CHAPTER 2
ENVIRONMENTAL BACKGROUND

2.1 Introduction (Study Area)

The district of Ahmednagar (Latitude 18°2’ and 19°9’ N. and Longitude 73°5’ E.) is situated partly in the upper Godavari basin and partly in the Bhima basin, the interfluve in between forming the extensive Ahmednagar plateau. The district is very irregular but compact in shape, somewhat resembling a slanting cross with a length of 200 km and a breadth of 210 km. It is bounded on the north by Igatpuri, Sinnar, and Yeola talukas of Nashik district; on the north-east by Vaijapur, Gangapur and Paithan talukas of Aurangabad district of Marathawada division, on the east by Georai, Bhir and Ashti talukas of Bhir districts; Bhum and Pependla talukas of Osmanabad district; on the south of the Karmala taluka of Sholapur district; and on the south-west by Murbad and Shahapur talukas of Thana district. Barring the district of Chanda in the Vidhharbha region, Ahmednagar is the largest district of the state in area, occupying a somewhat central position in Maharashtra (Gazetteer of India 1976:1).

The district of Ahmednagar is named after Ahmednagar town. The town is famous since the medieval times. In the year 1490 when Ahmad Nizam Shah, the founder of the Nizam dynasty defeated the Bahamani troop Sunder Jahangir Khan near its site. This victory was called the Victory of the Garden. Because on that spot Ahmad Shah built a palace and laid out a garden. In the year 1494 he laid the foundation of the city close to the Bag Nizam upon the left bank of the Sina River and called after himself Ahmednagar or the city of Ahmad, Ahmednagar district, popularly called Nagar and came into existence in 1818. In 1822, its boundaries spread between Vani in Dindori sub-division of Nashik and Karmala in Solapur district. In 1830 Solapur sub-collectorate was inducted in the
district and continued as such till it gained the status of an independent collectorate in 1838. During 1837-38, Nashik subcollectorate comprising of subdivisions of Sinnar, Chandor, Dindori, Nashik, Igatpuri and Peint tehsil was under Ahmednagar district. Subsequently this sub-collectorate of Nashik was abolished in 1856 and the area reverted to Ahmednagar district. 1869 witnessed the declaration of Solapur and Nashik as independent districts, thus leading to the shaping and emergence of present Ahmednagar district. In fact the district has a chequered history of evolution in as much as in 1891 it included the subdivisions of Jamkhed, Nevasa, Shrigonda, Shevgaon, Sangamner, Nagar, Kopargaon, Akole, Karjat, Parner and Rahuri. In 1913 Pathardi Peta was created and the remaining part of Jamkhed taluka was renamed as Jamkhed Mahal. Subsequently, Karjat taluka was downgraded as Karjat Peta during 1931-41. 1941-51 was marked by the upgrading of Pathardi and Karjat Petas as Karjat taluka. In 1945 Shrirampur taluka came into being. Jurisdictional changes of 1950 resulted in the transfer of 21 villages from Bid district to Ahmednagar district on the contrary the district had to lose 26 villages to Bid district and one village to Aurangabad district. With the reorganization of State, the district was incorporated into Bombay State in 1956. However since 1960, it constitutes a part of Maharashtra State (Census of India 2011: 12-13).

1318 inhabited villages and 5 towns dispersed over 12 talukas and one Mahal comprised Ahmednagar district in 1961. During the decade 1961-71 with the upgrading of Jamkhed Mahal the number of tehsil rose to 13 and at the time of 1971 census there were 1312 inhabited villages, 5 uninhabited and 6 towns. The position continued to be the same till 1981 Census. However, within the district some changes did occur during the decade 1971-81 when the number of villages rose to 1503, and with the declaration of Rahuri and Warwandi as towns the number of towns increases to 8. Rahuri town attained municipal status through a State Government notification and Warwandi was declared a Census Town as it qualified the specific criteria laid by census to declare as urban area. At the time
of 1991 Census the number of tehsils remain 13 with 1556 villages and 13 towns (Census of India 2011: 8).

The district at present has 14 tehsils, 19 towns and 1584 villages (including 3 uninhabited villages) (Census of India 2011: 12-13).

