CHAPTER – III

PROFILE OF NASIK DISTRICT

3.1 INTRODUCTION

Nasik district has a reputation of holiest pilgrimage district of Maharashtra state. Nasik district is highly diversified district in terms of physiography. It has a main river Godavari which is called as ‘Ganga’ of Maharashtra. Because of this main river along with river Girna and Mosam provide high resources of water for irrigation therefore we find this district with high and rich agricultural resources. Nasik district has made its name in the global export market because of grapes. It is necessary for us to understand a brief profile of this district which is now establishing itself into one of the leading agricultural and industrial district of Maharashtra state.

3.2 HISTORY OF NASIK

Nasik is a city in Maharashtra, India. Nasik is located in the northwest of Maharashtra, 180 km from Mumbai and 202 km from Pune. Nasik is the administrative headquarters of Nasik district and Nasik Division. Nasik, which has been referred to as the "Wine Capital of India", is located in the Western Ghats, on the western edge of the Deccan peninsula on the banks of the Godavari. It is claimed to be the fastest growing city in Maharashtra. Nasik has prospered the most in the past 20 years.

In addition to supplying the name to the famed Nassak Diamond, the city is known for its picturesque surroundings and pleasant climate. The Godavari River flows through Nasik from its source, which lies to the southwest of the city, in Trimbakeshwar Nasik Urban Agglomeration (Nasik UA) has a (projected year 2008) population of 1,620,000 and a total area of 264.23 km² which makes it the fourth largest urban area in Maharashtra in terms of population. Nasik is the third most industrialized city in Maharashtra after Mumbai and Pune.
Nasik is one of the world's holiest Hindu cities. Kumbhmela is held here once in 12 years along with four other cities in India. Lord Rama along with Lakshmana and Sita spent 14 years of his exile at Tapovan near Nasik. The city came under the rule of Mughal in 16th century and was renamed Gulshanabad. It is also noted for its participation in freedom struggle. Freedom fighters like Veer Savarkar and Anant Kanhere, Game Developer Niraj Kulkarni were born in Nasik.

Known for its beautiful and picturesque surroundings, flourishing valleys, Nasik is home to many vineyards and orchards. Today, Nasik is rated as one of India's fastest growing cities. The city saw a fast uplift of development from 2002 with malls, infrastructure, educational institutions etc. Nasik is known for its pleasant and cool climate, picturesque surroundings, high standard of living, greenery and well-developed infrastructure. Raam kund, where the people put the ash of their dead dear ones to let them get "Mukti". Hindu religion has it that Lord Rama, the King of Ayodhya, made Nasik his home during his 14 years in exile. At the same place Lord Laxman, by the blessing of Lord Rama, cut off the nose of Surpanakha and thus this place was named as "Nasik" (From Sanskrit word 'Nasika'). Several other references to the Ramayan era can be found in Nasik, which includes the Sita Gumpha caves, from where Sita, Lord Rama's wife, was abducted by Ravana. Nasik in 150 BC was believed to be the country's largest marketplace.

The city got its present name in 1818 when the Peshwas got control of the city.[7] The Peshwa rule however, did not last long and the British captured Nasik in the very same year. In 1840, one of the first modern libraries of Maharashtra (then, the Presidency of Bombay) was founded at Nasik.

Some of the major events in history of Nasik in the 1860s are-
1862 : Nasik Road railway station was built.
1864 : Nasik Municipality formed
1869 : Nasik district formed.
Nasik also participated in the freedom struggle of India. On December 21, 1909, 17-year-old Anant Kanhere shot the Collector of Nasik, Jackson in a theatre named Vijayanand theatre, where he had gone to see a play Sharada. Jackson died on the spot. The people involved in the incident, Anant Kanhere, Krishnaji Karve and Vinayak Ramchandra Deshpande were sentenced to death by hanging and were hanged soon after.

In 1914, Karmveer Ravaheb Thorat, Bhausaheb Hire, Annasaheb Murkute, founded the Nasik District Maratha Vidya Prasarak Samaj (NDMVP), prominent educational institute in Nasik. The founders name was later give to K.T.H.M. college. The K.R.T. Arts, B.H. Commerce & A.M. Science College, Nasik (Popularly known as KTHM College) was established in 1969. The College is situated on magnificent campus on the bank of river Godavari.

In 1930, the Nasik Satyagraha was launched under the leadership of Dr. Babasaheb Ambedkar for the entry of Dalits in Kala Ram temple. In 1931, a meeting of the Bombay Province Charmkar Parishad was organised at Nasik to work out the Chambhars' position with regard to the Second Round Table Conference in which Babasaheb was going to participate. In 1932, Babasaheb organized his temple entry movement for the abolition of untouchability in Nasik. On October 31, 1955, the Government of India inaugurated a press at Nasik for printing government stationery.

Nasik is located amidst high mountains. Nasik is located in northern Maharashtra at 600m (1 968 ft) from the mean sea level. The river Godavari originates from Trimbakeshwar (24 km from Nasik) and flows through various parts of the city. The river forms the northern boundary of the city in some areas and then flows through the old residential settlement in the city. Nasik lies on western edge of the Deccan Plateau which is a volcanic formation. The soil here is primarily black which is favorable for agriculture. Prashant Koli, India's renowned Agricultural Scientist said;" It's the best in North Maharashtra Region due to its iconoelasticity" The total land area of the city (Municipal Limits) is about 259.13 km² which makes it the third
largest urban area of Maharashtra after Mumbai Metropolitan Region and the Pune and Pimpri Chinchwad Urban Region (together as Second).

