### CHAPTER - II

### THE REGION - KOLHAPUR DISTRICT

- 2.1 Introduction
- 2.2 Location
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### 2.1 INTRODUCTION

The Kolhapur district is one of the prosperous district of Maharashtra State. The district has several resources. The district is famous for its scenic beauty. It has several tourists attraction centres. It has lot of tourism potential. Its latent capacity of tourism can be support the regional development. The urban and rural people should get advantage of tourism development.

Kolhapur district is a region of contrast. There is a variety in geographical, industrial and cultural characters.

Topographically, region has large diversity. Surface features of the region are varied in nature. There are two parts of the district, eastern and western, distinct in physiography of the region. Western part of the region is hilly part of the Sahyadri. In contrast eastern part is plain region. Similarly we can see the black cotton soil towards east and laterite soil to the west part of the region. The basalt rocks also find in hilly area of the region.

The region has good vegetative cover to the west. The six western tahsils of the Kolhapur district have substantial forest cover. The Dajipur Abhayaranya is one of the most important forest attraction to the tourists. In comparison to the west, the eastern part of the region has less vegetative cover.

The climate of the region is mild and temperate. The temperature of the region decreases from east to west. Summer average temperature of Khidrapur (eastern part) is 29.5°C and that of the

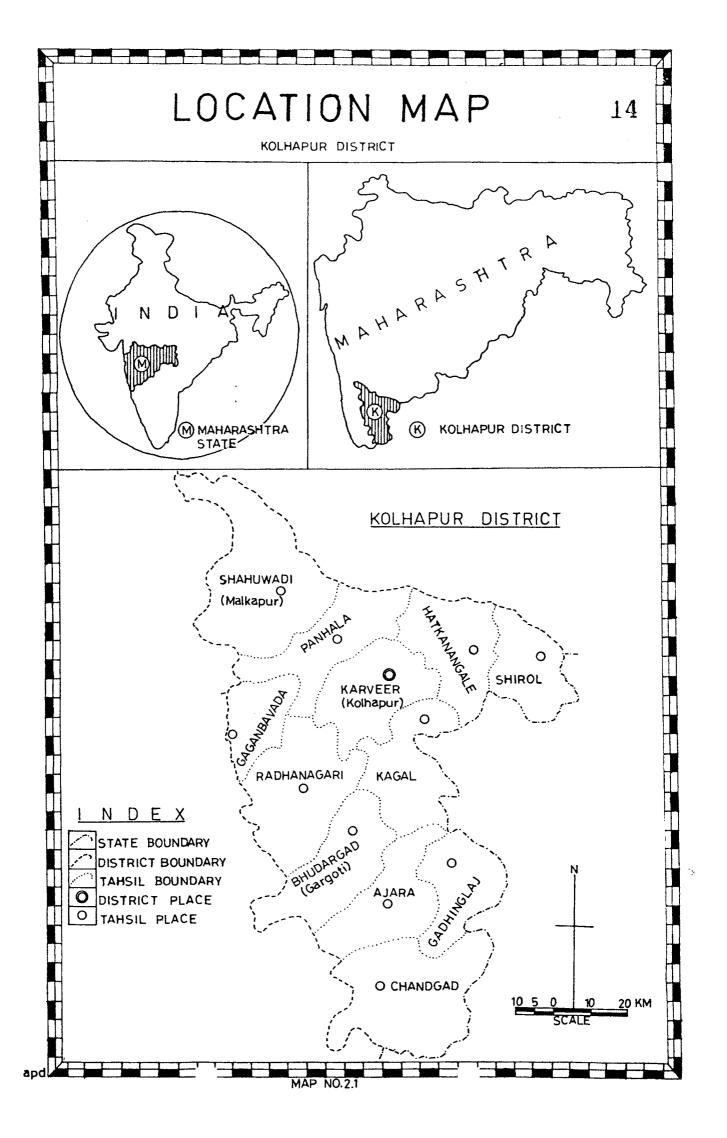
Vishalgarh (western part) is 25.5°C. There is a great variation in the amount of rainfall from tract to tract. At Gagan Bavada in the western part of the district, more than 6,600 mm rainfall is recorded while in the extreme east in Shirol, the rainfall is only 620 mm.

The region has number of rivers which flow generally, west to east. The rivers in their upper course flow into forest areas and gorges in Ghats region, but the lower course of the rivers are rather in the plane region.

The location of the region is in between 'Konkan' and 'Desh'. To the west there are Konkan districts as Ratnagiri and Sindhudurg. To the east there are Desh districts as Sangli, and Belgaum (Karnataka State). We can experience the Konkan and Desh, characteristics in the region.