2.2 Geology

The entire region is occupied by basaltic lavaflows erupted in the Cretaceous-Eocene age, which are popularly known as Deccan traps. These lavaflows are sometimes associated with inter-trappean beds such as limestone, sandstone, clay shales, red bole beds, porous ash or scoriaceous beds. Thin mantle of black cotton soil present almost everywhere on the basalt, river alluvium, sands, gravels, clays and silts represent the recent deposits in the district.

![Figure 2.1 Map showing Ahmednagar District, Maharashtra](image-url)
Calcareous concentration and nodules, known as *Kankar*, is commonly associated with the soil, more concentration in the vicinity of the stream-courses.

### 2.2.1 Stratigraphic Sequence

The stratigraphic sequence of the rocks in the district is given below:

<table>
<thead>
<tr>
<th>Black cotton soil, river alluvium sands, gravels, silts and calcareous <em>Kanker</em>.</th>
<th>Recent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrusive basic dykes, basalt lava flows belonging to the Deccan trap volcanic episode, associated with inter-trappean beds, red bole beds, porous ash and scoriaceous matter, etc.</td>
<td>Cretaceous-Eocene</td>
</tr>
</tbody>
</table>
Figure 2.3 Soil type of the Central and Upper Godavari Basin
2.2.2 Description of Rock Types

**Basalts:** Every flow of the basalt is generally composed of two different units: (a) the lower and middle part hard and compact, dark grey to greenish grey in the colour and almost non-vesicular or very minutely vesicular. They are traversed by numerous joints and fractures and on weathering at the surface give rise to spheroidal blocks with inter-spaces between the spheroids filled with soft weather material. (b) the upper part of the flows are comparatively soft and vesicular. They have reddish pink to purplish color and the vesicles almost everywhere filled up by zeolites and at places by other secondary minerals like calcite, greenish chlorophaeite, quartz or ferruginous material.

For want of geological mapping in the area, flow pattern and fabric of basalts exposed in the district are not known. The thickness of the flows range from 3 m to as much as 40 m, the average thickness being around 15 m. According to Roy (1948), the thickness of the volcanic rocks I around 900 m (Gazetteer of India 1976:23).

The basalts are composed of plagioclase feldspar and clinopyroxenes, usually augite or pigenite, with iron ores and other minor constituents. They exhibit porphyritic texture the plates of augite. Such porphyritic trap having minor laminations or patches of pink, vesicular is exposed in the Mula river bed near Ahmednagar cantonment. The porphyritic trap here is fairly hard and compact but the vesicular portions are comparatively soft and weathered. Climbing up the right bank-cliff, this porphyritic verity is traceable right upto 670 m from the M.L.S. where it is overlain by 0-6 m thick red clay, followed in turn by a series of pink or green, highly amygdular lava beds, the total thickness of the section being around 20 m. The amygdular varieties here are characterised by geodes or vesicles of various shapes, varying from round to elliptical bodies, sometimes in the form of mere stringers or veins, following the bedding or running irregularly
in the trap. Their size varies from that of peas to bigger bodies which are usually not inter-connected. The removal of infillings, e.g., calcite, zeolite, quartz, etc. due to action of running water and weathering has brought about a marked porousness giving rise to a type of cellular or spongy traps at the river-banks. Sometimes at the junction of the lava-flows, one could see well-developed pipe amygdules indicating the bottom of the lava-flows (Gazetteer of India 1976:23-24).

*Red bole beds:* These are thin reddish horizons occurring in between the successive flows of basalt and are exposed along the hill-sides.

### 2.3 Geographical Regions

Ahmednagar district lies partly in the upper hill section of the Sahyadri and its three off-shoots with a rapidly changing transitional “*mawal*” country, and partly in the plateau on the crest of the Balaghat range and the two riverine plains on the either side of the plateau. The key to rhythm of life and human responses in different sections of the districts lies in the variations of the underlying soil, aspect and topography, the availability of water-supply to water the fields and the extent to which agricultural innovations have made deep inroads in the rural infra-structure. Climatically, most of the district barring the westernmost Akola taluka in the hilly region receives a precarious rainfall of 500-600 cm whose reliability is not very high and hence practically the whole district falls within a chronic scarcity in which acute shortage of the food and fodder is repeated recurrence once in the three to eight years. It is only in the better-watered sections where agriculture has been made more secure by irrigated water supply, the rural agrarian economy breathes of some prosperity and pleasant changes. Significantly variations and variety in the physical landscape exist within the district area and the mould the cultural responses. Broadly, the districts area falls into the following geographical unites:-
2.4 Drainage

