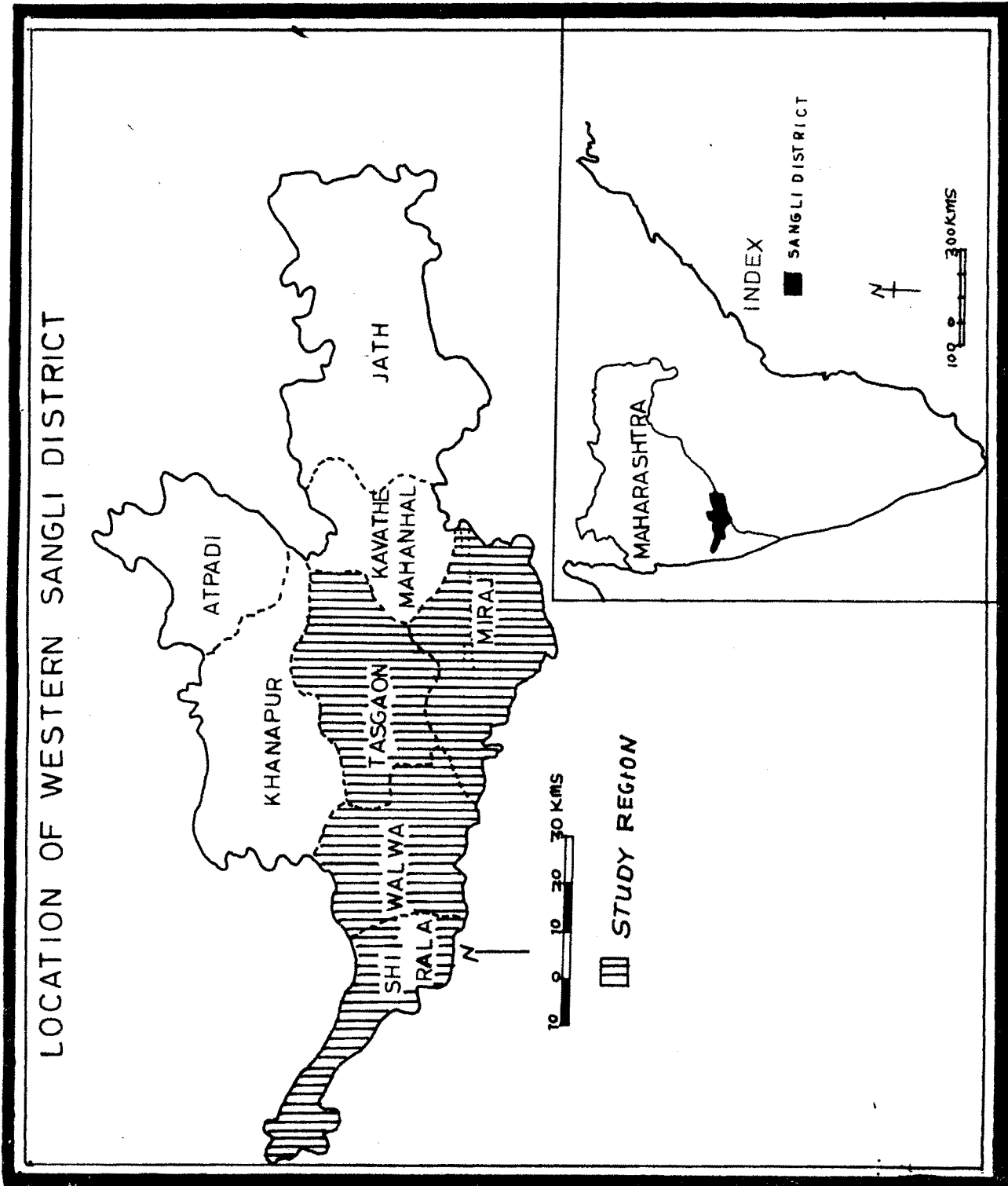


CHAPTER - II

GEOGRAPHIC CHARACTERISTICS OF THE REGION

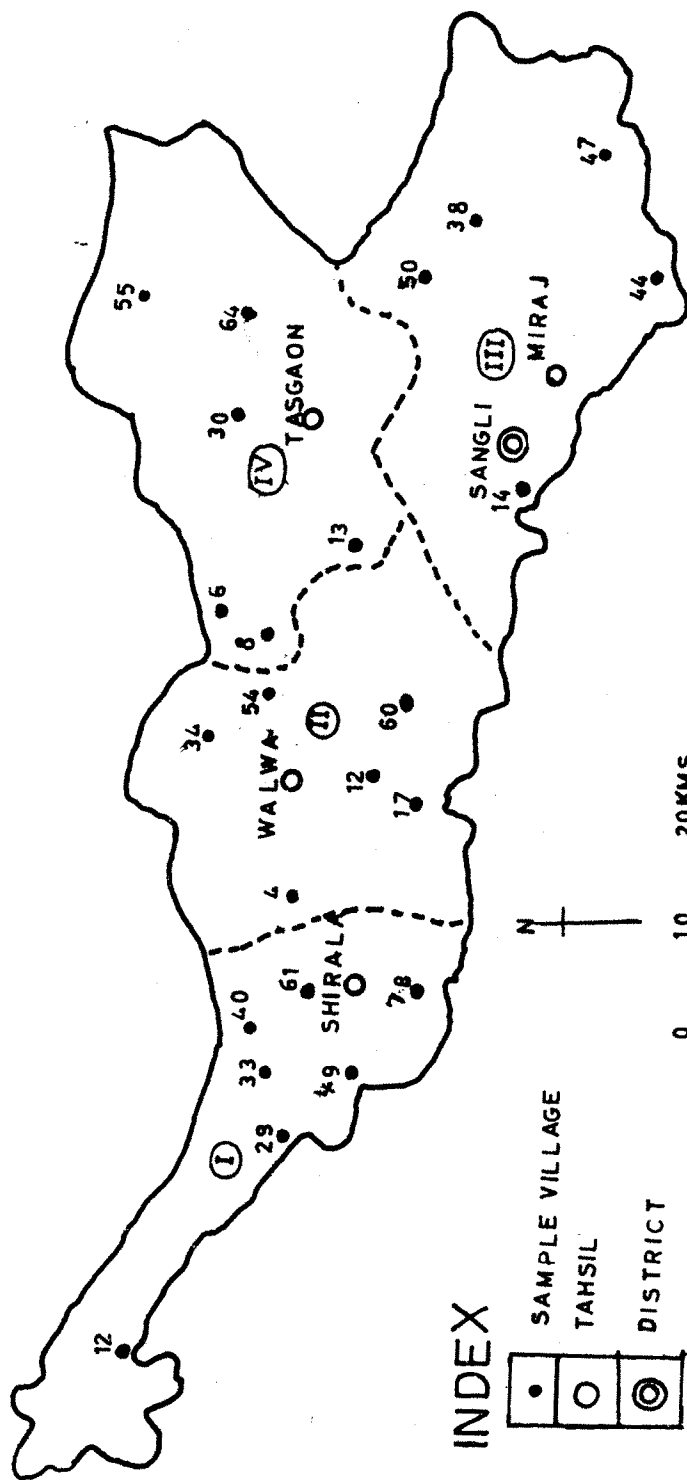
- 2.1 Location and extent of the region
- 2.2 Physiography
- 2.3 Climate
- 2.4 Soil
- 2.5 Rivers