The region is famous for it's sugarcane production and sugar factories. The eastern part of the region has more sugar factories as compared to the western hilly region. The rural settlements have many agro-based industries, in contrast, urban settlements have more automobile industries.

There is a great variation in cultural activities of the region. We can see the combination of culture of 'Konkan and Desh' in the region. In western part the 'Pola' festival celebrates, according to Konkan region and eastern part it celebrates according to Desh region.



The different types of people are found in the region. We can see the people of traditional thinking as well as people of modern thinking in the region, but majority of the people in the region are religious minded.

#### 2.2 LOCATION:

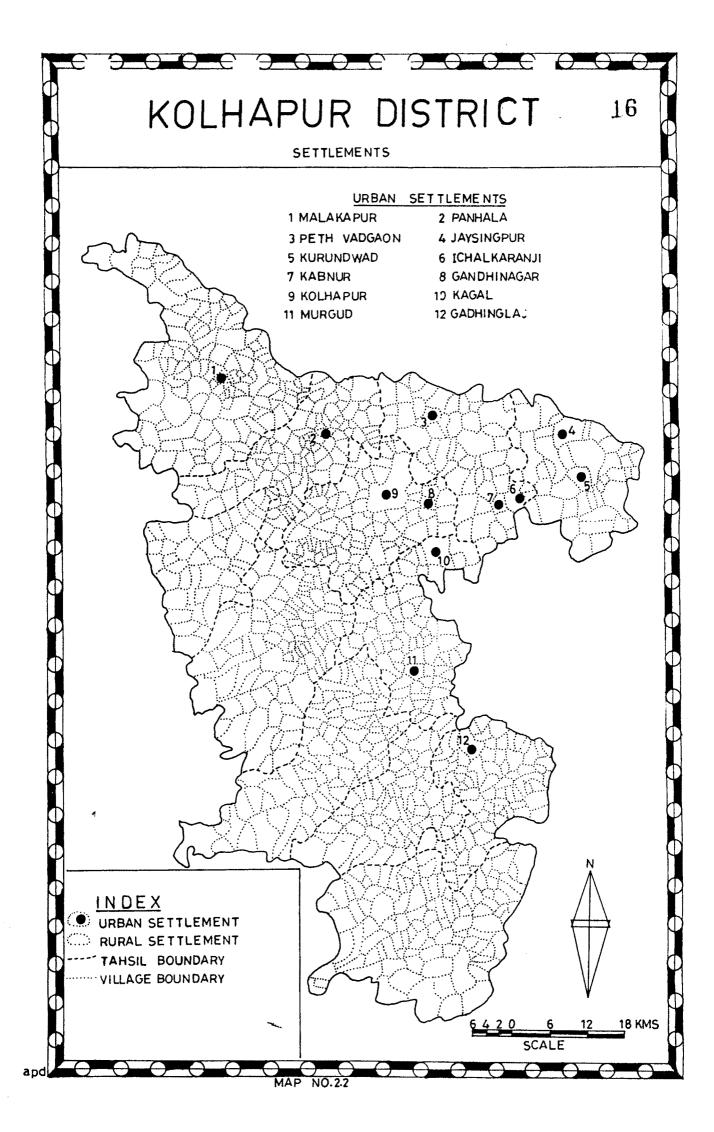
Geographically Kolhapur district extends from 15°43' to 17°10' North latitude and from 73°40' to 74°42' East longitude. It is located in south Sahyadrian hill ranges of Maharashtra State. The district is enclosed on the north by Sangli district, on south and east by Belgaum district of Karnataka State, and on west by Ratnagiri and Sindhudurg districts.

The total area of the district is 8,059 sq.kms. which consists of 2.62 percent of the area of the Maharashtra State (Map 2.1).

Politically, the district is divided into twelve tahsils. These are Shahuwadi, Gagan Bavada, Radhanagari, Bhudargarh, Ajara, Chandgarh, Panhala, Karveer, Kagal, Gadhinglaj, Hatkanangle and Shirol. There are 1,039 villages and 12 urban settlements in this region (Map 2.2).