The drainage of Ahmednagar district belongs to two major river systems of Maharashtra, the Godavari in the north and the Bhima in the south. Apart from these two main rivers which flow on the northern and southern boundaries of the district, a number of tributaries rising within the district drain the area of the district in general south-eastwards (Gazetteer of India 1976:8).

2.4.1 Godavari

The river Godavari which drains by far the larger part of the district, including the sub-divisions of Kopargaon, Sangamner, Akola, Rahuri, Nevasa, Shevgaon, the Northern half of Parner and parts of Nagar and Jamkhed. It rises near Tryambak in Nashik on the eastern slopes of the Sahyadris, and after passing the town of Nashik at receives the Banganges and the Kadra from the North and the Darna from the South and is already a considerable when, after a course of about sixty miles, it enters the North-West corner of the Kopargaon sub-division). It flows South-East through a rich alluvial plain past Kopargaon to the town of
Puntamba, which is situated on the Nizam’s frontier, where it received from the South combined water of the Kat and Khara rivers. From Puntamba to a point beyond Paithan, a distance of sixty miles, the river Godavari forms almost continuously the boundary between Ahmednagar and the Nizam’s dominions. At the village of Tokna it receives on its right bank the combined waters of the river Pravara and the Mula. Two miles East of Mungi the river enters the Nizam’s dominions and there flowing across the peninsula, it empties itself into the Bay of Bengal after a total course of 900 miles (Gazetteer of India 1977:8).

The bed of the river is for the most part sandy, but in many places of rocky boulders crop up and lie across its course turning the stream into large pools above and forming rapids below. In these pools which are often of great extent and depth, fish abound. The banks are sometime sloping, but are more generally are more steep and broken and eroded by gullies. In the dry season, the river trickles down a minor channel and becomes easily fordable except in the deep pools. During the monsoon season, it is flooded and cannot be crossed within the help of the country-craft and boats. The chief tributaries of the river Godavari is the Pravara and the minor tributaries are the Hamir, the Khara nadi and the Dora nadi (Gazetteer of India 1977:8).

Godavari basin includes the entire Kopargaon, Shrirampur, Nevasa and Shevgaon taluka, the east central part of Sangamner taluka, most of Rahuri taluka except the south-west and the northern parts of Pathardi taluka. The whole area forms part of an extensive alluvial plain country sloping northwards towards the Godavari. There are practically no hills but it is only monotonous country. However, in the south and south-east, the land has a more uneven slope up towards the rims of the Ahmednagar plateau which is deeply fissured by ravines down which water rushes with great violence during heavy rains. Between the various streams which drain the country are slightly elevated tracts
of mal or upland which however do not change the general level appearance of region.

Figure 2.4 Drainage system of the Central and Upper Godavari Basin

Except on the banks of the rivers and in the neighborhood of the village side, the entire plain is bare of trees. The banks of the rivers, however, are thickly fringed with babul trees. Even the hill in the southern parts of the Rahuri taluka are destitute of the vegetation and the present a bare rugged aspect, the strongly marked horizontal lines of stratification contrasting in the striking manner with the vertical fissures worn into their steep sides by the action of water. However, eastwards, the hill-slopes present a varied picturesque aspect; several of the
minor valley being well-wooded and in the neighborhood of the villages there are more extensive patches of bagait (garden) cultivation than are found on the plains lower down. The entire region is traversed by a number of right-bank tributaries of the Godavari of which the Pravara and the Mula flowing through Rahuri and Nevasa talukas and the Dhora nadi are the most important (Gazetteer of India 1976:19).

