CHAPTER – IX

CONCLUSION
Mandla-Dindori region presents a tribal area of Madhya Pradesh. Mandla-Dindori region lies between 22°12' to 23°22' north latitudes and 80°18' to 85°51' east longitudes. The region truly has a central location in the country with 4.30 per cent of the state's total area. Administratively the region is divided into two districts i.e. Mandla and Dindori, six tahsils i.e. Mandla, Dindori, Niwas, Shahpura, Nainpur and Bicchiya. It is further divided into sixteen development blocks. According to the 2001 census Mandla-Dindori region accommodates more than 14,73,220 persons out of which 7,37,059 are males and 7,36,161 are females 78.56 per cent population of the region is residing in 2004 villages and 170 forest villages.

Considering the dominant physiographical features the region is divided into number of table-lands and valleys which tend to increase in height from west to east. One ascend hill to come across a plateau locally know as 'Dader Plain' comprising of narrow and confined valleys.

The study region lies on a Plateau where number of hill ranges extend from the main 'Maikal-hills' from Amarkantak. The whole area can be distinguished into : Niwas-Shahpura Plateau, Dindori Plain, Southern Highlands, Ghughri-Bichhiya Plateau and Haveli Plain.

The dominant feature of the physiography is Narmada valley and its the main valley in the region. The Narmada river is the life line
of study region. The important tributaries of Narmada include Budiner, (Halon, Phen and Kukarnala) Kharmer, Machrar, Chakrar, Turar, Seoni, Banjar (Surpan-Motiyani) and Thanwar etc. The drainage system of the region is directed towards the north and northwest and is drained by Gangetic river system.

The region enjoys the direct links with different parts of state as well as the country. The region enjoys the direct road link with Jabalpur, Raipur and Nainpur. The region is widely accessible by roads. The region is traversed by National Highway 12A which connect the region with important town like Jabalpur in the north-west Bilashpur in the east, Raipur in the south-east, Nagpur in the south-west and Bhopal in the west.

The climate of the region generally pleasant and salubrious. The region has rich forests and belongs to the northern tropical dry deciduous type and moist deciduous forest consisting of teak forests, mixed forests and reserved forest. The region is a well known timber growing area of the state.

Tribal development is defined as an improvement in the living standards of the rural and tribal people living below the poverty line and area residing in the villages and initiating the process of self sustaining. The process of tribal development leads to a continuous increase in the capacity of tribal people to transform their environment accompanied by a wider distribution of benefits resting from such initiatives. Tribal Development has been viewed and to be
viewed as a process of raising the capacity of the tribal people to influence the tribal environment of the region not only to ensure the distribution of the benefits accruing from technical developments among the tribal masses but also to ensure the participation of weaker sections of the tribal population in the process of development being initiated for the region as well as for the local people. Tribal development in its comprehensive sense relates to all round development of the tribal areas.

Tribal development in India traces back its history of the 17th century when voluntary efforts to serve the mankind were initiated by the rulers. The process of tribal development in India was assumed by the government in the context of recurrent famines but did not have any legal sanctions. For the first time the need for tribal development was realized by the Indian masses with Mahatma Gandhi's initiative in 1919 after his return from South Africa and as a surprise the tribal development programmes was initiated as programme of human activity in various fields, for the development of the tribal/rural people.

India has been the land of village communities and 72.3 per cent were living in rural areas during 2001 and region under study is not an exception. Therefore, tribal development has been an absolute and urgent necessity in India.

A review of tribal development programmes and policies in our country after Independence, reveal four strategies of development i.e. Growth-oriented strategy, Welfare-oriented strategy, Responsive
strategy, and Integrated strategy. Tribal development programmes have accord a high priority in the country's five year plans. First five year plan was dominated by the community development programmes which reflected India's over riding concern with nation building and minimizing the disparities. Integrated rural development programmes presented a significant departure from the community development programmes. All these programmes were growth-oriented that is why most of these programmes concentrated in achieving the rapid increases in food production but failed to solve the basic problems of rural/tribal poverty and income inequality. The context of removal of poverty remained for short-term basis.

The recommendations of the Scheduled Areas and Scheduled Tribes Commission were conditional and were based on the assumption that "Government should under a plan which would protect the Scheduled Tribes and ensure development of the tribal areas within a stated period". The Commission further recommended that all tribal areas should be grouped under Tribal Development Blocks so that the bulk of tribal population is brought under intensive development schemes.

The basic problem of the tribal people was that of exploitation. On the solution of which the Scheduled castes and Scheduled tribes Commission laid the great stress, however, still remains to be tackled, and unless this is done, it is doubtful in any development programme can benefit the tribal people materially. It is estimated that prevention
of exploitation alone will mean a saving of about 20.0 per cent of the tribals annual income.