### 2.3 TOPOGRAPHY:

The topography of the district is influenced by geological complexities and the topography influences the economic activities. It also helps to create natural places of attractions for tourism. Kolhapur district is a part of the Sahyadri hill ranges. The total



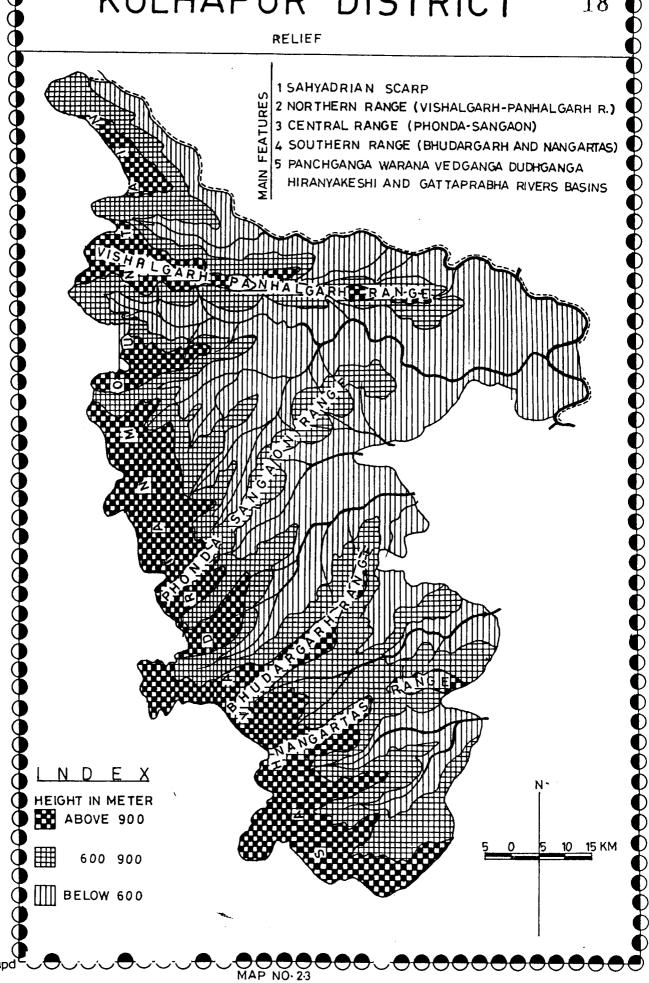
length is about 154 kms between Warana river to the north and Tilari river to the south. The district comprises Western Ghats ranges which spread towards east or stretches in the morth easterly direction. The western ghat of Kolhapur district has several Ghats (pass). These are Amba, Anuskura, Bhui Bavada, Karul, Phonda, Hanmanta, Amboli, Ram and Kodali. The ghats are very attractive. The landscape looks very nice. The deep valleys and the Konkan landscape towards west is a great wonder. The region has several buttes, cuestas and messas. These messas have historical importance. The messas (Garh-Fort) like, Vishalgarh, Shivgarh, Ranganagarh, Manohargarh, Pargarh are the gift given by nature to this region.

The Sahyadrian off-shoots divide the tableland into numerous valleys of different width and depth, rendering much of the land undulating, uninhabitable and uncultivable. The top basaltic foundation is marked by occasional terraces and the plateaus which extend over the off-shoots of eastern ranges upto 45 kms, reaching upto Panhalgarh and Jotiba hill near Kolhapur city. The central area, Gagan Bavada, Radhanagari and Bhudargarh tahsils are short but provide excellent catchment areas for number of rivers, venerated as 'Ganges' in local areas.

The southern part of the district has minor hill ranges of Ajara and Chandgad tahsils. The north easterly directed off-shoots of Sahyadri has several messas like, Panhalgarh, Jotiba hill, Pavangarh, Bhudargarh, Samangarh, Mahipatgarh, Kalanandigarh and Gandharvgarh which enhance the beauty of the region.

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The Deccan trap influences the landscape of the district. The southern extremeties, the rocks of Dharwar and lower Kaladagi series introduce a change in topography. The district, as a whole, is a part of Deccan tableland with the Sahyadrian scarp, forming the most prominent features along the western margin, from which several hill ranges emerge and develop an eastward trend. Some of these ranges extend upto 40 kms, while other are short. All the ranges have flat tops and steep escarpments, on the flanks which possess several terraces. The ranges have an average height of 300 to 500 M above the valley floors.

The rivers have carried out the valleys leaving the harder and resistant material as the residual hill ranges with broad bases. The hills rise in a series of terraces culminating in summit level, noted for its remarkably flat tableland, separated by low saddles, the laterite caps mark many of these plateau tops. The topography called as 'trap-topography' can be observed in main Sahyadri range as well as in Vishalgarh - Panhalgarh ranges.

### Hill Ranges :

The Sahyadri range and its off-shoots is only main system of hills. Kolhapur district is divided into four different heads as, i) Sahyadrian Scarp ii) Northern ranges iii) Central ranges and iv) Southern ranges (Map 2.3).

i) <u>Sahyadrian Scarp</u>: The Sahyadrian scarp is not a continuous range of hills. It is broken in several places by stream erosion on both the flanks. The watershed between eastern and western

drainage is marked by a succession of hills separated by low saddles. The height of the crestline varies from 600 M to 1,038 M. At many places the headward erosion by western rivers has pushed back the crestline feature into the plateau. The truncated valleys of the plateau streams and the phenomenon of river capture have created many gaps in the crestline.

