CHAPTER - II
PHYSICAL PROFILE OF THE STUDY REGION

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CHAPTER - II
PHYSICAL PROFILE OF THE STUDY REGION

2.1 Introduction:

In previous chapter we saw about the introduction, nature of agricultural geography, scope and significance of agricultural geography, the place of agricultural in national economy, agricultural development in Jalgaon district, choice of region and topic, aims and objectives of investigation, database and methodology, hypothesis, importance of dam, irrigation and water resources and review of literature in short.

It is very necessary to explain here in the beginning that Agricultural geography is an important branch of Geography. In the first chapter researcher attempts to prove the importance of Geography. Agricultural Geography can be considered as a science in view of its techniques of analysis, method of interpretation, and it’s approaches to the investigation of agriculture and agricultural activities also in the first chapter meaning of agriculture, agricultural geography, place of agriculture in national economy, it’s development in India and Maharashtra, choice of the study region aims and objectives of the present study, database, methodology, review of literature and chapter scheme, these points are discussed.

The second chapter is mainly related with location and boundaries, historical background of the study region, Physiography, geology, drainage system, climate, soil types and natural vegetation of the study region.
2.2 Location & boundaries:

**Map No.2.1**

Location of Jamner Tahsil

The study region forms the north western part of Jammer tahsil having distinct physical setting and socio-economic background. The study region lies between the northern belt of piedmont and the Main Ajanta highland in the south and Waghur River in the north.
The region lies between $20^\circ 10$ north and $21^\circ 25$ north latitudes and $75^\circ 15$ east to $75^\circ 35$ east longitudes. The total area occupied by the tahsil is 1082.90 sq. Km. In spite of the Government’s efforts, this part of the population still has remained backward in respect from the point of view of overall development. Hence, it becomes important to understand the physical factors such as physiographic, geology, climate, natural vegetation, drainage system, nature of soils etc. The components of natural environment such as land, water, flora and fauna make certain places more suitable for human habitation. Hence, it becomes important to understand the natural factors having their effects on the human beings. The variable socio-cultural and economic background has its effects on the human life-style which varies from circle to circle and time to time.

Jamner is a town and one of Tahsil in the Jalgaon subdivision of Jalgaon District in Nashik Division of Khandesh Region of Maharashtra state in India. Jamner is famous for cotton, banana, and corn crops. Its main markets are Jamner, Neri, Pahur, Shendurni and Fattepur.

Jamner is 37 km away from Jalgaon. It is also 29 km away from the world famous Ajanta and 130 km from Ellora caves. Mr. Paras Lalwani is the president of Jamner municipal Council, Jamner is famous for its Educational institutions. It is located on the Aurangabad Burhanpur Highway. The NHAI and Maharashtra Govt. proposed a new expressway Aurangabad Indore - Ajanta Expressway which passes through Jamner. A Narrow gauge railway line connects pachora to Jamner. Tourist destination in and around Jamner include the Ajanta caves (35km), Ramvan (4km), The Durga temple (8km) and a hill which is home to a famous Shiva temple.
Map no.2.1 shows the location of Jamner tahsil

The Nearest airport is Jalgaon and railway stations are Jamner, Bodwad, Pachora, Jalgaon, and Bhusawal JN.<sup>4</sup>

The average rainfall of Jalgaon District is 702.4 but the average rainfall of Jamner Taluka is 763.40.

**Boundaries:**

Jamner is a Tahsil place having lot of Taluka as well as district boundaries and forest area also.<sup>5</sup> At east side of Jamner their is Buldhana district and West Jalgaon and North Aurangabad District. There are Bodwad, Bhusawal, Jalgaon, Soyagaon, and Pachora Talukas.

Wetland projects are many for the progress in the field of agricultural e.g. sub project, Devhari Yojana, Shahapur small dam, Wakadi, Gondkhel-2, Hivarkheda, Sunasgaon, Shendurni, Kang, Kamanitanda and Waghur project. In short due to this entire short and medium project<sup>6</sup>. It will help to develop the field of agriculture. There are 158 villages in Jamner Tahsil.
Map No.2.2

Boundaries of Jamner Tahsil

Map No.2.2
Shows the various villages and their boundaries. There are eight circles in Jamner Tahsil So; map no. 2.2 shows the boundaries of village and also Tahsil Boundaries.
Map no. 2.3

Shows the administrative circles in Jamner Tahsil. It will help us to classify the information of various data circle wise. There are eight circles namely Jamner, Neri, Fattepur, Wakdi, Tondapur, Pahur, Maldabhadi and
Shendurni with the help of map no. 2.3 we understand the area of all circles and distance.