3.2.1 History of Nasik district

In the 18th century, the present-day Nasik district was part of the Maratha Confederacy, within the territory controlled directly by the Maratha Peshwa. The district contains several old hill forts, the scenes of many engagements during the Anglo-Maratha Wars. The present-day district was initially divided between Kandesh and Ahmadnagar districts of Bombay Presidency, a province of British India. Nasik district was created in 1869. The population in 1901 was 816,504, showing a decrease of 3% in the decade 1891-1901. The principal crops were millet, wheat, pulse, oilseeds, cotton and sugar cane. There were also some vineyards, and much garden cultivation. Yeola was an important centre for weaving silk and cotton goods. There were flour-mills at Malegaon, railway workshops at Manmad and Igatpuri, and cantonments at Deolali and Malegaon. At Sharanpur was a Christian village, with an orphanage of the Church Missionary Society, founded in 1854. In 1861 the main northeast line of the Great Indian Peninsula Railway was completed across the district, and in 1878 a chord line was completed between Manmad, on the northeast line in Nasik district, and Dound, on the southeast line in Pune district.

From India’s independence to 1960, Nasik district was part of Bombay State, which in 1960 split into the states of Maharashtra and Gujarat.

3.2.2 Geography of Nasik district

Nasik district has an area of 15,530 square kilometres. It is bounded by Dhule district to the north, Jalgaon district to the east, Aurangabad district to the southeast, Ahmadnagar district to the south, Thane district to the southwest, Valsad and Navsari districts of Gujarat to the west, and The Dangs district to the northwest.

The Western Ghats or Sahyadri range stretches from north to south across the western portion of the district. With the exception of the westernmost few villages, the western
portion is hilly, and intersected by ravines, and only the simplest kind of cultivation is possible. The western slope of the Ghats is drained by several rivers, including the Daman Ganga River, which drain westwards to the Arabian Sea.

The larger eastern portion of the district, which lies on the Deccan Plateau, is open, fertile, and well cultivated. The Chander Range, which runs east and west, forms the chief divide of the plateau region. The Godavari River originates in the district and drains east towards the Bay of Bengal, and all the streams to the south of the Chander Range, including the Kadwa and Darna, are tributaries of the Godavari. To the north of the Chander Range, the Girna River and its tributary, the Mosam, flow westward through fertile valleys into the Tapti River.

Figure: 3.1

POLITICAL MAP OF NASIK DISTRICT

Source: www.mahrashtramaps.com
3.2.3 Geographical Location of Nasik district

Nasik district is situated in north western part of Maharashtra. It lies between 19°35′ and 20°50′ north latitude and between 73°16′ and 74°56′ east longitude and falls in parts of Survey of India degree sheets 46-H, 46-L and 47-E and 47-I. The district has a geographical area of 15530 sq.km. It is surrounded by Dhole district in the north, Dangs and Surat district of Gujarat State in the North-West, Jalgaon in the east and northeast, Ahmednagar in the South, Aurangabad in the southeast and Thane in the west and south west. The district headquarters is located at Nasik Town. For administrative purpose four divisions have been formed namely Nasik, Niphad, Malegaon and Peth. The district is further subdivided in to 15 talukas viz., Nasik, Igatpuri, Dindori, Peint, Surgana, Deola, Satana, Kalwan, Chandwad, Niphad, Sinner, Yeola, Malegaon, Nandgaon and Trimbakeshwar.

3.2.4 Demography of Nasik district

As per 2001 census, the population of the district is 49.94 lakhs. The district has 18 towns and 1931 villages. Nasik is one of the largest district in Maharashtra in terms of area and population. The district forms part of Godavari basin (Southern part) and Tapi basin (northern part). Godavari and Girna are the main rivers flowing through the district.

According to the Census of India, 2001, Nasik had a population of 1,076,967. Males constitute 54% of the population and females 46%. Nasik had an average literacy rate of 74%, higher than the national average of 64%; male literacy was 80%, and female literacy was 66%. In Nasik, 14% of the population is under 6 years of age. In the same year (census year 2001) the Nasik Urban Agglomeration had a population of 1,152,326[13] and thus it was the fourth largest urban area of Maharashtra State after Mumbai, Pune and Nagpur. The projected population of Nasik urban agglomeration (which includes abutting urban areas like Deolali) as on 1 January 2009 is 16,20,000.[4] Only 3% of Nasik lives in Slum.22 Oct 2010
3.2.5 Climate and Rainfall

The climate of the district is on the whole is agreeable. The climate of Nasik district is characterized, by general dryness thought the year except during the south-west monsoon season. The winter season is from December to about the middle of February followed by summer season which last up to May. June to September is the south-west monsoon season, whereas October and November constitute the post-monsoon. The maximum temperature in summer is 42.5°C and minimum in winter is less than 5.0°C. Relative humidity ranges from 43% to 62%.

The normal annual rainfall in the district varies from about 500 mm to 3400 mm. It is minimum in the north eastern part of the district and increases towards west and reaches a maximum around Igatpuri in the western ghat. The chances of receiving normal rainfall are maximum (50 to 55%) in the north eastern part around Malegaon and Nandagaon and minimum in the central part of the district. The study of negative departures of the annual rainfall over normal reveals that major part of the district (about 75%) falling east of Western Ghats comprising almost entire Sinner, Niphad, Surgana, Kalwan, Satane, Chandwad, Yeola talukas and parts of dindori, Peint and Malegaon area. The average annual rainfall for the period 1998 to 2007 ranges from about 541 mm (Devali) to 3486 mm (Igatpuri).