The programmes of tribal development blocks has undergone considerable changes in last few years to conform to the basic needs of the tribal people in different areas. Economic programmes like soil conservation, irrigation, agricultural and horticulture development, organization of co-operative societies etc., received greater attention. Provision of drinking water has also been given high priority. Special attention is being given to the problems of most backward tribes in reference to education etc. It is also been possible to pool the funds available under the programme for expanding and strengthening the co-operative movement in the tribal areas.

Government has also approved the utilization of funds under these programmes for setting up a Special Public Health Engineering Units (SPHEU) to tackle the problem of drinking water in certain tribal area where sinking of water wells is not possible. A certain flexibility in the allocation of resources according to the needs of the tribal people in different tribal areas has also been built into the programme with the results that a beginning has been made to tackle the basic problem of the people in a realistic and determined manner.

It is, however, TDBP is too small for planning and organizing some of the services essential for its further growth and development. Programmes of organization of marketing, processing industries, soil conservation, communications, vocational and higher education, and
boring of wells through mechanical units could only be taken up in
the setting of a much bigger area. This new approach to the problems
of tribal (termed as the Area Development Approach) has found
general acceptance, and it is hoped that during the Fourth Plan,
suitable organization at the Area level will be set-up to cater to the
needs of the tribal area as a whole.

The concept of Area Planning living itself to planning for an area
not bigger than a district and for these very reasons planning
machinery can be organized at a given administrative units like
development block, tahsil or district. One of the main purposes of the
Area Development Approach's is to draw resources available under the
general programmes. However, it must be pointed out that limit
themselves to given administrative divisions.

Of late Government of Madhya Pradesh have adopted Tribal
Sub-Plan strategy for Mandla Tribal district during the First-half of
Fifth Five Year Plan, and continued during the six plan period 1980
85, with certain new additions of special projects for Baiga primitive
tribes. It is envisaged that the line of action taken for ensuring
planned economic development for tribal people and tribal area will
hold on till the gap of economic development between the tribals and
non-tribals, on the one hand economic imbalances between the tribal
and non-tribal regions continue to persist. Hence planning for Tribal
Development seems to be a continuous process subject to necessary
tribal, error and correction.
In Indian sub-plan strategy, area of tribal concentration (i.e., 50% OPC above tribal population) are identified so that special deal may be given to it not only in choosing the economic and social development programmes, but also in funding, the resources from various sources such as inflow of funds from State Plant Sectors, Special Central Assistance Central Sectors, Centrally Sponsored programmes and Financial institution. Mandla-Dindori Region has 60.50 per cent tribal population, therefore, it has been identified as fully tribal districts. At present in all four districts of Madhya-Pradesh fall in the category which include – (i.) Mandla (ii.) Baster (iii.) Jhabua and (iv.) Sarguja. Rest of 31 districts are partly covered in the Tribal Sub-Plan. The details can be seen in Appendix-I.

It has been realized by that all rural Tribal Settlements, i.e. 2184 villages of Mandla district are not equally prone to development activist. But those villages which assume central location and strategic situation from the point of view resource availability and existence of support services to cushion the new development programmes, can serve better as growth centre. With the result the state Government took a conscious decision first to broadly delineate three Tribal Development Projects each comprising composite tahsil of Mandla, Dindori and Niwas. This was done with a view to determine, broad functional areas of various growth centres identified in each of the I.T.D. Project. The Headquarters of the Projects, the centre of controlling activities in terms of release of sanctions of economic programmes and their overall control in terms of implementation and coordination between the implementation and coordination between
the Block Development Offices and the state government through the District collector.

It has been realized that Government of India the size of existing development blocks are quite large not only in terms of area covered, but also in terms of population covered. On an average I.T.D. Block have a population of 40,000 while community development block has one lakh population. Hence to make the development programmes more effective, it has been decided to reduce the size of area and population of the existing blocks. By doing so, the development activities will percolate to the grass root level and the problems and inspirations of the common people will be reflected suitably in blue prints of plan that are being prepared at block level.

At present the three I.T.D. Projects of Mandla-Dindori Region have prepared. As a basic exercise, First Tribal Sub-Plan of each of these three projects, namely, Mandla I.T.D.P., Dindori I.T.D.P. and Niwas I.T.D.P. were prepared during the Fifth Plan Period (1974-79). The broad outline of development programmes of each Tribal Development Block has been included in the I.T.D.P. reports, prepared by the state government. These reports were related to first Tribal Sub-Plan. These reports have broadly identified the Bankable schemes, which will directly benefit the tribal beneficiaries. These exercises are based on resource constraints and probable outputs at given price level by adopting the activity analysis and make a dent on existing plan documents in the sense that development activities will become self-contained and ensure returns at a well calculated rate of returns.
IRDP has been in vogue in one form or the other since Independence, has undergone some structural changes from a notion of community participation to area development. The development of the rural/tribal poor became the focal point of our planning and number of special programmes i.e. SFDA, MFAL, DPAP and CSRE were introduced and implemented. Though these programmes efforts were made to ensure that maximum benefits reaching to the poorest among the poor.