MAP NO 2.1

WESTERN SANGLI DISTRICT

SAMPLE CASE STUDIES



INDEX



• SAMPLE VILLAGE
 ○ TAHSIL
 ⊙ DISTRICT



• 12 CODE NO ACCORDING TO 1971 CENSUS

MAP NO 2.2

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WESTERN SANGLI DISTRICT SAMPLE CASE STUDIES

<u>I) Shirala tahsil</u>	<u>Location code</u>
Petlond	12
Charan	29
Yelapur	33
Dhanavade	40
Rile	49
Padali	61
Fakirwadi	78
<u>II) Walwa tahsil</u>	
Surul	4
Itakare	12
Kurlap	17
Shirgaon	54
Pokharni	60
Rethare Harnax	34
<u>III) Miraj tahsil</u>	
Haripur	14
Gundewadi	38
Narwad	44
Lingnoor	47
Patgaon	50
<u>IV) Tasgaon tahsil</u>	
Kundal	6
Nagrals	9
Ankalkhop	13
Visapur	30
Lode	64
Gourgaon	55

Code numbers according to 1971 census.

2.1 Location and extent of the region :

Sangli district is one of the southern districts of Maharashtra state. The Western Sangli district is the western part of Sangli district (Map 2.1) comprising of four tahsils viz. Shirala, Walwa, Tasgaon and Miraj. It is lying between 16°43' and 17°15' north latitude and 73°41' to 74°50' east longitude. The total geographical area is 3447.3 sq.kms. and population of 1,238,868 with 7 town 360 villages.¹ The neighbouring districts are Satara in the north, Ratnagiri in the west, Kolhapur in the south and eastern side is bounded by the same Sangli district.

The present area of Western Sangli district was, upto 1948, partly included in old Satara district and partly in the former state of Sangli, Kurundwad (senior), Miraj (senior), Miraj (junior) and wadi estates. In 1949 the district was named as South Satara district which included four tahsils of Tasgaon, Khanapur, Walwa and Shirala, transferred from old Satara district and two new tahsils of Miraj and Jath formed out of the princely states. In 1960 the name of South Satara district was changed to Sangli district with its headquarters at Sangli in Miraj tahsil.²

For the administrative purpose the district is at present divided into two sub-divisions; Walwa and Miraj. The Walwa sub-division comprises Khanapur, Shirala and Walwa tahsils, whereas Miraj sub-division comprises Tasgaon, Jath, Navathe Mahankal,

and Miraj tahsils. The Western Sangli district comprises Shirala and Walwa tahsils of Walwa sub-division and Miraj and Tasgaon tahsils of Miraj sub-division.

2.2 Physiography :

The hills of the Western Sangli district may broadly be grouped as follows³ (Map 2.3A).

- 1) Sahyadris, the Bhairavgad - Kandur hills and their spurs.
- 2) The Machhindragad - Kamal Bhairav Dongars
- 3) Mahimangad - Panhala range with its off shoots

1) The Sahyadris, Bhairavgad - Kandur hills :

The main Sahyadris rampart on the west rises over 909 metres, form the highest hill range in the district. The fort Prachitgad is situated on this hill range and the south Tivra pass connecting this district to the Konkan by a footpath. Shirala tahsil consists mostly of the southern slopes of the Bhairavgad - Kandur hills, which spread off from the main Sahyadris in south-easterly direction. The western part upto Charan is fairly well-wooded. Here the hills steeply rise from the river banks leaving little room for tillage. The slopes are covered with dense mixed vegetation with isolated patches of agricultural land. There is a line of springs below the ancient cap of the hills at a level varying from 833.3 metres in the west to 757.5 metres in the east.

