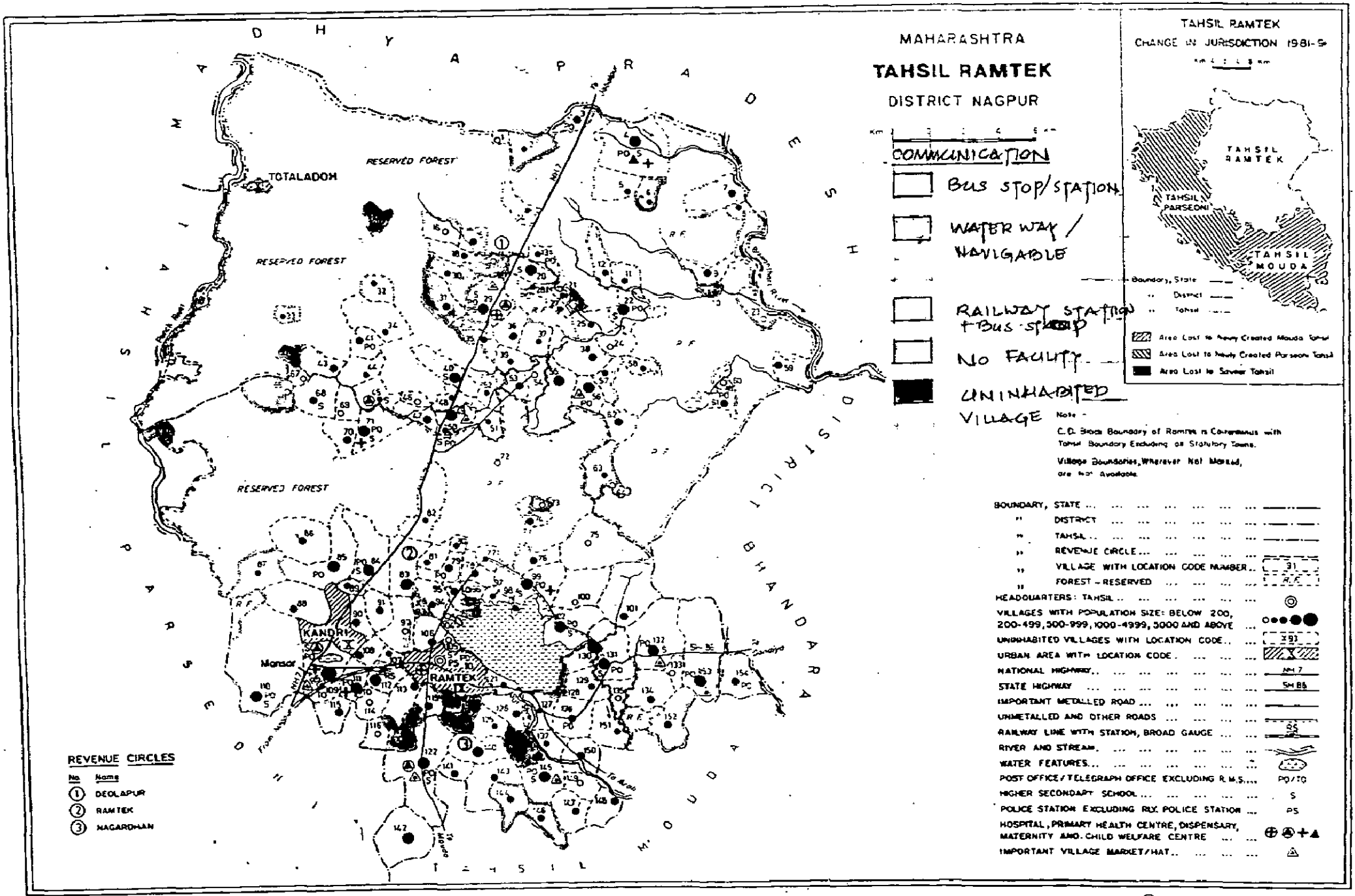

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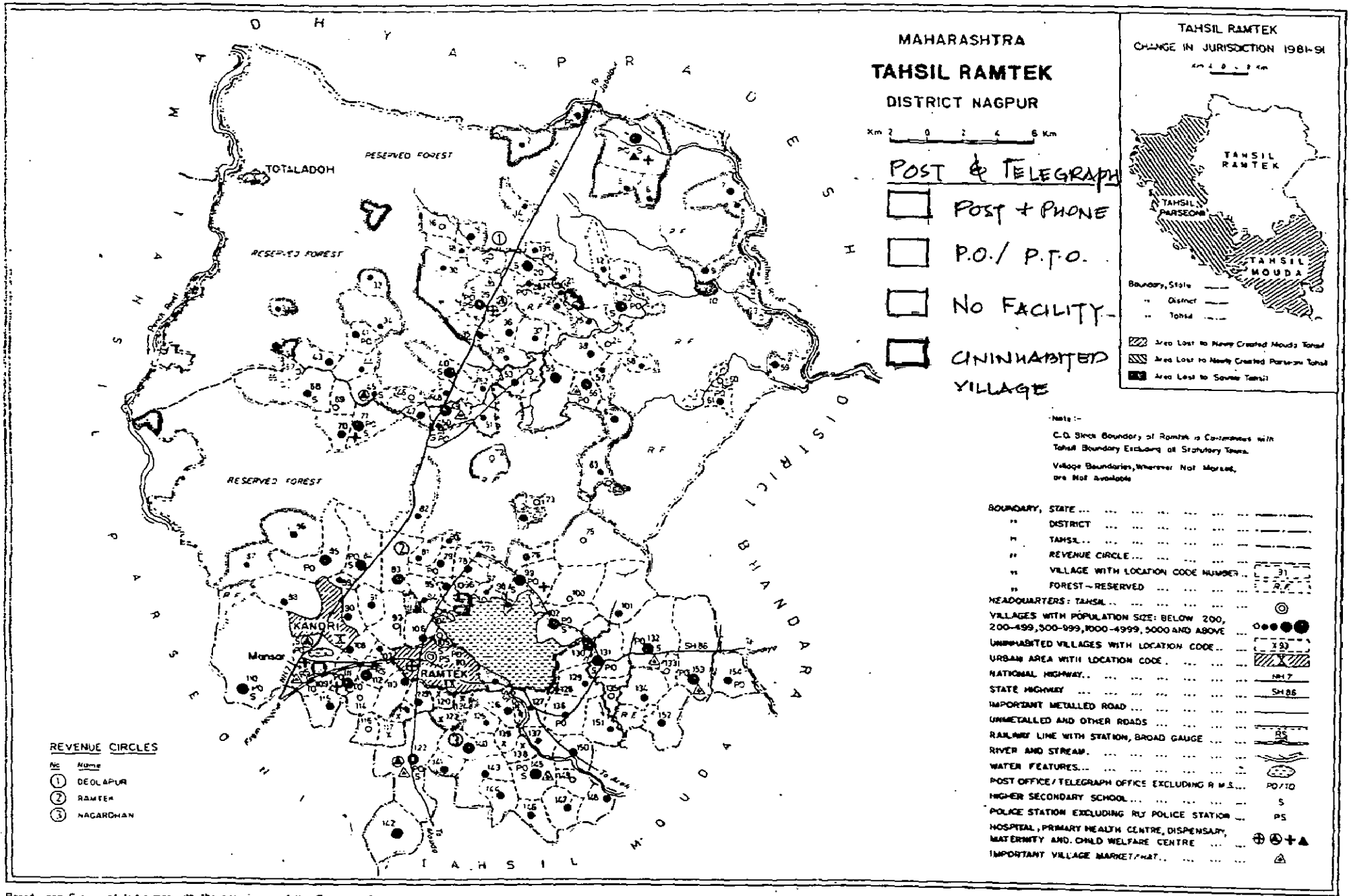

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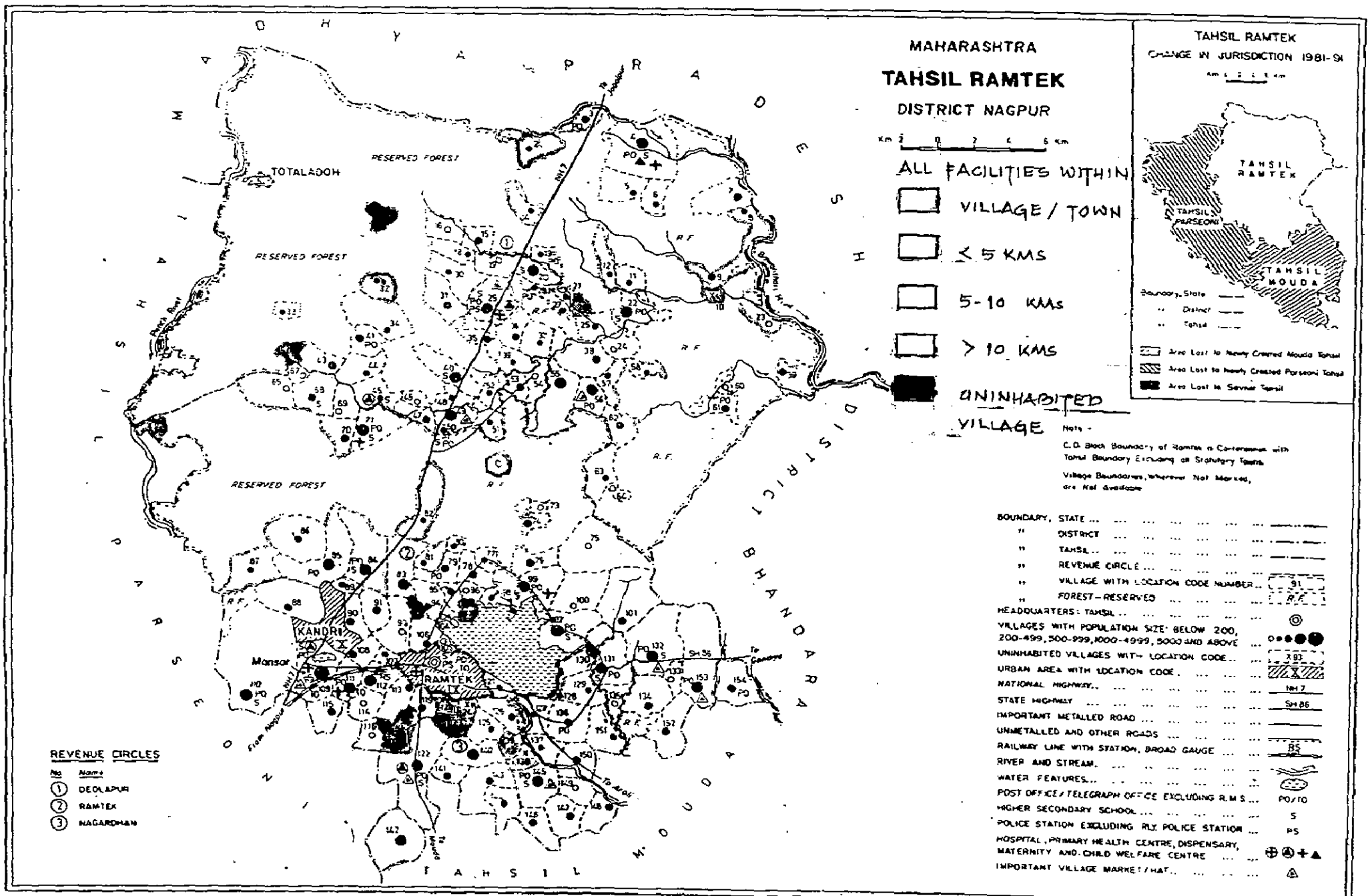