Tribal development has been the focus of various activities of the government. Efforts have been the stirred to provide opportunities of employment at minimum wages with ample facilities of education, health, child care and other services.

The First Five Year plan recommended that a positive policy of assisting the tribe should be formulated in order to develop their natural resources and evolve a productive life which can prevent exploitation by more organized economic forces.

The first five year plan was initiated with a resolution to reconstruct the country economically and socially. The immediate and the ultimate objective of the planned development programmes were to provide for a production and to initiate a process of integrated change, including the change in the outlook of the tribal masses.

The fifth Five Year Plan period (1974-79) saw the emergence of the tribal sub-Plan strategy in the country amid at massive development of tribal areas and Scheduled Tribe people. The concept
of tribal sub-Plan envisaged pooling of all available fiscal and personal resources and making use of them for a total, integrated effort. In the states having substantial areas of tribal concentration unit was identified for each effort each comprised of a few Community Development Blocks. These were called Integrated Tribal Development Projects (ITDP). An ITDP became a focal point in the planning and implementation process.

The tribal sub-Plan (TSP) has been envisaged as representing total development effort in the identified areas with the aim of resources pooled from: (a) outlays from State Plans, (b) institutional finance. The finalisation of the State's Tribal sub-Plans stretched over a couple of years.

The long-term objectives of the sub-Plan are: (i) to narrow the gap between the levels of development of tribal and other areas; (ii) to improve the quality of life of the tribal communities.

To initiate the process for the upliftment of the rural and tribal people integrated rural development programme was launched as the main programme to provide the assured employment opportunities through various schemes in the Mandla-Dindori region. With the successful implementation of the IRDP, in most of the cases efforts have been made to achieve the individual aims and targets rather than to concentrate on the main objectives of the programme to ensure the permanent increase in annual income of the rural and tribal masses to achieve the stability in their life. To improve the
prevailing situations and ensuring the employment opportunities, the existing rural and tribal development programmes were restructured and/or reoriented by the central and state governments based on the experiences and emerging needs a new programme was named as Swarojgar Yojana was designed.

Second October 1952 is an epoch-making date, when community development programmes was initiated with the formation of Narayanganj as the first block for improving the earnings and living conditions of the rural/tribal poor and by 2nd October 1965 Coverage of Community Development Programme was completed with the formation of sixteen blocks in the study region. Mandla-Dindori region was selected for SFDA on 19th March 1975 for better results and the main emphasis was on raising the earnings and living conditions. During the year 1985-90, 2,09,252 farmers were benefited by the various programmes.

Since January 1981 SFDA was recognized as District Rural Development Agency co-ordinate the development activities in the study region. Main objective of the programme was to raise the annual income of the people who are below the poverty line and to create substantial additional opportunities of employment in the rural sector. For the identification of the deserving households, each block in the study region wad divided into clusters and households survey was initiated with a plan to complete the same within two years. The bankers too have been involved in the selection of clusters for
household survey. Efforts have been made to ensure that preference is given to schedule caste and schedule tribe participants under IRDP, similarly sectoral priority too has been identified. By the year 1997-98 of 5014 selected beneficiaries have been Rs. 277.33 lakh as loan and Rs. 795.19 lakh as subsidy specially for agricultural, minor irrigation, animal husbandry, villages industries based on agricultural, forest and animal products and for other services in the study region. On the other hand as per the a piece of land along with the necessary loans and subsidy was given to the landless laburers from the study region. The effort was to see that these persons settle down in their respective villages and their living is improved.

By the Year 1990-91 all the prevailing schemes in the Mandla-Dindori region were grouped in to three sector i.e. primary sector, Animal Husbandry, Fisheries and other allied activities; Secondary sector with Rural Industries, Handicraft, Handloom and others. As per the government policy 60.0 per cent of the beneficiaries were selected for the primary sector, 20.0 percent for secondary sector and the remaining 20.00 percent for the tertiary sector. On the other hand 30.0 per cent selected beneficiaries were scheduled caste, 20.0 per cent scheduled tribe, 40.0 per cent women and the remaining 10.0 per cent from the general category.

In continuation of the above efforts a new programme on the name of Swarna Jayanti Gram Swarojgar Yojana was launched on 1st April 1999 and thereafter was implemented and has replaced by the prevailing
programmes implemented under the integrated rural/tribal development programmes. Number of employment oriented schemes were incorporated in the programme. To ensure the smooth implementation of the newly launched programme various steps were planned and number of Self Help Group (SHG) of the people living below the poverty line in the region were formed to provide the technical training knowledge and to create professional base, a well planned systematic functioning structure was planned.

