While designing the sample for the present study an element of purposiveness has been deliberately introduced at some stages not only to understand the role of urbanization but also to gauge its impact in transforming the rural environment in the study region. 21 villages from the study area have been selected as sample villages for the detailed study. As per the objectives of the study a set of questionnaire comprising village questionnaire and household questionnaire have been developed to facilitate the collection of data and information from the selected households representing the selected sample villages. Here attempt has been made to understand and analyse various aspects related to the topic.

Over all 21 villages were selected from Jabalpur region considering the distances and the directions to ensure the wider representation of the study area considering the objectives of the study.

In the present chapter attempt has been made to study the status and the process of rural transformation in the sample villages being influenced with the smooth implementation of the various development activities, programmes and urbanization over the period of time.

The present chapter deals with the location, accessibility of the selected sample villages, socio-economic status, infrastructure development and diversification of services with the expansion of urban needs.

LOCATION AND ACCESSIBILITY

Selected sample villages in the study region are located within a radius of 10 to 30 kms from the central point of the Jabalpur city.
Nimkheda, Maharajpur and Pipariya are the only three villages which lie within the radius of 13 kilometers from Jabalpur city while Bargi village lies within a radius of 30 kilometers from Jabalpur city. Only three villages Badaiya Kheda, Kungwa, and Kukrikheda lie within the radius of 15 kilometers, while the remaining thirteen villages i.e. Aamanala, Sehora, Saliwara, Umariaya Choubey, Matamar, Kukrikheda, Umariya, Pindrai, Chhitrikhurd and Khursi are situated within a radius of 16 to 23 kilometers. There are only four village, Mehgawan, Bahoripar, Urduakalan and Deori located within a radius 24 to 29 kilometers.

Though over the period of time accessibility to various villages has recorded a considerable improvement even then to some of these villages still are facing the problem of connectivity because of the dilapidated condition of roads and the poor frequency of Bus services. In the absence of proper culverts in the villages the problem of free movement during the monsoon still remains a major problem adversely effecting the development process. Badaiya kheda, Chhitrikhurd, Kathonda, Mehgwan, Matamar and Pindrai villages are very badly situated and practically remain disconnected with the adjoining areas during the rainy season due to the non-existence of fair weather roads. Barring fifteen villages namely Aamanala, Bahoripur, Bargi, Deori, Khursi, Kungwa, Maharajpur, Nimkhera, Pipariya Saliwara, Sehora, Umaria, Umariya Choubey, and Urdu kalan, either are located on the main road and other roads or are connected with metalled roads and enjoy direct accessibility with the urban centre as well as with different areas. Accessibility of sample villages has been tabulated in table no. 3.1.
Due to the old and poorly maintained buses even jeeps and their low frequency on these routes also restricts the movement of man and material between Jabalpur city and Badaiyakheda, Chhitrikhurd, Kathonda, Mehgwan, Matamar and Pindrai villages; while the remaining villages in the study area are properly connected with metalled roads and proper bus-service. Non-availability of adequate and proper communication again debars the villagers from availing the facilities to their emergency needs. Maharajpur, Umariya, Umariya-choubey, Saliwara, Nimkhera, Kungwa, Bargi, Bahoripar and Deori, are the few sample villages enjoy a direct accessibility with a better frequency of buses and Jeeps. Bargi, is the only village which enjoys the connectivity by railways. In the study area mostly cycles are frequently used by the villagers to move and carry the material from their villages to Jabalpur city or to block headquarters and other nearby places as has been shown in table no. 3.1.

Maharajpur, Umariya choubey, Saliwara, Deori, and Bargi are the only villages among the selected sample villages in the area which enjoys the facility of telegraph office. While the residents of the Pindrai village have to move upto Tilwara to avail the telegraph facilities after covering a distance of 7 kilometers. On the other hand most the villagers in the study area enjoy the facilities of the post offices located within a distance of 3 kilometers from the villages. While the residents of Urdu a kalan, Umariya, Sehora and Kukrikhedha villages have to cover a long distance of more then 4 kilometers to avail the postal services.
### Table No. 3.1
**Jabalpur Region: Location and Accessibility of Sample Villages**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Sample villages</th>
<th>Tahsil and District Head quarter</th>
<th>Block Head quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Place</td>
<td>Distance (in km)</td>
<td>Type of Roads</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Aamanala</td>
<td>Jabalpur</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>Bahoripar</td>
<td>Jabalpur</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>Bargi</td>
<td>Jabalpur</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Badaiya Kheda</td>
<td>Jabalpur</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Chhitri Khurd</td>
<td>Jabalpur</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>Deori</td>
<td>Jabalpur</td>
<td>24</td>
</tr>
<tr>
<td>7</td>
<td>Kathonda</td>
<td>Jabalpur</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>Khursi</td>
<td>Jabalpur</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>Kukrikheda</td>
<td>Jabalpur</td>
<td>14</td>
</tr>
<tr>
<td>10</td>
<td>Kungwa</td>
<td>Jabalpur</td>
<td>14</td>
</tr>
<tr>
<td>11</td>
<td>Mehgawan</td>
<td>Jabalpur</td>
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<tr>
<td>12</td>
<td>Maharajpur</td>
<td>Jabalpur</td>
<td>13</td>
</tr>
<tr>
<td>13</td>
<td>Matamar</td>
<td>Jabalpur</td>
<td>15</td>
</tr>
<tr>
<td>14</td>
<td>Nimkhera</td>
<td>Jabalpur</td>
<td>12</td>
</tr>
<tr>
<td>15</td>
<td>Pindrai</td>
<td>Jabalpur</td>
<td>21</td>
</tr>
<tr>
<td>16</td>
<td>Pipariya</td>
<td>Jabalpur</td>
<td>13</td>
</tr>
<tr>
<td>17</td>
<td>Saliwara</td>
<td>Jabalpur</td>
<td>18</td>
</tr>
<tr>
<td>18</td>
<td>Sehora</td>
<td>Jabalpur</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>Umaria</td>
<td>Jabalpur</td>
<td>23</td>
</tr>
<tr>
<td>20</td>
<td>Umaria Choubey</td>
<td>Jabalpur</td>
<td>20</td>
</tr>
<tr>
<td>21</td>
<td>Urdu kalan</td>
<td>Jabalpur</td>
<td>24</td>
</tr>
</tbody>
</table>

*Source*: Based on Village Questionnaire

## HOUSEHOLD AND POPULATION

The pace of population growth, distributional pattern; its size and composition has been effecting the process of development specially in the developing regions, states and countries and region under study is not an exception to this.
Human resources are germane to building up of an economy and they have pronged relationship with economic growth. Population is the most dynamic agent of production and the beneficiary of the entire process of development. In other words, on the one side, population has production aspect and on the other consumption aspect. As an agent of production active population contributes as a working force, which acting on the natural resource produce the good and services required for satisfying human needs.

The household is not necessarily a family, but merely a group of people living together. While family is a social group based on marriage and united by ties of kinship with a similar cultural back ground and a common household. The changing number and size of families and households has been greatly influencing the character of sample villages and that is of considerable significance. Spatial variations of households in pretence to the number and size are studied to understand the pattern of social organization as well as the emerging demographic trends in the study region.

