CHAPTER III

PROBLEMS AND PROSPECTS
IN THE BETTER UTILIZATION OF LAND

Land utilization deals with the study of the problems that arise while allocating land to different uses to yield optimum benefits. The pattern of land use changes remarkably with the changing needs of the society which occur due to urbanization, change in the relative importance of sectorial-wise development, growing population change in occupational sector and so on. Despite favourable climatic condition, excessively fertile of land gifted by nature and continuous developmental efforts during the five year plans as a part of national policy, the agricultural productivity per acre remains too low in comparison with other state for reasons which are yet to be explored. The present chapter attempts to make an in-depth analysis on the problems and prospects of better utilization of land in Manipur. Land Utilisation statistics for the entire State of Manipur are not available because hill areas are not cadastrally surveyed. The plain of Manipur occupies about 2,238 sq. kms. which accounts for about 10 percent
of the total geographical area. A firm information regarding the land utilization of the entire State cannot be built up since land records are available only for the cadastrally surveyed area of the Manipur Valley and a very small pocket of the hills while no complete and regular land utilization survey have been undertaken by the authorities, such as Agriculture/ Horticulture/ Settlement and Land Records/Revenue Departments.¹

As seen from the Table 3.1, the total geographical area according to Surveyer General of India was estimated to be 2,23,000 hectares in 2000-01. No further data of forest for the valley areas has been published since 2000-01. Therefore, the analysis is compelled to be base on information for the year 2000-01. It is also to be highlighted that according to village paper the total geographical area fluctuates from year to year during 1991 to 2000-01. The total area was estimated to be 1,89,231 hectares in 1990-91 and it rose 1,91,509 in 1995-96 and finally in 2000-01 it was estimated to be 1,90,442 hectares. Whatever the difference in the reports between Surveyer General of India and village paper, the

important point to be noted is that land not available for cultivation considerably declined from 31,844 hectares in 1990-91 to 26,900 hectares in 2000-01. Along with this the area of Barren and unculturable land also reduced from 1,225 hectares in 1990-91 to 940 hectares in 2000-01. Similarly other uncultivated land excluding fallow land also decreased from 10175 hectares in 1990-91 to 855 hectares in 2000-01. Likewise the cultivable waste land decreased from 1440 hectares to 740 hectares during the same period.