During 1994-2003 in the study region about 36,458 families were benefited with the distribution of Rs.3192.31 lakhs as loan and of Rs.7696.31 lakhs and subsidies through DRDA in the Mandla Dindori region.

Thus we see that the process of rural/tribal development in the district, which was started in Oct. 1992 has spread throughout the study region and has successfully delivered the benefits to the poorest among the poor. Gradually the process has become more co-ordinated and has given rich results in the area under study.

In designing the sample an element of purposiveness has been deliberately introduced at some stages to have a meaningful analysis of the problem 21 villages from the Mandla-Dindori region have been selected as sample villages to undertake the present study. Atleast one village was selected from each block of the study area-and wider representation has been ensued.
Most of the sample villages in the region are located within a radius of 5 to 30 kms from their block headquarter. Proportion of fair weather roads is very limited. Condition of the buses and their low frequency on these roads have restricted the movement of villages specially during the rainy season. Apart from transport facilities, level of awareness among the respondents of the area enables them to think in terms of new ventures. This is a stroke fact and a paradox that sample villages on the main road and very close to the block headquarters are ignorant and are still indifferent. Country to this, village Kanai-Sangwa which lies 3 kms from the main road and 0 kms. from the block headquarters, practically enjoys all facilities.

Geographical location of the sample villages significantly has favoured the process of development. Few of the sample villages like Mohti are still underdeveloped due to their odd location and surrounding.

For the present study households was the actual unit. In view of the limitations, 316 households from the households representing all categories have been selected as random from each sample villages. However some selectivity was introduced. Among the sample households, Hindus swell the number with 97.33 per cent followed by Muslims and Jains. Caste is a significance factor in rural/tribal areas as many economic activities are identified with one or the other. About 58.23 per cent of the total sample households belong to scheduled tribe followed by OBC, SC and general.
Development programmes is an important process helps and plays significant role in transforming the socio-economic as well as the natural environment of any region, state and nation. It is considered as an index indicating the continued improvement in the social status and that too in the quality of life in respective regions. Thus, the impact of cities on rural area extent according to the role they play. The areas beyond the boundaries of urban centres too are influenced by changes being recorded in urban economic and social systems. The transitional zone between the pure urban and pure rural land use are described as urban fringe and/or urban rural fringe intensified transformed due to their important significantly improving contacts with its city or town. With the growth of population and diversification of economic activities, the limits of cities have extended into their fringe areas and gradually the limits or the territories of fringe areas further extend towards the adjoining rural areas. These urban fringe areas are directly or indirectly influenced by their urban activities.

Development programmes and the process of transformation have been the two major processes of development, which rapidly was adopted by the country, state and region and has been substantially transforming the tribal as well as the rural environment of the study region. Some of these important transformations include transformation of the process using the natural resources, transforming the quality of land and water, transforming the demographic characteristics, transforming the transport network and associated systems, transforming the agricultural environment,
transforming the rural settlements in reference to their size and shape, transforming the socio-economic status of the population and issues related to health, transforming the infrastructural facilities and finally transforming the rural environment in the study region.

With the completion of various developmental activities environment is transformed along with the adoption of modern techniques to initiate the rapid development that has caused and is causing many dangerous changes specially the rural/tribal environment. Most of the developing and developed regions are confronting with the emerging problems caused by the environmental transformation and study region is not an exception to this.

It has been observed that changes in the landuse pattern in rural-urban fringe area is a reflection of the changes being made in natural, economic, social and cultural structure over the period of time in the study region. Rapid technological changes being adopted too have created new needs which demand more land as well as new modes of land utilization. In last 25 years land utilization in the region has witnessed major changes alongwith the growth of population and diversification and expansion of industrial and other related economic activities. Thus with these marginal adjustments between the land resources and expanding economic activities has caused widespread environmental degeneration in various parts of the region.

The history of resources being used clearly indicates, that with the increasing number of people along with the diversification of needs and
their enhanced capabilities with the adoption of advanced technology, initially the best land has been used for cultivation. But with the growing pressure due to the population and economic development, gradually the pressure on the available agricultural land too has increased and even the marginal lands too are cultivated with the induction of modern scientific and technological innovations. As a result use of agricultural land has gradually been intensively diversified to a higher level. This is another notable factor, which has affected the agricultural land, considering the changing scenario the small, even the marginal farmers of the region also have start adopting the recent technical knowledge and the use of modern inputs in agriculture. Thus the study of landuse pattern provides the guidelines to maximise the use of available land in the area/region in optimum conditions.

With the study of landuse pattern, one can know the distribution and use of land in different categories. Land utilization in the region too has witnessed similar changes with the growth of population, and activities related to rural industry, dairy, poultry and forest industries. This has struck the transformation of environment.