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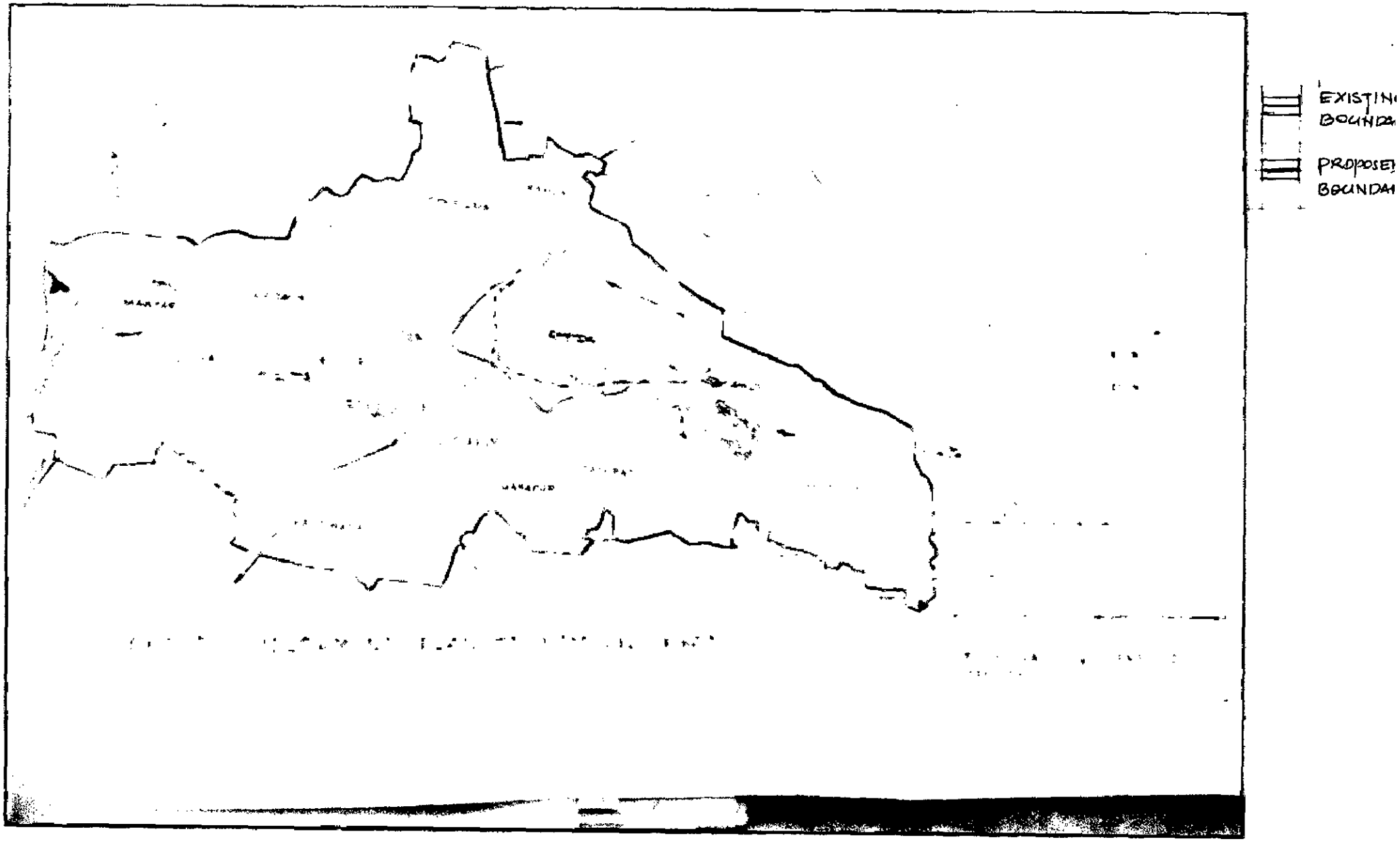


PROPOSED LANDUSE PLAN - 2013, RAMTEK

S.D.

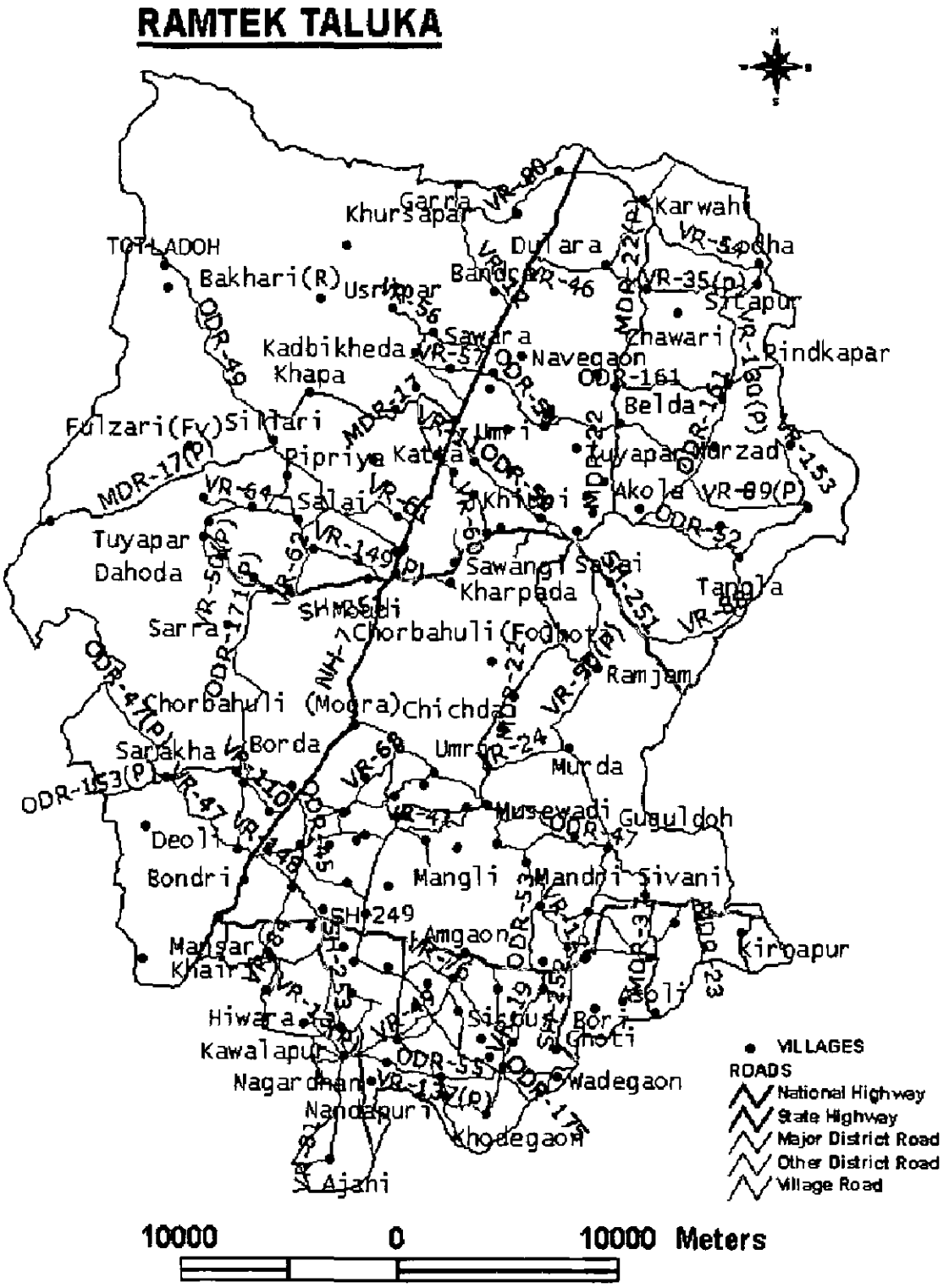


Fig 3.17: Ramtek Taluka : Road Map

Table 5.2: Requirement of Agricultural produce per year in district

Sr No	Items	Need of diet/head/day (in grams)	Need / year (in tonnes)		
			2011	2021	2031
	Cereals	500	9549	12033	15161
	Pulses	70	1337	1685	2123
	Groundnut	10	191	241	303
	Fruits	232	4431	5583	7035
	Vegetables	25	478	602	758

For optimization of agriculture production in tahsil, there is need to harness the potential of water, promotion of use of HYVS, fertilizers, pesticides and manures properly. From time of sowing to time of harvesting and after harvesting, there are many activities need to manage with proper technical inputs for increasing the production. At the time of sowing, there is required the selection of type of seeds, then required the providing nutrition in form of fertilizers and water to proper building up of crops and finally there is need to protect crops by diseases and weeds. After harvesting there is required protection of produce i.e. needs good gowdowns, and procurement facilities to avoid wastage of produce. There is also need to think about the maintenance of fertility of soil in district.

Following steps are required for development in order to optimize the agriculture production. These are detailed out as follows:

Increase of agriculture land

At present, the agricultural land, which is sown, is 36395 hectares and out of it only 7386 hectares is sown more than single time in the year. Also there is 2395 hectares which is unutilized but available for agricultural production. So in direction to increase agriculture land we will proceed in two ways:

1. Promotion of farmers towards sowing twice/ thrice in a year
2. Conversion of available unutilized land into agriculture production

The constraints in achieving first step written above are:

1. Shortage of irrigation facilities, funds and implements to small and marginal farmers especially in Rabi season
2. *Non- availability of options to sow especially in Kharif season*
3. Sowing of long base period crop like pulses which take 6-7 months in maturing
4. Dry areas where the yield of crop depends on the performance of monsoon

There is urgent need felt to create irrigation facilities in dry areas and implements to .small and marginal farmers. There is also need for HYV seeds of pulses etc. to shorten the base period. There is need of provision and guidance to farmers for new options of seeds which can sow twice a year comfortably.

To achieve second step, there is need to identification of landless people and make allotment of unutilized land to them. This will benefit by two ways, on one hand to landless people get the source for their livelihood and secondly the production will increase.

This type of activity will increase in land by 2395 i.e. increase in land by 6.54 % which will increase the yield by 6.54%

Increase of use of High Yielding Variety of Seeds (HYVS)

At present the use of HYS in agriculture is only up to 50% of total sown area. (dept of agriculture, Ramtek) So here is scope in increasing production by increasing use of HYS on frelds. The need to promote the use of HYS on fields can be listed out as follows:

1. Saving of produce through fields using HYS and procurement of them to increase the storage for supply to other fields
2. Easy availability of HYS to small and marginal farmers
3. Sufficient quantity of pesticides weedicides etc, to save crops to its full growth as these are more likely to be affected

Primary treatment to seeds

It is observed that mostly diseases are spread by seeds in crops. So there is need to provide facilities and knowledge to farmers to give primary treatment to seeds before

lg in fields. It will largely reduce the spread of diseases in crops and ~quently the production will rise up.

Enhancement to use of bio fertilizers

The regular and imbalanced use of chemical fertilizers is reducing productiveness of soil by disturbing the physical aspects of soil. Also the capability of water holding is reduced. This is effecting the production towards down fall and may cause serious cations in future. So that there is need to promote the use of humus, bio compost *kenchua* composted manures. This will help in maintaining productive power of and simultaneously increase the production. This should be done by guiding farmers about methods of preparation and campaigning about their benefits and need. campaigning and guidance can be done with help of representatives of PRIs.

Promotion of rotationary cropping pattern

It is scientifically proved that the productivity of soil is maintained by using rotationary crops in a field. To save the productiveness of soil there is need to promote farmers to for alternative cropping pattern with in certain no. of years. For this there is need to the research work to find out the cropping pattern of presently seeds used in trict for five years. Then this cropping pattern is circulated to farmers with help of PRIs.

Control on Weeds and diseases

Weeds and diseases reduce the production as weeds take out the nutrients of crops and diseases directly harm the crop and fell him to full development. As such, the production of agriculture produce is reduced to a large amount. For this can be done by ways of promotion as follows:

1. By giving primary treatment to seeds
2. Easy availability of pesticides and weedicides to farmers and circulation of knowledge about their time and quantity of use in fields
3. Settlement of rescue force to take instant action for fighting spreading of diseases at the time when crops stand on field.

5.2.1 Infrastructure Development

The optimization of the agriculture production can be expected through the methods defined above. Simultaneously there is also need of the development of infrastructure to meet the above objectives and provide consumption means so that farmers get optimum benefits from it. This can be categorized under following heads:

Water Supply and Irrigation Facilities

Irrigated area is 22% of the cultivated area. The soil of the district is generally fertile and can, by assured irrigation, be put to better and more productive use. There is a need to develop more irrigation facilities in the district.