On the other hand net area sown increased from 1, 46,693 hectares in 1990-91 to 10575 hectares in 2000-01. In fact the total cropped area increased from 1, 52,458 hectares to 1, 65,862 hectares in 2000-01.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total Geographical Area</td>
<td>(a) According to Surveyor General of India</td>
<td>2,23,000</td>
<td>2,23,000</td>
<td>2,23,000</td>
<td>2,23,000</td>
<td>2,23,000</td>
<td>2,23,000</td>
<td>2,23,000</td>
<td>2,23,000</td>
</tr>
<tr>
<td>2. Forest</td>
<td></td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Land not available for cultivation</td>
<td></td>
<td>31,844</td>
<td>27,194</td>
<td>28,116</td>
<td>27,068</td>
<td>26,953</td>
<td>26,910</td>
<td>26,910</td>
<td>26,900</td>
</tr>
<tr>
<td>3.1 Barren and unculturable land</td>
<td></td>
<td>1,225</td>
<td>1,156</td>
<td>1,106</td>
<td>961</td>
<td>951</td>
<td>940</td>
<td>940</td>
<td>940</td>
</tr>
<tr>
<td>3.2 Land put to non-Agricultural uses</td>
<td></td>
<td>30,619</td>
<td>26,038</td>
<td>27,010</td>
<td>26,107</td>
<td>26,002</td>
<td>25,970</td>
<td>25,970</td>
<td>25,960</td>
</tr>
<tr>
<td>4. Other uncultivated land excluding fallow land</td>
<td></td>
<td>10,175</td>
<td>9,154</td>
<td>9,035</td>
<td>8,081</td>
<td>8,256</td>
<td>8,144</td>
<td>8,105</td>
<td>8,055</td>
</tr>
<tr>
<td>4.1 Permanent pastures and other grazing land</td>
<td></td>
<td>1,671</td>
<td>1,187</td>
<td>1,123</td>
<td>1,467</td>
<td>1,467</td>
<td>1,425</td>
<td>1,405</td>
<td>1,370</td>
</tr>
<tr>
<td>4.2 Land under Misc. tree crops and groves (not included in net area sown)</td>
<td></td>
<td>7,064</td>
<td>6,567</td>
<td>6,593</td>
<td>5,753</td>
<td>5,938</td>
<td>5,938</td>
<td>5,945</td>
<td>5,945</td>
</tr>
<tr>
<td>4.3 Cultivable waste land</td>
<td></td>
<td>1,440</td>
<td>1,440</td>
<td>1,319</td>
<td>861</td>
<td>851</td>
<td>781</td>
<td>755</td>
<td>740</td>
</tr>
<tr>
<td>5. Fallow land</td>
<td></td>
<td>299</td>
<td>101</td>
<td>460</td>
<td>325</td>
<td>325</td>
<td>270</td>
<td>220</td>
<td>200</td>
</tr>
<tr>
<td>5.1 Fallow lands other than current fallows</td>
<td></td>
<td>101</td>
<td>101</td>
<td>151</td>
<td>125</td>
<td>125</td>
<td>95</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>5.2 Current fallows</td>
<td></td>
<td>198</td>
<td>-</td>
<td>309</td>
<td>200</td>
<td>200</td>
<td>175</td>
<td>150</td>
<td>140</td>
</tr>
<tr>
<td>6. Net area sown</td>
<td></td>
<td>1,46,693</td>
<td>1,54,031</td>
<td>1,53,772</td>
<td>1,54,966</td>
<td>1,54,981</td>
<td>1,55,136</td>
<td>1,55,232</td>
<td>1,55,287</td>
</tr>
<tr>
<td>7. Area sown more than once</td>
<td></td>
<td>5,765</td>
<td>6,235</td>
<td>6,752</td>
<td>9,813</td>
<td>10,387</td>
<td>10,478</td>
<td>10,555</td>
<td>10,575</td>
</tr>
<tr>
<td>8. Total cropped Area (6+7)</td>
<td></td>
<td>1,52,458</td>
<td>1,60,266</td>
<td>1,60,524</td>
<td>1,64,779</td>
<td>1,65,368</td>
<td>1,65,614</td>
<td>1,65,787</td>
<td>1,65,862</td>
</tr>
</tbody>
</table>

Source: Statistical Abstract Manipur 2007, Directorate of Economics & Statistics, Govt. of Manipur Page No.141 & 142
The main reason for increase in the net sown area is due to conversion of non-cultivable areas, fallow lands and other arable areas into cultivable one. However, the increase in the net sown area is still inadequate in order to meet the growing demand for food, pulses, vegetables etc. due to increase in the size of the population in the state in recent years. The main problems faced by the state in better utilization are highlighted as follows:

1. Massive Devastation & Degradation:

The most obtrusive problem of land utilization in the state is massive devastation and degradation of agricultural land. Vast areas have been depleted of the fertile soil due to the siltation and salinization. Increase of siltation and salinization mainly attributed to flood which is due to deforestation and vast removal of vegetation cover in the hills as well as valley areas. Deforestation and removal of vegetation cover leads to environmental and ecological imbalances which further lead to untimely monsoon i.e. (1) droughts and (2) floods. Since the agriculture of Manipur depends mainly on monsoon, there is no stability in the production of agricultural sector mainly rice and maize during the last 2/3 decades due to untimely monsoon.
Further the problem is being aggravated by soil erosion. Due to massive deforestation when heavy rain comes at the time of the monsoon in particular, water directly flows into rivers with eroded fertile soils which swallowed the beds and basins of the rivers thereby causing sudden floods. On the other hand, when there is untimely monsoon all the rivers are dried as there is no reserve water in the forest hill areas and drought occurs. Untimely monsoon due to massive deforestation and removal of vegetation cover becomes a normal phenomenon in the state in recent years. There is uncertainty in agricultural production as most of the cultivable lands are not accessible to irrigation facilities. As a result, the problem of food shortage becomes a normal phenomenon in the state. So far the survey records of the state forest department and data published by the Statistics Department are concerned, the forest area remains more or less constant. According to Economic Survey Report (2011), the forest area remains constant covering an area of 17,416 sq kms since 1995-96 till date. On the contrary, according to Forest Report 2009 published by the Forest Survey of India (FSI) Dehradun the area covered by forest in Manipur was

estimated to be 17,280 sq kms in 2009 as against 17,219 sq kms in 2003 and 17,086 sq kms in 2005-06.\textsuperscript{3} According to this report, the forest area fluctuates from time to time. Thus, there is lot of discrepancy between the two sources and no reconciliation can be made. However, one cannot deny the fact that there is massive deforestation in the state during the last 2/3 decades because of changing physical and natural structure of the state. As far as the state records are concerned, there is no any proof of deforestation which seems to be very illogical. The existence of deforestation can be easily justified by changes in physical feature of the state such as change in the degree of urbanization, industrialization and so on.