Northern Ranges: Out of the several ranges extending towards east from the main Sahyadrian crest, the Vishalgarh-Panhalgarh range is the northern most. The range maintains a fairly uniform level at a height of over 1,000 M upto a distance of a 50 km and extend for another 30 km at a comparatively lower level, abutting Krishna basin in the east. The summits of this range are remarkably flat upto Panhalgarh and Jotiba hill. Flanks of Panhalgarh range show intense gully erosion and development of minor ranges north and south. The gaps and saddles have cut the continuety of the ranges. These gaps are traversed by roads. The slopes are marked with a good forest cover in the west which deteriorates into poor scrubs and grasses towards the east. The structural terraces on either side of the range from belts of well developed agriculture supporting a large number of villages.

The northern ranges are very good for tourism. The major tourists attractions are in these ranges, like Vishalgarh, Masai Dongar (hill), Panhalgarh, Pavangarh, Jotiba hill, Bahubali, Allam Prabhu Plateau, etc.

iii) Central Ranges: In the central part of the district the hill ranges assume the same height as that of Panhalgarh range but differ from the latter into two respects. The central ranges have a south-west to north-east trend and they extend only upto a length of 25 kilometer. The central ranges include the range separating Kumbhi Valley from Dhamani Valley, Tulsi Valley from Bhogawati Valley. Phonda-Sangaon range extends to a stream of 55 km right upto Sangaon village. A branch of Phonda-Sangaon range extends upto the city of Kolhapur. The summit plateaus of these ranges are not uniformly developed. A number of saddles are created in the ranges due to greater erosion. These are useful for transport.

The central ranges have more erosion, therefore they don't have hill top attraction. The Shivgarh near the crest is the only exception. The ranges are famous for a dense forest. The Dajipur Abhayaranya (extended as Radhanagari Abhayaranya) is in this hill ranges. This area is rainfed hence the several dams are constructed. The Radhanagari dam, Tulasi dam, Kalamawadi dam are the places of great interest to the tourists.

iv) <u>Southern Ranges</u>: The Kagal range and Bhudargarh range are the important southern ranges. There is sparse vegetative cover.

Lower terraces are utilized for cultivation and settlements.

The southern ranges are favourable for the tourism.

There are many attractive centres in the southern ranges. Western part of southern ranges has a dense forest cover, which can be

developed as 'Abhayaranya'. The main hill station attractions are Bhudargarh, Rangamagarh, Samangarh, Pargarh, Mahipatgarh, Gandharvgarh and Kalanandigarh.

### 2.4 CLIMATE:

The district is divided into two zones marked by broad climatic differences - (a) Western mountainous track caused by the Sahyadri with its spurs with small valleys running in between these spurs and (b) the main eastern plain with little broken range hills. The height above mean sea level in the western region ranges from 654 M in the valleys to 914 M on the crest of the Sahyadri. The elevation in the eastern plain varies from 500 M to 580 M.

The climate of the district is mild and temperate. The range of temperature between the minimum and maximum is comparatively small. In the hilly west, with large forest areas and heavy rainfall, the weather is always humid during the rainy season and cool in summer. The hill traps tamper the hot winds prevalent in April, May and June, and maintain a pleasant climate.

The great heat during these months cause occasionally heavy shower with easterly winds, thunder, lightening and hail. These occasional heavy showers become more frequent and heavy as the south-west monsoon draws near. On the whole the climate of Kolhapur district is pleasant and agreeable during greater part of the year. The climatic year may be divided into three short seasons namely (i) a moderately warm wet season from June

to October, (ii) cool dry season from November to February and (iii) hot dry season from March to June. The rainy season lasts from June to October and climate is warm during these months. The climate in winter season is dry. January is the coldest month of the year. The hot season start in March and ends in June. The days from 10.00 a.m. to 5.00 p.m. during the summer season are hot, the nights are fairly cool. The nights are rarely sultry except in the far eastern part of the district April and May are the hottest months of the year.

TABLE 2.1: Kolhapur district - temperature in °C (1984).

Sr. No.	Season	Mean maximum	Mean minimum	Average
1	Cold	31.25	16.40	23.83
2	Hot	34.80	22.05	28.23
3	Rainy	28.10	20.80	24.45

The mean maximum temperature is 31.25°C in cold, 34.80°C in hot and 28.10°C in rainy season. The mean minimum temperature is 16.4°C in cold, 22.05°C in hot, and 20.8°C in rainy season. The average temperature is 23.83°C in cold, 28.23°C in hot, and 24.45°C in rainy season (Table 2.1).