Irrigation

One of the requirement, in increasing the agriculture land, is development of irrigation facilities and promotion for development of resources in district. The availability of water for irrigation in district is not plenty which lead to think towards the proTotion of scientific irrigation practices explained by following heads.

Surface water:

In Ramtek tahsil there are medium flow of rivers with aggregate flow from the tributaries eg. Sur river. There are no. of ponds and lakes like khindsi which after development can be used for irrigation purposes.

Ground water:

This area is classified under medium ground water potential zones by dept of water , maharashtra.

It shows that for making water available for irrigation, there are few things required to be done as listed below:

1. Installation of check dams on rivers and small streams to collect water and retaining walls at lakes, ponds etc.
2. Improvements of available ponds in district and construction of new ponds in areas having low ground water potential.
3. Increasing use of ground water for irrigation in areas having high ground water potential.
4. Encouragement to farmers for adoption of scientific irrigation practice.

Technical arm

There is need to establish a independent technical arm at Tahsil level for providing technical support and knowledge to farmers only. It is required:

1. To test the soil condition accordingly guidance about input of fertilizers on fields.
2. To fix the cropping pattern in the District on the basis of soil condition and requirement.
3. To guide for promotion of bio fertilizers use in district
4. To act at the time of bursting out of diseases in crops in their building up stage
5. To give guidance for use of pesticides and weedicides defining the amount and ways of using in fields
6. To campaign for promotion of scientific techniques in performing agricultural activities
7. To provide information to co-operative societies about the need in quantity of .HYS, fertilizers, pesticides, weedicides etc.

Co-operative societies

In the Ramtek Tahsil , 11 primary agriculture co-operative societies are working. They do not have hands to update the right requirements of inputs on fields. So they fell to provide them to farmers. Simultaneously, there is needed to make the interaction of these societies with farmers more frankly and transparently. So the working of co-operative societies should be redefined and incorporate to their work. Such as:

1. making the availability of fertilizers, pesticides, HYS to in sufficient amount, calculated with help of technical arm
2. this amount should update each year on the basis of cropping pattern to be followed in district
3. *the formalities should be minimum and ensure that all farmers get input in* sufficient amount.

Marketing facilities

The agriculture produce are retained by farmers to some extent for their own consumption and surplus has to be marketed. Unless efficient and fair marketin~ system is available, the lion's share of the margin is pocketed by traders anc middlemen and produce gets a raw d~al. The elements of an efficient marketing

systems are:

1. Stable and remunerative price level
2. A regulated market system
3. A good storage system, particularly for perishable produce like vegetables fruits etc.
4. Quality consciousness and quality control including proper processing anc packaging
5. An efficient transportation system

Farm credit services

Modern agriculture technology requires heavy investment in current input. Most of the farmers can not raise such amounts from their own savings, in fact the majority have hardly any savings at all. Hence availability of other inputs will be *of* no benefit to therr unless credit is also made available on reasonable terms. Ideally, the quantum of credit should be related to a good crop plan for the farm. The security required should be within the capability *of* the farmers and the period of repayment should be with in the farmers paying capacity. The farmers should also be provided with guidance.

Nationalized banks are required to offer loans on preferential rates to weaker sections of society, particularly small farmers. Private loans at relatively high rates of interest still play significant role in rural credit. The presence of the public agencies has helped to bring down the rates of private loans to about 15 -25 % from earliar 75-80%. So, the banks working in this field, should be flexible enough to small and marginal farmers for optimization of profit.

Table 5.3: Expected production on implementation of this plan in Ramtek Tahsil.

S. No.	Name of crop	Area of crop (in hect		Yield (tonnes/hect.)		Production (in tonnes)
		Irrigated	Non-Irrigated	Irri-gated	Non-irrigated	

1.	Cereals					
	Rice	2593	1824	3.5	2.1	12905.9
	Wheat	1685	2136	2.1	2.1	8024.1
	Jawar	---	Kharip-1484	--	1.3	
			Rabbi –1174	--	1.2	3338
	Bajra	---	10	--	1.15	11.5
2.	Pulses					
	Gram	169	2289	1.5	0.9	231.6
	Tuar	--	1608	--	0.66	1061.28
	Moong	--	120	--	0.5	60
	Urad	--	65	---	0.6	39
	Kuliv	--	7	--	0.6	4.2
	Math	--	20	--	0.4	8
	Makka	--	43	--	0.7	30.1
	Pea	--	149	--	0.7	104.3
	Others	5	104	1.5	0.7	80.3
3	Oil seeds					
	Groundnut	--	69	--	1.08	74.52
	Sunflower	-	26	--	0.72	18.72
	Soya bean	--	1000	--	1.8	180
	Jawas	--	1244	--	1.0	1244
	Til	--	82	--	0.36	29.52
4.	Sugarcane	---	66		50	3300
5	Total Fruits	----	2611	3.2	1.92	5013.12
6	Vegetables	---	495	4.2	2.5	1237.5

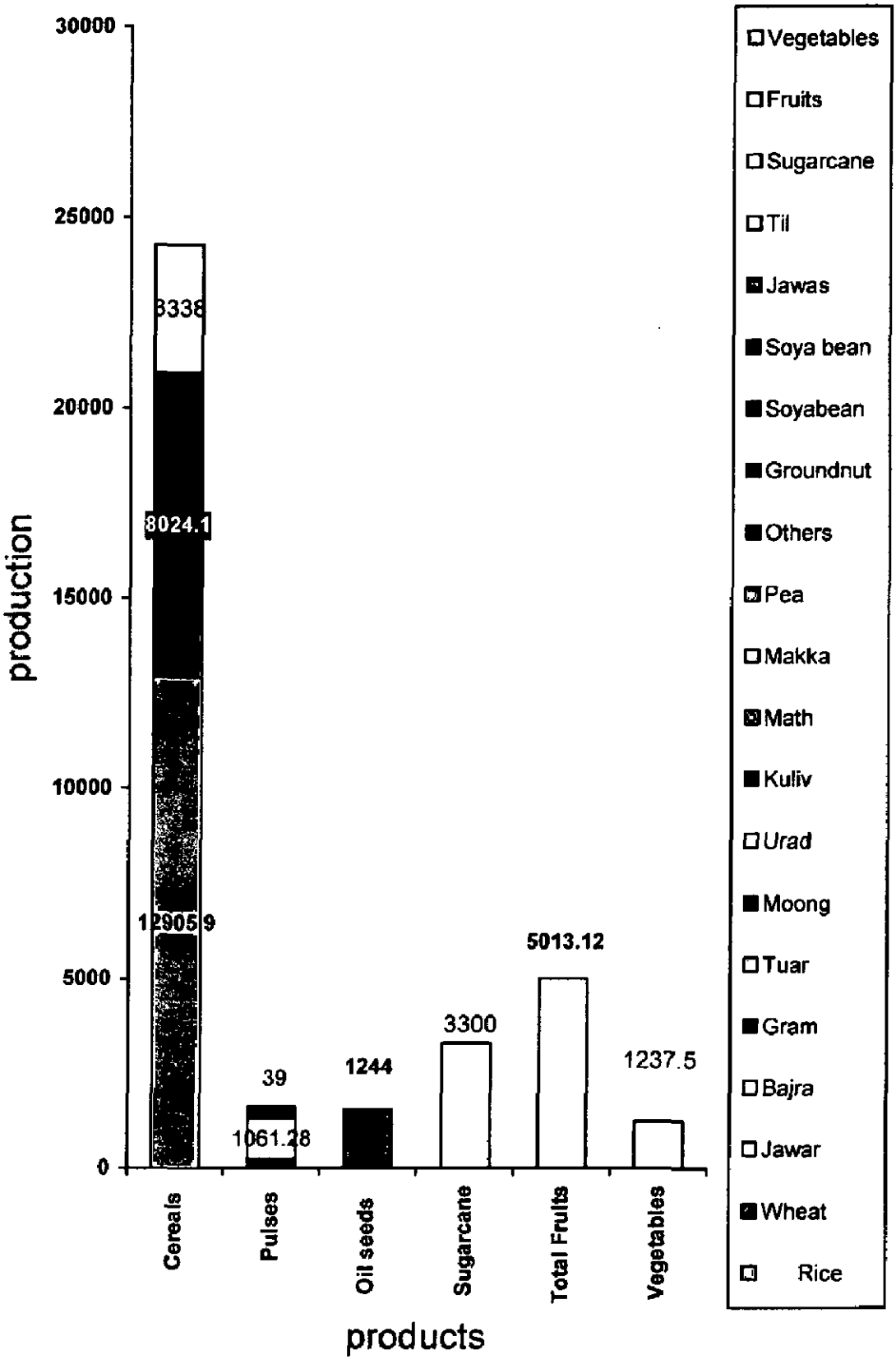


Fig. 5.3: Expected production on implementation of plan in Ramtek Tahsil.

5.3 Road Network

After finding out the needs of development of a tahsil, the spatial and functional gaps must be identified and a suitable program should be drawn up of such analysis.
Also it becomes necessary to decide and determine, what should be the package of basic services/ minimum needs in rural areas or cluster of villages, and what should be the minimum population threshold and location at which these services should be available. On the basis of that the kinds of hierarchy of settlements may be fixed for planning.

5.3.1 PROPOSED HIERARCHY OF SETTLEMENT

Growth centers and growth points

With the help of the PURA concept while considering the population projections the fixing of hierarchy of settlement can be done by finding out the levels of different locations. Thus number of growth centers and growth points can be found out.
The projection of population and required number of growth centers and growth points are calculated using PURA concept. It is as follow.

Table 5.4 : Growth Centres and growth points

Sr No.	Major Growth Centre	Growth centers	Growth points
1	Ramtek CD Block	Deolapar (29)	Manegaon Tek (3), Karwahi (4), Wadamba (Malgujari)(20), Belda (22), Pipria(41), Pauni (49), Hiwara (Bazar) (56), Tangla (61), Pathrai (71)

2		Mansar (109)	Bhondewada (83), Khumari (84), Patgowari (110)
3		Nagardhan (122)	Manapur (119), Kachurwahi (145), Chokhala (148)
4		Bhandar Bodi (132)	Chichda (74), Musewadi (99)
Total	1	4	17

The numbers of required growth centers and growth points are found out. The name and location of these settlements are identified on the basis of

Population of the settlement

Connectivity of the settlement with the other settlements in Tahsil.

Amenities available in and around the settlement.