As per Forest Report 2009, there is erratic movement in the forest land area which shows the evidence of deforestation in certain period particularly during 2003-04 to 2005-06 (where forest area decrease from 17,219 sq kms in 2003-04 to 17,086 sq kms in 2005-06). In fact the data published by the forest department, Government of Manipur are not comparable with the data published by the other sources. In spite the discrepancies in the data, the existence of deforestation is quite obvious.

\textsuperscript{3}Forest Report 2009 published by the Forest Survey of India (FSI) Dehradun.
2. Urbanization:

Another main problem that threatens the better utilization of land in the state is rapid urbanization. Urbanization by involving a change in pattern of human settlement is the most important social transformation that has taken place in recent times. The level of urbanization in Manipur is on rise and it has to deal with problems of land intrusions on productive agricultural lands. This is because urban land uses persistently compete with rural land-uses on the basis of more favourable land rent in free market. Again, higher level of urbanization would automatically lead to greater proportion of area under non-agricultural uses.

The increase in the degree of urbanization in the state can be seen from table No.3.1. It is seen that the no. of towns in the state increased from one in 1961 to 33 in 2001. As the population of the state increase both the nos. of rural and urban dwellers increased from 7.12 lakhs to 17.18 lakhs and from .68 lakhs to 5.76 lakhs respectively during 1961 to 2001. Though both rural and urban population increased in absolute terms and also the size of rural population bigger than that of urban population, the percentage growth rate between the two is quite different. During 1961 to 2001
the rural population increased by about 15.0% i.e. from 7.12 lakhs in 1961 to 17.81 lakhs in 2001. On the contrary the urban population increased by about 74.7% during the same period. In short when the rural population expands by about 1.5 times the urban population expands by about 7.5 times. This has severe impact in the pattern of land utilization in the state, thereby the agriculture production too. It also means that there is a marked change in the occupational structure of the people in Manipur during the last 4/5 decades or so. The rural activities have been declining while that of non-agricultural activities has been increasing by diverting the use of agricultural lands to non-agricultural purposes.
TABLE NO.3.2

Urbanization in Manipur from 1961 to 2001

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of towns</th>
<th>Person in lakhs</th>
<th>Total</th>
<th>Percentage to total population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>Urban</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>1</td>
<td>3</td>
<td>.68</td>
<td>7.80</td>
</tr>
<tr>
<td>1971</td>
<td>8</td>
<td>9.31</td>
<td>1.41</td>
<td>10.72</td>
</tr>
<tr>
<td>1981</td>
<td>32</td>
<td>10.45</td>
<td>3.75</td>
<td>14.21</td>
</tr>
<tr>
<td>1991</td>
<td>31</td>
<td>13.31</td>
<td>5.05</td>
<td>18.36</td>
</tr>
<tr>
<td>2001</td>
<td>33</td>
<td>17.81</td>
<td>5.76</td>
<td>22.96</td>
</tr>
</tbody>
</table>

Source: Economic Survey Manipur 2010-11, Directorate of Economics & Statistics, Govt. of Manipur page no.1
3. Technological problems:

The most important element in crop production strategy in the post-green revolution period is improved agricultural technology. This technology is in the form of high yielding plant varieties, intensive cultivation, and greater use of fertilizers, increased irrigation and better techniques for ploughing, harvesting and plant protection. So far Manipur is concerned, during 2009-10; it was found that HYVs of paddy were mainly used in the valley areas of the state. Of the total area of 169.37 thousand hectares under paddy, the area under HYVs paddy was found to be 34.81 thousand hectares which was 20.55 percent of the total area under paddy in the state. Out of the 34.81 thousand hectares under HYVs 34.19 thousand hectare was found in the valley and the remaining 0.62 thousand hectare was found in the hills. In short about 80% of the total area under paddy in the state still remains under the traditional cultivation.4

The main reason for the failureness of introduction of HYV seeds extensively in the valley area of the state was mainly due to

---

non-availability of proper irrigation facilities. A peculiar feature of
the agricultural system in the state is almost entirely depends on
monsoon. The use of tube wells as a means of water supply for
agricultural purposes is almost conspicuous by its absence.
Whereas, in the state like Punjab, tube wells were extensively used
and green revolution were already brought in the early part of 70s.