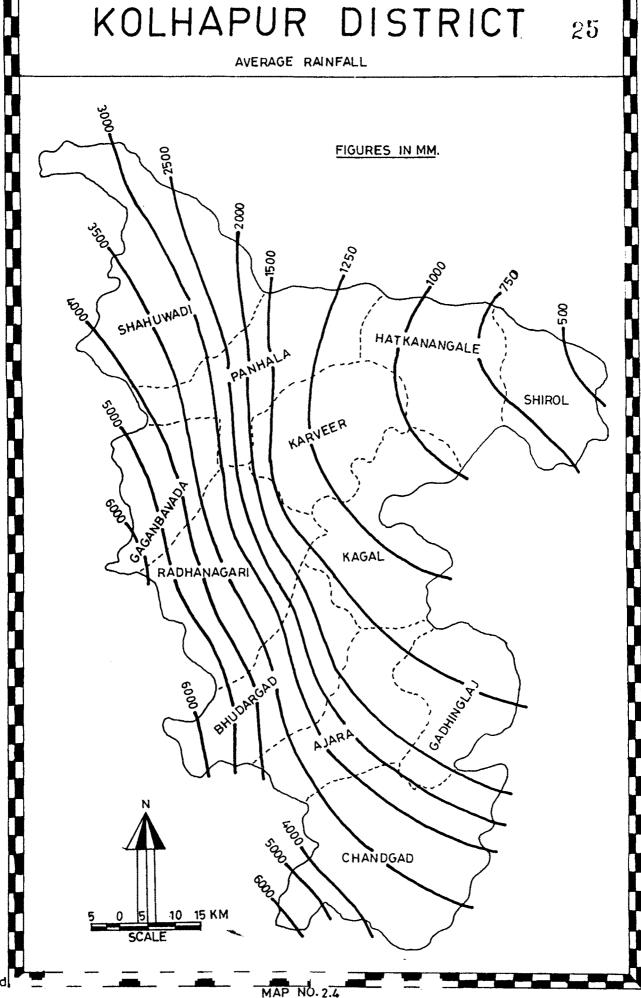
Rainfall is very important. It varies from track to track in Kolhapur district. The western part consists the Sahyadri range

and a series of small valleys and has rugged set up. It receives heavy rainfall and has cool moist climate. The eastern part is an open tract known as Desh which becomes more flat and plain as it passes into the hot and dry season of the Central Deccan. The western part comprises Shahuwadi, Panhala, Gagan Bavada, Bhudargad, Radhanagari, Ajara and Chandgad tahsil. While the remaining tahsils viz. Karveer, Hatkanangle, Shirol, Kagal and Gadhinglaj form the eastern part. These two main parts are further divided into smaller climatic regions according to the topographic differences affecting the rainfall. Since the north-easterly winds blow-up from the coast upto the west of the Sahyadri towards the Desh, the rainfall steadily decreases (Table 2.2).

TABLE 2.2: Kolhapur District - rainfall.

C		Actual Rainfall (mm)			Normal
Sr. No.	Tahsil -	1961	1971	1984	rainfall (mm)
1	Karveer	1745	890	747	1070
2	Panhala	3040	1327	1034	2080
3	Hatkanangale	830	535	502	525
4	Shirol	515	530	331	585
5	Kagal	1160	460	853	817
6	Gadhinglaj	2990	772	795	965
7	Chandgad	4620	2235	2537	2700
8	Ajara	3150	1735	1789	3140
9	Bhudargad	2530	1192	1351	1570
10	Radhanagari	5163	2770	3323	`3820
11	Gagan Bavada	6763	3850	4965	<b>623</b> 0
12	Shahuwadi	2750	1455	1485	3480

## KOLHAPUR DISTRICT



There is a great variation in the amount of rainfall from tract to tract. At Gagan Bavada in the western part of the district, more than 6600 mm rainfall is recorded while in the extreme east in Shirol, the rainfall is only 620 mm. This may be due to the fact that the moisture leaden clouds in their eastward journey strike the crest of Sahyadri and release much of rain there. The less saturated clouds in their eastward journey are not obstructed and therefore the amount of rainfall goes on decreasing from west to east.

According to the rainfall distribution the district can be divided into three tracts. These are (i) heavy rainfall tract where the rainfall exceeds 2000 mm, (ii) the central medium rainfall tract between 1000 mm to 2000 mm and (iii) eastern low rainfall tract below 1000 mm. The heavy rainfall tract incorporates tahsils of Shahuwadi, Gagan Bavada, Radhanagari, Bhudargad, Ajara and Chandgad. The central medium tract incorporates Panhala, Karveer, Kagal and Gadhinglaj. The eastern low rainfall incorporates Shirol and Hatkanangle tahsils (Map 2.4).