So the hierarchy for providing facilities in rural areas of the Ramtek Tahsil would be as :

Growth center for serving the population 25,000 – 50,000 = 4 nos

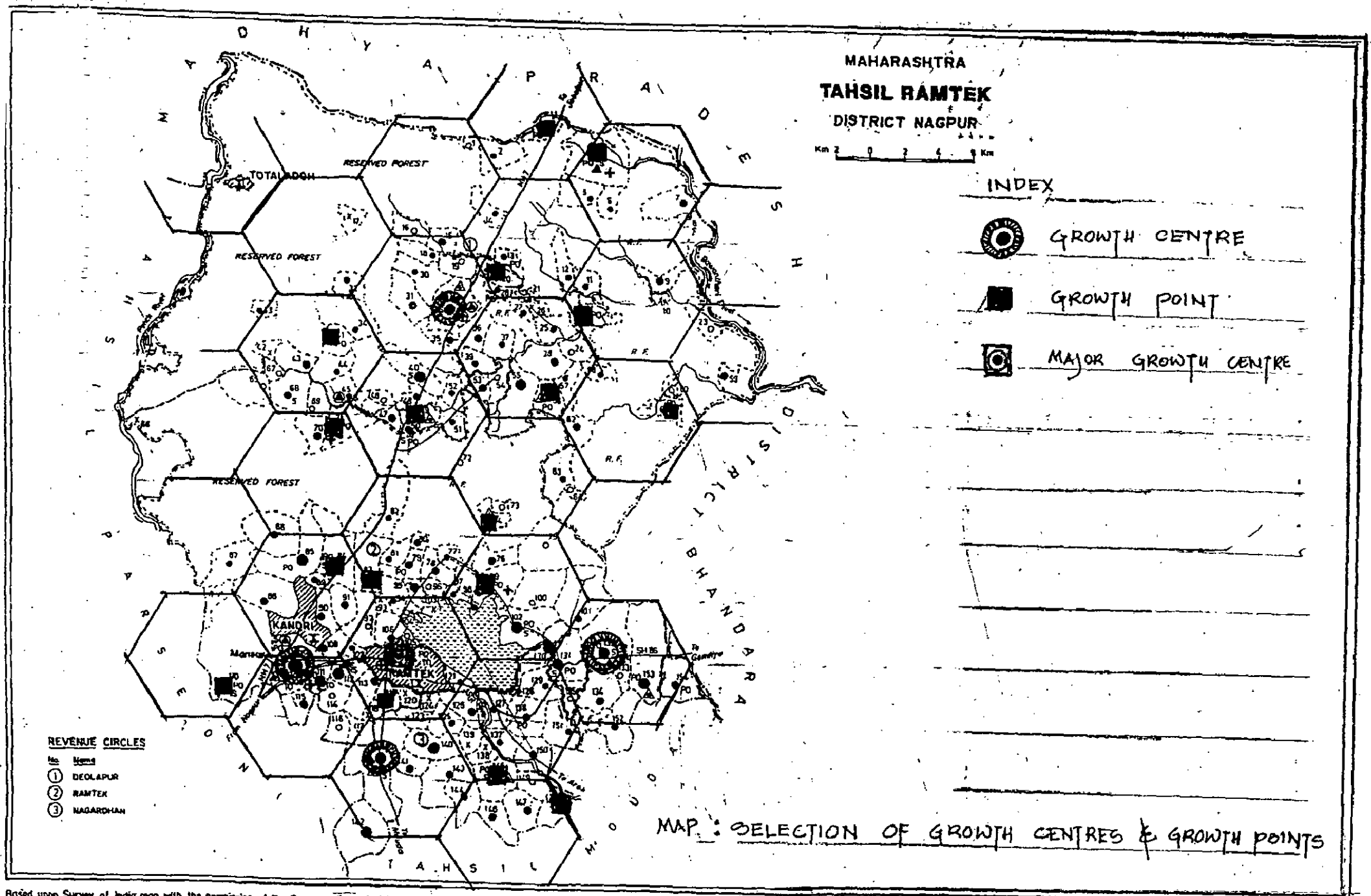
Growth points for serving the population 10,000 - 25000 = 17 nos

Basic Villages for serving the population more than 500 = 49nos

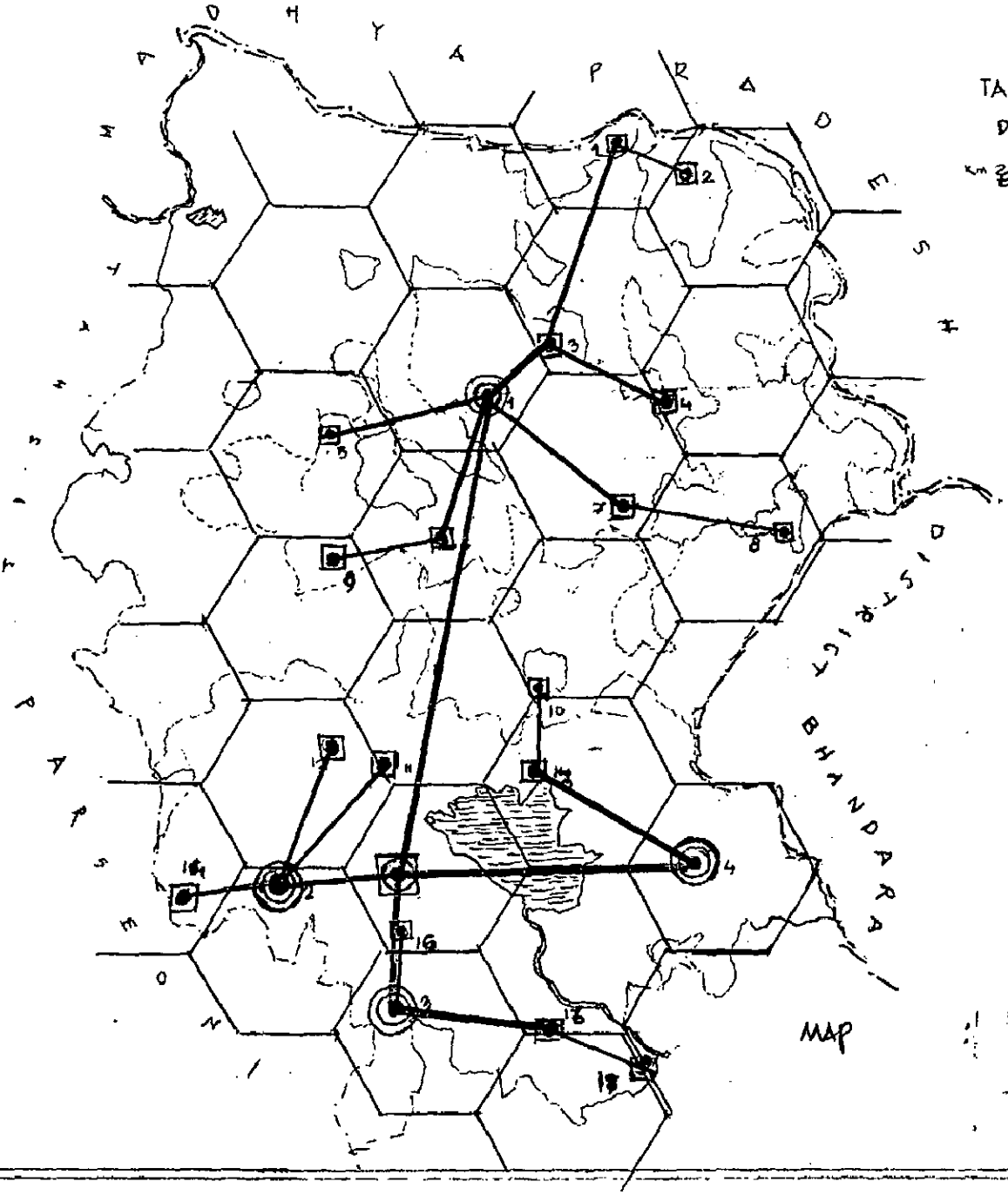
SubBasic Villages for serving the population less than 500. = 73 nos

RAMTEK TAHSIL, DISTRICT NAGPUR.

MAP 5·2: PROPOSED ROAD NETWORK PLAN



Based upon Survey of India map with the permission of the Surveyor General of India.



MAHARASHTRA

TAHSIL RAMTEK

DISTRICT NAGPUR

KM 2 0 2 4 6 KM

INDEX

- GROWTH CENTRE
- GROWTH POINT
- MAJOR GROWTH CENTRE
- CONNECTIVITY BETWEEN GROWTH CENTRE & GROWTH POINTS
- CONNECTIVITY BETWEEN MAJOR GROWTH CENTRE & GROWTH CENTRES

CONNECTIVITY OF MAJOR GROWTH CENTRE TO GROWTH CENTRE & GROWTH POINTS

Growth Centers should have the facilities to an extent required to serve the population in their catchment area. The finding of facilities required to provide at the centers are on the basis of PURA concept.

At the growth Centre, facilities required to provide are listed below :

1. Shopping on bigger scale
2. Mandi
3. Large community hall / Panchayat Ghar
4. Post office with Telegraphic facilities
5. Primary,Senior Secondary school and college
6. Dispensary/ Hospital
7. Administrative office of the Block Development Officer
8. Office of the Irrigation Department
9. Municipal Corporation
10. Police Station
11. Banks
12. Cinema
13. Library
14. Parks / playgrounds
15. Storage for Pesticides / insecticides and fertilizers
16. Veternary hospital and Dairy colony
17. Potable water Supply
18. Domestic and Industrial Power
19. Industrial Estate and Bus Terminal

At Growth Point, the facilities required to provide are listed below:

1. Shopping on a medium scale
2. Posts and Telegraphic office
3. Primary, Middle and Senior secondary school
4. Library / Club / adult education center
5. Seed / Grain / Fertilizer Storage
6. Cooperatives Societies management office
7. Police post
8. Veternary center / hospital

9. Primary Health Center / Dispensary
10. Playgrounds and gathering places
11. Drinking water, electricity and sewerage facility
12. Community Hall

Basic Villages are villages with population > 500 these will be provided with the facilites as listed below:

1. Community Hall / Chopal
2. Primary School
3. Panchayat Ghar
4. Adult Reading Room
5. Small gathering place, park, playground and open space
6. Community water hydrants, Latrines and electricity

Sub basic Villages having population < 500 will be provided by the following facilities:

1. Adult Reading Room
2. Small gathering place, Park, Play grounds and open space
3. Community water hydrants, Latrines and electricity

Connectivity

Tahsil Headquarter (Ramtek) is the major Growth Centre as it has potential to serve as source to other Growth Centres. Ramtek is also a community developement Block.

The growth Centres have been chosen seeing its connectivity with the other settlements and the major growth Centre. Growth Centres and Growth Points are very well connected by the NH-7 and State Highways. The growth Points are also well connected to growth centers. Some basic Villages and Sub Basic Villages are not connected growth points and the nearest growth center which will serve the population. So in brief, the connectivity status to achieve can be as follows :

Major Growth Centre or Tahsil Headquarter to be well connected by major District Road

Growth Centres in a Tahsil to be connected to each other by major District Roads.

Growth points are to be connected to the nearest growth Centre by village roads.

Basic and Sub Basic Villages are to be connected by village roads.

So the hierarchy of Settlement and their connectivity should be done as said above. The growth centers, Growth points and Basic Villages identified are to be developed phasewise. Once reviewed after 5 years it new strategies be evolved to meet the needs of the future development. Simultaneously the optimization of Agrioculture Production should be looked for.

5.4 Industries

The industrial structure of the tahsil is weak, a number of industries can be established because raw materials are available in plenty and the demand for them is likely to increase in future. Resource based industrialisation can be a strategy for the development of Tahsil.