Considering the size of population and number of households sample villages are grouped into three categories i.e. the first category includes Badaiya Kheda, Chhitrikhurd, Khursi, Mehgawan, Pindrai, and Sehora, together are accommodating 7.35 per cent population of the study region; the second category includes twelve villages and together accommodate about 41.96 per cent population and the third category includes Maharajpur, Bargi, and Saliwara villages together are accommodating about
50.69 per cent of the total population residing in the sample villages of the area (Plate 3.1) selected for the present study.

Maharajpur, Bargi, Saliwara and Deori villages in the study region are limited to 56.03 per cent households whereas only 43.97 per cent households are concentrated in Maharajpur, Bargi, Deori and Saliwara villages. Deori and Bahoripar are the only villages in the region where more than 56.06 and 54.22 per cent of total household belong to the group of other backward castes whereas Kukrikhedha village has only 2.85 per cent of OBC households. Whereas in Khursi and Kukrikhedha villages more than 98.71 and 97.14 per cent of the total households respectively belong to scheduled tribes.

Among the sample villages Kathonda is the only village where about 34.86 per cent households belong to the scheduled castes contrary to this hardly any scheduled caste household is residing Chhitrikhurd and Kukrikhedha villages. Among the sample villages selected for the present study only 26.98 per cent households belong to the general category. However, the proportion of households belong to the general category various from one village to the other. Maharajpur, Bargi and Saliwara, villages together account for more than 58.20 per cent families belong to general categories. On the other hand Kukrikhedha and Khursi villages show a plight in this regard and practically are without any household representing the general category.

75.13 per cent of the total households belong to the general category are concentrating only in seven sample villages of the study region. While
75.81 per cent of the total households belong to scheduled castes are concentrated only in eight sample villages of the study region. One can find the similar position in respect of scheduled tribes where 66.15 are being accommodated by eight sample villages, while 74.19 per cent of the total OBC households are concentrated in eight villages.

OBC category with 39.46 per cent of the total households rank first followed by general, scheduled tribe and scheduled caste categories with 26.96, 17.03, 16.55 per cent respectively. 18.54 per cent of the total OBC are living in the Bargi village of the region. Similarly OBC also ranks first with 23.10 per cent of the population residing in the Maharajpur village. On the other hand major parts of the scheduled caste households are residing in Maharajpur whereas Bargi villages rank first with 18.05 per cent of the scheduled tribes in the study region. On the basis of the total population of the village Khursi accommodates the maximum population of the scheduled tribes (98.58 per cent), while Matamar village ranks first with scheduled caste population and households. It is recorded that Matamar has only 5.82 per cent of scheduled caste households of the region and accommodates 7.23 per cent of total population of schedule caste. Kathonda village ranks first in scheduled caste families with 34.86 per cent of the total village population belonging to this category. Throughout the region general category is the only category which has maintained the uniform pattern in reference to the proportion of household and population while other caste group presents a diverse pattern.

Analysis of the sex ratio among the sample villages clearly shows that the dominance of male population with 889 females per thousand males too
has a wide variations considering the caste groups as has been shown in the Plate 3.2. Households belong to scheduled caste have a higher proportion of females followed by (955), OBC (825) caste groups as compared to the region’s average. While households belong to the general and scheduled tribe caste with 1076 and 888 females per thousand males respectively have a higher proportion as compared to the region’s average.

Considering the average sex-ratio of various caste categories one finds a wide variation if compared with different categories residing in various sample villages. For example sex-ratio in Deori village for the general category is lowest and does not show much difference whereas it is highest (1714) in Chhitrikhurd as compared to the average sex-ratio (645) for general category. Similarly lowest sex ratio for scheduled caste with 571 has been recorded in Badaiyakheda village while the highest ratio with 1255 has been found in Umariya village. Pipariya village has recorded the lowest sex ratio in the region specially among the scheduled tribe category with 571 while Umariya village with 1414 ranks first. Similarly in OBC category Kungwa with (417) has the lowest sex ratio while the highest figure of (1500) has been noted in Pindrai village. Finally the caste-wise analysis of sample villages clearly shows that Kungwa has the lowest sex ratio 417, while the highest sex ratio was recorded by the Pindrai village.

Finally the proportion of sex ratio in various caste group has recorded a changing pattern as an influence of intra and inter regional movement of selective groups in search of employment opportunities.
INCOME GROUPS

The income is an important factor, which substantially raises the socio-economic status of the household. It helps people in meeting their day to day requirements. Thus income determines the purchasing power of the people. Income of the people has a bearing over their awareness and attitude towards the adoption of new things. Considering the income households in the region are divided into two groups (1) Households above the poverty line, and (2) Households below the poverty line (Plate 3.3).

Households Above The Poverty Line

Households having more than Rs.11,000 as annual income are placed above the poverty line. Only 41.24 per cent of the total selected households from the sample villages of the region are living above the poverty line. These households have been grouped into three categories considering their annual income i.e. Middle income group (Rs.11,000-15,000), High income group (Rs. 15,000-20,000) and Very high income group with more than Rs. 20,000).

Considering the region as whole above mentioned three income groups virtually have a equal proportion however wide variations have been noticed in the sample villages. Middle income group has ten villages Khursi, Badaiyakheda, Kurkikheda, Pindrai, Sehora, Mehgawan, Umariya, Chhitrikhurd, Aamanala, Deori while almost 25.0 per cent villages of this group have the medium proportion households. This group with five villages (Kungwa, Saliwara, Nimkhera, Umariya Choubey and Maharajpur) have 4 times more percentage than the average. If one undertakes a caste-wise
study than one finds that about 13.90 per cent of scheduled tribes of Pindrai village belong to the middle income group and no other village with scheduled tribes belongs to this income group. Only 6.31 per cent of scheduled caste living in Maharajpur belongs to the middle income group and gradually the proportion declines in the remaining sample villages and even has reached to zero level. About 14.54 per cent villages of the region belong to the middle income group while only 6.72 per cent belong to the general category, similarly about 7.91 per cent belongs to OBC category living in villages from this group.

In the high income group also schedule tribes households have marginal share with 2.26 per cent followed by scheduled caste, OBC with 2.41 and 5.20 per cent respectively. While 75.0 per cent households from the sample villages representing general category has a share of 4.62 per cent. Surprisingly in the Khursi and Kukrikhedha villages do not have a general, OBC and Scheduled caste family from the high income group. Only 25.23 per cent households from the sample villages belong to very high income group. Mehgwan village alone account for 25.60 per cent of the total households in the very high income group while Umariya and Umariya Choubey have a minimum share for this income group. Practically all sample villages have few households which belong to very high income group. Most of the households placed in the very high income group belong to General and OBC category.

**Households below the poverty Line**

As per the approved norms households whose annual income is less than Rs.11,000.00 are placed below poverty line. Considering the wide range
of variations, households belong to this category have been further regrouped into four sub-groups i.e.

I. Nirdhan (Rs. 8,500.00-11,000.00).

II. Ati Nirdhan (Rs. 6,001.00-8,500.00) and

III. Atyadhik Nirdhan (Rs. 4,001.00-6,000.00)

IV. Deenheen (Rs. 4,000.00 and below)

5.68 per cent of the total households with meager means are placed in the Deenheen category followed by Atyadhik Nirdhan, Ati Nirdhan and Nirdhan categories with 7.79, 16.53 and 20.03 per cent respectively are living below the poverty line considering their annual income.