The chief soils of the entire basin are kali or black with a variety of gradations depending upon the local terrain conditions and slope. The soils, by and large derived from weathering of basalts under tropical semi-arid climate conditions, are regurs (black cotton soil), a type of clay loam that is moisture-retentive. In this region, the soil is more suited to wheat than to cotton, extensively sticky and hard to work during rains and full of cracks in the hot weather. However, in the plain of Sangamner taluka on either side of the Pravara and Mula occur rich munjal soils, a reddish sandy loam, and chopan soils that are admirably suited for garden cropping, Being alluvial and friable this latter soil needs less moisture and is more easily worked than the stiffer clayey loams of the Godavari plains. In the north, in the Kopargaon plains soils have good depth and along the Godavari there are many wide tracts of deep rich soils although along the immediate banks of the river occur large barren patches. In Rahuri too, the soil is deep, rich and black with unusual retentive capacity, more suitable for rabi crops. However, southwards in the neighborhood of the Mula valley the soils become shallower. Once again in Nevasa the soils are deep. Eastwards in Shevgaon taluka though the soils are rich they are more variable; more stiff clay soils occurring along the Godavari and somewhat poorer light soils on the hills. The best soil in the taluka occurs in the Dhora Valley. Mixed with these richer lands are many tracts of poorer soils like murum, gravelly and stony Khadkal soils on low plateaus and water partings (Gazetteer of India 1976:19-20).
The entire basin has intensely cultivated farm lands covering more than four-fifths of the land area. Gross cropped area is 4 to 5 per cent higher than net show area, as a result of double cropping in better water irrigated lands. In this entire stretch, the area under forest-cover is very low and so too the barren and uncultivated lands record low percentages. Fallow lands are also much less significant due to the greater fertility of the soils and more assured water-supply for farming (Gazetteer of India 1976:20).

In the entire Godavari plains irrigated farming is significant bringing prosperity to the small farmers and this is significant bringing prosperity to the small farmers and this is in sharp contrast to the dry farming practices of the Nagar plateau, Kopargaon, Shrirampur and Rahuri talukas have a large network of irrigation canal fed by the Godavari and the Pravara rivers and have high proportions of irrigated area- about 30 per cent of the net sown area in the first two talukas and about 15 per cent of Rahuri taluka. With the completion of the Mula valley project, the area under the irrigation in Rahuri taluka is also likely to be further enhanced. Comparatively the eastern part of Nevasa and Shevgaon talukas record a much lower percentage of area under irrigation. Well-irrigation is comparatively more significant over the entire region and supplements canal-irrigation. There are more than 30,000 irrigation wells in the entire region. Diffusion of agriculture innovation like pump-sets and oil-engines during the recent past has brought remarkable improvement in the field of agriculture over this entire tract (Gazetteer of India 1976:20-21).

Cultivation extends almost up to the banks of the river except where the banks being stripped off their surface soils by gully erosion present a desolate barren aspect. Where the banks are steep and high, they are generally upto the edge. In the fair season when the streams occupy only small portions of their channels in many places crops of wheat and vegetable are raised on the alluvial deposits
within the bed of the river while the gravelly stony soils are generally planted with melons (Gazetteer of India 1976: 21).

Jowar is the most important crop of the entire basin and is raised during the rabi season in the black soils. Bajri also occupies a significant proportion, increasing in importance substantially in the lighter soils to the south and west, mainly in Sangamner and Pathardi talukas. Wheats grown during the rabi season is of some importance in the northern parts. Pulses are much less significant in the cropping pattern than in Ahmednagar plateau and are raised only as cover crops. In the Cropping economy of the entire basin, rabi crops are more significant than anywhere else in the district accounting for slightly less than on the plateau and of them, sugarcane is vitally important in the economy, on the average accounting for about 12 to 15 per cent of the cropped area in the western parts of the basin and ushering in substantial agricultural prosperity to the rural economy. Next in important are groundnut and cotton (Gazetteer of India 1976:21).

The Godavari basin is the most densely peopled section of the entire district for obvious reasons. This region has also recorded the highest increased in the growth-rate of population (Gazetteer of India 1976:21).