To gauge the transformation, which has taken place in the study region, detailed survey has been conducted in the month of July, August, September and October, 2006 to find out the nature and direction of changes, brought out as a result of the implementation of science and technology for the development of agriculture and also to assess its multiple
effects on the rural/tribal environment. The socio economic changes in the region have become possible mainly with agricultural development and increased production. The available modern inputs have been systematically adopted by the farmers of the region.

The available modern methods have gradually replaced the traditional methods of agriculture being practiced in the region. The iron ploughs and/or tractors have replaced the wooden plough along with a pair of bullocks. The increasing number of threshers, harvesters and seed drills are being frequently used over the period of time and the adequate supply of water for irrigation in reference to the changing requirement has also become the reality of the day across the region. Considerable increase in the use of modern farm implements too has been noticed, throughout the region specially in last 20 years. Some of the industrial units, located within the region are also producing some of the modern machineries being widely used by the farmers, too have played and are playing important role in transforming the agricultural activities of the region.

In the region one of the major technical development during the post independence period has been the application of mechanical power in agriculture. Although mechanisation in region simply was referred with the use of tractors, power-based pump sets, tube wells, threshers etc. and their impact in improving the agricultural production as well as per unit of agricultural land has been noticed. Mechanisation has also lead to the proper utilization of inputs.
including fertilizers, pesticides and adequate supply of water through irrigation. Because of these facts attempts has been made to gauge the role of various agricultural implements, being adopted by the farmers in the region.

Agriculture has been a fundamental occupation of the country, as well as of the region. With the growing population and to meet increasing demands agricultural system too has improved. Thus fundamental changes have been initiated in the agricultural sector with the adopting of modern inputs and agricultural techniques. At the same time changes have been noticed in land use pattern, cropping pattern, expansion of irrigational facilities and diversified agricultural production in transforming the agricultural environment. Mandla-Dindori region as a part of upper Narmada valley is well known for its rich agricultural land. There is no doubt that the adoption and applications of modern inputs, on one hand has increased the agricultural production, and on the other has changed both the physical as well as the socio-economic environment. The rich agricultural land of the region has gradually degenerated even at places degraded due to the excessive use of irrigation, use of polluted water for irrigation, imbalanced and excessive use of fertilizers and pesticides and improper use of modern machinery. Dumping of rural wastes near the agricultural fields too has recorded as one of the main factor for the declining yields and quality, and ultimately polluting the agricultural as well as the rural environment.
On the other hand in the recent years the pace of fragmentation of land has accelerated specially in the villages located on the outer margins of the Mandla-Dindori urban area as to accommodate the increasing pressure due to the shifting of residential and various diversified activities to these rural areas. As a result on a large scale agricultural land is being transformed into the non-agricultural uses and thereafter it is being constantly fragmented into small pieces assessing the demand and cost of land.

The process and pattern of changes in the composition of the families is prompted by availability of employment opportunities in respective villages. Family dispute, marriage, increased family responsibilities, increase in family size and enhanced migration have also played an important role. The main reason for the split in the family is the employment opportunities. Most of the members of a family when find a job in different institutions, are forced to move considering the long distances between the work place and their native place. During the field work it has been noticed that still there are good number of families whose priorities too have changed. As they have start giving greater importance for the education of their children and at times fails to spare money to share the responsibilities of the joint families. As a result they opt to live independently rather a part of joint family. The other two major reasons for these change include marriage and increased family size. Less than 4.0 per cent of the respondents reported that the families have broken up because their family...
members have migrated to Jabalpur. However the assets owned by the joint family too were compensated by providing employment for single person. This also has led to a split in the family. The collectively owned assets have been yielding work for all members of the family and income with varying proportion for every one, including the womenfolk.

Broadly the houses built for residential purpose is classified into three types i.e. kuccha, pucca and mixed. In the kuccha houses roofing, flooring and walls are made by the locally available construction materials. In a typical kuccha house or country-made tiles are used for roofing, mud-flooring and mud-wells. While in pucca houses the walls are made of bricks plastered by cement-concrete and the flooring by red tiles. On the other hand in the mixed houses various types of construction material is used depending upon the availability of the materials and the cost.

Type of houses being constructed in the region is considered as one of the parameters to judge the socio-economic status of the households also indicates the life style of the people in the sample villages of the region. Nature and type of the residential houses become one of the main factor determines the use of electricity with its enhanced frequency for domestic purposes. During the field work it has been noticed that most of the Kuchha houses are hardly using electricity for domestic lighting only. Some of the houses though have the connection of electricity, but their consumption of electricity is very limited. Whereas most of the Pucca houses have the electric
connection and are using electricity for lighting, cooling and are using various electrical appliances to meet the domestic needs i.e. electric fans, electric press, grinders, coolers and refrigerators etc.