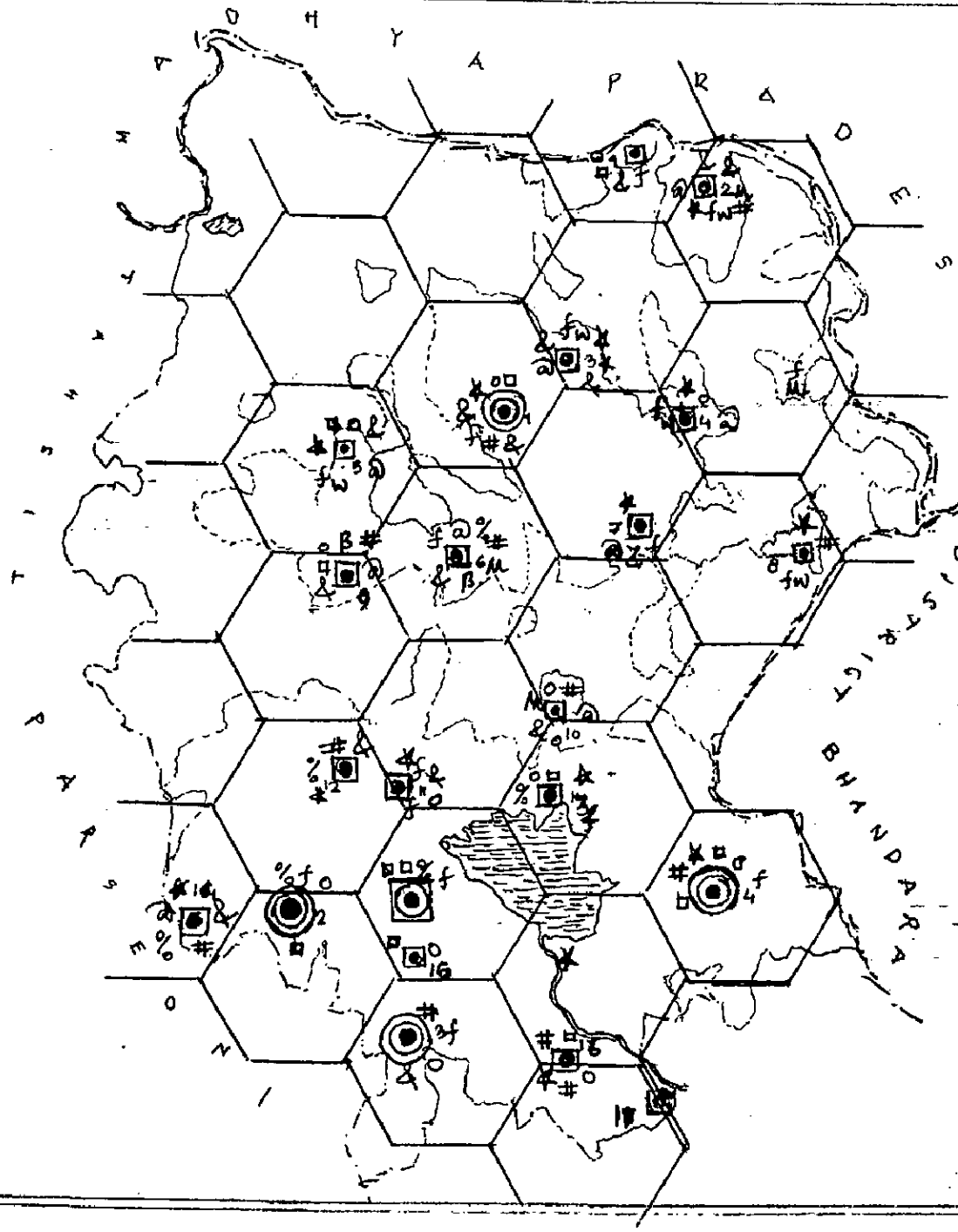
Employment can be generated through agro processing units ultaneously following ways can be promoted *for* raising employment in agriculture

1. Post harvesting practices
2. Development of markets and their connectivity of all easy perishable and non-perishable agro produce.
3. promotion of frequent income generating practices like inland fisheries, poultry, dairy development, piggery, sericulture, horticulture, bee-keeping etc.

Table No. 5.5: Types of Industries proposed in the Ramtek Tahsil

Sr. No.	**Types of Industries**	**Nos of Units**	**No of Employment**
I	**Agro Based Industries**		
1	Rice mill	7	210
2	Dal mill	6	200
3	Oil Mill	5	40
4	Sugar mill	1	300
5	Corn flakes	2	30
6	Pickle Industry	4	40

7	Fruit processing Industry	2	20
8	Juice Industry	2	15
9	Flour mill	10	50
II	**Forest Based Industries**		
1	Beetle Industry	1	25
2	Wood seasoning plant	2	15
3	Wooden Building materials	5	25
4	Wooden Furniture	5	25
5	Card board	2	20
6	Wooden Stationary	2	10
7	Bamboo Furniture	2	10
8	Mattresses Industry	4	20
9	Saw mill	5	20
III	**Livestock Based Industries**		
1	Dairy Industry	2	100
2	Chilling Plant	2	10
3	Poultry Farm	3	30
4	Cosmetics Industry (from cow dung etc.)	5	50
5	Leather bags	5	20
6	Shoe making	10	40
7	Bee Keeping	4	20
8	Fishery	2	30
IV	**Household Industries**		
1	Papad Industry	4	40
2	Spice mill	2	25
3	Craft making	5	100
V	**Other Industries**		
1	Bread	5	50
2	Cold storage	1	40
	Total	119	1630



MAHARASHTRA

TAHSIL RAMTEK

DISTRICT NAGPUR

km 2 0 2 4 6 KM

INDEX

GROWTH CENTRE

GROWTH POINT

MAJOR GROWTH CENTRE

AGRO BASED IND. TYPE	UNITS
# RICE MILL	7
○ DAL MILL	6
✱ OIL MILL	5
& SUGAR MILL	1
F FLOUR MILL	10
□ CORN FLAKES	2
@ FRUIT PROCESSING UNITS	2
% JUICE IND.	2.

LIVESTOCK IND TYPE	UNITS
# DAIRY FARM	2
○ CHILLING PLANT	2
✱ POULTRY FARM	3
□ COSMETIC IND	5
@ LEATHER IND	5
& SHOE MAKING	10
B BEE KEEPING	4
f FISHERY	2

FOREST BASED IND. TYPE	UNITS
# BEETLE IND.	1
○ WOODEN TURNING	2
✱ WOODEN B. MAT	5
f_w WOODEN FURNITURE	5
□ CARDBOARD	2
@ WOODEN STATIONARY	2
B BAMBOO FURNITURE	2
M MATTRESS MAKING	4
& SAW MILL	5

HOUSEHOLD IND. TYPE	UNITS
○ PAPER IND.	4
✱ PICKLE IND	2
% CRAFT IND	5

OTHER IND. TYPE	UNITS
# COLD STORAGE	1
II BAKERY	2

MAP _ : PROPOSED INDUSTRIES

Fig.

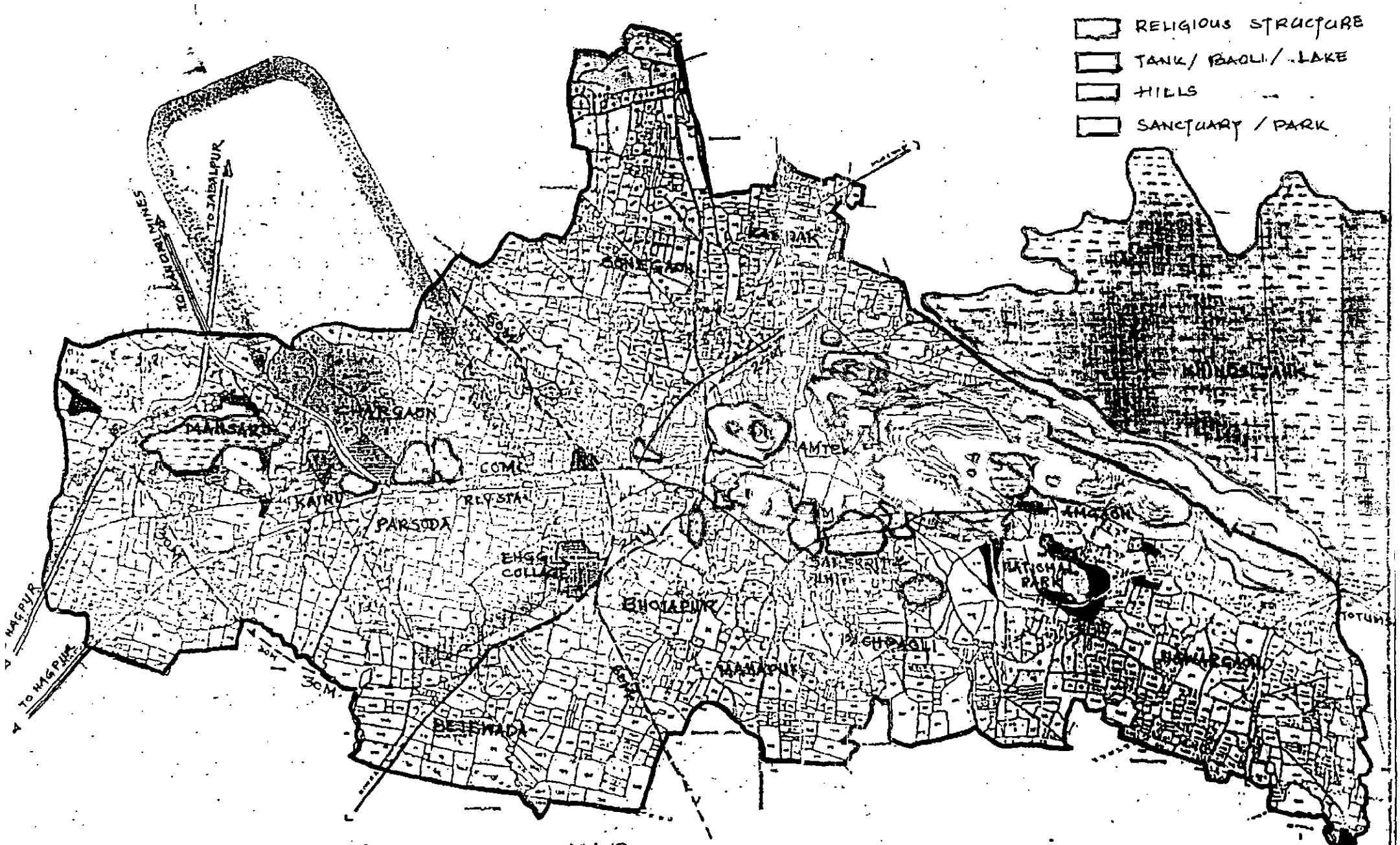
5.5: Tourism

Formulation of plan for the Development of Ramtek tahsil as tourist area includes Following heads:

1. To conserve the Heritage sites which are of private or public importance.
2. To give proposals for the socio economic development of the pilgrimage.

Table No 5.6 : The list of sites of public and private importance:

Sr No	Area	Site /precinct
1	Ramtek	Gadmandir : All the religious structures
		Kalidas Smarak
		Ambala Temples
		Nagarjuna Hills
		All lakes namely : Khindsi lake, Ambala Tank, Navin Talao, Rakhi Talao, Nagara Tank, M.S. Bareja Tank, Chambhar Tank, Gautam Tank Ramaleshwar,
		Stepped Wells Like Kumarika baoli, Sita baoli, Chor baoli
		Narayan Swami Temple
		Jain Temple
		All Temples : Wakataka style on the north side of Ramgiri hill
		Wild Life Sanctury
2	Nagardhan	Nagardhan Fort
3	Mansar	Hidimba Hill, Excavation Site
4	Ramtek Tahsil	Reserved Forest
5	Totladoh	Totladoh Dam



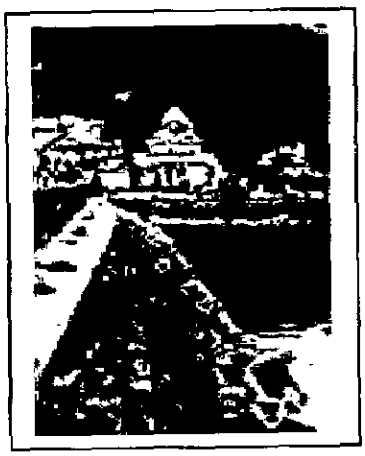
MAP : TOURISM MAP

DRAFT DEVELOPMENT PLAN OF RAMTEK (R+AA)

Fig. 5.5: Sites of Tourists Interest

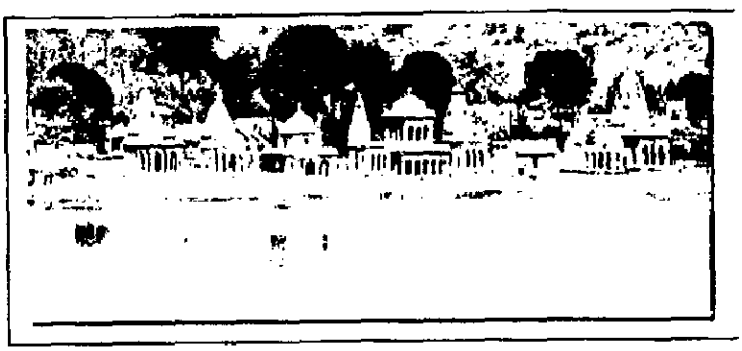
Gate to Ram Temple

Areal View of Hill RamGiri Temple

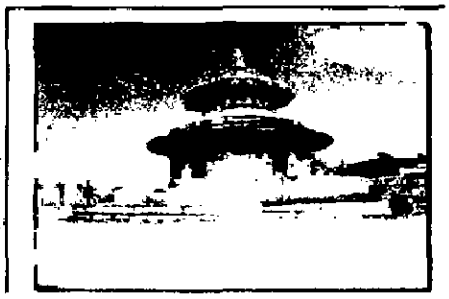


Ambala Lake

Ram Temple



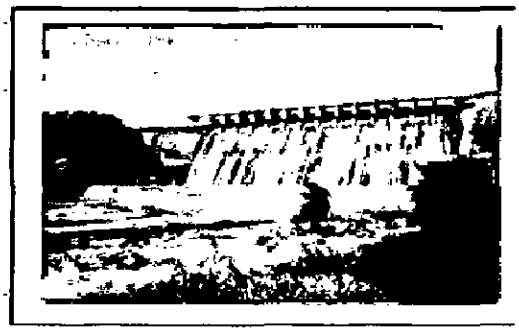
Ambala Tank and Temples



Kalidas Smarak

Nagardhan : Fort

Khindsi Lake



Totladoh

Scenic Beauty : Hills and valleys

Conservation of Heritage sites / precincts which are of private or public importance will include following tasks:

1. To conduct survey : In order to find out its relevance to conservation.
2. To prepare inventory of heritage sites : This will give the idea about the condition of a whole site or a structure.
3. To prepare detailed guidelines for the conservation of site or precinct.
4. To act for the conservation of site or precinct.