According to the rainfall distribution in 1984, the district can be divided into five ranks. These are (i) very high rainfall rank where the rainfall exceeds 4000 mm (ii) high rainfall rank between 2000-4000 mm (iii) moderate rainfall rank between 1000-2000 mm (iv) low rainfall rank between 500-1000 mm and (v) very low rainfall rank below 500 mm (Map 2.5).

## KOLHAPUR DISTRICT 27 RAINFALL (1984) SHIROL INDEX RAINFALL IN MM ABOVE 4000 V. HIGH 2000 4000 HIGH 1000 2000 MOD. LOW 500 1000 20 KM BELOW 500 V. LOW MAP NO. 2.5

Like any other western district of the state, Kolhapur district receives its rains mainly between mid June to October. The greater part of the rainfall being supplied by south-west monsoon which receives between mid-June to mid-October. From about mid October the eastern and central parts of the district get rain from the north-eastern monsoon. Very little rainfall is recorded in the western region due to north-east monsoon.

### 2.5 WATER RESOURCES:

Rivers of the district are the main water resources. There are six large rivers in the district. These are the Krishna, the Panchganga, the Vedganga, the Warana, the Dudhganga and Hiranyakeshi. These rivers with their tributaries flow through and drain the district, facilitating extensive irrigation of lands, about 13.95% (1980) of irrigation of the district (Map 2.6 & Map 3.4).

The Krishna is one of the biggest river that drains almost the western Maharashtra, rising at Mahabaleshwar in Satara district. It enters the Kolhapur district at the east of Kanwad village and then southwest upto Nrisinhwadi. The rivers Warana, Panchganga, Dudhganga and Vedganga merge into the Krishna before it leaves the district. The Krishna has gifted Kolhapur district, a big alluvial plain of Shirol and Ichalkaranji. The length of this river in the district is about 65 kms.

29 KOLHAPUR DISTRICT WATER BODIES (RESOURCES) <u> NDEX</u> 1 RADHANAGAR DAM RESERVOIR 2 TULASI DAM RESERVOIR 3 KALAMWADI DAM RESERVOIR 4 RANKALA TANK 5 RAJARAM TANK 6 ATIGRE TANK 7 KRISHNA RIVER 8 WARANA RIVER 9 PANCHAGANGA 10 VEDGANGA 11 DUDHAGANGA 12 HIRANYAKESHI 13 GHATTAPRABHA 14 TILARI DAM RESERVOIR 15 TAMRAPARNI 16 KASARI 17 KUMBHI 18 DHAMANI 19 TULASI 20 BHOGAWATI 21 KADAVI **20KM** 22 KANASA

MAP NO. 2.5

The Panchganga river is formed by the confluence of five rivers, the Kasari, Bhogawati, Brahmi, Kumbhi and Tulasi. In the valleys of those rivers sugarcane is extensively grown by lift irrigation system. The Panchganga falls into the Krishna at Nrisinhwadi. The length of the river is about 136 kms.

The Warana river is an important tributary of the Krishna river. The length of it is about 130 kms. Warana falls into the Krishna near Kothali village of Shirol tahsil. Before its merge with the Krishna, the Warana has formed a large valley in the district in which rice and sugarcane are grown.

The Hiranyakeshi river rises near Awandi village in Sawantwadi tahsil (Sindhudurg district), and after serpentine course in the district, it enters the Karnataka state and finally falls into the Krishaa. Its course in the district is about 80 kms. Sugarcane is grown on the bank of this river by lift irrigation.

Besides, these six rivers, there is one more river namely the Ghattprabha which flows in the district for a length of about only 16 kms.

#### 2.6 FOREST:

The forests in the district are confined to the western half of the district. In the heavy rainfall region, in the extreme west, Jambul, Hirda, Anjan, Suragi, Karvi and Panshi species are found while Mango, Nana, Sissum, Asaa, Kumbha, Dhavada, Kindal, Ainiba, etc. are found in the moist decidous and semi evergreen region. The famous scented wood species

Chandan is found in Ajara and Chandgad tahsils. The dry decidous type of forests are spread for and wide in small patches with species of sissum. Besides Timber, sandlewood, fruit tree, firewood grass, timber, bamboo, hirda, kaju, bibi fruits and minor forest products such as shikekai, cocumbs, honey and wax, karanji seeds are grown in markatable quantities in these forests.