There are main three rivers run in the studyregion in Jamner Tahsil. There are (1) Waghur river (2) Kang river (3) Sur river. These three rivers cover the study area and created drainage system of this region all three rivers originated in the Ajanta mountain ranges run from south to north. All three rivers Joint to each other at the site of Waghur dam area. Actually the dam reservoir collects the water from all three rivers. All three rivers are the tributaries of big river Tapi so this area also a part of Tapi basin.

**Soil:-**

It is the natural dynamics body made up from organic substances which Facilitates the requisite factors for growth of plants. It is the natural gift given by the nature in widen plants are grown and supplied food for man and all animal beings different type of soil found in the Jamner Taluka.

1) **Black cotton soil :-**

This soil found in the plain area mostly in flood plains of waghur, sur and kang. It is also called fertile black soil. It is very precious for various crops and also for various reasons.

2) **Medium Black soil :-**

Medium black soil is found in the plain area and nearer to hilly area Jamner Taluka Fields are in middle category of land type so, lot of farms are include in the medium black soil. If we compare between these two types then we guess that second is better for farmers than first one because it gives lot of benefits’ in minimum expense.
3) **Stony/ Rocky/ Red soil:-**

This type of soil is in lot of extent in Jamner Taluka. The color of this soil is red-brown soil level in the ground is very less strong’s stony surface is found in the region.

Jamner Tahsil comes under the Jalgaon District having total area of 1,36,040 hectare, fertile land under cultivation is 1,05,087 hectare all the land of Jamner Tahsil comes under Tapi valley Waghur river is the main river of Jamner and sur and kang rivers are the tributary of this Waghur. The rainfall of Jamner is 750 cm to 800 cm. on an average.

Under the Tapi Irrigation development corporation Formed by the Govt. of Maharashtra following wetland projects are undertaken.

2.3 **Historical background:**

Jalgaon District is one of the most famous districts in Maharashtra because of Banana and Gold. Jamner is the major Taluka or Tahsil in Jalgaon district Jamner is also famous for cotton, Banana and oranges, lemon or sweet lemon. Its main markets are Neri, Pahur and Shendurni. Jamner is 37 km away from Jalgaon.

It is also 29 km away from world famous Ajanta caves and 130 km from Ellora caves. Jamner is famous for its educational institutions. It is located on the Aurangabad Burhanpur highway. The Government of Maharashtra proposed a new Expressway Aurangabad - Indore. Ajanta Expressway which passes through Jamner. A narrow gaugerailway line connects Pachora to Jamner. The Airport is 30 km for away from Jamner. There are five post offices in Jamner Tahsil like Shendurni, Pahur, Jamner, Wakadi, Fattepur, The Ramvan, Durga temple and Shiva Temple situated at hill. This place is very famous for tourism.

Jamner tahsil also famous for waghur dam project like river linking project which is newly established in Jamner tahsil with special purpose to
agriculture. Waghur River is the second biggest tributary of the Tapi on the left bank.

2.4 Physiography:-

Physiography is one of the dominants parameter of physical environment and its impact on patterns and density of agriculture is immense\textsuperscript{10}. The study of the influence of environment upon the nature and the distribution of crops and livestock is of prime importance in agricultural geography nature with its physical characteristics provides a host of possibilities for agriculture and agro based industries in different areas. Physiographical jalgaon district is divided in following divisions.

1) The Tapi valley
2) The northern belt
3) The southern belt
4) Stapuda hills
5) Satmala
6) Spurs

1) The Tapi valley:-

The Tapi banks are high and bare due to heavy regional erosion the land on both sides is seamed by tributary rivers and streams now and again from the north spurs of the stapuda stretch close to the river bank and on the south rise somehow barren hill ranges. With these receptions the long central plain is far about 80 miles from Burhanpur to the west limit of the district which is so terminus with the influence of aner and Bori Rivers with the Tapi. Although the Tapivalley consists of a vast alluvial plain intense erosion reverie and gully is the major key note of its landscape and it acts as serious and interesting limitation on the traditional agricultural wealth of the region\textsuperscript{11}. This is particularly noticeable on the northern flank between faizpur and chopda and on the southern in the immediate vicinity of the Girna and the waghur rivers.
cultivation evidently dominates the valley landscape though to the north near the base of the stapuda, it yields progressively to the forest growth and in the south to the barren grass land with the approach of the Ajanta ranges.