Further the irrigation facilities provided by the major and
minor projects undertaken in the state during the last 4/5 decades
are almost negligible. Still most of the major irrigation projects
undertaken by the govt. remain uncompleted and non-functionable.

Out of the estimated area of 169.37 thousand hectares, 50.07
thousand hectares were found to be irrigated which accounted for
34.88 per cent to the area under paddy during 2009-10. It means
that 110.30 thousand hectares are lying idle for 7/8 months.\(^5\)

Another problem in the state is lack of adoption of modern
technology like use of tractors, harvesting machine etc. in large
scale. More than 70% of the farmers used the conventional
/traditional methods of cultivation. For instance, a tractor owner

\(^5\) Economic Survey Manipur 2010-11, Directorate of Economics and Statistics,
Government of Manipur, page no.72.
would have greater flexibility in its use and hence be able to better reap any advantages than would a tractor hire, especially where tractors are hired from other farmers (as it used in the Punjab). Normally the owner will hire out his machine only after fulfilling his own requirements. The farmer hiring a tractor would have to adjust the timings of his occupations, accordingly, thus losing some of the timeliness advantage on the top that, the uncertainty regarding the availability of the tractor as and when he requires it over the year, can affect his cropping decisions.

4. Financial Problems:

Another problem is that of lack of development of adequate financial institutions in the rural sector. Most of the nationalized banks are not interested to open their branches in the rural areas and also not much interested to provide loans and financial assistance to the agriculturists particularly the small peasants. In fact, the agricultural financial network is very poor in the state particularly in the hill areas. As seen from the table no. 3.2 the number of bank account holders belonging to the Agricultural and Allied Activities decreased from 10,291 in 1999 to 6,720 in 2004. The amount of loan advanced in this sector decreased from
Rs.2612.84 lakhs to Rs.2766 lakhs during the same period, the percentage share of this sector to the total sanctioned loan amount also decreased from 21.4% in 1999 to 17.3% whereas, the importance has been given more to services and others sector. Where the total loan sanctioned amount increased from Rs.3, 855.47 in 1999 to Rs.10, 049 lakhs in 2004. The percentage share also increased from 48% to 64.9% during the same period. This also means that the agricultural sector has been neglected considerably. The main source of finance in this sector is the village money lenders and Mahajans who charge exorbitant amount of rate of interest. This leads to slow pace of development of the agricultural sector.

The growth rate of loan advance in these sectors from 1999 to 2004 is workout to be 71.60% against 2.45 % in agriculture and allied activities, this means that agriculture and allied activities has been neglected and its importance being detorioted. Thus, the main source of agricultural finance is still constituted by the village money lenders and Mahajans, where the rate of interest is exorbitantly higher than that of rural banking finance.
This becomes one of the important factors for the failureness of introducing new agricultural development strategy. Success or failure of agriculture depends to a large extent on availability of finance.
TABLE NO. 3.3

Table showing the growth of financial Institution /Banks concerning with the financing of the Agricultural Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>1999</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture &amp; Allied Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) No. of Account</td>
<td>10,291</td>
<td>6,720</td>
</tr>
<tr>
<td>(b) Loan Advanced (in lakhs)</td>
<td>2,612.84(21.4%)</td>
<td>2,677 (17.3%)</td>
</tr>
<tr>
<td>2. Small Scale Industries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) No. of Account</td>
<td>11,967</td>
<td>4,967</td>
</tr>
<tr>
<td>(b) Loan Advanced (in lakhs)</td>
<td>3,719.5(30.5%)</td>
<td>2,766 (17.9%)</td>
</tr>
<tr>
<td>3. Services &amp; Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Total Account</td>
<td>15,634</td>
<td>10,652</td>
</tr>
<tr>
<td>(b) Loan Advanced (in lakhs)</td>
<td>5,855.47 (48%)</td>
<td>10,049 (64.9%)</td>
</tr>
<tr>
<td>(a) Total Account</td>
<td>37,892</td>
<td>23,339</td>
</tr>
<tr>
<td>(b) Total Advance (in lakhs of Rs.)</td>
<td>12,187.86(100%)</td>
<td>15,492(100%)</td>
</tr>
</tbody>
</table>

Source: Lead District Managers Office, UBI, Imphal
PROSPECTS:

The prospect of the better land utilization in the state is quite bright in view to the suitable conditions and rich heritage of the natural resources like soil minerals, water flora and fauna. By using these available resources prudently together with cultivation of different crops, the state will be able to feed the mounting population and the new industries to be set up in the state.