During the field work it has been noted that over the period of time the living environment in most of the residential areas of the sample villages has start degenerating due to the construction in a very unplanned manner causing congestion. With the increasing gap in the civic amenities as compared to the construction of the houses and expansion of residential areas, presents a very disorderly and unhygienic conditions in and around the residential areas. Most of the residential houses are facing the congested, cramped and are overcrowded scene. It has also been noted that most of the rooms do not have the proper lighting and lacks cross-ventilation and the living becomes highly unhygienic. In some of the houses the use of electricity becomes a necessity even during the day time due to poor lighting. Due to the partition of rooms and poor ventilation and with the conversion of front portion for the commercial use in most of the residential houses of the adjoining villages are constantly facing the problems arising due to the non-availability of fresh air.

As per the tabulation of the primary data more than 63.76 per cent respondents from the sample villages use open space to attend their nature’s call. Surprisingly among the sample villages Bahoripar is the only village 100.0 per cent respondents have the facility of flush latrines, which has emerged as an exception among the respondents of the sample villages in the region.
The process of transformation has played an important role in transforming the composition of occupational structure. As a result over the period of time the proportion of agricultural workers has substantially declined in the adjoining rural areas.

Majority of the persons living in the adjoining villages are engaged in the agricultural and other allied activities. But in last two decades the proportion of people engaged in non-agricultural activities has increased substantially. However, agricultural sector still account for the major share of workers for three different reasons i.e. Firstly, people who totally depend upon agricultural land; Secondly, people who are engaged in agricultural activities and partly depend on non-agricultural activities and finally people who have given their agricultural land on hire and are presently engaged in non-agricultural activities.

Villages close to urban areas like, Keharpur, Gajipur and Lafra are well known for their developed and organised dairy units and poultry farming. The growing demand of milk and eggs, poultry farms and dairies have been established and are developing on the adjoining agricultural fields.

Change in occupation is one of the indices applied for assessing a change in the status of the people which has brought about a shift in the socio-economic status of people in and around the area. Transformation provides a way to demographic changes in the region. This not only creates new job opportunities which has been
attracting people towards the urban areas of Jabalpur. But because of this there has been rapid increase in the urban population due to large scale in migration from the nearby and distant rural as well as urban areas.

The main reason for such increasing pattern of distribution is attributed to administrative activities, availability of adequate non-agricultural opportunities, developed education and medical facilities developed trade, transport, commerce and communication related activities. They together have been attracting a large number of people, causing very high growth of population and rapid increase of population density in the study region. Availability of non-agricultural occupations has accelerate the immigration of educated people and also because of educational centre with diversified education facilities, it generates educational consciousness among the masses. With this fact the literacy rate has increased sharply in the region.

It has been observed that people residing in the adjoining villages have positively responded to the available employment opportunities being offered by the city. While rural areas have their own limitations. Though the rural people opted for salaried jobs with minimum salaries making as they join most of the jobs as a helper or as unskilled workers in the industrial units or even as Chowkidar, peon, gardener and sweepers mostly in the private sector. It has been recorded that apart from other sectors commercial sector has a dominating share in offering the job opportunities in the potential areas to the rural people living in the fringe areas. Considering the
availability of wide variety of opportunities some of the rural people have start working as wage earners doing few odd jobs while others are working as venders, hawkers, barbers, and so on specially by the people belong to the low castes and also as the artisan castes in particular, who tend to take the initial steps in this direction.

A concomitant change that has occurred in most of the sample villages is that the villagers have start giving importance to education. As a result the proportion of children sent to the schools within and outside the villages has increased substantially. The upper castes, who do not want to be left behind too have start taking initiatives for higher education to their children with a hope that this will help in providing better jobs as office assistant and/or supervisory levels in the city.

A quantum jump in terms of the spatial mobility of the village population. The villages are invariably connected by city bus services, either as a terminal point or as an important transit point in the network area. Bicycles and motorcycles however, continue to play an important role as a popular mode of transport. The village economy is transformed in many ways. Shops having a variety of urban consumer goods are appear in the village itself. Radio, television, mobile phone and other electrical and household gadgets are found in a good number in surrounding villages. There is a rapid increase in the number of bicycles, scooters and motor cycles, providing greater personal mobility. Dressing sense and even eating habits undergone various changes. Houses are rebuilt using cement and bricks as a
main raw material. Maximum proportion of single storied houses are replaced by doubled storied and even three storied structures. The housing environment in study area has slightly improved with better furnishing and equipments but the basic amenities, such as water supply, sewage disposal and drainage facilities has recorded a minimum improvement. Apart from these in the villages sanitary conditions are hardly in evidence and as usual people expect the administration to improve the conditions.

The process transforming the rural environment has been a complicated interplay of shifts towards urbanisation, industrial structure, the character of economics and social organisation change in the quality of life, changes of agricultural practices, and changes in the proportion of population engaged in agricultural activities which provide a key to economic growth. The expansion of Mandla-Dindori urban area has influenced the rural environment both towards the development and modernisation and has caused degeneration and even degradation by polluting the rural environment.
Problems

During the field work in certain areas attempt have been to identify the highly problematic areas while in some areas emerging problems have been noticed include -

1. A system has to be evolved with the active involvement of the government functionaries implementing the tribal development programmes, maximum residents of the region under study are benefited. Strategies have to be prepared to ensure that people living in the remote areas too are benefited.

