CHAPTER –III
GENERAL LAND USE PATTERN

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CHAPTER – III
GENERAL LAND USE PATTERN

3.1 Introduction:

Land is fundamental aspect for human survival, because it provides food and with a number of raw materials which are used in the completion of mans requirements. But necessary as the land factor may be, man plays an important role in condition and transforming his physical environment Barlowe, R. (1963). Man uses within several frameworks i.e. physical, social and economic, which often operate together. The utility differs depending upon the soil, topography and climate. Thus the agricultural activities of man are controlled on the land surface. Land is study carries a more significance for the reason that land can gives clear ideas about intensively used. The concept of general land use is correlated to the use to which land is put in a certain reason at a given period of time. The term land use is practically self explanatory, meaning the real and particular use to which the land surface is put in terms of natural primary land use that is, land under woodland, grazing land etc. The general land use of any region is an impact of different factors. Land use is a result of combination of both natural origin and human influences which have been brought to bear unit in the past and of those which are still active in the present Vink, (1975). Spatial variations in land use are interrelated to physical atmosphere. Socio economic factors are also liable for determining the land use in the region.

The changing man and environment relationship plays an important role for defining the land use of the particular region. The objectives of the land use pattern are to use the available land which is restricted. The pattern of land use is composite and dynamic. The land use pattern is different in dissimilar regions. The current pattern of land use is a result of long continuous procedure of the whole range of environmental factors but modified by socio economic and historical elements Shafi, (1951). This chapter is dedicated to the study of spatial temporal analysis of general land use of south east part of Ahmednagar district. The general land use pattern has been classified as net sown area, area not available for cultivation, cultivable waste land, uncultivated land and area under
forest. The data obtained for the period of 1970-71 and 2010-11 from socio economic review and statistical abstract of Ahmednagar district, census handbook of Ahmednagar district. Data renewed in to the percentage to the total geographical area. The percentage is categorized in different group. The volume of change of these categories for forty years was computed and volume of change was given in appropriate figures and interpreted the text. The analysis gives the proper understanding of the general land use and pertinent aspects providing the base for further analysis.

3.2 Definition of General Land Use:

Land use is interesting and significance studying in its own right and therefore it is now desirable that it should be established as an independent, interdisciplinary subject. The launching in 1984 of a new international journal Land Use Policy, and its growing circulation may suggest this recent trend of thought Coleman, A. (1985). Land use is an important aspect of geographic studies particularly relevant to agricultural geography.

Land use studies assumed greater academic and practical significance especially after the luminous contributions by Baker, (1926) in United States of America and Bucks, (1937) in China. The concept of land use has been distinctive ‘the land as whole must be so used to satisfy as many possible of the needs and legitimate desires of the people in the nation as a whole.’ Stamp, (1962).

‘Land use is also related to conservation of land from one major use to another general use’ Nanavati, (1957). ‘Land use means surface utilization of all developed and vacant lands for a specific point at a given time and space’ Foreman, T.W. (1968). Land use is humanized from of earth surface synthesizing, physical, chemical, biological organization and procedure collectively with socio economic transformation and activities in space and time.

The monitoring of this composite system includes the analysis and diagnosis of changes in main land interface in a holistic manner at different levels. Land utilize modify may be examined with considering conversion of
forest to crop and range land, loss of productive land through different factors, renovation of marshland to agriculture and urban use, and exchange of other types of land to various human uses.

The average size of land holding has been reduced to just 1.55 hectares in 2001 from 1.68 hectares in 1985-86. It is fast declining as the population depending on agriculture is increasing causing infinite sub division of the land holding. This is a major disadvantage of Indian agriculture as a holding are becoming increasingly unviable for profitable cultivation Singh Jagdish (2003).

The land use study is a strategies role in the determination of man’s economic, social and cultural progress as evident from the economic history of different countries. Due to the increasing pressure of population on land and constantly growing demand of food and raw materials there is vital need to use every piece of land rationally. This calls for scientific, rational and economic planning for the use of land resources without disturbing ecological as well as socio economical balance of the area Noor Mohammad, (1980).

The land use study in its spatial context is important to understand the regionalization of the area of optimum land use, degraded areas etc. Thus the utilization of land for different purposes indicates a warm relationship between prevailing ecological conditions and man.