Proposals for the socio-economic development of the pilgrimage can be given as below :

1. Provision of information centers at the points of junctions / nodes.
2. Connectivity of the heritage sites / precincts with the shortest distant pedestrian routes.
3. Provision of commercial activities like shops and restaurants near the sites of pilgrimage as well as tourist importance.
4. Provision for accommodation facilities for the tourists as well as pilgrims in the form of hotels and Dharmashalas.

5.6: Poverty alleviation

Poverty Alleviation is one of the important objectives of plan to achieve the socio-economic development of the Ramtek tahsil. It can be achieved to certain extent by implementation of above proposals in the Ramtek Tahsil.

Still, Poverty is a multy dimensional problem which needs innovative and coordinated action at macro, sectoral and micro level. A large number of programmes and schemes are in operation both at National and State level which aim to strengthen and improve the quality and standard of living of weaker and deprived sections of the society. Different Govt. departments / Corporations are constantly making efforts to eradicate poverty and to generate sources for raising further income and employment in the

- Poverty Alleviation Through Economic Growth and Employment Promotion: Promotion of employment and income generation opportunities contributing to equitable economic development
- Protecting Human Capita: Restoration of previous levels of human capital formation through improved delivery of education and health f .Alleviating Women's Poverty: Special efforts to ensure the advancement of IJ women as full partners in all aspects of human life and their full participation in the poverty alleviation process
- .Alleviating Rural Poverty: Special efforts to ensure the improvement of living standards among the rural p~pulation
- .Strengthening the Social Safety Net: Mitigation of human deprivation through a targeted social safety net for the income poor can not benefit from new employment opportunities in the short term .
- Policy Management and Institutional Strengthening: Incorporation of ;' poverty into all aspects of policy making and ensuring effective implementation I and administration of program activities
- .Trade and skills training: Introduction of trade and skills training schools will
- Iprovide another avenue for these young people to gain valuable trades skills which will allow them to get into meaningful jobs

To facilitate the implementation of component tasks, the govt. has to form Poverty Alleviation Fund (PAF).

5.7: Health

Health facility is negligible in the whole tahsil. Only one hospital is available in the Tahsil. Hence is a great need to think about the health factor. Medical officers should be appointed or mobile hospitals should be available for 5 – 10 villages. Primary Health facilities should be provided within the vicinity (5 kms) of the village. Hospitals should be provided at all Growth Centres.

In addition to this there should be private clinics in all the villages to tackle malnutrition.

5.8: Education

Literacy rate of Ramtek Tahsil is 72 % (2001 census figures) average. The basic requirement to strengthen the people to develop themselves and proper implementation of program is to provide proper education facilities in Tahsil. It is, therefore, suggested that the school locations, barring exceptional cases, could be tied to the focal points forming part of the spatial framework as given below:

Growth centres : College
Growth point : High school & middle school
Basic village : Standard primary school Revenue village Lower primary school

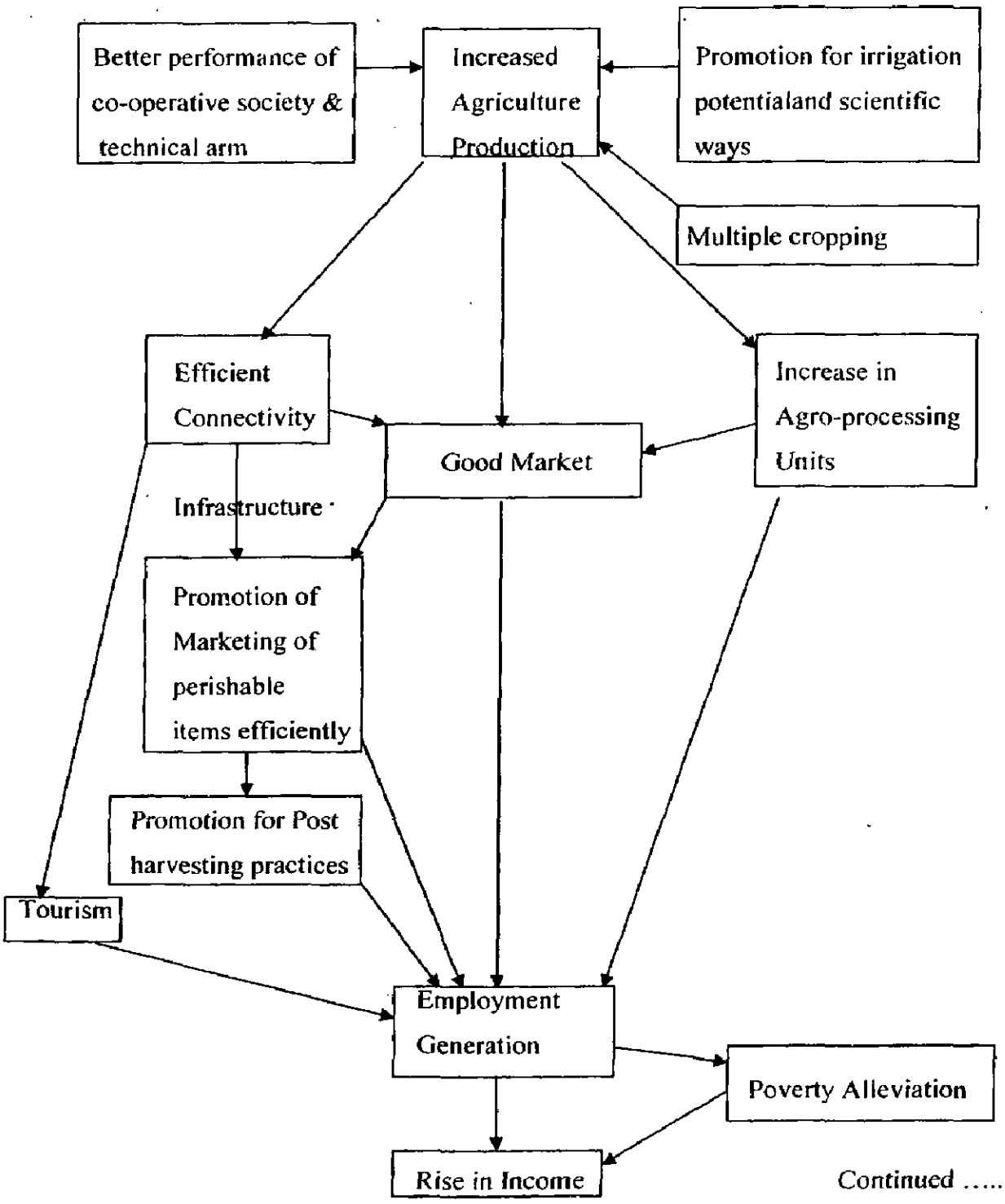
The goals of the educational development programme could be set as follows:
1. To make aware every individual household in the project area with a package of information on:
(a) Natural environment (b) Productive activity
(c) Social situation and institutions, and (d) Rural technology.
2. To carry the above to the people through their own representatives, leaders and sons and daughters.

To achieve the above, the following objectives could be set before us:
1. To restructure and improve the formal education programme at all levels - .college, high, primary and nursery schools.
2. To see that every child of school-going age attends the school, in order that illiteracy does not remain a scourge of the coming generation. .
3. To convert the schools into community centers and develop strong ties between the students, parents and teachers with a view to use these ties as vehicles for improving formal education and introducing informal educational processes through a variety of social, cultural and production-oriented activities.
4. Link up formal and informal educational processes with rural technological development programmes through a series of fabrication and production centers, and to train the youth of the village to secure self-employment.

5. To achieve the above objectives the following action programmes are to be started in the project area at an early date.

5.8 Theme of Integrated plan

The theme of this integrated plan can be well visualized through following figure :



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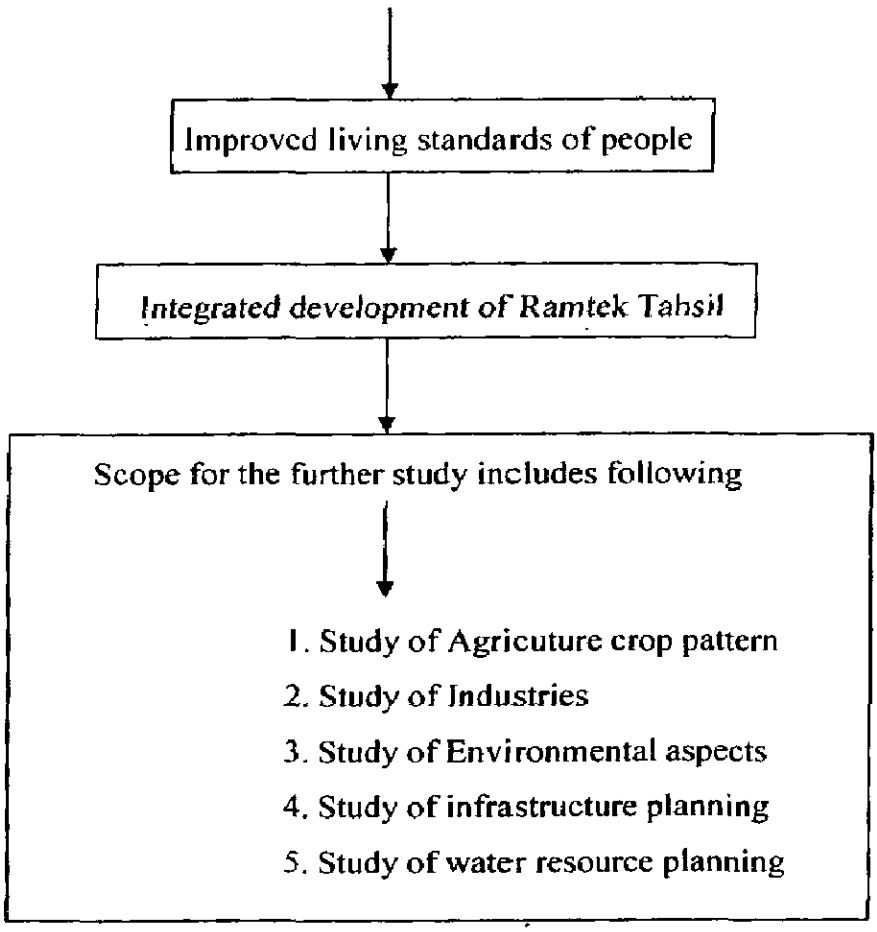


Fig. No. 5.6: Theme of integrated development plan for Ramtek Tahsil

CHAPTER 6

RECOMMENDATIONS

6. RECOMMENDATIONS

As per the plan formulated for integrated development of the Ramtek Tahsil (Refer Chapter 5) the physical development of the tahsil can be achieved by increasing the Agriculture Production, by connecting all villages, by developing Resource based Industries and Tourism network whereas social development is possible by providing the educational and health facilities.