Nasik has a mild climate for most of the year apart from the hot summers which last from March to mid-June. The city has a semi-arid climate under the Koppen climate classification. The period from June to September is the (South West) Monsoon Season, which sees about 620 mm (25 inches) of rain. The city experiences a mild, dry winter from November to February, with warm days and cool nights, although occasional cold waves can dip temperatures. The maximum temperature ever recorded in the city was 44.8 °C (108.3 °F) on 12 May 1960 in Nasik. The lowest temperature recorded was 0.6 °C (33.1 °F) on 7 January 1945 in Nasik.
3.2.6 Rainfall in Nasik district

Though average rainfall of the District is between 2600 and 3000 mm, there is wide variation in the rainfall received at various blocks. Most of the rainfall is received at various blocks. Most of the rainfall is received from June to September. The maximum temperature in summer is 42.5 degree centigrade and minimum temperature in winter is less than 5.0 degree centigrade. Relative humidity ranges from 43% to 62%. Climate of the Nasik is generally compares with that of Banglore and Pune because of its pleasant nature. However in recent years it is noticed that the temperature is increasing and the rainfall is decreasing due to industrialization and fast deforestation.

Table 3.1

Tahasilwise Rainfall in Nasik District in last few years (Fig. In Millimeter)

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Tahasil</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Malegaon</td>
<td>408.6</td>
<td>630</td>
<td>535.8</td>
<td>360.3</td>
<td>605.2</td>
<td>471.9</td>
</tr>
<tr>
<td>2</td>
<td>Baglan</td>
<td>321</td>
<td>374.7</td>
<td>597.7</td>
<td>514</td>
<td>666</td>
<td>424.7</td>
</tr>
<tr>
<td>3</td>
<td>Kalwan</td>
<td>311</td>
<td>481</td>
<td>868</td>
<td>615</td>
<td>869</td>
<td>625.5</td>
</tr>
<tr>
<td>4</td>
<td>Nandgaon</td>
<td>696</td>
<td>340</td>
<td>553</td>
<td>323</td>
<td>454.4</td>
<td>524.5</td>
</tr>
<tr>
<td>5</td>
<td>Surgana</td>
<td>1109.5</td>
<td>1524.7</td>
<td>2043.6</td>
<td>1887</td>
<td>2451</td>
<td>1807.2</td>
</tr>
<tr>
<td>6</td>
<td>Nasik</td>
<td>767.5</td>
<td>619.7</td>
<td>812.2</td>
<td>855.4</td>
<td>986</td>
<td>613.4</td>
</tr>
<tr>
<td>7</td>
<td>Dindori</td>
<td>536</td>
<td>463</td>
<td>866.7</td>
<td>741.5</td>
<td>1074</td>
<td>697.6</td>
</tr>
<tr>
<td>8</td>
<td>Igatpuri</td>
<td>2072.6</td>
<td>2972</td>
<td>2844.3</td>
<td>3508.2</td>
<td>3835</td>
<td>3442.1</td>
</tr>
<tr>
<td>9</td>
<td>Peint</td>
<td>1232</td>
<td>1660.5</td>
<td>1771.9</td>
<td>2069.2</td>
<td>2584.7</td>
<td>2278.6</td>
</tr>
<tr>
<td>10</td>
<td>Niphad</td>
<td>538</td>
<td>463.6</td>
<td>671.6</td>
<td>498</td>
<td>985.7</td>
<td>481.7</td>
</tr>
<tr>
<td>11</td>
<td>Sinnar</td>
<td>554.7</td>
<td>383</td>
<td>436</td>
<td>665.8</td>
<td>629.8</td>
<td>516.8</td>
</tr>
<tr>
<td>12</td>
<td>Yeola</td>
<td>496.5</td>
<td>471</td>
<td>440.4</td>
<td>286</td>
<td>726</td>
<td>488.5</td>
</tr>
<tr>
<td>13</td>
<td>Chandwad</td>
<td>463</td>
<td>515</td>
<td>697.7</td>
<td>364</td>
<td>720</td>
<td>570.6</td>
</tr>
<tr>
<td>14</td>
<td>Trimbak</td>
<td>1477</td>
<td>1799.3</td>
<td>2119.7</td>
<td>2253</td>
<td>2459</td>
<td>2278.6</td>
</tr>
<tr>
<td>15</td>
<td>Deola</td>
<td>405</td>
<td>436.5</td>
<td>367</td>
<td>299</td>
<td>434.8</td>
<td>625.5</td>
</tr>
</tbody>
</table>

Source: Nasik district Gazzate 2008-2009
3.2.7 Geomorphology and Soil Types

The district forms part of Western Ghat and Deccan Plateau. Physiographically Nasik district comprises varied topography. The main system of hills is Sahyadri and its offshoots viz., Satmala, Selbari and Dolbari hill ranges. These hill ranges along with eastern and southern plains and Godavari valley are the distinct physiographic units. The northern part of the district falls under Tapi basin and is drained by easterly flowing Girna river along with its tributaries, whereas the southern part of the district falls under Godavari basin and is drained by Godavari river and its tributaries. Other important rivers in the district are Damanganga, Vaitarna, Darna, Kadva, Aram, Mosam, Panjan and Manegad.

The soils of the district are the weathering products of Basalt and have various shades from grey to black, red and pink colour. The soils occurring in the district are classified in the categories namely lateritice black soil (kali), reddish brown soil (mal), coarse shallow reddish black soil (koral), medium light brownish black soil (barad). In general the soils are very fertile and suitable for growing cereal and pulses. The black soil contains high alumina and carbonates of calcium and magnesium with variable amounts of potash, low nitrogen and phosphorus. The red soil is less common and is suitable for cultivation under a heavy and consistent rainfall.