The concept of land use has been used in so many different ways that no generally accepted scheme of classification exists despite many years of the land use studies by geographer Kariel and Kariel, (1972).

In most of such schemes the activity on the land has been the major criteria for classifying land use. Moreover the problem as to how land resource are used and how much production comes from various major uses is remarkably complex being determined by several interconnected factors like the environmental, the socio economic and historical background of the land use Anderson,(1969). The demand of land changes due to changing needs of humanity. In Britain, the 1980 and in Japan the 1990’s have been designated as
the ‘Land Decade’, in order to instigate the promotion of land use research and education.

**3.3 Classification of General Land Use:**

Land utilization is a dynamic idea. So, it requires comprehensive land use survey, including all its important essentials and decisive socio-economic factors of land utilization Dziewonski, (1956). In order to visualize existing use and misuse. The planning should be what and how it should be done and also where shall be done Prakash Rao, (1956).

The utilization of land for different purposes indicates an intimate association between the prevailing geographical conditions of man. The competent use of land depends on the capacity of land, the capacity of man to operate the land and handle it in appropriate viewpoint. ‘The land use pattern indicates the spatio-temporal sequence of area under dissimilar uses. It also shows that net accessible land for agriculture, which is an important factor, since it is the base for planning of agriculture’ Arsud, (2000).

Land use studies endeavor at explaining the continuous interface between available land resources on the one hand and human requirements and efforts on the other hand. The competition between different types of uses is the result of insufficiency of land. Some land is better than other land for a particular use depending regularly on the physical distinctiveness of land to which its correctness for a particular use is interrelated.

Five most important categories of land use are renowned in the season and crop report for State of Maharashtra.

a) Area Under Forest

b) Land Not Available for Cultivation including

I) Barren and Uncultivable Land

II) Land put to Non Agricultural Uses

c) Other Pastures and Grazing Land including

I) Cultivable Waste Land
II) Permanent Pastures and Grazing Land

III) Land Under various Tree crops and Groves
d) Fallow Lands including
   I) Current Fallows
   II) Other Fallows
e) Cropped Area including
   I) Net Sown Area
   II) Area Sown More than Once
   III) Gross Cropped Area

In this study the following categorization of land utilization has been made in different groups, these are

1. Area Under Forest
2. Land Not Available for Cultivation
3. Cultivable Waste Land
4. Total Fallow Land
5. Net Sown Area

The tahasil wise general land use pattern and its change in the study period is presented in Figure No 3.1. The figures are computed for the years these are 1970-71 and 2010-11.

3.4 Temporal Changes in General Land Use Pattern: 1970-71 to 2010-11

The general land utilize of any region undergoes the changes in any particular period of time is called as a temporal change. The temporal changes in land use pattern of south east part of Ahmednagar district have studied for the period of four decade. The study period 1970-71 to 2010-11 find out the trends of changes in general land use and to discover the reasons of the changes. The main
The objective of this chapter is to emphasize the spatial-temporal changes in general land use categories are based on census classification.

The temporal changes in general land use for south east part of Ahmednagar district is shows in Table No. 3.1 and Figure 3.1

Table No. 3.1-General Land Use Pattern

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Categories</th>
<th>1970-71</th>
<th>2010-11</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Area Under Forest</td>
<td>90931</td>
<td>68452</td>
<td>-2.34</td>
</tr>
<tr>
<td>2</td>
<td>Land Not Available for Cultivation</td>
<td>101176</td>
<td>61672</td>
<td>-4.09</td>
</tr>
<tr>
<td>3</td>
<td>Cultivable Waste Land</td>
<td>32390</td>
<td>55317</td>
<td>2.37</td>
</tr>
<tr>
<td>4</td>
<td>Total Fallow Land</td>
<td>65357</td>
<td>100225</td>
<td>3.62</td>
</tr>
<tr>
<td>5</td>
<td>Net Sown Area</td>
<td>673136</td>
<td>677324</td>
<td>0.49</td>
</tr>
<tr>
<td>6</td>
<td>Total Geographical Area</td>
<td>962990</td>
<td>962990</td>
<td>----</td>
</tr>
</tbody>
</table>