There is 18.61 percent forest area in Kolhapur district, which is 1442.07 sq.kms in area. Radhanagari tahsil recorded highest forest area in the region; which is 279.02 sq.kms in area. On other hand Karvir tahsil has 7.43 sq.kms forest area, which is lowest in the region (Table 2.3).

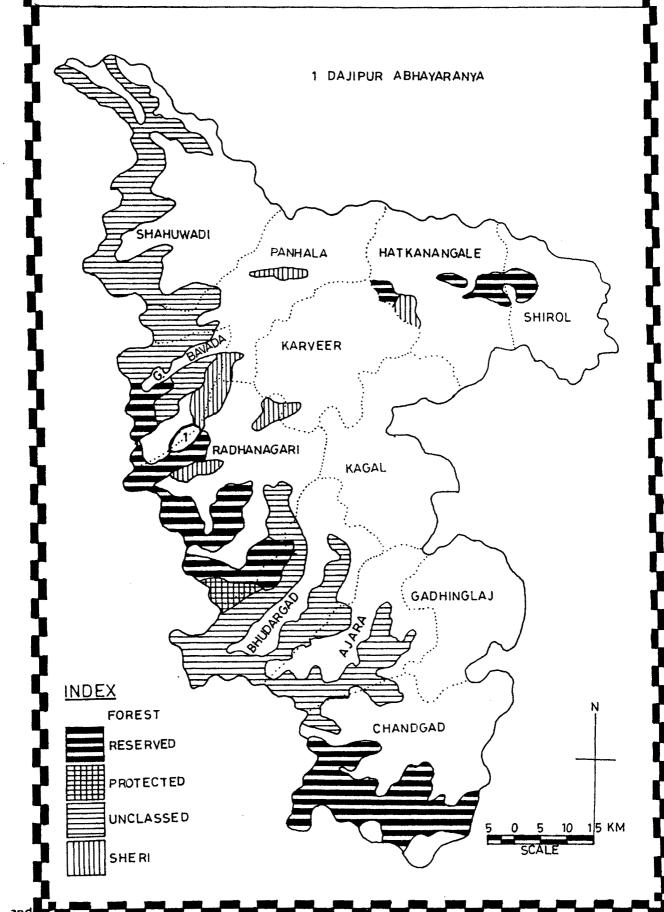
TABLE 2.3: Kolhapur district - Forest area (1985).

Sr. No.	Tahsil	Geogl.Area	Forest Area	% to total Dist.
1	Karvir	671.13	7.43	0.52
2	Panhala	568.71	117.38	8.14
3	Hatkanangle	614.71	13.58	0.94
4	Shirol	503.27	8.96	0.62
5	Kagal	547.54	14.73	1.02
6	Gadhinglaj	481.15	17.46	1.21
7	Chandgad	952.15	248.98	17.27
8	<b>A</b> jar <b>a</b>	548.88	147.96	10.26
9	Bhudargad	644.46	240.20	16.66
20	Radhanagari	892.32	279.02	<b>19.</b> 35
11	Gagan Bavada	282.18	102.38	7.10
12	Shahuwadi	1043.52	243.99	16.92
	District Total	7750.02	1442.07	100.01

### KOLHAPUR DISTRICT

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**FOREST** 



The distribution of forest in the Kolhapur district varies distinctly in western and eastern region. The Karvir, Hatkanangle, Shirol, Kagal, Gadhinglaj tahsils have very low percentage of forest area. The Panhala, Gagan Bavada tahsils have low percentages of forest area. The Ajara tahsil has moderate percentage of forest area. The Chandgad, Bhudargad, Radhanagari and Shuhuwadi tahsils have high percentages of forest area. It clears that the western part of the district has high vegetation cover rather than eastern part of the region (Map 2.7).

The famous Dajipur Abhayaranya (Radhanagari Abhayaranya) is in Radhanagari tahsil.

### 2.7 POPULATION CHARACTERISTICS:

The population of Kolhapur district was only 9 lakhs in 1901. According to 1981 census total population of the district is 2,506,330 which consists of 1,884,308 people living in 1039 villages and 622,022 people living 12 towns (urban centres). The district is dominated by rural population, which is 75.18% of the total population of the district. The geographic divisions of the district have determined and shaped the formation and growth of human settlements. The western and southern hilly areas, covering Shahuwadi, Panhala, Gagan Bavada, Radhanagari, Bhudargad, Chandgad, Ajara tahsils stand out distinctly from the plain lands of Karveer, Hatkanangle, Kagal, Gadhinglaj and Shirol tahsils. The western tahsils are sparsely populated with preponderance of villages with small population, having population

## KOLHAPUR DISTRICT 34 POPULATION (1981) SHAHUWADI URBAN POPULATION RURAL POPULATION 1 SQURE CM. = 20,000 POPULATION **PANHAL A** HATKANANGALE SHIROL GAGANBAVADA KARVEER KAGAL RADHANAGARI **BHUDARGAD** GA DHINGLA 1 AJARA CHANDGAD

density of 150. On the other hand, the eastern tahsils constitute dense rural pockets of the state, having population density of 573.