2) Northern belt:

North of the Tapi the whole length of the rich alluvial plain is bounded by the southern face of the stapuda a belt of mountain land form twenty to thirty miles broad\textsuperscript{12}. The northern boundary of the district is marked by the longitudinal depression of the Aner River and its eastern counter parts the mamat tributary of the Suki River. These two longitudinal valleys separate the southern range of the stapuda from their northern members much of this hill country.

Now with only a few scattered hill hamlets was once well peopled at every few miles in the forests of pal Tappa there are ruins of villages. Further west Amba in the wide valleys of the Aner and the Arunavati is dotted with the brush hood. Covered ruins of the temples mosques wells and upper stored houses of what must once have been good sized towns.

3) The southern belt:

South of the rich Tapi valley the country is more varied than either in the centre or in the north. In the extreme east. The Purna Valley between the weststretches south, much of it uncultivated or covered with brush hood. Further west ordained by the Waghur or Girna and the Bori. Wide stony and thorny plains rise in low based topped basaltic ridges or sink in rich well cultivated valleys.
4) **Stapuda hills:**

With in Jalgaon limits are there chief hill ranges the stapuda in the north the Hatti in the south east and Ajanta or satmala in the south. The stapuda a broad belt of mountain land stretching in a wall like line along the north bank of the Tapi rise from the first range of hills ridge behind ridge to the central crests about 2000 feet 8 high and then slope jointly to the Narmada. Among the peaks that rise upper about 3000 feet the chief are in the east pancha pandu and Mon dhiamal looking down on Yawal. The Hatti hills bounded the Purna valley on the cast run North West and south east and for about twenty miles pass through the south east corner of jalgaon. Rising gradually from the Tapi Valley in their first twenty miles, they are rather low and tame. Further east forming the northern frontier of bearer they rise to nearly 4000 feet and finally merge in the Nagpur hills.

At first base and rocky as they near the southern limit of Jalgaon their sides are in places somewhat thickly covered with brush wood and timer and give shelter to wild beasts.

5) **The satmala:**

The satmala also known as the Chandor or Ajanta range breaking off sharply from the sahyadris in the north west of Nashik, runs for about fifty miles east in a series of quaint basalt Pinnacles and ridges.

Near Manmad after a gentle depression it again rises about 600 feet above the plain and forms some whatmonotone us walk like boundary between Jalgaon and the Decean. Except for about fifteen miles in the west actually par its limits the range svirts the south of Jalgaon for about eighty miles. A few miles beyond Ajanta it turns south merging into the highlands that form the southern frontier of the Berar districts. As it is a narrow range little more than the steep northern face of the Deccan tableland the satmala contains few forest tracts. The sides mostly bare or
with a few scattered trees have here and there strands large enough to
shelter wild animals of late year’s tillage has spread to the sides of many
of northern spurs and in some places come close to the foot of the main
range. Besides the pictures quenches of its western peaks, the chief
interest in the satmala range are the rock-out Buddhist temples and
monasteries at Ajanta Patna and Chandor with in Jalgaon limits besides
several foot paths, two roads cross the hills one through the Ranjangaon
pass near Chalisgaon and the other by the Ajanta pass above Fardapur.

6) The spurs:

To each of the three great hills ranges the stapuda on the
north, the satmala on the south and the sahyadris on the west which more
properly lie in Dhulia Spurs rise from the plain for the most part at right
angles to the main lines. Those emanating from the stapuda in the north
and the satmala in the south of no great height or length and as a rule with
bare rounded sides and flat tops are of little pictorial interest. But from
the central plain spurs stretch for upland of seventy miles west of the
Sahyadris one of these a rocky upland rising from the Tapi valley a few
miles south of Amalner boundaries the Bori on its left and stretching
west ward from near Dhulia a claim of craggy peaks.