Fig. No. 3.1
### Figure No 3.1

#### 3.4.1 Area Under Forest:

Forest land includes all land classified as a forest under any legal enactment dealing with forests or administered as forest, whether state owned or private, whether wooded or simply maintained as a woodland. The Table No.3.2 clearly indicates that there is a continuous decrease in the forest land.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahasil</th>
<th>1970-71 Area in</th>
<th>2010-11 Area in</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shevgaon</td>
<td>2689</td>
<td>2.47</td>
<td>1050</td>
</tr>
<tr>
<td>2</td>
<td>Pathardi</td>
<td>11796</td>
<td>9.83</td>
<td>6413</td>
</tr>
<tr>
<td>3</td>
<td>Nagar</td>
<td>13165</td>
<td>8.76</td>
<td>13165</td>
</tr>
<tr>
<td>4</td>
<td>Parner</td>
<td>25278</td>
<td>13.53</td>
<td>18792</td>
</tr>
<tr>
<td>5</td>
<td>Shrigonda</td>
<td>15174</td>
<td>9.46</td>
<td>15210</td>
</tr>
<tr>
<td>6</td>
<td>Karjat</td>
<td>18837</td>
<td>12.63</td>
<td>13068</td>
</tr>
<tr>
<td>7</td>
<td>Jamkhed</td>
<td>3992</td>
<td>4.56</td>
<td>754</td>
</tr>
<tr>
<td>8</td>
<td>Total Area</td>
<td>90931</td>
<td>9.44</td>
<td>68452</td>
</tr>
</tbody>
</table>

Source: District Statistical Abstract, Ahmednagar-1970-71
Land Record Ahmednagar District-2010-11
The area under forest was 90931 hectares during 1970-71. It was 9.4 percent of the total geographical area of the study region. In 2010-11 the area under forest was 68452 hectares and it was 7.10 percent of the study area. The area under forest in forty years from 1970-71 to 2010-11 has decreased with 2.34 percent in a results rapidly improved use of land under other categories. The negative change has been observed in area under forests varies in tahasil wise i.e. -1.5 percent in Shevgaon tahasil,-4.48 percent in Pathardi,-3.46 percent in Parner, -3.87 percent in Karjat and -3.70 percent in Jamkhed tahasil of study area. Pathardi tahasil of study area which is decreased maximum area under forest in study region. The Shrigonda tahasil which has lightly increased area under forest (0.02 percent) No change has observed in forest cover in Nagar tahasil.

3.4.2 Area Not Available for Cultivation:

This wide category comprises of a number of different types of land which are not available for cultivation under the exiting circumstances. This type of land use represents the land engaged by road and railway transportation, industrilization, play grounds, grave land and settlement etc. Land not available for cultivation has indicated the variation in the study period. The land under these categories in 1970-71 was 101176 hectares which was 10.51 percent of the total geographical region. After four decade in 2010-11 it was a recorded as 61672 hectare which is 6.42 percent in the study period from 1970-71 to 2010-11. It was declined by 4.09 percent.

The negative change has been observed in area not available for cultivation varies in tahasil to tahasil i.e. -2.68 percent in Shevgaon taluka,-7.38 percent in Nagar,-2.31 percent in Parner, -9.45 percent in the Shrigonda,-2.52 percent in the Karjat and -6.92 percent in the Jamkhed tahasil of study area. Shrigonda tahasil of study area which is decreased maximum area not available for cultivation in study region. The Pathardi tahasil which is lightly increased area not available for cultivation (0.25percent).
Table No. 3.3 Temporal Changes in Area Not Available for Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahasil</th>
<th>1970-71</th>
<th>2010-11</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in (Ha)</td>
<td>Area in %</td>
<td>Area in (Ha)</td>
<td>Area in %</td>
</tr>
<tr>
<td>1</td>
<td>Shevgaon</td>
<td>10072</td>
<td>9.26</td>
<td>7150</td>
</tr>
<tr>
<td>2</td>
<td>Pathardi</td>
<td>10546</td>
<td>8.79</td>
<td>10843</td>
</tr>
<tr>
<td>3</td>
<td>Nagar</td>
<td>15955</td>
<td>10.62</td>
<td>4870</td>
</tr>
<tr>
<td>4</td>
<td>Parner</td>
<td>23512</td>
<td>12.59</td>
<td>19210</td>
</tr>
<tr>
<td>5</td>
<td>Shrigonda</td>
<td>16353</td>
<td>10.44</td>
<td>1585</td>
</tr>
<tr>
<td>6</td>
<td>Karjat</td>
<td>20075</td>
<td>13.46</td>
<td>16311</td>
</tr>
<tr>
<td>7</td>
<td>Jamkhed</td>
<td>4263</td>
<td>8.86</td>
<td>1703</td>
</tr>
<tr>
<td>8</td>
<td>Total Geographical Area</td>
<td>101176</td>
<td>10.51</td>
<td>61672</td>
</tr>
</tbody>
</table>