Table 3.2
Soil type, characteristics and area in hacters

<table>
<thead>
<tr>
<th>S. No</th>
<th>Soil type</th>
<th>Characteristics</th>
<th>Area in ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Laterite and non laterite soils</td>
<td>Well drain, deficient in lime, $\text{pH}$ 5-6, Low in nutrient, high leaching</td>
<td>70400</td>
</tr>
<tr>
<td>2.</td>
<td>Reddish brown soils</td>
<td>Porous soils, absence in N,P,K,lime and organic matter, $\text{pH}$ 7-7.5, low fertility status, high leaching</td>
<td>496645</td>
</tr>
<tr>
<td>3.</td>
<td>Medium black soils</td>
<td>Heavy clay texture, $\text{pH}$ 7.5-8.5, deficient in N and P, rich in K, poor aeration.</td>
<td>321760</td>
</tr>
<tr>
<td>4.</td>
<td>Coarse shallow soils</td>
<td>Light texture, low clay content, $\text{pH}$ 6-7.5, deficient in N,P,K.</td>
<td>647255</td>
</tr>
</tbody>
</table>
3.3 Agriculture in Nasik district

Bajra, Rice & Jowar are the main kharif crops of Nasik district. Cotton & groundnuts are also grown here. Bajra is the main crop in the eastern parts, especially in Malegaon, Baglan, Yeola, Nandgaon and Chandwad talukas. Rice is mainly grown in the western parts of the district.- Igatpuri, Peth, Nasik and Surgana talukas. Jowar is grown on a large scale in Malegaon, Nandgaon, Baglon, Chandwad & Kalvan talukas though it is common in other talukas also. This crop is grown on a large scale in the Rabi season as well. Groundnut is grown in all parts of the district but Malegaon,
Baglan, Nandgaon and Kalwan talukas produce more of it. Cotton is produced by Malegaon, Baglan & Kalvan talukas on a small scale. Besides these crops, several pulses like Udad (black gram), Moong (green gram) and Tur are grown here. Jowar, wheat and gram are grown in the district during Rabi season. Jowar is common in almost all the talukas. However, in Yeola, Dindori, Sinnar & Kalvan talukas, it is grown on a large scale. Wheat is grown in DIndori, Niphad, Baglan, Yeola & Nasik talukas. Gram is grown in all the talukas. Onion is grown in plenty in Lasalgaon, Niphad, Nasik, Sinnar & Malegaon areas. Brinjal, Cabbage, Cauliflower, Tomato, Cucumber, carrot, potato and coriander are some of the vegetables grown in the district.

Nasik is known as “Grape City”. Nasik district is known for certain irrigation crops like Sugarcane, Grapes Onions and other vegetables. Sugarcane is the main irrigated crop of the district. Niphad, Baglan, Yeola, Malegaon and Sinnar talukas produce large quantities of sugarcane. Nasik, Niphad, Dindori & Kalvan talukas have many vineyards.

Mango export- Recently, at Lasalgaon, the center for fumigation of mangoes to be exported has been started.

3.3.1 Irrigation Facilities in Nasik district

The district also identified as tribal by the State Government. Many important rivers of Maharashtra originate in the district. Godavari which is popularly known as Ganga of South India originates at holy place Trimbakeshwar. Another major river is Girna. Other rivers are Darna,Mosam, Aram, Vaitarna, Manyad and Kadwa.

DARNA DAM :- Darna dam is situated at 20 Km. from village Wadivarhe on the Nasik Mumbai highway. This is a masonry dam constructed by British Government in 1916. The total length of dam is 1634 meters, and the maximum height of the dam is 28 meters. There are 50 automatic Reynolds type gates for passing the discharge of 2017.55 cumecs (71250 cusecs). In 1972 additional 6 radial gates of size
12.19 x 4.27 m. are constructed for passing the discharge of 1318.40 cumecs (46560 cusecs). There are 6 irrigation outlets on left bank and 2 irrigation outlets on right bank. The total catchment area at the dam site is 404 Sq.Km. The total Live storage of the dam is 202.42 MCM (7149 mcft). The Gross irrigation command area is 79697 Ha. and irrigation command area of the dam is 33170 Ha.

GANGAPUR DAM:- This dam is near village Gangawadi and is 10 Km. from Nasik city. This is a earthen dam constructed in 1954. The total catchment area of the dam is 357.4 Sq.km. The total dam length is 3810 m. and maximum height of the dam is 36.57m. The total Gross storage of the dam is 215.88 MCM (7624 mcft) and total Live storage is 203.76 MCM (7200 mcft). The length of the waste weir is 102 m. There are total 9 radial gates of size (9.15x6.10 m.) having the discharge capacity of 2294 cumecs (81013 cusecs). The dam has two canals, the left bank canal is 64 Km. long and right bank canal is 30 Km. long. The total irrigable area of this dam is 15960 Ha.

### 3.3.1 a. Major Projects

<table>
<thead>
<tr>
<th>Name of Project</th>
<th>Location</th>
<th>Year of Completion</th>
<th>Height in Mtr</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gangapur</td>
<td>Gangawadi, Tal Nasik</td>
<td>1965</td>
<td>36.57</td>
<td>203.76</td>
</tr>
<tr>
<td>Karanjwan</td>
<td>Karanjwan Tal-Dindori</td>
<td>1974</td>
<td>39.31</td>
<td>175.57</td>
</tr>
<tr>
<td>Waghad</td>
<td>Waghad, Tal- Dindori</td>
<td>1980</td>
<td>46.92</td>
<td>76.48</td>
</tr>
<tr>
<td>Ozarkhed</td>
<td>Ozarhed Tal- Dindori</td>
<td>1984</td>
<td>35.30</td>
<td>67.96</td>
</tr>
<tr>
<td>Tisgaon</td>
<td>Tisgaon, Tal- Dindori</td>
<td>2000</td>
<td>24.90</td>
<td>15014</td>
</tr>
<tr>
<td>Chanakapur</td>
<td>Chanakapur, Tal-Kalwan</td>
<td>1918</td>
<td>39.01</td>
<td>79.97</td>
</tr>
<tr>
<td>Girana</td>
<td>Panjhan, Tal- Nandgaon</td>
<td>1969</td>
<td>56.60</td>
<td>524</td>
</tr>
<tr>
<td>Darana</td>
<td>Darana, Tal- Igatpuri</td>
<td>1916</td>
<td>28.04</td>
<td>202.42</td>
</tr>
</tbody>
</table>