During field survey it has also been noticed that in certain cases the rich persons are being benefited rather than the needy persons. On the other hand most of residents of Mohti, Khargahna, Khajarwara, Hathitara and Rampuri sample villages are not aware of the programmes being implemented for the uplift of the tribal people, due to prevailing literacy in the region.

2. Sincere and systematic efforts have to be made by providing educational facilities and motivating people to avail these facilities.

It has been recorded that Khargahna, Mohti, Tatri, Rampuri, Khajarwara, Gajraj and Kumah sample villages have the lowest literacy. Due to the prevailing illiteracy and lack of awareness most of the villagers have failed in getting the benefit of development programmes.

3. Agriculture is the main occupation and source of the limited income of the tribals due to the poor quality of land, prevailing
primitive agricultural practices, dependence on rainfall, lack of irrigational facilities and the subsistance type of farming makes this major activity uneconomical to the tribal people.

Hence emphasis has to be made for the systematic development of agriculture in the region under study by developing the irrigational network, availability of modern inputs and the accessibility to the market so that better financial returns are ensured.

4. The great strides made in agrucultural research and technology relate mainly to the major crops like wheat and paddy and attention has also been paid to the millets like jowar and maize. While in the tribal areas, however, minor millets like Ragi, Kodo, Kutki and Sava etc. are grown in considerably large areas. Limited efforts has been made to study the minor millets. Therefore it is recommended that a comprehensive research programme covering both fundamental and adaptive research designed for the increase of production is successfully implemented in the region to make it relevant to the tribals and this will go a long way gradually increasing their agricultural production. During the field survey it has been observed that in Koko, Mohtu, Motinala, Kumah, Gajraj, Hathitara, Bargaon, Gorakhpur, Kamko-Mohaniya, Khajarwara, Khargahna and Salwah villages due to unfertile hilly terrain mainly Ragi, Kodi, Kutki and Sara, Arhar crop are produced in different areas. And due to low productivity livelihood of the tribal people becomes full of problems.
5. In most of the tribal areas the women play a major role in agricultural operations and allied activities. Considering these facts a dent tribals by initiating the improved agricultural practices will successfully propagated through the agriculture extension. Hence attempt has to be made to recruit the women as the agricultural extension staff so that effectively it reaches to the beneficiaries. In this context it is emphasised that the usefulness of the scheme of training the tribal couples is made effective. Selected tribal couples should be trained in modern agricultural practices by the government agricultural farms and training institutions.

6. Even after 50 years of independence in the study area some of tribal communities in Mohti, Gorakhpur and Khargahna sample villages many tribal communities specially Baiga are still practicing the shifting cultivation. With growing intensity and declining the cycle it is becoming wasteful and detrimental to the ecological balance and growth of forest. On the other hand it is not very productive and therefore, communities dependent on this forced lead a precarious existence. A determined effort has to be made to tackle the problem of shifting cultivation.

7. Over the period of time soil erosion has become very acute problem in the study region. It has been reported from the Kanai-Sangwa, Khargahna Gorakhpur, Mohti, Kamko-Mohaniya, Motinala, Salwah, Koko, Bargaon and Kuman sample villages that with the accelerate use of high lands in a unplanned manner gradually the
problem of soil erosion becoming evident and in a month during the rainy season fertile soil is transported by rainy water. It is believed that soil conservation measures, therefore, be given highest priority to overcome this problem and ensuring the agricultural development in study areas.

8. Animal husbandry and dairy development - In the study area tribal agriculture continues to be primarily based on animal power. While cattle wealth is given considerable importance in the socioeconomic conditions of tribals and the status of families is being determined in many communities by the number of cattle heads owned by them. However the quality of the animals is very poor. Besides, using them for agricultural operations, animals would be useful for raising the level of diet, provide adequate protein to the tribals, and also a source of subsidiary income.

9. Minor forest Produce - The rights of minor forest produces are being recognised by various state governments in a limited way. Keeping in view the fact that tribal economy is heavily dependent upon the forests, which before becoming "national resource" were the exclusive resource base on the tribal, their rights on the minor forest produce should be fully recognised without reservation. Many states still want the tribals to pay royalty at a very rate for the minor minor forest produce collected. In order to increase the income of the tribals within a very short time, it is necessary to have an effective marketing system for the minor forest produce.
Chapter IX

It has been noticed that in Gorakhpur, Khargaina, Mohri, Kamko-Mohaniya, Motinala, Ghutas, Koko, Gajraj, Tatri and Salwah sample villages forest produces are collected by the local tribals but most of these are marketed by the mediators as a result tribals fails to get a proper returns.