Source- District Statistical Abstract, Ahmednagar-1970-71, Land Record Ahmednagar District-2010-11

Figure No-3.2
Cultivable waste land is also well-known as other cultivable land. These lands are certainly cultivable but at present lying of waste on account of number of causes. They can be counted underneath following heads intrusion by floods and corrosion, poor drainage, scarcity of water and distance from settlements etc. Land under cultivable waste in study region has 32390 hectares of the total geographical area of study region. It was 3.37 percent area of study area and 55317 hectares i.e. 5.74 percent in 2010-11. It was increased by 1.37 percent. The positive change has been observed in area in cultivable waste varies in tahasil to tahsil these are 0.98 percent in Shevgaon taluka 1.28 percent in Pathardi, 4.17 percent in Nagar, 3.34 percent in Parner, 1.73 percent in the Shrigonda, 6.35 percent in the Karjat tahasil of study area. Karjat tahasil of study area, which is increased maximum area in cultivable waste in study region followed by Nagar.

Figure No-3.3

3.4.3 Area Under Cultivable Waste Land:

The changes in land not available for cultivation are as follows:

- Pathardi: 8.9 hectares (1970-71), 8.5 hectares (2010-11)
- Shrigonda: 10.8 hectares (1970-71), 8.5 hectares (2010-11)
- Karjat: 12.3 hectares (1970-71), 13.6 hectares (2010-11)

The positive change has been observed in area in cultivable waste varies in tahasil to tahsil these are 0.98 percent in Shevgaon taluka 1.28 percent in Pathardi, 4.17 percent in Nagar, 3.34 percent in Parner, 1.73 percent in the Shrigonda, 6.35 percent in the Karjat tahasil of study area. Karjat tahasil of study area, which is increased maximum area in cultivable waste in study region followed by Nagar.
and Parner tahasils respectively. The negative change is observed in Jamkhed tahasil, which is remarkable change i.e. -5.06 percent.

Table No. 3.4 Temporal Changes in Cultivable Waste Land

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahasil</th>
<th>1970-71</th>
<th>2010-11</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in (Ha)</td>
<td>Area in %</td>
<td>Area in (Ha)</td>
</tr>
<tr>
<td>1</td>
<td>Shevgaon</td>
<td>1369</td>
<td>1.27</td>
<td>2447</td>
</tr>
<tr>
<td>2</td>
<td>Pathardi</td>
<td>2621</td>
<td>2.19</td>
<td>4162</td>
</tr>
<tr>
<td>3</td>
<td>Nagar</td>
<td>3278</td>
<td>2.18</td>
<td>9539</td>
</tr>
<tr>
<td>4</td>
<td>Parner</td>
<td>4682</td>
<td>2.51</td>
<td>10931</td>
</tr>
<tr>
<td>5</td>
<td>Shrigonda</td>
<td>6293</td>
<td>3.92</td>
<td>9067</td>
</tr>
<tr>
<td>6</td>
<td>Karjat</td>
<td>6692</td>
<td>4.48</td>
<td>16151</td>
</tr>
<tr>
<td>7</td>
<td>Jamkhed</td>
<td>7455</td>
<td>8.51</td>
<td>3020</td>
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<tr>
<td>8</td>
<td>Total Geographical Area</td>
<td>32390</td>
<td>3.37</td>
<td>55317</td>
</tr>
</tbody>
</table>

Source-District Statistical Abstract, Ahmednagar-1970-71, District Land Record, Ahmednagar-2010-11

3.4.4 Total Fallow Land:

The fallow land subdivided into three types.