2.5 Geology-
The Physiology of the district is made up of high hill ranges on the north
alluvium in the centre and low hill ranges to the south of the Tapi on the
north the hill ranges stretch east west and form part of the stapuda the
highest peak being about 3500 feet. Alluvial stretches for miles on both
sides of the Tapi on the west it thing out on the east and the rock appears
near Bhusawal where the railway bridge cross the Tapi.
Deccan traps cover almost the whole of this district except a few strips of
alluvium covered land on both sides of the major streams. These trap
rocks are the result of our pouring of enormous lava flows which spread
over vast areas of western, Central and southern India at the end of Mesozoic area. They came through long narrow fissures and cracks in the earth crust and spread out as nearly horizontal sheets.

Map no. 2.4
Indicates the relief region in the Jamner Tahsil. There are divided into 5 scales the legend from 190-260, 261-300, 301-340, 340-420, and above 420 m. The above part of the map shows the few level hills and below past of map show the high hill ranges above 420 m means It helps to understand the relief of Jamner Tahsil region.

They are called plate basalt, because they form a flat topped plateau. A bore hole at Bhusawal 1211 feet deep revealed 29 flows at average being 40 Feet.

Map No.2.4 Relief Map of Jamner Tahsil
of grass is hogtied. In the Aner valley and near Danlet, North of Chopda they appear to be horizontal but they dip north at about 5° in the low rises stretching across from Burhanpur to near River. The traps that are commonly found in the plateau or cliff faces are compact and harder often characterized by vertical primates on columnar jointing. They are dark grey or dark greenish gray to brownish grey in color.

About territory to the south of the Tapi, very little information is available as the area has not been surveyed geologically. However it can be stated that the hilly ranges south of the Tapi are covered with dark basalt. The trap weather with characteristic spheroid exploitation gives rise to large rounded boundaries on the outcrops and is very common throughout the district. The trap spoils produced by corrosion and weathering are deep brown to rich red on black (regur). These black soils are very rich in plants nutrients and are most favorable for cotton crops. They are sticky when wetted and on drying due to contraction, produce, conspicuous cracks.

2.6 Drainage system:

Drainage system is very important at the view point for agricultural development because near about 75 to 80 percent land development or economical growth cultivate the proper drainage system for a particular region same is the case of Jamner Tahsil.

There are three drain rivers runs in the region of Jamner Tahsil. These are Sur, Kang and Waghur. These three rivers cover the study area of present and basis of this Region all three rivers originated in the Ajanta Mountain ranges run from south to North All three rivers meet to each other at the site of waghur dam area actually this area is a reservoir collects the water from all three rivers.
Map no. 2.5
Illustrates the various type of Drainage system in Jamner Tahsil. There is lot of small as well as big tributaries in the selected region and finally all
small streams, small rivers, medium rivers and streams come in contact with Waghur River and it comes to waghur dam which is very important in the development of the selected region. Because it pervades the lot of region of Jamner Tahsil.

1) Waghur:

With above mentioned information which is published in the report of central water commission 2004, Ministry of water Resources New Delhi. We can able to understand the importance of water as resource. There is Waghur Dam project as Waghur River. It is the second biggest tributary of the Tapi on the left bank Waghur river originates near village Jaiki in district Aurangabad in the world famous Ajanta caves and flows for 120 km up to her end with Tapi near Borkheda village in Jalgaon district. The Waghur dam on Waghur river is located 78 km downstream from the village.

The proposed dam site is located near Raipur village in Jalgaon Taluka Jalgaon district. The Waghur River.

Map No. 2.6

Indicates the various major, medium and minor Irrigation projects in Jamner Tahsil. The major Irrigation project is waghur which is located near Raipur and the other medium and minor projects like various L.P. yojana which also contribute for Irrigation specially for agricultural development other particular Rivers like sur, bor etc. help to develop the irrigation and the waghur river combined by other small rivers and various streams seem in map no. 2.6
The project is multipurpose consisting of irrigation as well as drinking water which help to benefited 51 villages from jalgaon Taluka, 9 villages from Bhusawal Taluka the project with an anticipated gross storage of 325 m.cu.m. Aims to provide water supply to jalgaon city and nearby villages along with the generation of electricity.
The entitle investigation on the waghur project was carried out in 1901 this report recommended construction of a dam on waghur river near village varadsim the proposal was soon suspended as it run into difficulties regarding the location on the storage water
Then a fresh proposal was made to build a dam near a Raipur and in 1965 clearance was obtained from the state government to built a dam in the selected side the implementation of the project started in 1979 the height of the dam in the original project was 37 m. with FIR of 232 m. and the total submergence area of 3140 hectare has construction on earthen dam on the right bank then there are lot recommendation regarding the dam on the river of waghur it can be say that it is survival the of farmers as well as animals and other insects, workers, electricity, drinking water facilities in the Jamner tahsil and in short we can say that there is revaluation in Jamner tahsil due to drainage system of waghur project on the bank of waghur river
Last but not least other two rivers also made revaluation in Jamner tahsil related to drainage system but in less extent than the waghur river so all the farmers other profession people can live their life happily only due to all these three rivers. Lastly because of those three rivers irrigation and positive impact can be done on agricultural land utilization of Jamner tahsil.