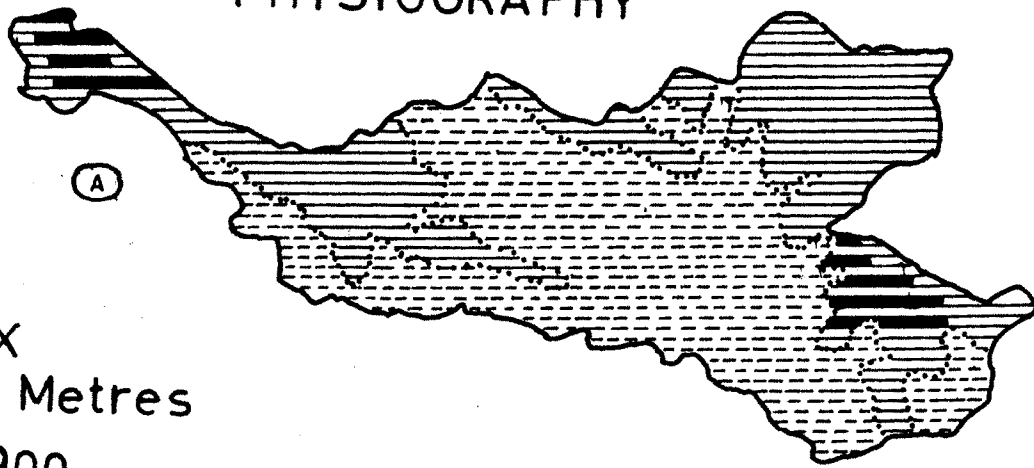
From the main range of Bhairavgad - Kandur hills near Girijawade and Dhamawade several spurs radiate towards south-east

and north-east separating the valleys. The south-easterly spur is broken, being cut across by streams and ends in Mallikarjun Dongar and Santoshgiri hills. There are three spurs extending north-east and east from this main spur, at the ends of which are situated the villages - Wategaon, Nerle and Kameri. All these hills have only narrow flat tops.

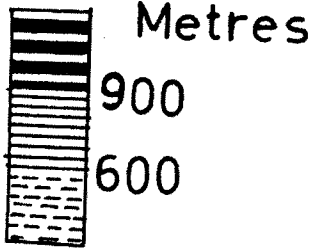
2) The Machhindragad - Kamal Bhairav Dongars :

The Machhindragad - Kamal Bhairav Dongar trending in a north-west to south-east direction, rises fairly up from flood plains of the Krishna but descends more gently to the basin of much smaller Sonhira stream level of which is more than 300 metres above that of the Krishna river. Kundal is situated at the southern end of the Machhindragad. On account of the lower base level of the Krishna, the southern end of the range has been cut into and the watershed has receded due to the capturing of few north-easterly tributaries stream by the more powerful ones of the Krishna. To the north of Machhindragad, these hills continue as Machhindragad - Vardhangad range, which is an off shoot of the Mahadev hills and to which the district boundary approximates. Here also the range presents a steeper slope towards the west of Krishna side and gentle slope to the east. From this range a few spurs extend eastwards and produce between them several valley amphitheatres drained by streams flowing into Nani river, tributary of Yerala.