(a) Permanent fallow- means the land reserved uncultivated for the period of five years or extra period. It consist the land under permanent grazing land and land under various trees and bushes

b) Current fallow land means the land which were not sown at the occasion of crop reporting but were sown one or two years of left follow either in one season or one full year to improve the quality of the land.

c) Other fallow land means the land kept uncultivated two to five years due to some problems.

Initially in 1970-71 the fallow land in South- East part of Ahmednagar district was 65357 hectares accounting 6.78 percent and it was reached up to
100225 hectares accounting 10.40 percent of the total geographical vicinity. Throughout the study period from 1970-71 to 2010-11 the fallow land has increased by 3.62 percent of the total geographical area.

The negative change has been observed in area in fallow land varies in tahasilwise i.e.-16.30 percent in Shevgaon tahasil, -2.07 percent in Pathardi and,-7.58 percent in Nagar tahasil, but this change is good indicator because the more land is come under different categories.

In remaining tahasil the area under fallow land has been increased by 3.96 percent in the Parner, 12.91 percent in the Shrigonda, 7.04 percent in the Karjat and 31.82 percent in the Jamkhed tahasil of study area. Jamkhed tahasil of study area which has increased maximum area in fallow land followed by Shrigonda and Karjat tahasils respectively. This change is indicating that the area under fallow land is increasing day by day.

Table No. 3.5 Temporal Changes in Fallow Land

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Tahasil</th>
<th>1970-71</th>
<th>2010-11</th>
<th>Change in%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in(Ha)</td>
<td>%</td>
<td>Area in(Ha)</td>
</tr>
<tr>
<td>1</td>
<td>Shevgaon</td>
<td>28913</td>
<td>26.60</td>
<td>11144</td>
</tr>
<tr>
<td>2</td>
<td>Pathardi</td>
<td>8439</td>
<td>7.04</td>
<td>5961</td>
</tr>
<tr>
<td>3</td>
<td>Nagar</td>
<td>16700</td>
<td>11.11</td>
<td>5303</td>
</tr>
<tr>
<td>4</td>
<td>Parner</td>
<td>3644</td>
<td>1.95</td>
<td>11044</td>
</tr>
<tr>
<td>5</td>
<td>Shrigonda</td>
<td>2978</td>
<td>1.86</td>
<td>23704</td>
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<td>6</td>
<td>Karjat</td>
<td>4199</td>
<td>2.82</td>
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<td>7</td>
<td>Jamkhed</td>
<td>484</td>
<td>0.55</td>
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<tr>
<td>8</td>
<td>Total Geographical Area</td>
<td>65357</td>
<td>6.78</td>
<td>100225</td>
</tr>
</tbody>
</table>

Figure No 3.4

Changes in Cultivable Waste Land

Shevgaon Pathardi Nagar Parner Shrigonda Karjat Jamkhed

Area in percentage

Changes in Fallow Land

Shevgaon Pathardi Nagar Parner Shrigonda Karjat Jamkhed

Area in percentage

Figure No-3.5
3.4.5 Net Sown Area:

The net sown area is the land which is being actually tilled for raising the crops. The temporal changes in net sown area from 1970-71 to 2010-11 is shown in fig no 3.6. In 1970-71 the net sown area was 673136 hectares accounting 69.90 percent of the total geographical area. After forty years, in 2010-11 it was recorded as 677324 hectares which was 70.39 percent. In the study period from 1970-71 to 2010-11, it was increased by 0.49 percent.

The positive change has been observed in net sown area varies in tahasilwise i.e 19.60 percent in the Shevgaon tahasil, 5.02 percent in the Pathardi and 10.79 percent in the Nagar tahasil. The negative change is observed under net sown area these are -1.53 percent in the Parner, -5.21 percent in the Shrigonda, -7.00 percent in the Karjat and -20.14 percent in the Jamkhed tahasil respectively. The area under net sown is decreased rapidly in the Jamkhed tahasil fallowed by Karjat, Shrigonda and Parner tahasil due to some negative condition for the agriculture. It is bad signal for agriculture in future.