### 2.4.2 Pravara

Pravara rises on the Eastern slopes of the Sahyadris between in the high peaks and the hill-forts of Kulang and Ratangad; after a strenuous course of 20 km in a picturesque amphitheatre enclosed between the Kalsubai and Baleshear ranges in an easterly direction, it falls near the village Renad into a rocky chasm, 60 km and then winds for about 13 km through a narrow deep glen that opens into a wider valley east of and below the central plateau on which the town of Rajur stands. After flowing across this valley, the river enters the Desh part of the Akola sub-
division. As it flows past the town of Akola receives on the left the discharges of the Adulariver and Mahalungi both on the left banks. Through Snagamner and Rahuri, the Pravara flows between low cultivated banks still. Through Sangamner and Rahuri, the Pravara River flows between low cultivated banks still keeping its easterly course. It receives, as it enters Nevasa talukas, the waters of the Mula River and the combined flow turning to the north-east falls into the Godavari at the Pravara Sangam near the village of Toka. The total length of the Pravara is 200 km (Gazetteer of India 1977:8).

2.4.3 Tanks

There are not many tanks within this district. The only large tank is in Visapur tank in Shrigonda taluka. Apart from it, there are 18 other tanks inclusive of one north-west of Jeur in Ahmednagar taluka. These tanks irrigate nearly 700 hectares of farm land.

2.4.4 Springs

Quite a few fresh-water springs occur in the spurs of Sahyadri and in the upper sections of the transvers off-shoots where the perched water tables in the intra-trappeans and the volcanic ash layers are exposed on the steeper slopes. Lower down in the plateau, a large number of springs occur mainly in the southern scarp edge of the kanhore plateau at an average elevation of 650-700 m, where the junction of the intra-trappean limestone aquifer and the underlying massive basalts gets exposed along the scarp-slopes. A few springs also occur in the eastern parts of the district in the Jamkhed taluka at an elevation of 850-900m.
2.5 Soils

The in this district can generally be classified into three groups, viz., black or Kali red or tambat, and the grey of inferior quality locally known as barad including whit or pandhari of these barad soils are very poor in fertility. The plain in Kopargaon and Shrirampur talukas have comparatively a good depth of soil. Near the Pravara and Godavari rivers white tracts of deep rich land are found. Two specially barren tracts may be noticed, one on the border of the Karjat and Shrigonda and the other north of the line drawn east to west through Takli- Dhakeshvar, ten miles north of Paner, as far north as the slopes down to the Mula. The second waste is of great extent and is mostly un-arable being little better than bare basalt, unfit for anything except sheep-grazing. Near the range of the hills that runs south-east down the center of the Srigonda and Karjat subdivisions, the land is very poor with occasional patches of good light soil near Kartaj, Koregaon and other places. In the hilly areas to the west of Akola, red soil, deeper on the slopes than on the levels is found. Thus a major area of the district comes under scarcity zone (Gazetteer of India 1977: 301).

The types of soil of this zone are given in the following statement (Gazetteer of India 1977: 301):

<table>
<thead>
<tr>
<th>Main category of soil</th>
<th>Type of soil</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level shallow soils</td>
<td>H G F</td>
<td>Low lime shallow, reddish brown, loams</td>
</tr>
<tr>
<td></td>
<td></td>
<td>moderate lime, brown to dark brown clay loams</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low lime, brown, loams</td>
</tr>
<tr>
<td>Intermediate medium deep soils</td>
<td>A D</td>
<td>Black clay loams with reddish tinge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calcareous brown clay loams with lime band below</td>
</tr>
<tr>
<td>Low level deep soil</td>
<td>B</td>
<td>Low lying high lime, deep brown-black clay</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Eroded phase.</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>Low lying deep, black compact clays</td>
</tr>
</tbody>
</table>
Besides the soils in the district can be divided into following agro-climate zones from east to west:

2.5.1 Ghat Zone

This zone covers hilly terrain including Sahyadri hill tops and the western sloping hilly land with variable altitude between 500 and 1,500 m. The soil types founds in this region are high level, red to reddish brown lateritic soils and light brown to dark brown shallow gravelly loams.

2.5.2 High rainfall zone with non-lateritic soils

This zone includes the narrow strip of land west to the ghat zone and received rainfall of 2,000 to 3,000 mm. the major soil group, viz., non-lateritic red to reddish brown loams including two types soils and brown to dark brown, medium to deep loams locally known as manat.