Virtually 91.68 per cent of the total scheduled tribe households in various sample villages are living below poverty line. Similarly 89.71 per cent of the scheduled caste households also belong to this category. The percent of OBC households except Atyadhik Nirdhan group have declining graph from 7.10 to 1.97 per cent. While in general the proportion of different caste categories varies from 5.73 to 92.0 per cent. Most of the scheduled tribes respondents with maximum proportion belong to the Deenheen group considering the income. While the proportion of scheduled tribe households belong to the Nirdhan category is 2.12 per cent only.

**Nirdhan**

20.03 per cent of the sample households in the region belongs to this income group where as OBC ranks first with 8.65 per cent, followed by general, scheduled tribes and scheduled castes with 5.77, 2.84 and 2.77
respectively. Sample households of Matamar village with 45.85 per cent living below the poverty line category and ranks first among the category. In reference to the total households Mehgawan village with 42.72 per cent has the maximum share. While village Umariya ranks first with 16.66 per cent of households belong to the OBC category.

Village Pindrai ranks first with 14.28 per cent of the households belonging to scheduled tribes category. While other villages placed in this group less than 3.11 per cent have a very low proportion. Scheduled caste category has only 2.77 per cent of households. Whereas village-wise analysis shows that the villages have the minimum proportion above the average percentages. Only in Umariya Choubey (6.07), Nimkhera (3.90) sample villages belong to high per cent. Thirteen villages belong to minimum proportion on average percentage basis. Six villages have a negligible proportion. Similarly average of the households the proportion in general category is less as compare to 3.14 per cent in the region placed to this income group. Village wise percentage has been minimum and the households belong to this income group. Maharajpur, Deori, Bargi, Saliwara and Bahoripar villages have less than the average household percentage placed in this income group of the region.

**Ati Nirdhan**

Among the households living below the poverty line account for 16.53 per cent of households belong to Ati Nirdhan income group. Kukrikheda is the only village which has the highest proportion with 40.95 per cent, while in the proportion of household belonging to this income group is very low.
Under the OBC category Umariya village ranks first with 18.33 per cent households lying under this income group. OBC category has the highest number of households. In this income group Deori village has highest percentage of 13.34 per cent. Therefore in reference to OBC category Matamar, Chhitrikhurd and Badaiya Kheda are the only villages belonging to this group with minimum household (1) per cent (0.49). Beside the Sehora, Bargi, Maharajpur, Bahoripar, Nimkhera, Umariya choubey, Urduwa kalan and Pipariya with 7.22 per cent lie about the average. While remaining sample village has a marginal per cent.

Matamar villages with 21.90 per cent has the maximum percentage of the scheduled castes in this categoryans six sample villages in the region have a zero per cent of households. The share of the remaining villages ranges from 3.6 to 14.19 per cent. 17.90 per cent household of scheduled caste in Matamar village belonging to this category as compared to others income groups. In the remaining villages the proportion of scheduled caste households is less in this income group. While Badaiya Kheda, Kathonda, Kungwa, Saliwara and Bahoripar villages have the lowest proportion. Among the six sample villages not a single household belongs to this income group. Kungwa Village deserves a special position where 9.10 per cent of the households belongs to the general category. The households in six sample villages practically belong to the general category. The villages present a wide variations ranging from 4.0 to 9.0 per cent.
**Atyadhih Nirdhan**

7.79 per cent households living below the poverty line in the region belong to Atyadhih Nirdhan category with Rs. 4001.00-6000.00 as their annual earnings. Only 1.66 per cent households belong to general category of this income group whereas on the other hand Saliwara is the only village where proportion of household is only 0.69 per cent. Castewise distribution of this income group also presents a wide variations. Village Deori with 13.34 per cent in OBC ranks first while in Matamar village only 0.49 per cent belong to this category. In the remaining sample villages the proportion of households belonging to this group varies from 1.11 to 14.00 per cent. In Khursi village 13.84 per cent scheduled tribes households belong to this category. Mehgawan and Matamar are the villages where not a single household belongs to this category. In most of the villages 12.6 per cent or less households belong to this income group. Aamanala with 4.45 per cent has the highest proportion of the scheduled caste while Umariya Choubey with 0.35 per cent ranks last. The remaining sample villages show a fluctuating trend under this income group.

Generally 2.77 per cent households of the general category belong to this group whereas Nimkhera and Bargi account for 10.1 per cent of the general households. Mehgawan, Matamar and Badaiyakheda villages with zero percentage belonging to general category.

Analysis of this income group clearly shows that Maharajpur is the only village among the sample villages in which households under all categories have been recorded. The main reason assigned for all categories
showing rising trend in the proportion of households in the Deenheen group and it stand out with zero per cent of the total households.

**Deenheen**

More than 5.68 per cent families concentrating in twenty-one sample villages in the area belong to Deenheen category. While in Aamanala, Bargi, Chhitrikhurd, Deori, Kathonda, Maharajpur, Saliwara, and Urduak kalan villages more than 5.16 per cent families belong to Deenheen category. While in Badaiyakheda, Chhitrikhurd villages more than 16.43 per cent households belong to Deenheen category because of them depend upon agriculture only and to work in other activities they cover distances of 15-20 kms and at times to cover these distances becomes very difficult. Among the sample villages Mehgawan, Matamar and Pipariya villages do not have a single family which belongs to Deenheen category.

Villages wise analysis clearly indicates that only Deori and Bahoripar villages account for the highest proportion of OBC households with 56.06 per cent and 54.22 per cent respectively considering the village-wise distribution of selected households. Remaining 19 sample villages account for 50.00 per cent of OBC households. While Badaiya kheda and Khursi villages account for the highest share of schedule tribe households with 26.98 per cent and 13.84 per cent respectively of the total households belonging to Deenheeen category. The remaining sample villages have only 20.00 per cent of the total household who belong to this income group. In the scheduled caste category, Aamanala and Kathonda are the only villages where they are only 45 households belong to this group whereas in most of
the remaining villages more than 10 to 12 per cent households belong to Deenheen categories. In this group there is much difference in the percentage of general category. 5.47 per cent households of the Chhitrikhurd village belong to this income group while Matamar and Mehgawan villages hardly have a single households under the Deenheen category.

**HOUSE TYPES**

The house is considered as the basic need of the human being. On the other hand type and nature of the construction materials being used in the construction of house along with the built-up area and number of persons residing in a house are considered as the main indicators to gauge the living conditions of the population in a region as has been shown in the Plate 3.4. About 26.58 per cent of the total houses in the region are Kuchha followed by mixed, Pucca houses with 39.83 per cent and 33.59 per cent respectively.

In Badaiya Kheda and Chhitrikhurd villages 55.17 and 54.43 per cent respectively of the total Kuchha houses belong to the households living below the poverty line.

The proportion of kuchha houses in Umariya Choubey, Kukrikheda, Bargi, Khursi, Urduwa Kalan and Saliwara villages varies from 30 to 40 per cent, while in eight villages of the region the proportion of Kuchha houses ranges from 11.0–29.0 per cent or even more than this.