2.7 Climate:
The maximum temperature of Jamner Tahsil is 45.0 °C and minimum 10.3 °C. The average rainfall in mm is 690.2 mm. due to particular temperature selected crops are taken in the Jamner region e.g. Wheat, Millet, lime, groundnut cotton, Jawar, Bajara, sugarcane etc. because all
these crops suit the temperature and it will help to take maximum output\textsuperscript{15}.

Temperature also help to collaborate various Industries in near areas of Jamner tahsil therefore the Industries like Silk, Sugar, Vegetable oil, cotton ginning and pressing, Irrigation, Instruments, pipes clothing, cement, defense etc. are progressing in this area because the suitable climate is available for all these industries and so, Jamner also progressing to related occupation and also getting the proper financial output\textsuperscript{16}. Farmer is becoming progressive related to technology, latewood, Irrigation etc.

Climate also helps this region to avoid the Natural disaster because we know very well that in particular climate there is lack of Natural.

\textbf{Table No. 2.1}

Shows the mean daily maximum and minimum temperature in \textdegree{}C. From 1980 to 2011. The temperature is shown in two categories High and Low. The highest temperature highlighted in 1988 as 43.7 and lowest is in 1998 as 8.3 other years are also recorded in table no. 2.1. The general ratio of temperature is high low and vice versa the temperature also helps to understand the particularly of selected region.
Table no.2.1

Mean daily maximum and minimum temperature in °c

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Source computed by author
Disaster like flood, cyclone, drought etc. so Jamner region is safe from all these Natural disasters only due to safe climate.

The Climate of the Jamner is characterized by a hot summer and general dryness throughout the year except during the south – west monsoon season, e.g. June to September. Bank of Waghur River.

Lost but not least other two rivers also made Revolution in Jamner tahsil related to drainage system but in less extent than that Waghur river so, all the farmers other profession people can live their life happily only due to all these three rivers. Lastly because of these three rivers Irrigation and its positive impact can be done on agricultural land utilization of Jamner tahsil.

The minimum temperature is 10.8\(^\circ\) C and mean maximum temperature is 42.2\(^\circ\) C. The normal annual rainfall over the district of Jalgaon varies from different talukas about 660.40 mm. to 763.40 mm. The average annual rainfall for the last 20 years 1990 to 2010 ranges from 669.20 mm to 830.84 and the same.

In 1990 the rainfall of Jamner is 1200.15 mm but in 1991 it is less than 1990 and continuously it is becoming less and less year by year. We can understand it with the help of table how the rainfall of Jamner tahsil is important for other Resources. Because it can help to make other progress related to agriculture.

In 1990 the rainfall of Jamner is 1200.15 mm but in 1991 it is less than 1990 and continuously it is becoming less and less year by year. We can understand it with the help of table how the rainfall of Jamner tahsil is important for other Resources. Because it can help to make other progress related to agriculture.

There has been need of various water Resources to particular type of climate in the region of Jamner tahsil e.g. Ground water Resources of Jamner tahsil, area of type is command & non-command but
non command area type is bigger than command type of area. In 2010 it is 787.59 command types and non-command type is 11521.60. The Net annual ground water availability (ham/yr) is 820.47 Irrigation, 115.10 Domestic and Industrial uses, and 935.57 totals.

With the help of climate water samples are with the classification of alkaline earths (ca + mg > 50%) exceeds alkali metals and weak acids (Co3 + HCo3) > 50% exceeds acids.