2.5.3 Transitional Zone I

Area on the western side of the high rainfall zone with non-lateritic soils comes under this zone. This zone received rainfall of about 1,250 to 2,500 mm. The soil group consists of soils of red to reddish brown colour with varied depth and texture.

2.5.4 Transitional Zone II

Western part of Akola taluka and the limited area from south-east portion of Sangamner taluka is covered by this zone. This part of districts received rainfall of about 700 mm to 1.250 mm. The major soil group of this zone is brown of varying depths and comprises three types of soils, viz., high level, low lime, shallow, reddish brown loams; intermediate, medium deep brown black clay
Figure 2.5 Geological map of the Central and Upper Godavari Basin
loams; and low level, deep low level lime and brown black clays (Gazetteer of India 1977: 302).

**Intrusive dyke:** No details are available regarding true dykes in the district. Two trap dykes are reported to occur near Taskarwadi (47°1’/3, 19°19’: 47°18”) near Mula dam site. One is about 1.2 m thick and runs in the middle of the river for about 120 m. The other is a large dyke about 10 m thick and seen on the left bank of the river.

*Calcaceous Kankar:* These are either associated with soil or occurring as small nodules or concentrations either associated with soil or as infillings in cracks, fissures and joints in rocks. Withish *kankary* clay is commonly seen in the cliff at both the banks of Mula River near Ahmednagar Cantonment.

*Soil and Alluvium:* Black cotton soil is the ultimate product of decomposition and weathering of basalt. This is highly absorbent and cracks and crumbles after a period of long drought. Recent alluvium and consolidated gravels have attained a thickness of 24-30 m on the right bank of the Mula river near the dam-site (Gazetteer of India 1976:24).

### 2.6 Geological Structure

The lava-flows are almost horizontal in deposition but local gentle tilting, undulations and minor flexure are rarely seen. But for these, no major faulting is seen in the area. The rocks are however, traversed by large number of vertical, high angled or sub-horizontal joints; the last ones when closely-spaced, dissect the basalt into finely laminated or slabby beds with bedding thickness of a few centimeter to a metre. At places the trap joining is most irregular. Alternation of traps into spheroidal block is very common. Columnar jointing is also common as noticed at (19°20’:74°13”) Nandur Khadarmal. The flat-topped hills at the
Mula valley flanks near Ahmednagar Cantonment are formed of horizontal trap flows, in the form of fine laminations up to a few metres in thickness. This feature has given to a marked slabbiness sometimes resulting in “terminal creep” at the cliff edges abutting the valley, particularly at the right bank. The traps are fractures near the surface as compared to the sub-surface strata near the Mula dam site. The intensive trap dykes mentioned elsewhere in the note have caused lot of crushing and cleavages around them. The river sand and clays near Digras (19º 22’; 74º37’) occasionally show current bedding (Gazetteer of India 1976:24-25).

_Economic minerals:_ No minerals of importance are available in the district. The hard and compact basalts however are used extensively as building material and road metal. The pinkish-colored vesicular variety is amenable to cutting into blocks of desired sizes. The calcareous _kankar_ is burnt in lime kilns and is responsible for a regular “lime industry” around Ahmednagar town (Gazetteer of India 1976: 25).

### 2.7 Climate

The climate of the district is characterised by a hot summer and general dryness during major part of the year except during south-west monsoon season. The cold season in the district commences from December and ends in the month of February. To the period from March to the first week of June is the hot season. It is followed by the south- west monsoon season which lasts till the end of September; October and November constitute the post monsoon or the retreating the south-west monsoon season (Gazetteer of India 1976: 26).
Climate data for Ahmednagar