In the region 39.83 per cent houses are of mixed type and most of these are from Matamar village however 53.08 per cent of the total mixed
type houses are found in the village Aamanala, Bargi, Deori, Maharajpur, Saliwara, Kungwa and Umariya choubey villages.

Similarly in Nimkhera village more then 50.14 per cent houses are of mixed type as compared to the region’s medium proportion it is 21.58 per cent. The proportion mixed type of house in every sample villages varies from 27.0 to 53.0 per cent.

In the study region only 33.59 per cent houses are of pucca type. Most of the pucca houses, in the region are concentrated in Pipariya, Aamanala, Kungwa, Nimkhera, Bahoripar and Saliwara villages. Maharajpur village has the highest proportion of pucca houses in the region. While Badaiya Kheda, Matamar and Chhitri Khurd sample villages have the minimum proportion of pucca houses.

**ELECTRIFICATION**

Electricity is considered as a powerful instrument positively helps in process of the socio-economic development of the rural areas. The economic development largely depends on the well developed infrastructural facilities and the adequate supply of power. Among various facilities, availability of electricity is considered as the most important one. It is a well known fact that in most of the developing regions the basis of development take-off has been with the establishment of industries in the urban and adjoining rural areas, and becomes difficult rather impossible without the adequate supply of electricity.
Availability of the electric power in the rural areas is considered as an important and basic infrastructure supporting the diversification of activities. Rural electrification brings about significant changes in the rural areas in the context of domestic, irrigation, commercial and industrial sectors. With the electrification not only an individual family is benefited but its impact is recorded on the over all environment of the villages.

100 per cent sample villages in the region are electrified. In most of the villages electricity is used by the irrigational, commercial and domestic sectors. Most of the power used by the domestic sector followed by irrigational, commercial and industrial sector as has been shown in the Plate No. 3.5.

More than 78.00 per cent of the selected households living in the sample villages are electrified. Maharajpur village ranks first with 98.07 per cent electrified households among the sample villages of the region. Maharajpur, Saliwara, Nimkhera, Bargi, Matamar, Bahoripar, Kungwa and Pipariya villages, have the higher proportion of electrified houses as compared to the region’s average.

More than 62.0 per cent electrified houses in the region belongs to OBC households. The OBC category out of which 59.90 per cent electrified house of this category are concentrating in Bargi villages. While Bargi, Maharajpur, Bahoripar, Pipariya, Matamar, Saliwar and Nimkhera villages have more than 50.0-53.0 per cent Households which belong to the OBC category are without electric connection. In the remaining villages also the proportion of electrified house under this category in marginal.
Chapter III

STATUS OF SAMPLE VILLAGES

Only 18.17 per cent of total electrified houses in the region belong to schedule caste households. Most of them have facilities of one point connection as per government policies. More than 30.73 per cent of the total connections are found only in the Kathonda village.

In Deori village 15.0 per cent schedule tribe houses are electrified, while Khursi, Kukrikheda, Maharajpur, Nimkhera and Saliwara villages in the region belong to this category the proportion varies from 55.0-75.0 per cent of the total electrified houses and belong to schedule tribes. It is surprising fact that three villages Kukrikheda, Pindrai and Chhitrikhurd in the region belong to this category have the highest proportion of electrified houses.

More than 64.91 per cent of the total Schedule tribe houses in the region are being electrified while only seven sample villages in the region account for more than 81.24 per cent electrified house belongs to schedule caste households.

Only 16.17 per cent electrified houses belong to the general category in the region. Therefore, it can safely be asserted that in the context of the region whatever ratio is there, it also equally prevail in the electrified houses. About 62.11 per cent of total houses belong to general category too are electrified. In nine villages more than 75.0 per cent electrified houses are owned by the general category.

22.4 per cent of the total households in the study region are using the irrigational implements. Similarly 60 per cent, that is 25.07 per cent of the region’s total households have start adopting the electric implements for
irrigation. About 50.0 - 60.0 per cent households of Bargi, Maharajpur, Saliwara, Nimkhera and Bahoripar villages are using power supported irrigational facilities are using power supported.

Households owning the electric pumps for irrigation accounts to 80.0 – 82.0 per cent of the total households and are mainly concentrated in Maharajpur, Saliwara, Nimkhera, Kungwa, Umariya Choubey and Bahoripar villages. While in Pipariya, Aamanala, Urduwa Kalan, Mehgawan, Khursi. Badaiya Kheda, Kukrikheda and Sehora villages. Due to maximum proportion of Scheduled tribe population and their poor economic condition very few households in these sample villages using electric pumps for irrigation. In these sample villages proportion of OBC population is 48.49 per cent who are using electric pumps for irrigation purpose. More than 67.06 per cent electric pumps are used in Bargi, Maharajpur, Saliwara Nimkhera, Bahoripar and Matamar villages for irrigational purposes. While in Bargi, Bahoripar, Nimkhera, Saliwara and Maharajpur villages about 50.0 per cent of the available electric facilities are used by the OBC category for irrigation.

Only 18.7 per cent of the total sample households used electricity for irrigation. Schedule tribe households as compared to other categories are using minimum electricity in the region. Because the size of the agricultural landholdings mostly owned by the schedule tribe households are virtually of very small size and represent a negligible proportion of total land. That is why facilities provided by the government are not being properly availed by
these people. Most of schedule tribe households availing these facilities are mainly concentrating in Khursi and Kukrikheda villages.

16.47 per cent Schedule caste families are using electric power for irrigation. Most of them are concentration in Bahoripar and Matamar villages. Maharajpur, Bargi, Nimkhera, Saliwara, and Kungwa villages account for more than 50.0 per cent of the total SC families using electric power for irrigation.

About 24.34 per cent of the total families in the region belong to general category and are using electric equipments for irrigation and mostly are concentrated in seven village of the region. Out of these only Maharajpur, Umariya Choubey, Saliwara, Nimkhera, Kungwa, Bargi, Bahoripar villages recorded 76.06 per cent family to the general category using electric power for irrigation.

About 60.45 per cent of the total households in the region using electricity for commercial purposes. More then 61.11 per cent of these are OBC category and are concentrated in four villages of the region.

The share of schedule caste and schedule tribe households availing these facilities for commercial purposes is only 12.80 per cent, while only 26.75 per cent belongs to the general category. The use of electric power for industrial purpose is being used by the households are concentrated in Maharajpur, Saliwara, Deori, Bargi, Aamanala and Umariya Choubey villages.
TRANSPORT FACILITIES

The transport network is considered as the main feeding veins influencing the economy of the region. The movement of people as well as the goods from one place to another places becomes possible only with the development of transport network and related facilities.

Transport is an important and essential asset for the development of the people and activities operating in the region. The expansion of the societies and economic activities gradually requires the safe, efficient fast and dependable transport network. All related systems too are expanded and diversified gradually to ensure the movement of the man and material from local, regional, national and international level with intra and inter variations. Human being has strived from time immemorial, to develop and improve the means of transport for the movement of man and materials to various places. As a result the rural and urban societies have been benefited with the growth of efficient transport network at various levels.

Transport facilities are the hub around which revolves the development of the regions as well as in the study region. The regions having a good network of transport facilities and the development of that region is patent.