In short climate can be effective in the life of agriculture and indirectly farmers. Because the life of water, soil, air, light all these factors are important in the agricultural area\textsuperscript{17}. We sow it climate change. We have to take proper precaution for maintain health come is the case with agriculture also it affects on the life of Geographical factors. But in Jamner region it helps to maintain the progress of agriculture of Jamner region so, day by day farming and agriculture of Jamner tahsil is in progressing.

2.8 Soil;

Soils constitute the physical basics of an agricultural enterprise and play a very important role in the agricultural economy of a region. Differences in soil texture drainage and Fertility are of major importance in explaining contrasts in agriculture.

Unlike climate, soils should not be regarded as part of the natural endowment of an area. In fact it is agriculture that modifies soils excepting certain virgin’s soils which can refrain their original characteristics\textsuperscript{18}. On the whole souls constitute the physical base for any agricultural enterprise. Farming is a business and soil is part of the farmers stock in trades Good soils are good to the ere tent that man makes judicious use of them our standard of living which predominantly depends on agriculture is often determined by a combination of the
physical, chemical and biological characteristics of the soils and crops and livestock raised on them.

Crop growth is determined in the soils. The main factor that has influenced the development of soils in Jalgaon district is the undulating and hilly topography. The soils of varying are to be found.

Through out of district. The soils in the district can be classified into several categories on the basis of depth and structure namely. The soil of the district are generally derived from the under lying basalt though older alluvium has a deep cover all along the broad Tapi valley. The fertility of these soils depends largely on their position Vice – Versa relief and their nearness to stream courses.

Soil is the natural dynamic body made up from organic substances which provides the proper factor for growth of plants. Soil is the natural gift given by the nature in whiten plants are grown and supplied food for man and all beings. Soil is the main factors which provide the fundamental needs to all being. Different type of soil found in the Jamner tahsil. According to their physical characteristics the soils in the Jamner tahsil can be classified into three main categories on the basis of depth and structure

i) **Black cotton soil :**
This soil is found in the plain area mostly in flood plains of River Waghur, Kang, Sur, is a fertile Black soil area.

ii) **Medium Black Soil :**
Medium Black soil is found in the plain area and nearer to hilly area.

iii) **Stony/ Rocky soil/ Red soil :**
This soil is found in that area which is always from rivers and nearer to hilly area. The color of this soil is red- brown- soil level in the ground is very less Strong’s stony surface is found in the region.
2.9 **Natural vegetation:**

Vegetation of some sort of the other is the Natural covering of the land surface of the earth. Even the so called deserts have Major vegetation though it may be scanty and inconspicuous.

Natural vegetation is vital from the aim of rainfall distribution and the fertility of the soil. It also verity the soil erosion to the greater extent\textsuperscript{19}. It also keeps the environmental balance. It is also prominent to protect the wild animals and insects. Forest products help to the forest based industries. Forest also provides raw material for agricultural implements.

The Jalgaon District has 14.68 % area under forest in 1990-95 0% to 14% area under forest was recorded in Bhusawal, Erandol, Amalner, Parola, Bhadgaon, Jamner tahsil and above 25% area under forest was noticed in Yawal & Raver tahsil during the period.

The area under forest are increasing from 1990-95 to 2005-2010. Raver Tahsil was highest in area under forest (32.40%) and the Amalner tahsil was lowest in area under forest (2.43%) during the study period. The forest of Jamner tahsil can be classified into the following three categories.
Table no.2.2
Tahsilwise change in forest area in Jalgaon district