Source: Nasik district Gazzate 2008-2009
3.3.1 b Medium Projects

<table>
<thead>
<tr>
<th>Name of Project</th>
<th>Location</th>
<th>Year of Completion</th>
<th>Height in Mtr</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashyapi</td>
<td>Khadyachi Wadi, Tal- Nasik</td>
<td>2005</td>
<td>41.75</td>
<td>52.43</td>
</tr>
<tr>
<td>Alandi</td>
<td>Kathewadi, Dindori</td>
<td>1985</td>
<td>29.28</td>
<td>27.46</td>
</tr>
<tr>
<td>Haranbari</td>
<td>Ambapur, Tal-Baglan</td>
<td>1982</td>
<td>34.02</td>
<td>34.77</td>
</tr>
<tr>
<td>Keljhar</td>
<td>Keljhar, Baglan</td>
<td>1986</td>
<td>30.95</td>
<td>17.10</td>
</tr>
<tr>
<td>Nagya Sakya</td>
<td>Hinganwadi, Tal- Nandgaon</td>
<td>1994</td>
<td>23.09</td>
<td>15.62</td>
</tr>
<tr>
<td>Bhojapur</td>
<td>Bhojapur, Sinnar</td>
<td>1973</td>
<td>29.65</td>
<td>10.21</td>
</tr>
</tbody>
</table>

Source: Nasik district Gazzate 2008-2009

3.3.2 Rivers & Dams

The district is drained by two chief rivers, the Girna and the Godavari, and their tributaries, the watershed between these being the Satmala range. Apart from these there are a number of small Konkan rivers draining westwards into the Arabian Sea.

Konkan rivers: Innumerable small streams flow down the western scarp of the Sahyadris draining towards the Arabian Sea.

Chondi: A small portion of the headwaters of the Chondi river rising on the scarp west of Hatgad and flowing into the Ambika river is included within the district limits.

Kavera: The Kaveri rises near Pimpalsond and has a small course running north-westwards in Surgana before it joins the Kaveri outside the state.
**Sasu:** The Sasu or Tan river rises near Wangan in Surgana and flows in a north-westerly direction past Karanjale and Guhijambhulpada and then in a south-westerly direction to leave the district after running along the boundary for about a kilometer.

**Man:** The Man or Bamti river rises near Walutzira and flows westwards and leaves the state about a kilometer and a half south-west of Umbarthana. In Gujarat state the Sasu and the Man unite to form the Auranga river.

**Nar:** The Nar river rises on the northern slopes of the Kem hill and has a long winding westerly course and flows below Waghdhond, Bhintghar, Umbharade and Waghadi and forms the district boundary between Madhuri and Karanjul Petare before leaving the state to join the Par outside.

**Par:** The Par rises on the southern slopes of the Kem hill to the east of Rokadpada (Rokri) and flows nearly due southwards for about 5 km. and then turning westwards has a long winding course throughout which it forms the boundary between Surgana on the north and Dindori and Peint on the south. Beyond this it forms the state boundary between its course a little above Bhati and Kahandulpada.

**Barik:** The Barik is a small river forming a tributary of the Par on the northern side taking its course in the Chowitta hill just north of Barhe. In the lower portion of its course up to its confluence with the Par it forms the state boundary. Besides Barik, the Par receives a number of small streams draining the northern part of Peint.

**Damanganga:** The Dawan river, known as the Damanganga in its upper course, rises near Mangone (Mangunpada) and flows southwards passing by Patali, Pawarpada, Usthala and turns westwards near Ekadare.. The principal river makes a slight bend into the district at Borpada so as to include the village of Khamshet on the right bank within the district and turns and runs westwards forming the state boundary for the rest of the course in the district leaving it to the north-west of the Deodongri village.

**Val:** The headwaters of the Val nadi rise on the northern slopes of Bhaskargad, Phani dongar, Harishgd and Brahma dongar (separated from the Kikvi of the Godavari
system by the Brahma dongar and its northward continuation as an imperceptible water divide) and unite on the boundary of the district as the Val nadi.

**Vaitarna:** The headstreams of the Vaitarna rise on the southern slopes of the Trimbak-Anjaneri range and combine into three southward flowing streams which unite to form the Vaitarna a little north of Dapure. The Vaitarna from here has a very winding course southwards and goes round Zarwad (Jarwar) Budruk. Due south of it, the river is joined by its tributary Alvand nadi, whose headstreams rise in the same Trimbak Anjaneri range on the southern slopes of the Bhaskargad, Phani dongar and Harish dongar, which form the divide between these and those of the Val river flowing northwards.

**Bhima:** The Bhima river rises in Tringalvadi hill to the north-west of Igatpuri and flows nearly due southwards as far as the railway line. Here it turns abruptly and flows north-westwards to join the Vaitarna, its lower course also serving as the district boundary. The Vaitarna, as well as its tributary the Bhima nadi, must have been originally, rising in the steep scarp slope of the Sahyadris, in the neighbourhood of the Thal pass.

**Girna:** The Girna rises just south of Cherai village at about 8 km. South-west of Hatgad in the Sahyadris and flows nearly east along a wide bed, with high banks in some parts, but as a rule, low enough to admit of the use of water for irrigation. The stream of water during this portion of its course is comparatively small, and confined during eight months of the year to a narrow strip or sandy bed. Several dams have been built across the main stream, irrigating large areas of garden land. After its course through Kalwan, Satana and Malegaon talukas, it winds its way northeastwards as it nears the Jalgaon frontier. The Girna in its upper course receives several rivers of nearly equal size as itself and equally useful for irrigation.