Important means of transport available in the sample villages include Bullock carts, Cycles, Motor cycles and Tractor trolleys. Besides these Tempo, Jeep, Bus and Train too are important means of transport in the certain areas of the study region. Most of these means of transport are
widely and commonly used by the rural people for inter and intra movement in the region.

Private Transport Facilities

In the study region 21.64 per cent households own a bullock cart. About 25.31 per cent of total bullock carts alone are found in the Bargi village of the region. But if considered from the point of view of the total households this becomes negligible. Kathonda, Khursi, Mehgawan, Pindrai and Sehora, villages together account for more than 35.00 per cent bullock carts and are being used as a most common means of transport. On the other hand Maharajpur, Saliwara, Umariya choubey, Nimkhera and Kungwa villages have the lowest (less then 10.0 per cent) number of bullock carts.

On the other hand Bahoripar, Bargi, Deori, Maharajpur, Nimkhera and Saliwara villages together account for 61.11 per cent Tractor-Trolleys. While in thirteen sample villages the proportion of tractor and trolleys as compared the region's total is minimum.

In the region 66.14 per cent households are owning cycles. In Maharajpur, Nimkhera and Saliwara villages of the region practically every household has a cycle, even some of these households possess more than one cycle. While in Umariya choubey, Bahoripur Deori, Kungwa, Urduwa Kalan and Pipariya villages 75-91 per cent families have atleast one cycle. On the other hand in the remaining sample villages only 50.00 per cent households are owing the cycle.
The total households selected from the sample villages have only 396 motor cycle 71.12 per cent motor cycle are being owned by households of Maharajpur, Saliwara, Nimkhera, Bargi and Bahoripar villages.

Maharajpur, Nimkhera, Saliwara, Bargi, Bahoripar, Umariya choubey, Matamar and Pipariya villages in the region also have the Jeep for private use and occasionally used by the fellow villagers. Aamanala village is using horse as a means of transport and the total comes to 12 Horses. Because of the hilly and uneven tract restricts the movement during rainy season and to ensure the movements horse are being used as main means of transport.

**Public Transport Facilities**

Bahoripur, Bargi, Deori, Kungwa, Mehgawan, Maharajpur, Nimkhera, Pipariya, Saliwara, Umariya, Umariya choubey and Urduwa Kalan sample villages enjoy the bus facilities. While Bargi is the only sample village which have the train facilities. Matamar and Aamanala villages enjoy the facilities of frequent tampoo service from the nearby villages.

**LAND-USE PATTERN**

The use of land specially for producing various agricultural produces is the widest and very significant for the sustenance of humanity. From early times man has been tilling the land, which is a renewable stock resource. The history of resource use clearly shows that with the increasing number of people and their capability with the advancement of science and technology gradually the use of resources have been diversified to meet the growing demands with increasing human population. So this has been the
case with the land resource. Initially with sparse population only best lands were cultivated. But with increasing pressure of population, even marginal lands too are being gradually brought under cultivation. At the same time science and technology too have been applied to meet the emerging challenge to feed the population. This all has caused the changes in the pattern of landuse, its intensity and multiplication of crops specially to meet the growing demands for diversified agricultural produces by the urban population as well as industrial activities.

Bargi alone in the region shares for about 12.74 per cent of the total area while Mehgawan villages ranks last with about 1.15 per cent (Plate 3.6) of the total area. And more than 22.43 per cent of the total area is not available for cultivation (not suitable for agriculture) and only 20.88 per cent is used as the double cropped area. More than 47.05 per cent of the total area is not suitable for agriculture mainly lies in Bargi, Maharajpur and Umariya choubey. Marked variations in the double cropped area has emerged as a main feature in the region. Deori, Bargi, Kathonda Urduwa kalan and Umariya Choubey of the region together account for more than 45.00 per cent of the double cropped area. Bahoripar, Nimkhera nad Chhitrikhurd sample villages of the region have more than 40.00 per cent of the double cropped area. Similarly Pipariya and Kukrikheda villages have 31.94 and 39.09 per cent respectively of double cropped area. Remaining villages have less than 30.00 per cent of the double cropped.
Only 4.05 per cent of the total area is classed as fallow land and the Khursi village alone has more than 12.33 per cent of the total fallow land of the region.

**Land-holdings and ownership**

With the growing impact of the urban areas becomes evident along with the increasing pressure of population on the land of the adjoining villages. As their resources has been manifested also in sub-division and as a result the agricultural holdings have been fragmented. With the transformation of agricultural land to meet the growing demand of additional space for non-agricultural activities, gradually the rich productive agricultural land are being permanently converted as a result pressure on the available agricultural land further increases to enhance the production to meet the expanding demand for agricultural produces.

The initial impact of the city is seen on the agricultural land use of the adjoining villages. The city offers a growing market for agricultural produces of the villages such as milk, milk products, vegetables, flowers and fruits. A few enterprising farmers representing sample villages take initiatives to available the advantages of these opportunity, and this leads to improving daily connectivity with the city. Milk is taken to the city by bicycle and vegetable by Ox or horse driven carts. That is how gradually the villages become the fruit and vegetable farm and milk shed of the city. In the present study too the rural areas specially the sample villages have clearly shown that it is generally the lower and intermediate caste and marginal farmers who have taken the advantage of the urban market.
41.03 per cent households in the region belong to the category of marginal farmers and average size of their land holding is less than 5.00 hectares. 32.12 per cent selected households belong to the category of small farmers with the land holding of 5-10 hectares. 18.86 per cent households belong to medium farmers category with the land holding of 10-25 hectares. Only 7.99 per cent households are owning. The land more than 25 hectares. Irrigational facilities are availed by 56.91 per cent farmers in the study area. (Plate 3.6).

Only 7.99 per cent households in the region belongs to the category of big farmers. Considering the total number of households belongs to big farmer, 41.62 per cent are from OBC category and more than 17.06 10.26 per cent of these households are confined to the Bargi village. Only 8.91 per cent households from Mehgawan village have their own irrigational facilities. The scheduled tribes category falls shorts of expectation while the scheduled caste category has a minimum proportion of irrigational facilities and are concentrating in Khursi, Pindrai and Mehgawan.

About 26.96 per cent households are from general category and 16.92 per cent households belongs to the general category and are concentrating in Urdua kalan and Kathonda village.

Total sample villages account for about 7.99 per cent big farmers. About 44.32 per cent these farmers belong to the OBC category. While 38.91 per cent of big farmers and the scheduled tribes and scheduled caste category have big farmer in minimum proportion.
18.86 per cent households in the region are medium farmers, whereas 40.16 per cent households have agricultural land with irrigational facilities and 61.06 per cent of the households avail the irrigational facility by the medium farmers for their respective villages. About 50.00 per cent and above are minimum percentage (11.06 per cent) confined in the Sehora, Mehgwan and Pindrai village of the region.

62.14 per cent households of this group belong to the OBC category and 20.86 per cent households of this group belong to general category. Only 10.88 per cent households belong to scheduled tribes while 6.12 per cent households belong to scheduled caste category.

32.12 per cent households in the region are small farmer. Out of them 39.16 per cent are owning irrigated agricultural land while 50.00 per cent of this is owned by the OBC category. In Nimkhera and Chhitrikhurd villages 45.36 per cent and 42.17 per cent households respectively are small farmer whereas Sehora has the minimum percentage of small farmers (17.16 per cent). Among small farmers, the OBC category rank first with 46.17 per cent, followed by general category, scheduled tribes and scheduled caste category with 24.12, 19.17 and 10.54 per cent respectively (Plate No. 3.6).