6.1 Agriculture :

For the optimization of the agricultural production the earlier mentioned steps should be followed. Also the forward and backward linkages should be thought of well in advance.

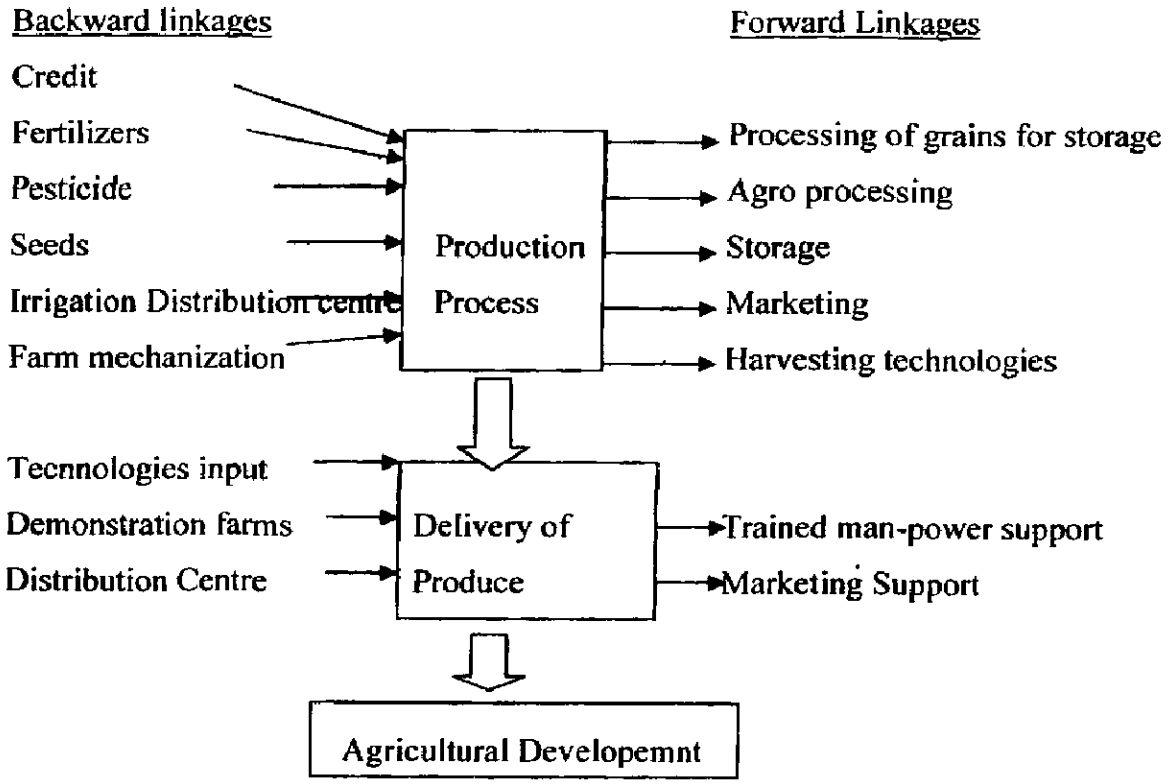


Fig 6.1: Backward and forward linkages with delivery system for Agricultural Development

6.2 Road network :

For the implementation of the plan for the socio - economic development of the Tahsil, road network should be constructed parallel to agriculture production growth. For the proposal is given to implement it in four phases thus connecting all population sized villages by all weather road network.

6.3 Industries :

INFRASTRUCTURAL DEVELOPMENT

There is always heavy traffic on National Highway No. 7 and State Highway No. 249 connecting Mansar to Tumsar through Ramtek. So it is proposed to widen the highways.

To have suitable location for any industry, return cost ratio should be highest. Under cost three items can be taken as major factors:

i) Processing cost
ii) Procurement cost
iii) Marketing cost (distribution cost)

The return will be in terms of money / earnings as far as private enterprise is concerned. To get maximum social benefits, the private parties should not always be given the best.location but sometimes the second best so that balanced growth of the area is maintained and the fruit of economic development is shared by all the sections of the society.

Following assumptions have been made while deciding the location of the industries:

1. Processing cost remains almost the same throughout the Tahsil and only transportation cost varies.
2. Markets are fixed and alternative locations do not alter the marketability of the product.

Based upon the above assumptions the locations for various types of industries have ben suggested.

6.4 Tourism

In order to provide employment opportunities to the local population the tourist spots can be developed. For eg. Heritage sites, wild life sanctuary, Water Park. Heritage sites include religious structures in the form of Hindu, Jain and buddhit temples, Muslim tombs and water bodies like tanks, lakes, river and stepped well, palacial structures like forts and palaces. To support the economy the provision for temporary as well as permanent shops should be provided and accommodation units should be increased .

6.5 Health

In order to have substantial improvement in the nutritional level and health of the people following recommendations are made:

- All the villagers should have easy access to health facilities.
- Primary Health Care unit should be provided with in 5 kms from the village.
- Every village should have clinic and there should be provision of hospitals at all growth centres.

6.6 Education

RESTRUCTURING OF FORMAL EDUCATION

There are three basic human elements in the formal eduction system. They together constitute a triangle.

- Teacher
- Students
- Parents

The quality and relevance of education imparted depends upon degree of co-ordination and co-operation among the three. Any educational development programme must consider these three elements as the target elements.

Apart from the human triad, there is a material triad which is a significant determinent of quality of education. This consists of quality of education, physical environment of the school, the equipments and teaching aids and reading materials. All of these have to be taken care of in educational development programme.

Restructuring of formal education system would involve rethinking on each of the above six elements. Some proposals in this regard are given below:

Teachers: A training programme for teachers of the project area should be organized to acquaint them with the latest methods of teaching.

Parents: Parents should be brought closer to school either through Village panchayat system or through parents' organization using local leadership.

Building: Immediate efforts should be made to determine minimum space requirements for primary schools keeping in view the capacity of State and local community to bear the cost of construction and maintenance, and additional space would be made available.

Books: Immediate steps be taken to develop suitable books for children together with handbooks for teachers on how to teach. Libraries should be opened in each school. *

Equipment: Each school should be provided with minimum furniture and equipm~nt to teach various subjects. Some extra funds should be made available for outdoor activities.

In order to make the make school as a community institution, responsive to local needs and aspirations, especially in rural areas the changes in work schedule would be effected.

1. Schools would be closed for two weeks or more during the sowing and harvesting times.

2. Schools would open at 9 a.m. and close at 3 p.m. to accommodate two requirements:

(a) Children should be available for household work for at least three hours daily.

(b) The school building be available for non-formal educational programmes after 3 p.m.

The proposals in this regard are:

1. The local school building, as stated earlier, would be converted into a community centre after 3 p.m. on working days and on holidays. The community centres would be used for:

(a) Discussion on current topics of interest to rural people; .

(b) Film and slide shows on rural activities specially animals, plants, soils, seeds and agricultural operations in India and abroad;

(c) Music and drama performance, by local artists; . (d) Sports meet and games on Sundays; and

(e) Meeting of village panchayat and parents to discuss problems *of* rural education.

2. Helping the people to follow the advice given by the scientists and others for improving their productive capacity. At the time of sowing, advice should be rendered on how to plough, what to sow, what seeds to use, what fertilizers to use, etc. In the same way advice on animal rearing should be available. This would enable people to learn scientific ways while doing the work.

Special programmes for women's education would have to be chalked out covering such vital areas as nutrition, child health, family planning, cooking, sanitation, etc.

At a later stage, programme of adult literacy could be started depending upon the interest and demand of the people.

3. Primary education should be available in all villages having population above 500. Secondary Education schools should be available in villages having population above 1000 and Villages having population above 1500 should have high schools.

6.7 Phasing of Development:

1. In the first phase, emphasis should be laid on development of agricultural resource. Farming should be encouraged by advancing loan for agricultural purposes with liberal policies and at low rate of interest.
2. In the second phase an access to all villages should be made by constructing some new roads.
3. In the third phase an emphasis should be given on resource based industries such as livestock, agro-based industries, forest based units and household and tourism Industry.
4. In the fourth phase an emphasis should be laid on providing of services for these units thus bringing socio-economic development of the whole Ramtek Tahsil in all the three sectors.

CHAPTER 7

CONCLUSIONS

7. CONCLUSIONS

The objective of the present study was to determine a planning strategy through which the country can be freed from the trap of degrading poverty and consequent poor quality of life available to the people. A measure of this is the Human Developemnt Index of latest UNDP report according to which India ranks 157th among all countries. As bulk of India's population is engaged in agriculture and there are serious difficulties in diverting a significant proportion of the work force to other sectors of the economy, the only remedy is to make agriculture more rewarding, profitable and labour intensive.

Accordingly a study of Ramtek Tahsil has been made with a view to optimize agricultural incomes with available land and water resources and other necessary inputs. Ramtek Tahsil is located on the North East of Nagpur District in Maharashtra touching the border of Madhya Pradesh. It is predominantly Agricultural with limited industrial development with a total area of 1141.56 Sq. Kms. And 2001 population of 1.51 Lakhs. It represents a typical unit in the central part and the planning methodology evolved for it will be widely applicable.

OPTIMISATION OF AGRICULTURAL INCOME

Ramtek Tahsil is mostly dependent on ground water for irrigation. Water table is also going down day by day. By constructing the retaining walls / check dams and by using the rain water harvesting techniques we can increase the water level below ground. By way which the cultivable but non cultivated land can be used for cultivation. It will help in order to optimize the agriculture production. With this the agriculture production can be increased upto 20 %.

IMPETUS TO ECONOMIC GROWTH

The increased agricultural income will give a strong impetus to overall economic growth in the Tahsil. It is shown that an increase in agriculture production will allow agro-processing units and market for the surplus amount. This will result in direct employment opportunity to about 200 workers for 6 months. It is proposed to

establish small scale agricultural processing industries 120 numbers which will provide regular employment to 1600 workers regularly. Substantial increase in employment in trade, services etc. will also be observed.

There will be substantial improvement in the nutritional level and health of the people due to availability f more food and income.

ROAD NETWORK PLANNING

Provision of transport is one of the mos important requirements for stimulation of economic activity and growth. Many eminent economists and social scientists have stressed the extreme importance of a transport network. Like other areas in India Ramtek Tahsil does not have netork of all weather roads linking its villages. Since road construction is quite costly it is necessary to make it as cost effective as possible. For the Tahsil is divided into 23 hexagons, few of them partial, with a side of 4 kms. A 'growth centre' based on population and other attributes, quantified by a 'centrality score' was identified inside each hexagon. A road network has been planned bae don demographic force of interaction between growth centres, centrality scores, and aimed at maximizing network efficiency. With this network no village will be more than one hours walk away from an all weather road. All growth centres will be linked to each other and to the major growth centre (urban) Ramtek.

INFERENCE

An inference can be drawn from the above that poverty is not preordained or determined by forces beyond human control. The poverty is an indication of under development and under utilization of natural and human resources. With the introduction of 73rd and 74th constitutional Amendments government of India has shown the concern by making decentralization of planning functions. By united effort and hardwork of human resource towards the sustainable development of our natural resources we can bring it to leading position.

Major backdrop of areas in India is the optimization of agriculture production, fast connectivity of all areas, processing at source which was picked by Britishers and hence introduced industries at the source of raw materials. This reduces the cost of production and transport.

With the introduction of resource based industries (including tourist industry) employment generation is possible. It will increase the income from secondary and tertiary sector and reduce the burdon on primary sector.

This is an attempt to give proposal for integrated development of the smallest unit of planning: Tahsil and /or Community Development Block at Ramtek with an aim to have the socio-economic development of the tahsil as a whole including urban & rural and /or developing as well as underdeveloped areas.