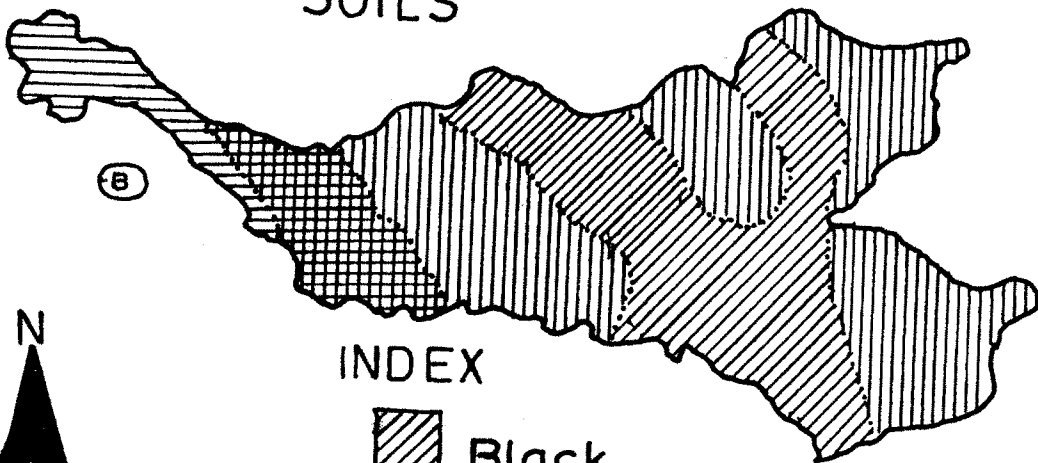
WESTERN SANGLI DISTRICT PHYSIOGRAPHY



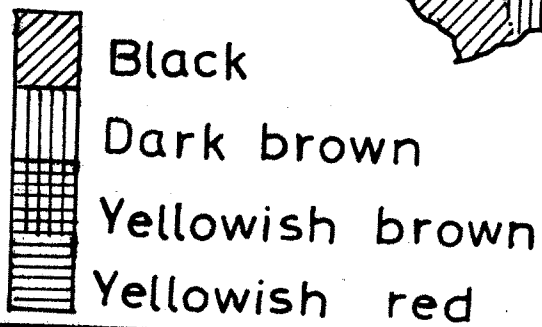
INDEX



WESTERN SANGLI DISTRICT SOILS



INDEX



3) The Mahimangad - Panhala range with off-shoots :

The Mahimangad-Panhala range, another off-shoot of the Mahadev hills lies to the east of Yerale basin. The district boundary passes on this range near Bhairavchi wadi from a westerly spur and then proceeds northward, along this upto about 3.29 kilometres, north of the Taraskhind Ghat. In these hills the land rises in two or three distinct terraces separated by precipitous slope. The Taraskhind Ghat is a major break in this range which is negotiated by the road from Mayani to Dighanchi.

2.3 Climate :

Climate plays an important role in influencing the characteristics of agricultural economy in a region. It can influence the choice of farming system either indirectly through its impact on soil formation or directly through such factor as length of growing season, the occurrence of forest and availability of water, crop growth.⁴

The climate of the Western Sangli district is on the whole agreeable and is characterised by general dryness in the major part of the year. The cold season is from December to about middle of February. The hot season, which follows, lasts till the end of May. June to September is the south-west monsoon season and the two months of October and November, contribute the post monsoon or retreating monsoon season.



2.3.1 Temperature :

In the matter of daily average minimum and maximum temperature ranges not much variation is observed in different zones of the region. The difference is, however, made by the

Table 2.1 The maximum minimum temperature, degrees in centigrade Sangli centre, 1978.

Sr. No.	Month	Maximum temp.	Minimum temp.	Daily range	Mean temp.
1.	January	31.3	14.7	16.6	23.0
2.	February	32.9	15.5	17.4	24.2
3.	March	35.6	17.3	18.3	26.4
4.	April	37.9	20.6	17.3	29.2
5.	May	37.4	22.6	14.8	30.0
6.	June	29.8	21.1	8.7	25.4
7.	July	28.9	21.7	7.2	25.3
8.	August	30.1	20.8	9.3	25.4
9.	September	32.3	17.2	15.1	24.7
10.	October	34.7	17.3	17.4	26.0
11.	November	33.0	14.9	18.1	23.9
12.	December	31.1	11.7	19.4	21.4
Year		37.9	11.7	26.2	25.4

Source : Regional Meteorological Centre, Government of India, Bombay-5.

rainfall, extent of vegetation, topography etc. The climate gets hotter and drier towards the east and humidity goes on increasing towards the west. Table 2.1 gives maximum and minimum temperature data at Sangli centre.

It will be seen from the table 2.1 that there is a spell of high range of temperature for five months from November to March. During the rest of period in the year, the temperature remain high and range is very low. Sangli has annual maximum temperature of 37.7°C in March to 37.4°C in May. Similarly, the minimum temperature ranges from 14.9°C in November to 15.5°C in February. Annual mean temperature is 25.4°C.