10. Problems of Residential Areas - Due to unplanned residential areas most of the Majra or Tolas are situated in different places in disturbing way as a result the implementing of various developmental programmes related to the settlements. It has also been noticed that some villages are distributed in 4 to 5 toles, the electrification of these tolas, becomes difficult considering the distances between the tolas. Similarly most of the schools are in big tolas not in small tolas.

11. Drinking Water - Practically in all sample villages water is supplied through wells and handpumps and becomes inadequate during the summers.

It has been reported by the respondents of khayarwara and Hathitata sample villages regarding the serious problem of drinking water because these two villages have one well each because that too without the outer wall. To over the problem though number of handpumps have been drilled in these villages under various schemes but due to the rocky structure and availability of water at the lower level most of the handpumps in Koko village households are also engaged throughout the night in pumping become ineffective, for
example the water specialty during the summer season as water level falls down and hand pumps even wells become dry.

In Lafra sample village water is supplied through the tube-well, but due to non-availability of power at required time water is supplied once in two or even three days. While in Ghutas sample village water is collected from the hand pump during the nights only to give adequate gap to recharge during daytime. Similar problems related to water supply and available quantity of water are being reported practically from all villages of course with varying intensity.

12. Latrine (Toilet) - This is considered as an important variable to gauge the level of living environment. During the field survey it has been found that except in few villages with limited households facility flash latrine is not avail in the sample villages. Hence majority of the people are forced to use the nearby open space for this purpose.

SUGGESTIONS

The present study has attempted to gauge the process of development causing the transformation of tribal environment suggests that with the implementation of various programmes deterioration in the quality of natural environment has been noticed. This has a negative effect the human health. To monitor these problems some effective measures have to be adopted by local people at local level with support of the administration. To monitor and control these problems efforts at individual as well as at community level, are considered as the best options. Some of the suggestions
based on field experiences are made to control the problem of land degradation and transformation of some important measures has to be adopted by the villager as well as by functionaries of the state government in the study region include -

➢ Proper planning is required at the time of developing the residential colonies especially the provisions related to fresh air, sunlight, proper ventilation, and points for the dumping of wastes must be incorporated with strict provisions to monitor the progress. Adequate open space has to be provided as playing ground, community activities and for greenery.

➢ To maintain the fertility of soil and preserve it from the harmful effect chemical fertilisers. Use of composite manure to be encouraged alongwith the use of organic pesticides like Neem oil. This has to be adopted specially in Keharpur, Gajipur, Labra and Rampuri sample villages considering the intensity of problem.

➢ Land filling and waste disposal sites have to be kept at a distance from the residential areas.

➢ Proper techniques for handling and disposal supported by equipments are to be used for handling the hazardous wastes if any.

➢ Brick kilns have to be shifted away from the village area and provisions have to be made to protect the regular loss of agricultural land to fallow or waste land. This not only prevents
agricultural soil but also will protect the surrounding fields from
the air pollution caused by these kilns.

- In the study region dust bean should be used combinedly by
  some households according to their accessibility, which will
  properly be maintained i.e. regularly empty, disposal in
  dumping place etc. More attention have to be paid towards
  monitoring the location of dust disbursement which is suitable
  for the residential areas by the local self and state government.

- Proper drainage system should be developed to avoid the blocket
  of waste water in the residential areas.

- To protect the agricultural land from the water logging, use of
  the low lying areas be monitored regularly and proper drainage
  system be developed in the affected areas of the villages in the
  region.

- To prevent land from the hazardous impacts of pesticides and
  chemical fertilizers, biodegradable products, adoption of organic
  agriculture have to be encouraged in rural areas. To cater these
  issue the technical guidance of the Agricultural Colleges and
  related Training Centres have to be ensured. considering these
  issues regular survey of the areas training has to be provided to
  the farmers.

- To prevent problem of water logging on the agricultural needs,
  drip irrigation or the use of sprinklers have to be
encouraged. Attempts have to be made to provide subsidies on biodegradable products and in ecofriendly techniques.

➢ Transforming the agriculture land to accommodate poultry and dairy, proper attention is required. Poultry and dairy farms should be far from residential areas and also from the rich agricultural fields. Proper waste disposal facilities and drainage facilities should be provided by the state authorities and government.

➢ To prevent soil from erosion basically from farm activities, attention and farm processing training should be provided by the authorities. Proper education of farmers can control the level of transformation. Education gives knowledge to understand and to evaluate the present situation, keeping future in mind. So proper education should be provided to the farmers.

➢ The use of developed agricultural equipments and their proper monitoring has to be ensure for agricultural development.

➢ To monitor the growth of the residential areas and the adjoining areas of the villages needs proper planning. Attempts be made by providing required basic amenities for the better living environment to the people.