CHAPTER 8

ANNEXURES

Technology for the poor

Wasteland maps can help frame poverty alleviation programmes

SANJAY K SRIVASTAVA

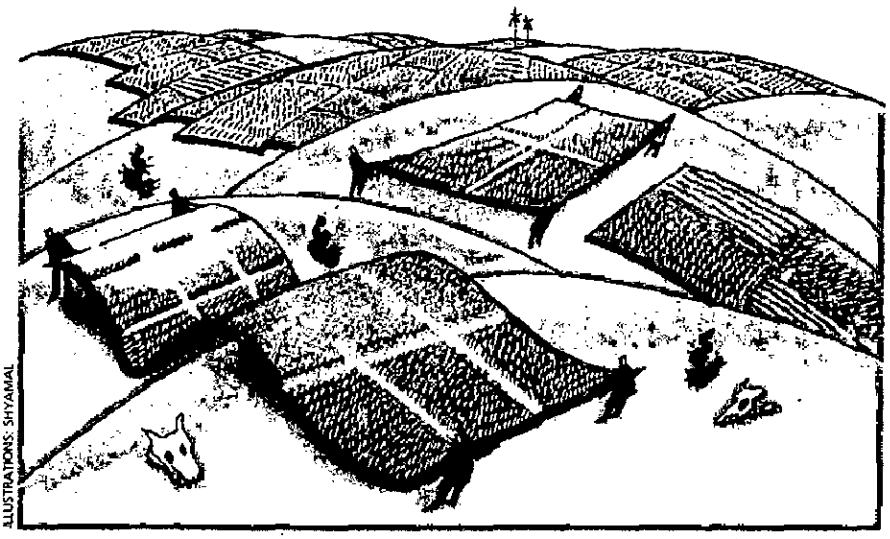
Despite the recent emphasis on industrial growth, building up the country's natural resource base remains the most potent counter to rural poverty. In fact, a number of social scientists and activists — even some planners — contend that rural poverty is very often a consequence of environmental degradation. But are links between the two merely circumstantial? Satellite remote sensing and geographical information system (GIS) can help answer this question. While remote sensing helps map and monitor areas where poverty is accompanied with environmental degradation, GIS establishes linkages between the two through modelling and simulation.

It's important to integrate these methods in the planning processes of the country. And, Indian planners are not totally oblivious of these methods. For example, the ecological dimensions of poverty has been captured in agro-ecological zonation maps.

That's not all. In 1999-2000, the Union ministry of rural development commissioned the Hyderabad-based National Remote Sensing Agency (NRSA) to prepare district-level wasteland maps. The agency prepared about 5,000 maps and in 2000, came out with a wasteland atlas of India.

What's so unique?

The 1:50,000 scale wasteland maps delineate both ecological and administrative boundaries: forest limits, watershed and village boundaries. So, these maps provides planners with a ready aid to link wastelands with villages and watersheds. But currently they only serve as primary guides to reclamation projects undertaken by the Union ministry of rural development's land and resource department, state forest and agriculture departments, district rural development agencies and NGOs. Several other uses of these maps lie unexplored. Used in conjunction with other socio-economic data, these maps can help in appropriately targeting resources for rural poverty alleviation. The maps can also help prepare analyses of poverty and natural resource use at micro-levels, and also help chart out institutional interventions to alleviate rural poverty.



ILLUSTRATIONS: SHYAMAL

That's not all: rural development projects such as the Drought Prone Areas Development Programme and the Desert Development Programme could benefit from use of wasteland maps, so could land reform policies.

Wasteland categories

The Union ministry of rural development, has of course, used the NRSA data to classify wastelands in the following categories:

- Ones that require high capital, modern technology and long-term development projects
- Those requiring direct government action in form of subsidies and grants
- The few which are in the vicinity of areas undergoing economic transformation, and where sustainability issues are of major concern.

However, wasteland reclamation must be combined with poverty alleviation measures. Why would the poor labour to reclaim degraded lands, if their efforts don't bring them any immediate economic benefits?

It is here that institutional interventions — by both government agencies and NGOs — become imperative. The strategy for such interventions should be responsive to local conditions. For example, expanding agriculture could be an ideal strategy for Jharkhand, Assam and Rajasthan, which have very high degree of food insecurity as well as large wastelands. But the method is very unlikely to work well in food secure states such as Punjab and Karnataka. Planners should take care to ensure that wasteland development here is accompanied by off-farm interventions.

Wasteland maps and other maps created by remote sensing have provided appropriate resources to chart strategies for poverty alleviation. It's up to the policy makers, planners and NGOs to use them to good effect. ■

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Livestock boom

Poor farmers can benefit from it, only if there are appropriate regulations in place

V PADMAKUMAR

In the global livestock sub-sector, a revolution is taking place that has profound implications for poor producers, people's health and the environment. In recent years, there has been a massive increase in the demand for food derived from animal origin — such as milk and meat. The phenomenon has been particularly conspicuous in developing countries such as India and China. India's annual per capita milk consumption, for example, has increased from 62 kg in 1997 to 104 kg in 2000; the per capita meat consumption in the same period has increased from 4 kg to 7 kg. This offers a unique opportunity to increase incomes of poor farmers since it's they who are most often associated with livestock. At the same time, absence of appropriate policies in favour of the marginalised livestock keepers and the environment could further marginalise the poor and damage the ecosystem.

Land degradation

Land degradation is the main livestock-associated environmental issue in India. The landless and pastoral livestock keepers depend on common land for grazing their animals. But these resources are constantly shrinking. Consequently, the concentration of animals per unit area has gone beyond the land capacity — which varies according to the intensity and distribution of rainfall, topography, soil, type of vegetation. This works to the detriment of both farmers and the environment. For instance, overgrazing is an almost inevitable consequence. And, this can cause soil compaction and erosion, decrease soil fertility, deplete organic matter content, and reduce the soil's water storage capacity.

The fast growing industrial production system is another livestock-associated problem. Large industrial cattle farms are on the rise in many parts of the country, especially in urban and peri-urban areas. Managing cattle manure is difficult and the possibilities of the waste getting into our water bodies cannot be ruled out. This is a small problem at present, but can become acute if appropriate measures are not taken immediately.

Greenhouse gases

Another concern related to livestock in India is the emission of greenhouse gases by ruminants. Domestic livestock produce CO_2 and methane, directly as well as indirectly. They also produce small quantities of nitrous oxide. Methane gas is 24 times and nitrous oxide is around 320 times more aggressive than CO_2 in contributing to climate change. Livestock is estimated to contribute about 15 per cent of all methane gas emitted in the country. Indian farmers do store manure in dried form, and this ensures that less amount of gases are released. Even then, it is important to take the issue seriously.

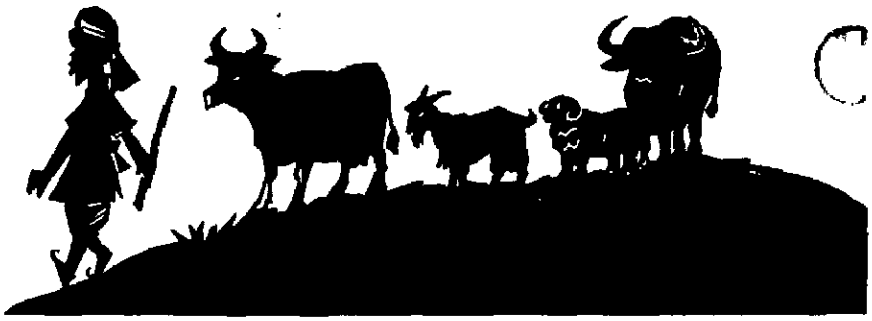
How to address the problem?

Development of institutional mechanisms for biomass generation and utilisation of common lands is one way to address land degradation by overgrazing. This requires a conceptual shift. Mobilisation of resource poor farmers into user groups, providing them required user rights on common lands and allowing them to evolve their own norms for sustainable use and maintenance could be the first step in this direction. This should be followed by framing regulations.

Fiscal measures

The government would also do well do consider fiscal measures such as taxation for environmental damage, removal of subsidies on inorganic fertilisers and on fossil fuel-based tractors and machineries. The money thus generated can be used to pay producers for their ecosystem services such as carbon sequestration, biodiversity conservation, and maintaining clean water and fertile soil. It can also be used to offer incentives for mixed farming and pastoral production systems; and for investing in technologies to reduce ruminant methane production.

The environmental problems related to livestock production can be surmounted. What is required is an alternate perspective for a low external input product production system. ■



Absence of proper policies can turn the livestock revolution into a bane for poor farmers and the environment

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"Future of local population rests on tiger-related tourism"

JIM KNIGHT, UK's minister for biodiversity, landscape and rural affairs, responds to KUSHAL PAL SINGH YADAV's queries on the British government's intention in helping India tackle wildlife crime and illegal trade in wildlife

MOUSETRAP MEDIA / BASC

What was the main purpose of your visit to India?

I was here to attend the Delhi sustainable development summit. The visit was also meant as a follow up to the UK-India dialogue process, which began when the Indian minister of environment and forests, A Raja, visited the UK in October, 2005. The dialogue was about sharing information related to sustainable development. Tackling wildlife crime was identified as a key area of cooperation. Two days before my visit, some leading enforcement officers of the UK were in India to run a workshop on tackling wildlife crime.

Who participated in that workshop?

Union and state government officials as well as representatives from NGOs. We are keen to help India tackle wildlife crime and other biodiversity-related smuggling.

Had the Indian government approached you for help?

Yes, the wildlife crime issue did come up in a major way when the dialogue process was initiated during Raja's visit in October 2005. It was something he instigated and we followed it up with the workshop.

What was the main agenda in your meeting with Raja?

We started with a discussion on the rapid decline of the vulture population, and then moved on to issues related to wildlife crime. That formed the bulk of our discussions. The US initiative to form a coalition against wildlife trafficking also came up during the talks. We have joined the initiative and look forward to other countries joining it.

Was the issue of declining number of tigers also discussed?

Yes, you cannot discuss wildlife crime in India without talking about tigers. I have just returned from Ranthambore National Park in Rajasthan. It was quite thrilling to see the tigers around the park. The population level of these animals is critical and the results of the tiger census are keenly awaited. After all, the future of the local population, to a great extent, rests on tiger-related tourism.

Did you also discuss the issue of recent demolition drive of encroachments at Ranthambore?

No, we didn't. I am aware of the issue. Even in the UK we have some friction between national park authorities, local authorities and local people. I keep out of those as well.

Your impressions from your visit to Ranthambore?

We visited some villages around the park to see the implementation of the biogas initiative. We also visited a school, which has been funded in large measure by UK conservation interests such as the Surrey-based David Shepherd Wildlife Foundation. And that effort to give the local people something back seems a very important part of sustaining the tiger population. After all local people's support is at the heart of protecting the tiger from threats to its habitat.

What could be the reason for decline in tiger numbers?

A number of factors. Illicit trade in wildlife parts and loss of habitat are the major threats to wildlife in India. A large measure of the solution lies in addressing the social and economic needs of the local population so that they protect the tigers.

In that case will relocating villages work? In the past, a number of such attempts failed. This has led to a resentment and anger among villagers.

There again, I don't think it's proper to intervene in that discussion. Every local circumstance needs a local solution and on the basis of a day-long visit to Rajasthan, I do not feel qualified to answer your question.

Besides, we in the UK have not experienced the difficulty you talk of: our national parks are meant to protect landscapes, not wildlife.

Protecting wildlife that depends upon an unmanaged landscape is a different challenge. You then have to decide whether to exclude local people or include them in the conservation process. That decision should be best left to people who understand the local situation.

On the issue of illegal wildlife trade, do you think enough pressure has been put on China through the Convention on International Trade in Endangered Species (CITES)?

CITES is certainly one way of tackling the problem and I have discussed this particular issue with the head of enforcement at the convention. It is by no means straightforward. And the worrying aspect is that organised crime may now be involved in this trade. And tackling organised crime is something that needs robust action.

Internationally, governments should be talking to each other about the problem. We certainly should not be seeking to bypass CITES but should be making sure that it works. ■

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CHAPTER 9

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