The western and southern regions have large area covered by hills and forest, no fertile land, small villages having population less than 1000 persons. There is no scope for development of any type of industry, because of lack of resources and small villages. People migrate towards north and east part of the district as the north and north-eastern part is of sugar factories. Villages, therefore, in the western and southern parts are less populated which cause less development of infrastructural and supra-structural facilities and retards socio-economic growth of the region and emergence of growth centres.

On the other hand, in eastern part of the district, villages have infra-structural facilities as these are big settlements and number of the sugar factories in the region. These influence the infra-structural development in the villages which helps the emergence of growth centre.

Karvir tahsil has more rural population (254,539) and urban population (351,392) in the district. Gagan Bavada tahsil has less rural population (70,692) in the district. Chandgad, Ajara, Bhudargad, Radhanagari and Gagan Bavada tahsils are rural tahsils. The The urban and rural people around the tourist centres visit frequently for the trips (Map28).

Density of population for Kolhapur district was 158 in 1951, which increased to 311 in 1981. With the district, the density

varied from 83 per sq.km. in Gagan Bavada tahsil to 903 in Karvir tahsil. Karvir, Hatkanangle and Shirol tahsils are situated in the fertile valleys of Warana, Krishna and Panchganga rivers.

These are densely populated areas, not only in the district but also in the state.

### 2.8 TRANSPORT:

Transport plays important role in tourism development.

The road length per lakh population in Kolhapur district is

200 kms as against 263 kms in the state. The road length per

100 sq.kms is 28.5 kms for Kolhapur district, against the state

average of 43 kms. The Government of Maharashtra has accepted

under minimum needs programme that the villages having 500 popula
tion should be linked by roads (Map 2.9).

Table 2.4 indicates that 16.20 percent villages are not connected by roads, 35.80 percent connected by kaccha roads and remaining 48.00 percent villages are connected by all weather (pakka) roads.

Table 2.4 indicates tahsilwise road length per 100 sq.kms. in Kolhapur district in 1966 and 1978. It is obvious that due to hilly region and rough terrain the road length per 100 sq.kms is low in the western zone. It is as low as 13.5 kms in Gagan Bavada tahsil. It is less than 30 kms per 100 sq.kms in rest of the western tahsils. It is maximum that 46.2 kms per 100 sq.km in Karvir tahsil followed by 45.2 km in Hatkanangle tahsil, 35.6 kms in Panhala tahsil, and 31.6 kms in Shirol tahsil. Thus the lenth of

# 37 KOLHAPUR DISTRICT ROADS TO MIRAJ **INDEX** RAILWAY THE NATIONAL HIGHWAY STATE HIGHWAY DISTRICT ROAD MAP NO. 2.9

TABLE 2.4: Kolhapur District - Villages connected and not connected by roads (31-3-1978).

Sr. No.	Population	No. of villages connected by road	No. of villages connected by kaccha road	No. of willages connected by pakka road	Total number of <b>v</b> illages
1	below 500	63	111	63	237
2	501 to 1000	37	136	115	288
3	1001 to 2000	75	104	149	328
	Above 2000	1	37	192	230
	Total	176	368	519	1083
	<b>Percentage</b>	(16.20)	(35.80)	(48.00)	(100.00)

TABLE 2.5 : Kolhapur District - Tahsilwise length of roads per 100 km<sup>2</sup>.

Sr.	Tahsil	Kms. of road per 100 sq.kms.		
No.	IdiiSII	1966	1978	
1	Karvir	30.29	46.20	
2	Panhala	28.20	35.60	
3	Hatkanangle	25.40	45.20	
4	Shirol	17.60	31.80	
5	Kagal	17.80	28.90	
6	Gadhinglaj	13.70	26.20	
7	Chandgad	09.50	16.80	
8	<b>A</b> jara	17.70	24.20	
9	<b>Bhu</b> darg <b>ad</b>	11.40	23,20	
10	Radhanagari	13.90	25.40	
11	Gagan Bavada	06.10	13.50	
12	Shahuwadi	09.80	16.50	
	District	16.00	28.50	

the road per 100 sq.kms increase from west to east. Table 2.5 also reveals that the increase in the length of roads per 100 sq.kms is uneven. It is more in the eastern tahsils.

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