**Tambdi:** The first considerable stream that joins it, on the left or north bank, is the Tambdi, which similarly rises in the Sahyadris north of Hatgad and joins the Girna at Chandkapur.
Aram: The Aram river rises just south of Salher fort and after a short southerly course flows eastwards and south-eastwards to join the Girna 5 km. below Thengode. The width of its main valley is considerable, the banks are low, and the land at the lower portion is particularly well suited to irrigated crops.

Mosam: The headwaters of the next and northernmost tributary of the Girna rise in the Sahyadris south of Hanuman hill. The river runs eastwards past Mulher, Taharabad and Jaykheda. It is joined by a number of affluents especially from the northern side. Among the latter may be mentioned the Tungadi nala, Bhevri nala, the Alvali nala and the Vatoli nala, all draining the southern slopes of the Galna hills. It joins the Girna about 3 km. below Malegaon.

The rest of the right or south bank tributaries of the Girna further up, those up to Malegaon are of small size but useful for irrigation. The chief of them are the Masa nadi joining the Girna just below Chandkapur, the Baindki and the Markandi draining the northern slopes of the Saptashring and Markinda hills respectively, uniting together under the name of the latter river to flow past Kalwan to join the Girna a kilometer to the north, the Khatki nala and the Kolthi nadi passing by Devla, the Kharf nadi, and the ParsuI. There are also a few minor tributary streams such as the Suki nala and the Gulandi nala.

Panjan: The panjan rises to the east of the Chandvad fort on the southern slopes of the Satmalas and after an initial southerly course, curves eastwards and then makes its way north-eastwards past Manmad by a gap cut through the Satmalas. It drains parts of Chandvad, Malegaon and Nandgaon talukas before it joins the Girna at Panjan in the last mentioned taluka.

Maniad: The Maniad rises a little south-west of Rajapur south of the Satmala range as the Kher nala and after a short east-south-east course bounded by a ridge to the north of it, turns abruptly to a point little beyond the district, where after it turns abruptly northwards continuing the course of a tributary and re-enters the district. After cutting a passage in the hills near Manikpunj, it continues its northerly course
and after receiving the Sakhi (Sakhambari) nala draining past Nandgaon, turns northwards to the boundary of the district. Then it forms the district boundary for some distance and then after a short course in Chalisgaon taluka of Jalgaon district joins the Girna at Saigaon in that taluka.

Bori: Here it may be mentioned that the Bori nadi, another independent tributary of the Tapi besides the Girna, rises a little above Mahad and Chirai on the southern slopes of the Galna hills and has a small course eastwards within the district.

Godavari: The Godavari, or the Ganga as it is locally called, is the most celebrated river not only of this district, but of the whole of the peninsular India. The principal course lies just below the scarp of the western side of the Trimbak amphitheatre, where is a temple, reached by a flight of well built steps. A larger and more distant branch takes its rise in the ridge that joins the Trimbak and Brahma mountains in a region of higher rainfall owing to greater exposure to moisture bearing winds. But here there is no imposing natural formation to lend its aid in supporting the divine origin of the stream, so this branch is neglected in favour of its smaller rival. After passing the town of Trimbak, the Godavari turns to the west, cutting a deep and rocky bed through the Ghat matha country. After about 15 km. it receives the abovementioned tributary, called the Kikvi, on the north.

Kashyapi: The Kashyapi (Kas) river rising a little above Wagira in the Sahyadris and augmented by the waters of the Wotki and the Muli, is the next stream to join the Godavari. Just at this confluence is constructed the Gangapur dam, whose storage backs up both the main river and its tributary, the Kashyapi. Five kilometers further to the east, at Jalalpur, the Godavari is met by the Alandi, a small stream flowing from the north. A few hundred metres below the meeting point, the Godavari dashes down in a narrow chasm in a bed of rocks, some 10 metres high, and owing to the narrowness of the passage and the height of the rocky walls, the fall is accompanied by a noise far above what would be expected from the average body of water that passes through. About 450 metres below the falls of Gangapur, the bed of the river is crossed by a remarkably well marked dyke of the kind usually found in trap
formations. It has been worn down by the stream, but at each bank the broken edges are so clean cut as to give it the appearance of a wall built by a human agency; and this is, in fact, the character it bears among the neighbouring villagers. About 10 km. east of Gangapur the river passes the town of Nasik. Here it turns slightly southwards, and at the bend near the point of its entry into the town, a second ridge of rocks crosses the bed, causing a slight fall of about 2 metres.

A few kilometers after its meeting with the Darna, the Godavari swerves to the north-east, till the Banganga, from the north-west, meets it on the left. The course of the main stream then tends more decidedly south. At Nandur-Madhmeshwar, the Kadva, a second large affluent, brings considerable increase to the waters of the Godavari. Taking advantage of this as well as of the Lake Beale storage on the Darna, a dam has been constructed here with left and right bank canals which irrigate lands in Nasik and Niphad talukas and also the Kopargaon taluka in Ahmadrnagar district. After a course from Trimbak of about 100 km. the Godavari leaves Nasik for Ahmadrnagar district.

**Darna:** The Darna rises on the northern slopes of the Kulang hill fort in the Sahyadris about 13 km. south-east of Igatpuri. Though the straight line distance from the source to its confluence with the Darna is only about 50 km., it has a very long and winding course as much and half again of that distance. Its banks are like those of the Godavari below Nasik, of no great height, but broken by scores of small streams, making the passage along the banks of the river very difficult for laden carts. It is crossed by a bridge at Chehedi on the Nasik-Poona road, on the way to Sinnar. The bed is for the most part wide and sandy, though at times, the water flows over rocks. A dam is constructed across the Darna near Nandgaon village giving rise to the storage known as Lake Beale, which is visible for considerable distance while travelling by train from Bombay to Nasik on the right hand side. This has enabled the construction of a pick-up weir on the Godavari river at Nandur-Madhmeshwar to divert the water into the Godavari canals.
On the right bank, at Belu, the river Darna receives the Kadva, not the large river of that name, but a small stream flowing north-eastwards between Mhordan-Katliia hills on the west and Kalsubai-Bitangad-Patta range on the east in the south-eastern part of Igatpuri taluka. On the left bank the Darna has only three tributaries of any size, and they hold little water during the hot season. They are the Waki, the Unduhol and the Valdevi.