41.03 per cent households of the region are marginal farmers, out of these total and as per marginal farmers scheduled tribes ranks first with 42.91 per cent followed by OBC, scheduled caste and general category with 28.16, 24.76 and 4.17 per cent respectively. Urduwa kalan, Bargi and Kungwa villages have the 36.11 per cent, 35.80 per cent and 32.11 per cent households respectively of the marginal farmers. Whereas Deori village with
9.46 per cent of marginal farmers. In Saliwara village 24 families of the marginal farmers belonging to OBC and scheduled tribes category are using irrigational facilities for cultivating Barseem (green grass), vegetables, fruits and few other cash crops and are sent to the nearby Jabalpur city.

Only 17.98 per cent households mostly belong to scheduled caste and scheduled tribes of the region do not own agricultural land and are landless. Among the landless households schedule tribes lead with 36.51 per cent scheduled caste, OBC and general with 31.29, 18.11 and 14.09 per cent respectively.

**CHANGING PRODUCTION OF CROPS**

The factors consists of economic, social and personal factors while the natural factors stand for climate, soil terrain and demand of crops. Most of these factors with minimum changes remain stable. But certain economic factors particularly economic factors are of dynamic nature. Therefore over the period of time their significance has changed, technical factors consist of agricultural implements, machines, high-yielding varieties of seeds and fertilizers etc. Among the social factors i.e. ownership of land, size and distribution of operational holdings too influence nature of agricultural land.

**Food Crops**

Wheat, gram Jowar and rice are the main food crops produced in the region. Besides this paddy and maize too are produced. Wheat is practically produced in all villages of the study region. The per hectare yield varies from one village to the other village. Bahoripar village with a yield of 2014 kg
wheat per hectare ranks first among the sample villages. While Khursi village with 308.75 kg per hectare ranks last among the sample villages. The main reason of this low yield is due to the unfertile and embedded land with stones, where even the growth of grass becomes difficult. In the local dialect this soil is known as Gajar soils in the area. Availability of ground water at depth is also one of the reasons, which restricts the expansion and future prospects of adequate irrigation. On an average seven households with an implements are availing the facilities. Whatever is produced becomes feasible only in the lower beds of the river, which swills in the season. Only in six sample villages of the region wheat production comparatively has a low yield (618-742 kg/hectare) while is thirteen villages wheat production is fairly well (988-1482 kg/hectare). Wheat is cultivated in about 9232 hectares of land with an average yield of 770.64 kg per hectare.

Khursi, Kukrikheda, Mehgawan Pindrai, Sehora village have recorded a minimum production with 296 kg per hectare while Maharajpur, Bargi, Bahoripar, Deori Umariya choubey and Nimkhera, villages have recorded yield with more than 360 kg per hectare. Except the village Umariya, Kathonda and Matamar villages are known for lower yields. On the other hand remaining seven villages have more than the region's average yield. Only five villages have recorded yield of 597 kg per hectare.

Rice is the main Kharif crop of the region and is cultivated in 1842 hectares. Its average production is 708 kg hectare. Though eight villages in the region are cultivating rice but the area under rice varies from one village to the other. While Khursi, Kathonda Aamanala, Badaiya Kheda and Sehora
villages account for 51.49 per cent of the total area developed for Rice cultivation.

In the study area maize forms a minor part of production and is producing only 70.44 kgs per hectare with 454 kg per hectare as average yield. Badaiya kheda village has the lowest production (308 kg per hectare) while Matamar and Umariya choubey have comparatively more production (543 kg per hectares).

**Commercial Crops**

In last 25 years the proportion of commercial crops in reference to the hectarage and production has recorded a increasing trend over the food crops in the region. Similar pattern has been noticed practically in all sample villages where gradually the area under food crops has declined.

Sunflower is the main commercial crop produced in the region. Sunflower is cultivated in 739 hectares and its average production was 592 kg per hectare. There have been only five sample villages in the region where sunflower is not produced while in the remaining sample villages are producing this crop, of course with a varying hectarage. As far as the area under this crop is concerned about 38.50 per cent of the total area is under sunflower and is mainly confined to Deori, Umariya choubey, Pipariya, Bargi villages, Khursi, Kukrikheda and Pindrai villages have the lowest figure of production (297 kg per hectare). More than 85.50 per cent production is contributed by only nine villages.
Soyabean is another commercial crop and is cultivated in 415 hectares of the land with an average production of 692 kg per hectare. Seventeen villages together account for about 45.71 per cent area under soyabean. Umariya choubey village comparatively has a better yield (765 kg per hectare). While Khursi and Kukrikheda villages have the lowest production 247 kg per hectare on the other hand Khursi, Kukrikheda, Umariya, Sehora and Aamanala villages have more than the region’s average production. And the remaining villages account for the lowest yield.

Vegetables and Barseem (grass) are the important minor crops of the region. Vegetables are grown in about 187 hectares of the region and in 82 hectares under Barseem with the average production to 937 and 1182 kg per hectare respectively. Maharajpur, Matamar, Umariya choubey and Saliwara, villages in the region are well known for vegetable and grass production.

With regard to the area more than 40 per cent of the total area is concentrated in Kathonda village, where per hectare production is very low (346 kg per hectare). Though Pipariya and Urduwa kalan village has a minimum area under this crop but per hectare production is highest (630 kg per hectare).

**ANIMAL HUSBANDRY**

The sample villages of region also have rich animal husbandry and have 10,489 animals. One-third of these animals are dry and comprising of bullock, buffalo, goat and horses. Out of the total dry animals 51.25 per cent are bullocks. Fifty per cent of the total bullocks in the region are found
in Umariya choubey, Kungwa, Matamar, Chhitrikhurd Mehgwan, Pipariya and Sehora, villages, whereas seven villages in the region have only 15.70 per cent of the total bullocks. Most of the buffaloes are concentrating in Saliwara, Urduwa Kalan, Bargi, Kathonda, Kungwa, Kathonda Aamanala and Matamar village and account for 64.11 per cent of the total buffaloes. Whereas eight villages have a minimum number. Most of the goats found in the sample villages are concentrated in Maharajpur, Pipariya, Kungwa, Kathonda, Urduwa Kalan, Umariya choubey and Kukrikheda, whereas seven villages have a minimum number. Among the milch animals- cow, she-buffalo and she-goat are important. Out of which only 49.75 per cent are milch animals leaving about 51.25 per cent as dry animals. Among the milch animal she buffaloes forms a major share. 65.70 per cent of milch animals are concentrated in Matamar, Bargi, Pipariya Nimkhera, Saliwara, Sehora and Kathonda, villages. In Matamar and Pipariya sample villages the ratio of the dry animals and buffaloes is 3:1 and conversely in Sehora, Pindrai and Urduwa Kalan the ratio is 1:12.