2.3.2 Rainfall :

Rainfall is the ultimate source of both surface and under ground water.⁵ Rainfall starts sometimes in the middle of June and lasts till the end of September. Major portion of the rainfall in the district is received between July and September. During the first half of the monsoon, most of the days are cloudy with drizzling rains, whereas during the latter half it rains heavily. The rainfall is heavy in the Shirala area. Yearly average rainfall is 1250 mm. in the areas bordering Shirala tahsil. As we go towards west of the region, the rainfall goes on increasing and in the extreme west the rainfall is about 6000 mm. The tahsil of Walwa, western part of Tasgaon and Miraj tahsil fall within the rainfall range of 600 mm. to 1250 mm. The rainfall goes on decreasing as we go towards east from the western boundary of

Walwa tahsil. The rest of region has scanty rainfall which is less than 600 mm.

Table 2.2 shows tahsilwise normal and actual rainfall distribution in the western Sangli district for different years.

Table 2.2 Rainfall in Western Sangli district.

Sr. No.	Tahsil	Normal rainfall in mm.	1961 Actual rainfall in mm.	1971 Actual rainfall in mm.	1978 Actual rainfall in mm.
1.	Sangli	569	622	637	N.A.
2.	Shirala	862	N.A.	1204	1193
3.	Islampur	639	788	423	827
4.	Miraj	635	730	592	619
5.	Tasgaon	599	695	426	674

Source : Socio-economic review and district statistical abstract of Sangli district 1961-62, 1971-72 & 1978-79.

Tahsilwise rainfall distribution shows (Map 2.4A) great variation. Highest rainfall is received in Shirala tahsil. Miraj and Tasgaon tahsil receive lowest rainfall, while Walwa (Islampur) tahsil receive medium rainfall amount. This is experienced due to south-western blowing winds, which give highest rainfall in western ranges and lower towards the east.

The rainfall records of (Table 2.2) 1961-71-78 shows that during the 1961 rainfall received is more than the average.

In 1971 there is general shortfall in rainfall amount except Shirala. During 1978 rainfall was received more than the average, except Miraj. In general, it is seen from the record that regional distribution of rainfall is unequal and there is slight variation in temporal distribution of rainfall.

2.4 Soil :

The most valuable asset in any country is its soil. If the soil is well managed, its fertility is not only renewable but improvable. If it is misused, the soil can be permanently damaged irretrievably lost when the soil lost, prosperity and culture of a country are also lost.⁶ The soils in the region are shown in the Map 2,3B.

Soil formation in Sangli district has been predominantly influenced by the climate.⁷ The western zone which received very heavy rainfall, has lateritic soil on up-ghat and reddish brown soil on the hill slopes. The transition zone of Krishna Valley has deep black soil of alluvial origin. The eastern drier zone which consists largely of granular black soil and poor shallow soil.

2.4.1 The soil in the western part of the district, comprising area of Shirala sub-region is formed from red laterite, mixed with hard murum due to the hilly nature of the zone. The hill tops have shallow laterite soil, while the reddish brown soil is observed on the slopes, at a depth varying from 23 to 45 cm. Deep black soil is found on the river banks of Warana. The area

from Mandur to Nitoli and Girjawade have yellowish brown shallow soil.

2.4.2 The central portion, which covers area of Walwa, Tasgaon (part) and Miraj (part) tahsil has deep black soil. This region comprises the part of Warna, Krishna and Yerela basin and have medium to deep black cotton soil. The three kilometre wide belt along Krishna and Warna banks has deep black soil with more than 90 cm. depth. Two kilometre wide belts along the Yerela river and the 'Kapur Nala' have deep black soil.

2.4.3 The dark brown soil observed in western part of Walwa tahsil, the area in between the Krishna and Yerela rivers laying to the south of Kundal and western part of Tasgaon and Miraj tahsil. The nature of soil is yellowish brown to dark brown. The hill slopes have very shallow soil.

2.5 The Rivers :

Within the limits of the Sangli district the Krishna forms the main river system. The main rivers are Krishna, Warana and Yerela. The rivers are shown in the Map 2.4B.