Since the size of land cannot be expanded effective measures should be taken up to raise agricultural productivity by changing pattern of land utilization and implementing new agricultural strategy in the state. As already mentioned, due to the urbanization and economic development, the size of the cultivable lands has become smaller and limited. Most of the paddy fields have been used for expansion of road and bridges, construction of school and college buildings, development of new markets, brick fields. Not only that they have been converted into homestead lands and for the establishment of towns etc. This process of development and urbanization cannot be checked, it is a normal process which takes place in every part of the world. On the other hand, we cannot
sacrifice every cultivable land for the urbanization. Food is also basic necessity without which human being cannot live. So now we are in dilemma to reconcile the conflicting situations.

We need to change an overhauling of the existing land use pattern. The most peculiar feature of the existing land ownership system in the state is that the valley dwellers, which are generally known as Meiteis, cannot acquire land in the hill areas. The hill areas are under the exclusive ownership of the tribal people and they do not allow the valley people to settle in the hill and to utilise the natural resources available there. This makes an imbalance in agricultural development in the state. Since cadastral surveys are not carried out in the hill areas, permanent settlement and cultivation is almost nil. Shifting cultivation is widely practiced in all hill areas of the state. This leads to massive destruction of forest areas, which are the main factors for degradation in the fertility of the soil. In the light of the above facts a new strategy of agricultural development in the state becomes the need of the hour.

It is to be maintained that the Green Revolution which is centred around the use of semi-dwarf high yielding varieties responsive to irrigation and chemical fertilizers have reached a
plateau and this scope for future increase in production appears to be very limited. In other words, the seed-water fertilizer technology has probably exhausted its potential and is now at a point of diminishing returns.

Some like Harish Damodaram do not subscribe to the view that agricultural production has reached a plateau. According to him green revolution still could be successful if the cropping pattern is changed and new varieties of seeds are introduced. To quote Mr Harish Damodaram: “Even with the current high yielding varieties it is possible for farmers in the Indo-Gangetic plain, which accounts for 18 million hectares out of 26 million hectares under wheat to produce an additional 25 million tones of wheat by adopting improved crop management practices and ensuring timely supply of inputs, attractive process on so on. A half-a-tonne increase in average per hectare rice yield can similarly generate an additional 20 million tones from the country’s million-odd hectares area planted under paddy.”

---

In this way there is a lot of prospect for improving the agricultural productivity both in the hill and valley areas. The new HYV Seeds are introducing in recent years. There are some varieties of HYV Seeds which can be used extensively and particularly in the valley areas provided that irrigation facilities and fertilizers are extensively made available. Further double and multiple cropping should be introduced in mono cropped areas so that the production can be raised.

Further a new land policy should be formulated so that the conversion or use of fertile cultivable lands for non-cultivable purposes should be checked. Fallow and waste lands should be developed to convert it into cultivable areas. If it is not suitable/possible they should be made available for use of other non-agricultural purposes.

The development of roads and other means of communication will further help to utilize land presently inaccessible to the mainland. Land capability classification and allocation to different uses may help land utilization in a way desirable by the society.
In view of the existing nature of communal ownership of land in the hills of Manipur, there is large scope of land classification. After the land classification, private ownership of land may be introduced so that the individual owners may engage necessary land development works and this may inspire them to stay and cultivate in one place to provide education to their children by living in the same place, to stand united in the political and social fields and also to obtain institutional credit.

In view of the suitable climatic conditions in the hills, the prospects of extension of plantation crops are the highest. Tea, coffee, rubber, black-pepper etc. can be grown easily. For adoption of cultivation of tea, rubber, coffee and other plantation crops, cash subsidy for maintenance of family during gestation period, housing subsidy and other helps, both tangible and intangible may be extended.