Out of the total milch animals in the region there are only 7:5 cow and in the region milch-dry ratio comes 2:3. There are 62.0 per cent of the totals she-buffalo concentrated in Bargi, Matamar, Pipariya Umariya choubey, Kathonda, Kungwa, Mehgwa, and Maharajpur villages. Whereas in thirteen villages of the region the ratio varies from one village to other for example, milch-dry ratio, Matamar village leads with 12:3 followed by Bargi 1:9 and Umariya choubey 1:7.
The region has 16.7 per cent of milch animals. The ratio of milch and dry goat in the region is 1:1 of the total goats in the region 61.20 per cent are found in Bargi, Nimkhera, Saliwara, Deori, Khursi, Pindrai and Kungwa villages whereas Badaiya Kheda, Umariya and Bahoripar villages have a negligible proportion of she-goats.

EDUCATIONAL FACILITIES

Generally education is considered as an important input which has a direct link with the process of development. The differential spread of the literacy can, therefore be properly analysed in the system of interdependencies having bi-directional linkages with the development process. In consonance with the marked disparities, in socio-economic conditions across the sample villages in the region. The level and response of educational opportunities also vary among sample villages. The changes in the educational levels positively helps in the development of human resources.

Primary School

It is an important fact to be recorded that practically every sample village has a primary school in the region. Among the sample villages Bargi village has the oldest primary school which was established in 1956, while recently at Khursi village primary school has been opened in 1989.

During the first five year plan only two primary school were opened at Bargi (1956) and Umariya choubey (1957) and in second five year plan only one primary school was opened at Deori (1960). During the third five year
plan only three primary schools were established at Bahoripar (1964) Saliwara (1964) and Maharajpur (1965). During the fourth five year plan no primary schools was opened in the study area. Thereafter only four primary schools were opened during the fifth five year plan mainly at Matamar (1975) and Kungwa (1975), Nimkhera (1976) and Badaiya kheda (1978). Only five primary schools were opened in sixth five year plan at Pindrai (1980) Pipariya (1980) Mehgawan (1980) Urduwa kalan (1983) and Kathonda (1984). During the seventh five year plan six primary schools were opened in Sehora (1985) Aamanala, (1986) Kukrikheda (1987) Chhitrikhurd (1987) and Umariya (1988). This clearly explains that process of expanding the educational facilities of school that too of primary is being maintained with the opening of primary schools at regular interval in different villages. Practically in every sample village of the region has their own building for primary school with atleast 2-4 rooms.

Primary schools of the region on an average have per room density of 40, students whereas maximum per room density goes upto 65 in Bargi while in Maharajpur Khursi, Mehgawan, Badaiyakheda and Kukrikheda villages have the minimum room density i.e. 20 to 22 student per room.

Considering the teacher-student ratio, Umariya choubey village rank first with a ratio of 1:88 followed by Bargi and Nimkhera with 1:64 whereas this ratio goes up to 1:86 at Saliwara. Higher secondary student ratio than a teacher reflects the continued pressure on a teacher certain effects the quality of teaching.
Average male-female student ratio in the region come to 1:2, while in Bahoripar, Bargi, Deori, Umariya choubey, Saliwara, Nimkhera, Kukrikheda and Kungwa villages the share of male student is higher whereas in Aamanala, the ratio is lower.

In most of the primary schools average growth in the number of students has been 200.00 per cent as compared to the opening of the school except a few exceptions. Nimkhera village has recorded the highest growth of 202.96 per cent. The reason for this growth is due to the population size, extent of the coverage area, as well, oldest school with all necessary infrastructure in the area.

Therefore this growth is justified. Annual growth in the village Maharajpur has the highest proportion (100 per cent). In Bahoripar village figures shows a retarding growth in the region. Which had a good number of student in the beginning but later on there has been a sharp and marked fall in the growth which has declined to 52.8 per cent.

**Middle School**

Out of 21 sample villages, fifteen villages have a middle school, while Bargi villages has the oldest middle school which was started in 1976 with one teacher and 26 student. While the remaining villages have at least one middle school. However the student of Badaiya kheda, Chhitrikhurd, Khursi, Kukrikheda, Mehgawan and Umariya have to cover a distance of 4-10 kms to attend their middle school. At Bargi, in the middle school male-female student is 3.2 while teacher-student ratio is 1:71. Room density in a school has a 45 student per room while similar is the case of the village Bahoripar where the middle school is established in 2002.
Bahoripar village also has a similar story. Middle school at Bahoripar has 2 teachers and 82 students. Male-female ratio in the school is 1:1.5 while the teacher-student ratio comes 1:41. Room density in the school is 50 students per room.

**Higher Secondary School**

Among the Bargi, Kungwa, Maharajpur, Nimkhera, Saliwara and Pipariya sample villages of the study region have the facility of higher secondary schools. Fifteen sample villages do not have higher secondary schools and student from these villages have to attend their school after covering a distance of 4 kilometers to 18 kilometers. Student from Deori have to cover only 4 kilometer while student of Khursi village are going to Jabalpur (18 km) by bus and Jeep. 60 per cent student from Aamanala, Bahoripar, Chhitrikhurd, Kathonda, Matamar villages use cycle to reach their school while the remaining are going on foot. Considering these problems sometime students give up their studies, specially parents avoid to sent their daughters to these far off school.

**College**

Only Nimkhera sample village has a Homeopathy medical collage and two education collage, and students from the other nearby villages attend their collage after covering a distance of 5 to 24 kms. Student from and Bahoripar and Bargi covers a distance of 25 km and 30 km respectively to attend their classes in the college.
AGRICULTURAL IMPLEMENTS

One of the major technical development of the post independence period has been the application of mechanical power in the agriculture sector to boost the agricultural production even in the Jabalpur region. This simply refers to the use of tractors, power operated pump sets, tub-wells and threshers etc and their impact on improving farm production, farm performance per unit of agricultural land has been considerable. The agricultural implements are easily available from nearby Jabalpur city. The Jawahar Lal Nehru Agricultural University played a catalytic role in the implementation of modern technology in the agriculture sector so that the productions may be increased. After the successful implementation of modern technology farmers have start using their valuable time by working in certain other activities to boost their income.

The sample villages of the region account for about 288 tractor, 66.66 per cent of the total tractors are owned by the farmers of Maharajpur, Bargi, Saliwara, Bahoripar, Nimkhera, Deori and Umariya choubey, villages (plate 3.7). Every villages in the region have tractor. Normally a tractor is enough for 148-173 hectares but among the sample villages of the region the per tractor average comes to 247 hectares.

It is an important fact that in region Maharajpur, Bargi, Saliwara and Nimkhera villages have sufficient number of tractors in proportion to the net sown area of the village. The region shows a fair difference in tractor-area ratio with the highest per tractor area comes to 114, while in Mehgawan,
Pindrai Umariya, Aamanala villages have comparatively low ratio of per tractor acre (120-150).

55.00 per cent households engaged in agricultural activities in the region are also owning irrigational equipments. Only 9.00 per cent households have the diesel pumps while 46.00 per cent households have electric pumps. Bargi, Maharajpur, Deori, Bahoripar and Saliwara, villages together account for more than 52.27 per cent of the total diesel pumps. Bargi, Deori, Bahoripar, Saliwara, Maharajpur and Nimkhera, villages have 60.53 per cent of the electric pumps.