2.5.1 Krishna :

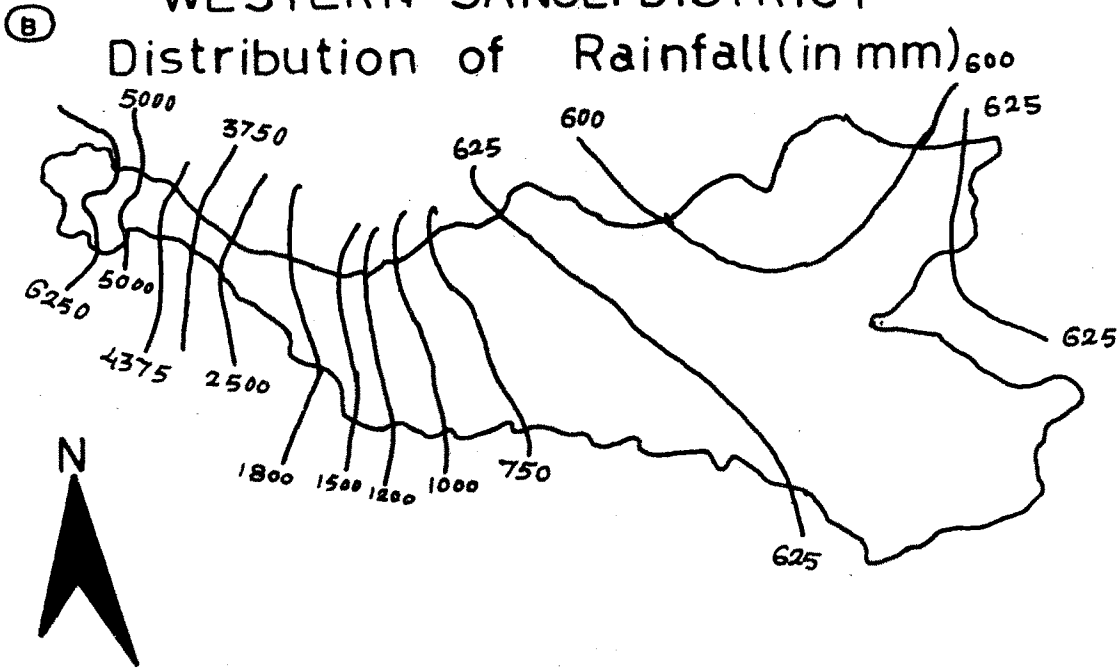
The Krishna is one of the three great rivers of South India. Within the district, it flows for a distance of 108 km. and is joined by Warana and Yerela. The Krishna is less useful for navigation. The channel bed is only about 40 to 50 metres across and out side the monsoon season, the river is so shallow

WESTERN SANGLI DISTRICT

(A) Drainage



(B) WESTERN SANGLI DISTRICT Distribution of Rainfall (in mm)



0 10 20 30 KMS.



RABI JOWAR



WHEAT



HARVESTING



SOURCE OF THE MILK, CATTLE



SOURCE OF THE MILK, BUFFALO



DRINKING WATER SUPPLY



NIGHT BLINDNESS



KWASHIORKOR (STUNTING OF GROWTH)
AS WELL AS EYE DISEASE (CORNEA)



that it is possible to drive even bullock carts across the bed in about knee-deep water.

The Krishna Valley is the most fertile part of the district. Unlike Warana basin, there are numerous prosperous villages and towns located right on the high banks of Krishna, on the out side of the beds such as Narsingpur, Bahe, Bargaon, Walwa, Bhilwadi, Sangli.

The right bank tributaries of the river except Warana, are small ones such as Kasegaon river, Peth river, Katora Odha, Khera Odha. The main importance of these stream is that, though they may be dry for a major part of the year, in their valley the water table is close to the surface and there are several villages supported by irrigation from numerous wells.