Table No. 3.6 Temporal Changes in Net Sown Area

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Tahasil</th>
<th>1970-71</th>
<th>2010-11</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in(Ha)</td>
<td>Area in %</td>
<td>Area in(Ha)</td>
<td>Area in %</td>
</tr>
<tr>
<td>1</td>
<td>Shevgaon</td>
<td>65670</td>
<td>60.40</td>
<td>86922</td>
</tr>
<tr>
<td>2</td>
<td>Pathardi</td>
<td>86545</td>
<td>72.15</td>
<td>92568</td>
</tr>
<tr>
<td>3</td>
<td>Nagar</td>
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<td>67.33</td>
<td>117395</td>
</tr>
<tr>
<td>4</td>
<td>Parner</td>
<td>129981</td>
<td>69.42</td>
<td>126820</td>
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<td>5</td>
<td>Shrigonda</td>
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<td>110915</td>
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<tr>
<td>6</td>
<td>Karjat</td>
<td>99354</td>
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<td>7</td>
<td>Jamkhed</td>
<td>71429</td>
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</tr>
<tr>
<td>8</td>
<td>Total Geographical Area</td>
<td>673136</td>
<td>69.90</td>
<td>677324</td>
</tr>
</tbody>
</table>

Source: District Statistical Abstract, Ahmednagar-1970-71
District Land Record-Ahmednagar-2010-11
3.5 Spatial Changes of General Land Use: 1970-71

The spatial changes in general land use pattern in South-East part of Ahmednagar district is the consequence of physiographic and socio-economic factors presented in the region. The spatial changes in general land use categories has studied which are as follows:

a) Area Under Forest.

b) Land Not Available for Cultivation

c) Cultivable Waste Land

d) Total Fallow Land

e) Net Sown Area.

3.5.1 Area Under Forest:

The area under forest in south east part of Ahmednagar district was 90931 hectares in 1970-71. This was 9.4 percent of the total geographical area of the study region. This area under forest was less than the average for Maharashtra and India as a whole are 17.30 percent and 21.30 percent correspondingly. The Table No.3.1 and Map No 3.1 shows the distribution of the forest land in the study region. The highest area under forest has observed in Parner tahasil with
27.80 percent and lowest area has observed in Shevgaon tahasil with 2.96 percent.

High percent area has recorded in Parner (27.80 percent), Karjet (20.71 percent) and Shrigonda (16.79 percent) tahasils.

Moderate percent area has observed in Nagar (14.47 percent) and Pathardi (12.97 percent) tahasils ranging between 10 to 20 percent area.

Low area under forest has found in Jamkhed (4.40 percent) and Shevgaon (2.96 percent) tahasils between 1 to 10 percent areas. (Map No-3.1)
3.5.2 Land Not Available for Cultivation:

It is clear from Table No.3.1 and Map No.3.2 that the total area under land not available for cultivation in south east part of Ahmednagar district was 101176 hectares in 1970-71 and it was 10.51 percent of the total geographical area of study region. The highest percent of land not available for cultivation was observed in Parner tahsil, it was 23.23 percent. The lowest percent area has recorded in Jamkhed tahasil with 4.21 percent. High percent area under land not available for cultivation has observed in Parner (23.23 percent), Karjat (19.65 percent), Shrigonda (16.56 percent) and Nagar (15.77 percent). Moderate percent area has observed in one tahasil namely Pathardi (10.42 percent). Low percent area under not available for cultivation has observed in two tahasils namely, Shevgaon (9.46 percent) and Jamkhed (4.21 percent) (Map No-3.2).

3.5.3 Cultivable Waste Land:

The area under cultivable waste land in south east part of Ahmednagar district was 32390 hectares in 1970-71 which is 3.37 percent of the total geographical area of study region. The highest percentage area under cultivable waste land is found in Jamkhed tahasil with 23.02 percent and lowest area has found in Shevgaon tahasil with 4.23 percent. Table No. 3.1 and Map No. 3.3 shows the area under cultivable waste land in study region. High percentage area under cultivable waste land is found in Jamkhed and Karjat tahasils due to insufficiency of irrigation facilities. High percentage area has observed in Jamkhed and Karjat tahasils these are 23.02 percent and 20.66 percent correspondingly. Moderate area under these categories has observed in Shrigonda, Parner and Nagar tahasils i.e. 19.42 percent, 14.46 percent, and 10.12 percent correspondingly. Low percent area has found in two tahasils namely Pathardi and Shevgaon i.e. 8.09 percent and 4.23 percent correspondingly (Map No.-3.3).
3.5.4 Total Fallow Land:

The fallow land includes permanent uncultivated and other fallow land. The permanent fallow land is the land held in reserve uncropped for the period more than five years. Current fallow land which includes lands those were not sown at the time of crop reporting but were sown one or two years. Table No.3.1 and Map No.3.4 shows the total fallow land in south east part of Ahmednagar district of study area. The total area under fallow land was 65357 hectares which is 6.78 percent of the total geographical area of study region. The highest uncultivated land has observed in Shevgaon tahasil occupied 44.24 percent area and lowest area was observed 0.74 percent in Jamkhed tahasil. High percent area has observed in Shevgaon (44.24 percent) and Nagar (25.55 percent) tahasils. Moderate area is under fallow land is observed in Pathardi tahasil. Fallow land was 12.91 percent. Less area under fallow land is found in Karjat, Parner, Shrigonda and Jamkhed tahasils i.e. 6.42 percent, 5.48 percent, 4.56 percent and 0.74 percent correspondingly. (Map No.-3.4)

3.5.5 Net Sown Area:

The net sown area is refers the concrete area in the south east part of Ahmednagar district of study region covers 673136 hectares land. It was 69.9 percent of the total geographical area of the study region. Table No. 3.1 and Map No.3.5 indicate the net sown area in the study region. The highest percentage under net sown area has recorded in the study area in Shrigonda tahasil. It is 19.26 percent. The lowest percentage area under net sown area was recorded in Shevgaon tahasil covers 9.76 percent area. The high percentage of net sown area has recorded in Parner (19.26 percent), Shrigonda (17.72 percent ) and Nagar (15.05 percent) area. Moderate percentage of net sown area observed in three tahasils specifically karjat,Pathardi and Jamkhed, i.e. 14.75 percent, 12.86 percent and 10.61 percent respectively. Low area under net sown area observed in Shevgaon tahasil and it was only 9.76 percent. (Map No.-3.5)
3.6 Spatial Changes of General Land Use: 2010-11

3.6.1 Area Under Forest:

The area under forest in south east part of Ahmednagar district was 68452 hectares in 2010-11, which was 7.10 percent of the total geographical area. This area under forest was not as much of the average for Maharashtra and India as a whole are 17.30 percent and 21.30 percent correspondingly. Table No. 3.1 and Map No. 3.6 shows the distribution of the forest land in the study region. The highest area under forest has observed in Parner tahasil with 27.50 percent and lowest area has observed in Jamkhed tahasil with 1.10 percent. High percent area has recorded in Parner (27.50 percent) and Shrigonda (22.20 percent) tahasils. Moderate percent area has observed in Karjat tahasils i.e 10.20 percent area. Low area under forest has found Pathardi, Shevgaon and Jamkhed tahasils between 1 to 10 percent areas. (Map No.-3.6)

3.6.2 Land Not Available for Cultivation:

This category of land comprises that lands which is held in reserve in to non agricultural uses. It also includes land rock coverage, little hillocks and mountain ranges. It is clear from the Table No.3.1 and Map No. 3.7 that the uncultivable land was 61672 hectares in 2010-11 and it was 6.42 percent of the total geographical area of study region. The highest percent of land not available for cultivation has observed in Parner tahsil (31.20 percent). The lowest percent area has recorded in Jamkhed tahasil with 2.76 percent. High percent area under land not available for cultivation was observed in Parner (31.20 percent), and Karjat (26.50 percent). Moderate percent area has observed in two tahasils namely, Shevgaon and Pathardi i.e. 11.16 percent and 17.60 percent respectively. Low percent area land not available for cultivation was recorded in three tahasils namely Nagar Jamkhed and Shrigonda i.e. 7.90 percent, 2.76 percent and 2.57 percent respectively. (Map No.-3.7)
Map No.-3.7

Area Not Available For Cultivation (2010-11)

Legend

<table>
<thead>
<tr>
<th>Area in %</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 10.00</td>
<td>L</td>
</tr>
<tr>
<td>10.01 - 20.00</td>
<td>Mod</td>
</tr>
<tr>
<td>&gt; 20.01</td>
<td>H</td>
</tr>
</tbody>
</table>

Map No.-3.7
3.6.3 Cultivable Waste Land:

The land under this category is the waste land through it can be used for agriculture and cultivated vicinity. These types of land comprise all lands available for cultivation weather not taken up for cultivation once but not cultivated during preceding five years or more in succession. These lands may be uncultivated or occasionally may be covered by scrubs, bamboos or greenery. Table No. 3.1 and Map No. 3.8 shows the cultivable waste land in study area. The total geographical area under cultivable waste land in south east part of Ahmednagar district was 55317 hectares in 2010-11, which is 5.74 percent of the total geographical area of study region. The highest percentage area under cultivable waste land is found in Karjat tahasil with 29.20 percent and lowest area has found in Shevgaon tahasil with 4.42 percent. High percentage area under cultivable waste land is found in Karjat tahasil with 29.20 percent area. Moderate area under these categories has observed in three tahasil namely Parner, Nagar and Shrigonda. i.e. 19.80 percent, 17.20 percent and 16.40 percent respectively. Low percentage area has found in three Pathardi, Jamkhed and Shevgaon tahasils i.e. 7.52 percent 5.46 percent and 4.42 percent respectively. (Map No.-3.8)

3.6.4 Total Fallow Land:

Fallow land is the land not used for cropping at the time of reporting. Fallow land further can be used for the cultivation. Table No.3.1 and Map No.3.9 display the total fallow land in south east part of Ahmednagar district of study area. The total area under fallow land was 100225 hectares which is 10.40 percent of the total geographical area of study region during the period of 2010-11. The highest fallow land has found in Jamkhed tahasil occupied 28.30 percent area and lowest area was found 5.95 percent in Nagar tahasil. High percent area has observed in Jamkhed (28.30 percent) and Shrigonda (23.65 percent) tahasils. Moderate area is under fallow land is observed in three tahasil namely Karjat Shevgaon and Parner It is 14.67 percent, 11.12 percent and 11.02 percent respectively. Low area under fallow land is observed in two tahasil tahasils namely Pathardi and Nagar i.e. 5.95 percent, and 5.29 percent respectively. (Map No.-3.9)
Fallow Land (2010-11)

Legend

Area in %

L  
<= 10.00

Mod  
10.01 - 20.00

H  
>= 20.01

Map No.-3.9
3.6.5 Net Sown Area:

The net sown area is the land which is being really cultivated for raising the crops. The net sown area is refers the actual region in the south and east part of Ahmednagar district of study region covers 677326 hectares land occupying 70.39 percent of the total geographical area of the study region.

Table No. 3.1 and Map No.3.10 shows the net sown area in the study region for the period of 2010-11. The highest percentage under net sown area has recorded in the study area in Parner tahasil. It is 18.72 percent. The lowest percentage area under net sown area was recorded in Jamkhed tahasil covers 7.94 percent.

The high percentage of net sown area has recorded in Parner (18.72 percent), Nagar (17.33 percent) and Shrigonda (16.38 percent) area.

Moderate percentage of net sown area observed in three tahasils namely Pathardi, Karjat and Shevgaon these are13.43 percent, 13.13 percent and 12.83 percent correspondingly. Low area under net sown area found in Jamkhed tahasil and it was only 7.94 percent. (Map No.-3.10)
Net Sown Area (2010-11)

Legend

Area in %

L $<= 10.00$

Mod $10.01 - 15.00$

H $>= 15.01$

Map No.-3.10
3.7 Resume

The total geographical area of the south east part of Ahmednagar district is 962990 hectares. In the study region the utilization of land was classified into five categories. i.e. Area under forest, land not available for cultivation, Cultivable waste land, total fallow land, net sown area. Table and figure number 3.2 to 3.6 shows that the changes in land use pattern in the study region during the period of 1970-71 to 2010-11. In the study region net sown area is the most important type of land use except the other entire land use category. Proportion of such land is higher in both years i.e. 69.90 percent in 1970-71 and 70.39 percent in 2010-11. It is observed in increased lightly by 0.49 percent.

A noticeable decrease is indicated in other categories i.e. area under forest 2.34 percent, land not available for cultivation 4.09 percent. Increase is observed in the categories of cultivable waste land and total fallow land which is 2.37 percent and 3.62 percent respectively to the area of the study region.
References:


18. Ahmednagar Land Record. Ahmednagar. 2010-11