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average high °C (°F)</td>
<td>29 (84)</td>
<td>32 (90)</td>
<td>36 (97)</td>
<td>38 (100)</td>
<td>38 (100)</td>
<td>33 (91)</td>
<td>29 (84)</td>
<td>28 (82)</td>
<td>29 (84)</td>
<td>32 (90)</td>
<td>30 (86)</td>
<td>28 (82)</td>
<td>31.8 (89.2)</td>
</tr>
<tr>
<td>Average low °C (°F)</td>
<td>10 (50)</td>
<td>12 (54)</td>
<td>16 (61)</td>
<td>21 (70)</td>
<td>23 (73)</td>
<td>23 (73)</td>
<td>22 (72)</td>
<td>22 (72)</td>
<td>20 (68)</td>
<td>18 (64)</td>
<td>14 (57)</td>
<td>10 (50)</td>
<td>17.6 (63.7)</td>
</tr>
<tr>
<td>Average precipitation mm (inches)</td>
<td>5 (0.2)</td>
<td>3 (0.12)</td>
<td>5 (0.2)</td>
<td>10 (0.39)</td>
<td>23 (0.91)</td>
<td>132 (5.2)</td>
<td>97 (3.82)</td>
<td>69 (2.72)</td>
<td>165 (6.5)</td>
<td>56 (2.2)</td>
<td>28 (1.1)</td>
<td>8 (0.31)</td>
<td>601 (23.6 7)</td>
</tr>
</tbody>
</table>

Source: Ahmednagar Weather (https://en.wikipedia.org/wiki/Ahmednagar)

2.8 Forests

The district has an area of 731.41 square miles under forest. The forest area makes 11.30 per cent of the total geographical area of the district as against 17.56 per cent for the whole of the Maharashtra State. The forests of the district represent the “Southern Tropical Dry Deciduous” type. They are scattered in sheltered pockets of spurs and valley and are situated manly in Akola, Sangamner, Ahmednagar, Shrigonda, Paner and Rahuri talukas.

The commercially important species found in the forests are teak, neem, babul, sissoo, sandalwood, etc. Other important miscellaneous species are khairhiwar, amoni, apta, bet, etc. The growth is stunted and poor due to poor soil and lack of adequate humus. Vast stretches of grass-lands are also found are kusal, dongari-gavat, pavanya and marvel.

Among the scrubs the following are found: *Rhus mysorensis* (Amoni), *Caesalpinia sepiaria* (Chillar), *Lantana camara* (Karvand), *Mundulea suberosa* (Supli), *Cassia auriculata* (Tarwad), *Mimeroa haomata* (Arati), *Butea superba* (Palsvel) etc. The common grasses are Sheda, Gondal, Chirka, Marval, Paonya, Kusli, Kunda and Rosha.

The forests in the Akola and Sangamner talukas produce small quantity of teak poles, charcoal, firewood, grass and myrobalan. The forest produce is transported in trucks to Ghoti and Sangamner markets. The important market for the Ahmednagar, through the production in that forest division is very meager (Gazetteer of India 1976: 29).

2.9 Wild animals and Birds

In the Akola taluka of Ahmednagar district there are some patches of natural ever-green type of forests confined to the hills. In the rest of the talukas of the district there are practically no such patches of natural forest except the afforestation areas cultivated during the last few years. As such the wild life in Ahmednagar district is poor and sparse. However, the following wild animals and birds are found in the district:-
(1) The Panther –*Panthoropardus*– is found occasionally in the hilly forest areas of the Akola, Rajur, Rahuri and Shrigonda ranges.

(2) Among the carnivorous animals in the district are the jackal, *Kolha* or Sheal, *canis-aureus* the hyena, the wild cat (*Felischus*).

(3) The herbivorous animals commonly found in Ahmednagar district are as under:-
   - The Indian Gazelle, *Chinkara* (*Gazella bennetti*);
   - The black bucks, *Harine* (*cericapra*)

(4) Animals such as birds the hare, *Khargosh* (Leous nigricollis ruficaudatus), Parempine (*Hystrix lacura*) are also found in almost all the forest areas.

(5) Among the birds the peafowl (*pavo cristatus*), Grey and painted partridges, Teetar (*Francolinus spp*), the Pater (*Coturnix spp*), the green pigeons, hariyal (*Phoenicoprerus Crocopus*) are found in Shrigonda, Rahuri, Parner, Akola and Rajur Forest Ranges.

(6) The Great Indian Bustard (*Choriotes nigriceps*). This bird is making a precious existence and heading towards extinction and is seen infrequently, on the borders of Aurangabad division in the Nevasa and Shevgaoan talukas.

The population of the aquatic birds is limited due to the small water-spread in the district. Some varieties of ducks (*sarkidiouruis spp*) are found near the tank in the district (Gazetteer of India 1976: 29-33).