2.5.2 Warana :

The Warana takes its source some 6.4 km. to the north of the district in the Sahyadris and after a southerly course for a few kilometres in the western part Shirala, runs in a south-easterly direction, forming the southern boundary of the district to join Krishna at Haripur, 3.21 kilometre west of Sangli. Its banks are steep and broken. The lands immediately bordering the river are plateau with Shevari, a fodder crop. Besides, supplying the much valuable fodder for cattle, in times of flood when the river inundates these Mali alluvial lands as they are called, they not only check soil erosion and prevent land slips but actually promote the accretion of slit. The

villages usually avoid the area liable to flood and are perched on raised ground half a mile away from the river at the foot of mountain slopes inspite of having to fetch their drinking water supplies from wells sometimes as deep as 30 metres.

2.5.3 Morana :

The river Morana, a tributary of Warana rises from a place very near to Dhamwada hill knot and flows between the southerly and easterly trending spurs. Villages such as Vakurde Bk., Antri-Khurd and Mangle are situated on the stream bank in the through of depression. On the both sides of depression land rises more suddenly. The town Shirala is prosperous settlement in the region.

2.5.4 Yerala :

Yerala has much larger area and much longer and some direct tributaries than the Krishna within the limits of Sangli district. It flows north to south in a valley flanked by the Vardhanga - Machindragad range on the right or west and by Mahimanga - Panhala range on the left or east. Well irrigation is important in Yerala Valley. The important west bank tributaries of Yerala, the Naninadi has a course somewhat parallel to the Vardhanga - Machindragad range and is joined by several small tributaries which drain the eastern slopes of the range, the chief of which is Mahadev Odha. The Sonhira Odha is another west bank tributary of Yerala, flowing eastward on the northern side of Kamal-Bhairav mountain in to Yerala. The east bank tributaries

of Yerala are generally longer, though somewhat drier than those of west. The important of them is Kapurnala, which has a good sub-terranean flow of water under the sounds even in the dry season.

Thus, the river system can be described in brief as follows :- River Krishna with its Warana and Yerala tributaries flows through the western Sangli district. Warana flows from west to east along the southern boundaries of the district and join Krishna river near Sangli at Haripur. Yerala flows from north east to south-west and after traversing the western part of Khanapur and Tasgaon tahsil, join Krishna near Brahmanal. All these three rivers are the lifelines of the Western Sangli district and serve as a source for large irrigation schemes.

The important impact on seasonal water regime is seen on the general economy and life of the people. Copious water supply in one season and its almost complete absence in the other. This fundamentally influences the rhythm of life. Much of the seasonal water goes west into the sea. During the dry season not only crops but also animal and human life is equally starved of water. Hence irrigation of every type : well, tank, and canal has become a cardinal feature in the policy of economic development of the region.⁹

REFERENCES

1. Census of India, (1981). Indian Administrative Service, Registrar General of Census Commissioner for India. p.129.
2. Gazetteer of India, (1969). Maharashtra state, Sangli District, Government of Maharashtra publication, Bombay.p.1.
3. Rammurthy K. (1969). Geography section, Sangli District Gazetteer.Govt.of Maharashtra, Bombay. pp.1-11.
4. Shirlaw, D.W. (1971). Agricultural Geography of Great Britain, Pergamon Press, Oxford, p.20.
5. Coppock, J.T. (1971). An Agricultural Geography of Great Britain, G.Bell & Sons, London. p.39.
6. Negi, B.S. (1980). Geography of Resources. Kedar Nath Ram Nath, Meerut. p.79.
7. Government of Maharashtra. Sangli District Gazetteer (1969) p.194.
8. Kulkarni, K.G. (1983). Sangli District. A Study of Rural Settlement. Ph.D.Thesis, Shivaji University, Kolhapur. pp.7-8.
9. Hardikar, R.N. (1982). An inquiry into spatial pattern in the agricultural landuse in the Sangli district. Ph.D.Thesis, Shivaji University, Kolhapur pp.36-37.
10. Socio-Economic Review and District Statistical Abstract of Sangli District, 1961-62, 1971-72, 1978-79.