Manipur has a wide range of possibilities of horticultural and animal husbandry development. The state is suitable for growing a variety of horticultural crops such as pineapples, banana, papaya, oranges etc., but due to lack of processing and marketing facilities, their cultivation have remained unutilized.
J.N. Mahalanobis observes ‘To rationalize the system of marketing by reducing waste, by better handling, better packing, scientific storage and efficient transport’. The adoption of horticultural crops will eventually enhance the economic status of tribal farmers, particularly of small holdings, in addition to ensuring full employment among them around the year. In spite of sufficient pastor available, the animal husbandry is not developed. The livestock population is considerable but the quality is not unsatisfactory.

The forests of Manipur have vast scope for match industry; saw mills, paper and pulp industry, chip board and hard board plants etc. Forest is very important natural resources economically, biologically and scientifically. If it is properly exploited, they can have significant impact on economic reconstruction of the state. The cultivation of farm level may also be encouraged.

There is also vast potentiality of cultivating mushrooms. The naturally grown type of mushrooms are found in the state

---

abundantly particularly in the beginning of rainy season mainly in the hill areas. The climatic condition of the state is also suitable for cultivating hybrid and other artificially cultured types of mushrooms. The cultivation of the same can also generate an attractive income to the peasants.

Last but not the least, maximum efforts should be made to utilize the available cultivable land at the optimum level, by practicing double or multiple cropping. For effective double cropping or multiple cropping, suitable crop varieties for different seasons and locations must be identified. In addition to double cropping, due attention is also to be given for mixed cropping. Besides, other allied programmed such as minor irrigation, animal husbandry and dairying, sericulture, agricultural training and research must also be given proper attention. Here it is also to be highlighted that a major part of the irrigation potential is unexploited in the eastern region. Obviously, irrigation has a prominent role for enhancing the overall yields in this region. We first discuss the feasibility of expanding irrigation in the eastern region particularly Manipur.
According to Vaidyanathan (1987), finance would not seem to be a constraint for increase in surface irrigation facilities. Regarding these high rainfall states, this study observes that ‘flood protection is equally important and without it irrigation (particularly surface irrigation) may not be economical’. Many studies on eastern region have examined the reasons for the slow expansion in ground water facilities.

The basic factors seem to be the following:

a) The dominance of small size of holdings,

b) High level of fragmentation,

c) Low returns of irrigation relative to cost due to lack of drainage facilities and floods.

The consolidation of holdings and public investment on irrigation, flood control, and on provision of drainage facilities seem to be the policy prescriptions for increasing overall yields in the eastern region.

The future of the agriculture in the eastern region lies in the development of small farms. Commenting on the small farms of Japan, Taiwan and other East Asian countries, the Sen Committee report says that ‘a plot of 1 hectare in these countries provides
sufficient net income through intensive use of appropriate inputs and capital. These countries have successfully developed by conscious design the small farm economy supported by credit and appropriate services from public and private sector institutions.

**Main Findings:-**

The main findings of the present analysis on the problems and prospects of land utilization in the state can be summed up as follows:

1. Wide practice of shifting cultivation in the Hill areas of the state by deforestation and vast removal of vegetation leads to ecological imbalances, untimely monsoon, devastation and degradation of cultivable lands and soil erosion. Not only that it also leads to siltation and salinization of soil thereby rendering low agricultural productivity by reducing/degrading the fertility of soil.

2. The fast taking process of urbanization further aggravates the problem of land utilization in the state. Urbanization took place particularly in the valley areas of the state where a significant/substantial part of cultivable land were converted into urban/suburban areas by massive construction of school and colleges, roads and bridges, making into homesteads, developing
industrial estates and so on. Thus the size of cultivable land areas becomes smaller and smaller. Furthermore, the rapid growth of population and influx of immigrants from neighbouring states and countries particularly Bangladesh and Myanmar also gives a heavy pressure on the cultivable land.

3. Another important factor that influences the land use pattern in the state is the existing land ownership systems which are very peculiar in characteristics. In the present system the valley areas are covered under the cadastral surveys and permanent settlement whereas in the hill areas there is no permanent settlement and land tenure system is governed by the customary tribal laws under which non-tribal's are neither allowed to procure land nor to settle in the hill areas. All the land in the hill areas belong to the chief of the concerned area.

In the next chapter we are going to examine the cropping pattern and cropping intensity in the state. The main objective of our analysis will be the impact of changing cropping pattern and cropping intensity on the agricultural development in the state particularly the effect of implementation of new agricultural strategy.