**Jham:** The Jham river, the easternmost tributary of the Godavari on the south bank, flows nearly-parallel to the Bhokhan nadi and joins the main river outside the district.

**Banganga:** Among the north bank tributaries, the Banganga rises a little to the north-west of Ramsej hill and flows in a general easterly course passing by Ozar where a dam crosses it to divert the water into canals on both sides for irrigation. After passing Sukene it joins the Godavari.

**Kadva:** The Kadva rises in the Sahyadris to the north-west of Dindori in the angle between the former and the Satmala range, and crosses Dindori from north-west to south-east. It is rocky both in bed and bank, but the bed is wide, and the average volume of water is small compared with the area through which it flows. Irrigation works of considerable importance have been established on it.

**Unanda:** The Unanda is the first of these having a long course nearly parallel to the Satmalas and receives several small streams draining its slopes. Among these are the small Dev nadi flowing past Vani, the Parasheri river flowing by Pimpalgaoon Basavant, the Netravati nala flowing by Vadner, the Vainatha nadi joining it near Niphad and formed by the union of two rivers, the Vadali flowing by Vadali Bhoi and the Shelu.

**Gui:** The Gui nadi rises in the Satmalas just west of Chandavad and is joined at Maralgoi by a similar stream, the Pimpalad nadi, rising a little further west and flowing past Lasalgaon. After a long course southwards, it joins the Godavari just outside the limits of the district.
3.3.4 Crops of Nasik district

Nasik district having diversified physiographic, climatic conditions is rich in agriculture with variety of crops, such as kharif, rabi, vegetables and fruits along with variety of cash crops.

3.3.4 a. Kharif crops

Bajra, Rice and Jowar are the main kharif crops of Nasik district. Cotton and groundnuts are also grown here. Bajra is the main crop in the eastern parts, especially in Malegaon, Baglan, Yeola, Nandgaon and Chandwad talukas. Rice is mainly grown in the western parts of the district - Igatpuri, Peth, Nasik and Surgana talukas. Jowar is grown on a large scale in Malegaon, Nandgaon, Baglan, Chandwad and Kalvan talukas though it is common in other talukas also. This crop is grown on a large scale in the Rabbi season as well. Groundnut is grown in all parts of the district but Malegaon, Baglan, Nandgaon and Kalwan talukas produce more of it. Cotton is produced by Malegaon, Baglan and Kalvan Talukas on a small scale. Besides these crops, several pulses like Udad (black gram), Moong (green gram) and Tur are grown here.

3.3.4 b. Rabi crops

Jowar, wheat and gram are grown in the district during Rabbi season. Jowar is common in almost all the talukas. However, in Yeole, Dindori, Sinnar and Kalvan talukas, it is grown on a larger scale. Wheat is grown in Dindori, Niphad, Baglan, Yeola and Nasik talukas. Gram is grown in all the talukas.

3.3.4 c Irrigated crops:

Nasik district has very rich diversified physiographic, climatic and rainfalls. Because of this there are variety of irrigated crops such as sugarcane, onion, ground nuts and variety of fruits such as grapes, pomegranates, mango, banana, orange, guava etc. Vegetables such as Brinjal, Cabbage, Cauliflower, Tomato, Cucumber, Carrot, Potato and
Coriander are grown in the district.

3.4 Administration

Nasik is the headquarter of Nasik District and is also the headquarter of Nasik Revenue Division of Maharashtra. The city is administered by the Nasik Municipal Corporation which came into existence in 1982 by combining Nasik Municipality and surrounding civic bodies e.g. Nasik Road Municipality. A planned area was introduced in Nasik which was designed and executed by CIDCO which is now administered by the Nasik Municipal Corporation. Deolali, which is also a part of the Nasik urban agglomeration, has a separate civic body called the Deolali Cantonment Board.

3.5 Economic Overview of the district

Nasik today is one of the fastest growing cities of India and has even been identified as a tier-2 metro. The city's economy is driven chiefly by the engineering and manufacturing industry (which has been around since the seventies) as well as the progressive agriculture in area surrounding the city. Auto majors such as Mahindra & Mahindra, BOSCH and Original Equipment Manufacturers (OEMs) such as VIP, Samsonite, CEAT etc. have their plants here and have spawned a huge network of auto component suppliers and engineering ancillary services. It is also a pharmaceutical hub with presence GlaxoSmithKline and Fem.

In recent years, Nasik has also carved a niche for itself as India's "Napa Valley" and locally established wine brands such as "Sula" and "Zampa" have attained international acclaim. Modern efforts are on to promote the growth of an export-oriented rose farming and wine industry in the district. It is home to an important thermal power plant (Eklahare) and a National Treasury Printing Press (India Security Press at Nasik Road). There are five "Industrial Zones" in the Nasik area and its outskirts (Satpur, Ambad, Sinnar, Igatpuri and Dindori). Nasik has a number of sugar mills. It is also chief exporter of white onions and pomegranates.
Nasik is deemed "the third most industrialized city of Maharashtra after Mumbai and Pune", mainly due to extensive industrial development in recent times. In Maharashtra, “Nasik” is situated at a distance of approximate 200 km from economic capital of country Mumbai (Bombay) as well as Pune. Nasik already has a huge Companies and government institutions. Some of are as follows:

Defence Ministries Fighter Plane (MIG) Production Unit HAL ( Hindustan Aeronautics Limited) in Ozar
National Treasury printing press (India Security Press at Nasik Road)
Thermal Power Plant in Eklahare
Currency Note Press (CNP)
Artillery Centre at Deolali
Maharashtra Engineering Research Institute (MERI)
Maharashtra State Health University
Yashwantrao Chavan Maharashtra open university (YCMOU)
Maharashtra Police Academy (MPA)

3.6 Industries of Nasik district

3.6.a Major Industries

The HAL plant is an aircraft manufacturing plant located 10 miles (16 km) from Nasik employing about 7000 people. Manufacturers who have set up plants in the Nasik MIDC area include: Bosch India - previously MICO Bosch, Mahindra and Mahindra, CEAT, Thyssen Krupp, Samsonite, Atlas Copco, Crompton Greaves, ABB, GlaxoSmithKline, Glenmark pharmaceuticals L&T, Schneider Electric, Jindal Steel, Kirloskar, IBP, Coca Cola, Siemens, Matrix Laboratories Ltd., Visteon Automotive System India, and Warehouse.sipra engineers pvt Ltd. (Diecasting company).
3.6.b IT Parks

Recently the government decided to prepare IT parks in the city of Nasik. Nasik is also emerging as a BPO/IT destination and is in list of the selected Tier II cities for BPO/IT companies; companies like Datamatics, WNS, Winjit Technologies Pvt. Ltd., I-Tech System, Solutions(A Software Development co providing software for Courier and Logistics Industry), Nasik Online, Netwin and http://vtelnetsolutions.com/ gloStream , which develops electronic medical record software and practice management solutions, have a presence in Nasik. Legrand at Sinner.

3.6.c Government-run industries

The India Security Press – The India Security Press (the National Treasury Press) was the biggest employer in Nasik for many decades until the late eighties when a service-based economy started to thrive. The existence of the India Security Press is very beneficial to Nasik citizens. Hindustan Aeronautics Limited is located in Ojhar Township about 20 km from the city, where it is designs, manufactures and overhauls a variety of aviation products from basic trainers to highly sophisticated supersonic fighters, helicopters, transport aircraft, engines, accessories and systems.

Education

3.7 Education in Nasik

Nasik has been the educational hub of North Maharashtra. The city has two state-run universities, the Yashawatrao Chavhan Maharashtra Open University and the Maharashtra University of Health Sciences. Colleges in Nasik are affiliated to Pune University. Today the city houses a large number of private and governmental educational institutions offering higher education in Medicine, Engineering & Technology, Architecture, Pharmacy, Management among others. Indian Railway has
also established its Advanced Training Institute for electrical engineers namely, Indian Railway Institute of Electrical Engineers IREEN here at Nasik.

3.8 Transport services

3.8.1 Roads

Nasik is one of the major road junctions of India. The Mumbai-Agra national highway(NH3) runs through Nasik. Nasik is also connected to Pune with NH-50. Nasik is a major road junction of major state highways. It is well connected to Surat, Aurangabad, Mumbai, Pune, Ahmednagar, Dhule and many other cities. It has been seeing reasonable growth in terms of road infrastructure in the past few years or so. A privately built and tolled expressway is nearing completion between Mumbai and Nasik. The National Highway Number 3 (NH3) is being converted into a multi-lane tolled road.

3.8.2 Bus services

Buses are run by the Maharashtra State Road Transport Corporation to various cities, towns and villages around Nasik. They operate services from multiple bus terminals (New and old Central Bus Stand among others. The new CBS is the principal bus terminal. The city is well connected to major cities in the state Mumbai, Pune, Kolhapur, Satara, the Konkan Region, Aurangabad and other adjoining areas. Private bus operators run services buses to large cities around like Mumbai, Pune, Nagpur, Ahmedabad, Surat, Vadodara, Indore, Kolhapur etc. Transport services are provided by Taxis in the city which ply to Mumbai, Thane, Shirdi, Pune and a few other locations.

3.8.3 Railways

Nasik Road Railway Station, Early morning crowd waiting for the Panchvati Express to Mumbai. Nasik Road Railway Station is an important railway station on the Mumbai-Kalyan-Manmad-Bhusaval (and further to Delhi or Kolkata) sector of the Central Railway Division of Indian Railways which was the first ever electrified
section in India. The railway station is about 11 km away from the city center (and hence called Nasik Road instead of Nasik). Also the Railway Minister announced rail wroughts to Dahanu road. A new bottling plant also will set up at Nasik. Train from Hyderabad will start shortly. Trains to Shirdi also passes from Nasik.

Deolali is another station (about 10 minutes train travel towards Mumbai) which serves the population residing in the Deolali Cantonment More than 50 trains pass through this station daily and it is thus connected to Mumbai, Aurangabad, Nanded, Hyderabad, Bhopal, Agra, Delhi, Nagpur, Kolkata, Jamshedpur, Guwahati, Jammu, Madgaon, Mangalore and so on. Although the station connects to most northern and eastern parts of the country, the southern sector still needs consideration. Major passenger traffic is between Mumbai and Nasik. Fast-moving intercity trains like the Panchvati express and the Godavari Express connect this station to Mumbai. These trains originate from Manmad and principally cater the large number of business travelers from Manmad and Nasik to Mumbai and suburban area.

3.8.4 Airways

Kingfisher Airlines runs only one daily flight in the evening at 17:30 hrs to Mumbai from Nasik's Ozar Airport located at some 24 km from the city center. Deccan Airways also used to operate a flight to Mumbai from Ozar airport a couple of years ago which was later taken off due to lack of passengers. Nasik has another airport at Gandhinagar with a shorter runway and hence unfit for modern-day passenger aircraft. The government run Vayudoot used to operate a service to Mumbai from this Gandhinagar Airport during the 1980s.

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