<table>
<thead>
<tr>
<th>Sr.n o</th>
<th>Tahsil name</th>
<th>Area under forest</th>
<th>% to the total geo.area</th>
<th>Area under forest</th>
<th>% to the total geo.area</th>
<th>Volum e of change in % 1980-85 to 2005-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chopda</td>
<td>19500</td>
<td>19.73</td>
<td>15059</td>
<td>15.89</td>
<td>-3.14</td>
</tr>
<tr>
<td>2</td>
<td>Yawal</td>
<td>32200</td>
<td>33.75</td>
<td>30383</td>
<td>31.81</td>
<td>-1.94</td>
</tr>
<tr>
<td>3</td>
<td>Raver</td>
<td>27700</td>
<td>32.66</td>
<td>30664</td>
<td>32.40</td>
<td>-0.26</td>
</tr>
<tr>
<td>4</td>
<td>Muktainagar</td>
<td>15200</td>
<td>23.34</td>
<td>12998</td>
<td>20.13</td>
<td>-3.21</td>
</tr>
<tr>
<td>5</td>
<td>Bhusawal</td>
<td>8600</td>
<td>10.29</td>
<td>8949</td>
<td>10.80</td>
<td>0.51</td>
</tr>
<tr>
<td>6</td>
<td>Jalgaon</td>
<td>8300</td>
<td>9.89</td>
<td>14424</td>
<td>17.48</td>
<td>7.59</td>
</tr>
<tr>
<td>7</td>
<td>Erandol</td>
<td>4300</td>
<td>4.42</td>
<td>5620</td>
<td>5.21</td>
<td>0.79</td>
</tr>
<tr>
<td>8</td>
<td>Amalner</td>
<td>1800</td>
<td>2.26</td>
<td>2027</td>
<td>2.43</td>
<td>0.17</td>
</tr>
<tr>
<td>9</td>
<td>Parola</td>
<td>10400</td>
<td>13.08</td>
<td>9362</td>
<td>11.85</td>
<td>-1.23</td>
</tr>
<tr>
<td>10</td>
<td>Bhadgaon</td>
<td>4400</td>
<td>9.01</td>
<td>7711</td>
<td>12.83</td>
<td>3.82</td>
</tr>
<tr>
<td>11</td>
<td>Chalisgaon</td>
<td>13500</td>
<td>11.19</td>
<td>15546</td>
<td>12.68</td>
<td>1.49</td>
</tr>
<tr>
<td>12</td>
<td>Pachora</td>
<td>4300</td>
<td>4.43</td>
<td>7197</td>
<td>7.77</td>
<td>4.34</td>
</tr>
<tr>
<td>13</td>
<td>Jamner</td>
<td>16200</td>
<td>15.74</td>
<td>21804</td>
<td>15.99</td>
<td>0.25</td>
</tr>
<tr>
<td>14</td>
<td>Total Jalgaon district</td>
<td>16640</td>
<td>14.68</td>
<td>18167</td>
<td>15.30</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Source computed by author
Table No. 2.2
Highlights the Tahsilwise change in forest area in Jalgaon district in hectares. There are 13 Tahsil in Jalgaon district. The highest area under forest recorded in Raver Tahsil as 27700 hectares and lowest is in Amalner Tahsil in 1980-81 and in 2010-11 it recorded in Raver Tahsil highest as 30664 hectares and lowest in Amalner as 2027 hectares. Means the volume change of area under forest is changing year by year. It recorded in Jamner Tahsil as 16200 hectares in 1980-81 and 21804 in 2010-11 means the volume in change recorded 0.25% in Jamner Tahsil from 1980-81 to 2010-11 in the table no. 2.2

Graph No 2.1
1) Grasses
2) Scrub forest
3) Tree forest.

1) **Grass**:

   The prominent grass found in the various forest blocks of Jamnertahsilare pansya, Rosha, Sheda, Bori, Kusali, Kand, Chirka and Gonda. Present tahsil cover but the proportion of cover varies from different regions of Jamner tahsil e.g. Pahur region, Neri Region, Jalgaon region, Shendurni etc.

2) **Scrub forest**:

   There are various shrubs available in Jamner tahsil e.g. Aarati, Arni, Chondor, Henkal, Hinganabet, Kaddhaman, Katydhoman, Read side trees. The following are the trees normally found along the roadside. Amba, Nim, Babul, Chinch, Jambhul, Mohala, Pimpal, siras etc.

3) **Tree Forest**:

   These types of forest occur only in cool sheltered pockets having northern and eastern aspects. With the help of all these type of forest we gain lot of valuable Natural Resources. These forests are of mixed miscellaneous type and consist mostly of salai, Khair, Teak, Palas, Bhawa, Bhilwa, Chandan, Sag, Sisam, Tiwas etc.

   In short with the help of Natural vegetation, farmer try to solve lot of problems regarding animals grass and other beneficial products household needs also solved due to all these Natural vegetation so it is very interesting and valuable to the present region to make progress and development.
REFERENCES

5) Census of India 1991 District census hand book Jalgaon Published by the Director, Govt. printing press Bombay P-23
8) Gazetteer of India Maharashtra state Jalgaon Dist.1991. P-10
9) Gazetteer of India Maharashtra state, Jalgaon Dist. 1991, P-11