During the field work it has been noticed that practically in most of the sample village the farmers are using Sprinklers to irrigate their standing crops. Bargi, Deori, Kathonda, Saliwara, Bahoripar, Maharajpur and Nimkhera villages have more than 57.33 per cent of total sprinklers. In these villages sprinklers have become very popular considering their effectiveness and saving the available water.

Bargi, Deori, Umariya choubey and Kathonda villages in the region also have sufficient number of diesel and electric pumps, while Deori village in the region shows rare prospects with respect of electric irrigational implements. Apart from the availability of diesel/electric pumps and other irrigational equipments, the problem of irrigation has become more severe specially when the water level during the summer season gradually goes down. With such changes the use of irrigational equipments becomes restrictive only to certain suitable points in the villages considering the availability of water.
In the region only 19.12 per cent households are owning have thrashers. Bahoripar, Bargi, Deori, Kathonda, Nimkhera and Saliwara villages have more than 60.10 per cent thrashers of the region 70.88 per cent households are owning agricultural land. At the same time 66.00 per cent households are devoid of iron ploughs. Generally, one plough is enough ploughing about for for .11 hectares. In relation to the total net sown area the proportion of iron ploughs varies different sample villages. For example in Kathonda and Umariya choubey villages even one iron plough is used for ploughing about 123-149 hectares of land. Flying machines too are used by the farmers of the region and found in Maharajpur, Kathonda, Bargi, Bahoripar, Deori, Saliwara, Nimkhera and Umariya choubey villages. These eight villages, to gather account for more than 70.00 per cent of the flying machines used in the region.

**ELECTRICAL APPLIANCES**

In last two decades the use of various types of electrical appliances by the residents of the sample villages. This clearly indicates changing pattern of life style as well as the attitude of the people. However, this also mentions about the changes in their income. The people that regularly the invert to improve the agricultural production by adding new inputs have expressed it. Similarly they have start sparing the money for purchasing the electrical appliances for their domestic requirements.

24.79 per cent households in the sample villages have their own television set. 70.57 per cent of total T.V. sets owned by the people are found in Maharajpur, Bargi, Deori, Saliwara, and Umariya choubey villages.
34.00 per cent households in the region also have the various types of radio sets. About 57.08 per cent of the total radio-sets are found in Maharajpur, Bargi, Saliwara and Umariya choubey villages as has been shown in the Plate 3.8.

Only 9.24 per cent households are owing the tape-recorder and that too are found in Bargi, Bahoripar, Maharajpur, Saliwara and Nimkhera villages. In Maharajpur alone 12.93 per cent households in the region have electric fans and more than 42.91 per cent together are found in Bargi, Kathonda, Saliwara, Nimkhera and Umariya choubey villages.

SERVICES

Only fifteen villages have Gram Panchyat while the Gram Panchayat of Umariya and Aamanala are situated at a distance of 3 kms.

Bargi, Deori, Maharajpur, Saliwara and Umariya choubey villages have a facility of post office. While for the residents of other sixteen villages in the region have distance of 2-7 kms to avail this facility. Remaining villages have this facilities at an easy distance.

Only Bargi village have a police station while residents of the remaining sample villages have to cover a distance of 4 km to 14 kms to reach the police station.

During the field work it has been recorded that practically all sample villages in the study region are availing the facility of public telephone which clearly indicates the expansion of communication net in the villages. In
Saliwara, Maharajpur, Umariya choubey, Kungwa, Nimkhera, Piparia villages even some of the farmers and traders are owning the mobile phones also.

Bargi is the only village enjoys the facility of railway station. Bahoripar, Umariya, Umariya choubey, Kukrikhedha, Maharajpur and Kungwa villages have adequate railway facilities as they are situated at very close distance or less than 6 km. Khursi village has a railway link at a distance of 8 km. While 12 villages in the region have to cover a distance of 10 to 24 kms to avail this facility.

Bargi, Deori, Maharajpur, Saliwara and Umariya choubey villages have a facility of veterinary hospital with trained staff. While the residents of the 13 villages in the region cover the distance of 3 to 10 km. to avail these facilities. Mehgawan, Pipariya and Sehora are the only three villages having these facilities at a distance of 11-14 kms.

Bargi, Deori, Maharajpur and Saliwara villages have the facilities of medical store whereas, Aamanala, Badaiyakheda, Chhitrikhurd, Khursi, Kungwa, Nimkhera, Umariya and Umariya choubey villages have this facilities at a distance 3 to 8 km. while nine villages have this facilities at the distance of 9 to 14 km.

Bargi, Bahoripar, Deori, Maharajpur, Saliwara, Umariya choubey and Urduwa kalan also have a facility of Agriculture service center. While to avail this facility residents of the 14 villages have to cover a distance of 5 to 16 kms.
Among the selected sample villages in the region only in Bargi the weekly market is held. While the residents of 15 sample villages have to cover a distance of 3 to 10 kms to reach the weekly market. While the residents of Kukrikheda, Khursi, Sehora Urduwa Kalan, and Mehgawan villages have to cover a distance of 11 to 16 kms to avail the facility of the weekly market to procure the essential materials/items.

**RURAL ARTISAN AND SERVICE UNITS**

**Rural Artisan**

The region has only eleven cobblers and they too are confined to Maharajpur, Bargi, Saliwara, Pipriya, Deori, Matamar and Kungwa, villages. Over the period of time their number is declining due to the inferiority complex and number of families actively involved in activity is decreasing as the younger generation is not adopting this profession.

72 persons in the region are engaged in the carpentry work and most of them are concentrated in Bargi, Maharajpur, Saliwara, Nimkhera Piperiya, Umariya choubey and Deory villages. While six villages do not have any carpenter. Similarly sample village in the region have only 29 blacksmiths are living in Maharajpur, Saliwara Nimkhera, Bahoripar, Deori, Kungwa, Umariya choubey and Urduwa kalan, villages. In the region only in Maharajpur, Saliwara and Bargi villages have the four shops of goldsmiths.

Bargi, Bahoripar, Maharajpur, Umariya choubey, Matamar, Saliwara, Nimkhera, Kungwa and Urduwa kalan have a facility of thirty two tailors.
Service Units

During the field survey it has been recorded that twenty one sample villages in the region have about 314 shops dealing with variety of materials. While in ten villages number varies from 3-4 shops. More then 70.00 per cent of the total shops are concentrated in Maharajpur Bargi, Deori, Saliwara and Nimkhera, while Khursi, Kukrikheda, Aamanala, Bahoripar, Mehgawan Pindrai, Umariya and Urduwa kalan villages also have the facility of 27 bicycle repairing shops. On the other hand Maharajpur, Bargi, Saliwara and Nimkhera villages also have the facility of electric repairing shops and number varies from four, three, two and one respectively in the region.

Maharajpur, Bargi and Saliwara villages ranks first in the list of the villages where all types of service units are regularly functioning. Other eighteen villages also have the facility of Kirana, cycle, and other minor type of services.

The analysis of above aspect clearly confirms that, apart from the transport facilities, level of awareness among the residents of the area has positively motivated them to think in terms of new ventures. This is a stark and paradox fact that some of the sample villages located on the main road or close to it and a direct accessibility with Jabalpur city they has been transformed most of the rural activities. Maharajpur Saliwara and Nimkhera located at a distance of 13 to 16 km. also have started various non-agricultural activities to meet the requirement of the urban market.