
THE REGION

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2.0 The region :

2.1 Location :

Malshiras tahsil is one of the eleven tahsils of Solapur district, situated on the western part of the district, lies between 17°36' N - 18°1' N latitude, and 74°42' E - 75°13' E longitude. It is bounded on the north by Poona district, on the west by Satara district, on the south by Sangli district, Sangola tahsil and on the east by Madha and Pandharpur tahsils of Solapur district (Fig.2.1). Malshiras tahsil ranks fifth in area and second in the population (1981) in the district. According to 1981 census tahsil has a population about 282,300 persons, occupied an area about 1,522.2 sq.km. and density 185 persons per sq.km. There were 75 villages in the tahsil in 1971; the number reached to 104 villages in 1981.

2.2 Relief :

Malshiras tahsil as a whole is monotonously underlain by Deccan trap basaltic lava flows, which in turn covered by thin mantle of soil. These lava flows on account of weathering give rise to undulating topography. There are no prominent hilly ranges in the region except Mahadeo Maikal Range. The region is characterized by typical Deccan trap geomorphology and conveniently divided into three regions (Fig.2.3).

i) Hilly and ghats region ii) Foot-hill region iii) Plain region.

LOCATION MAP

MALSHIRAS TAHSIL

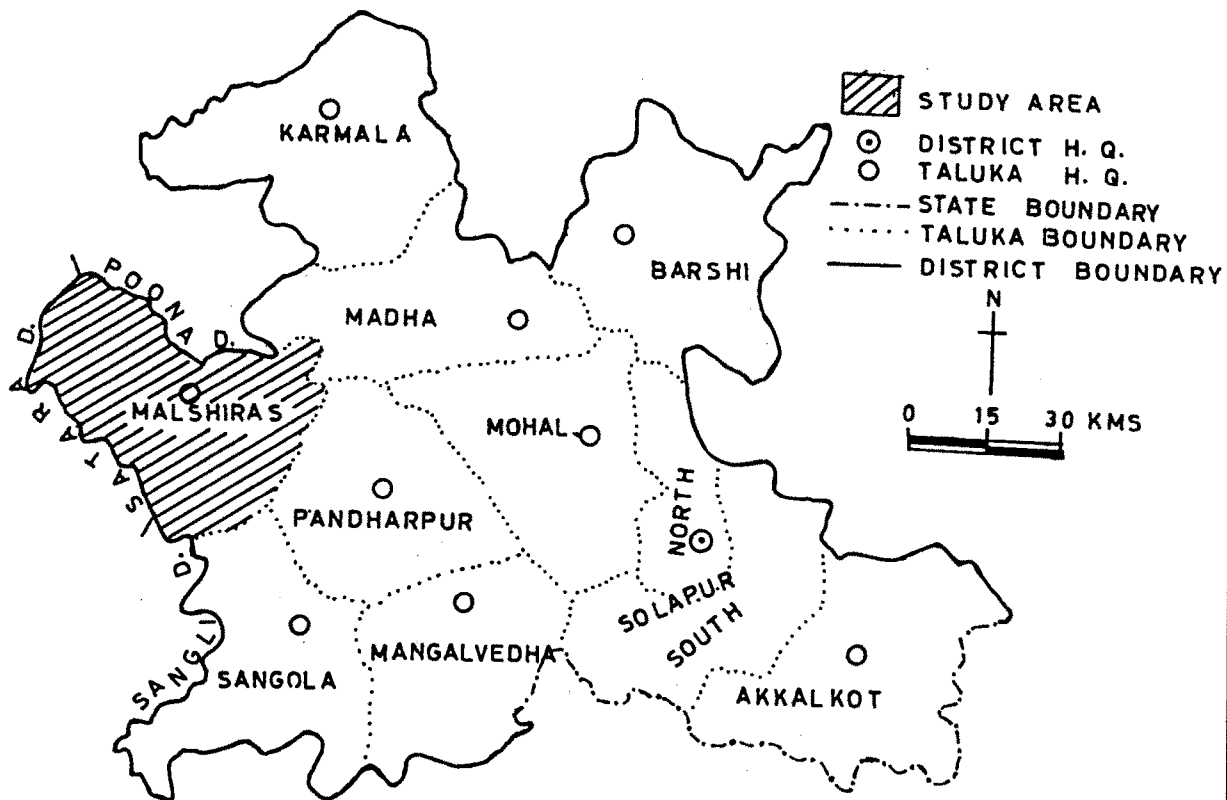
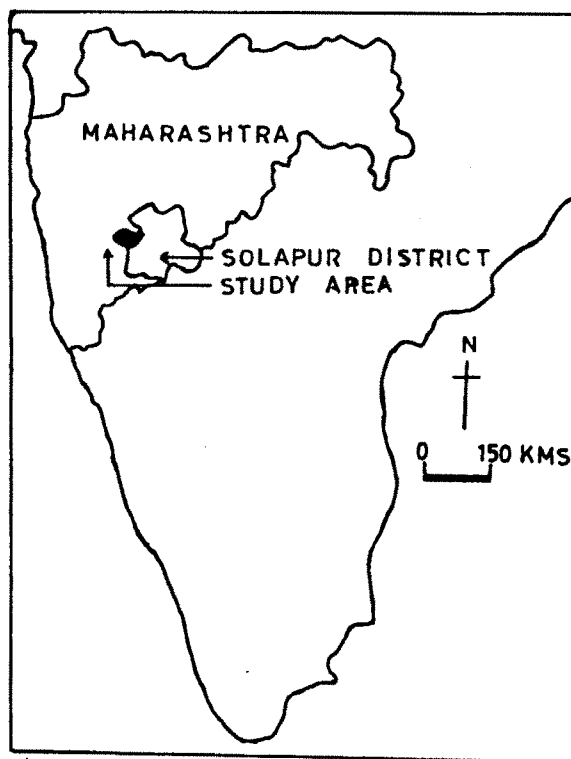
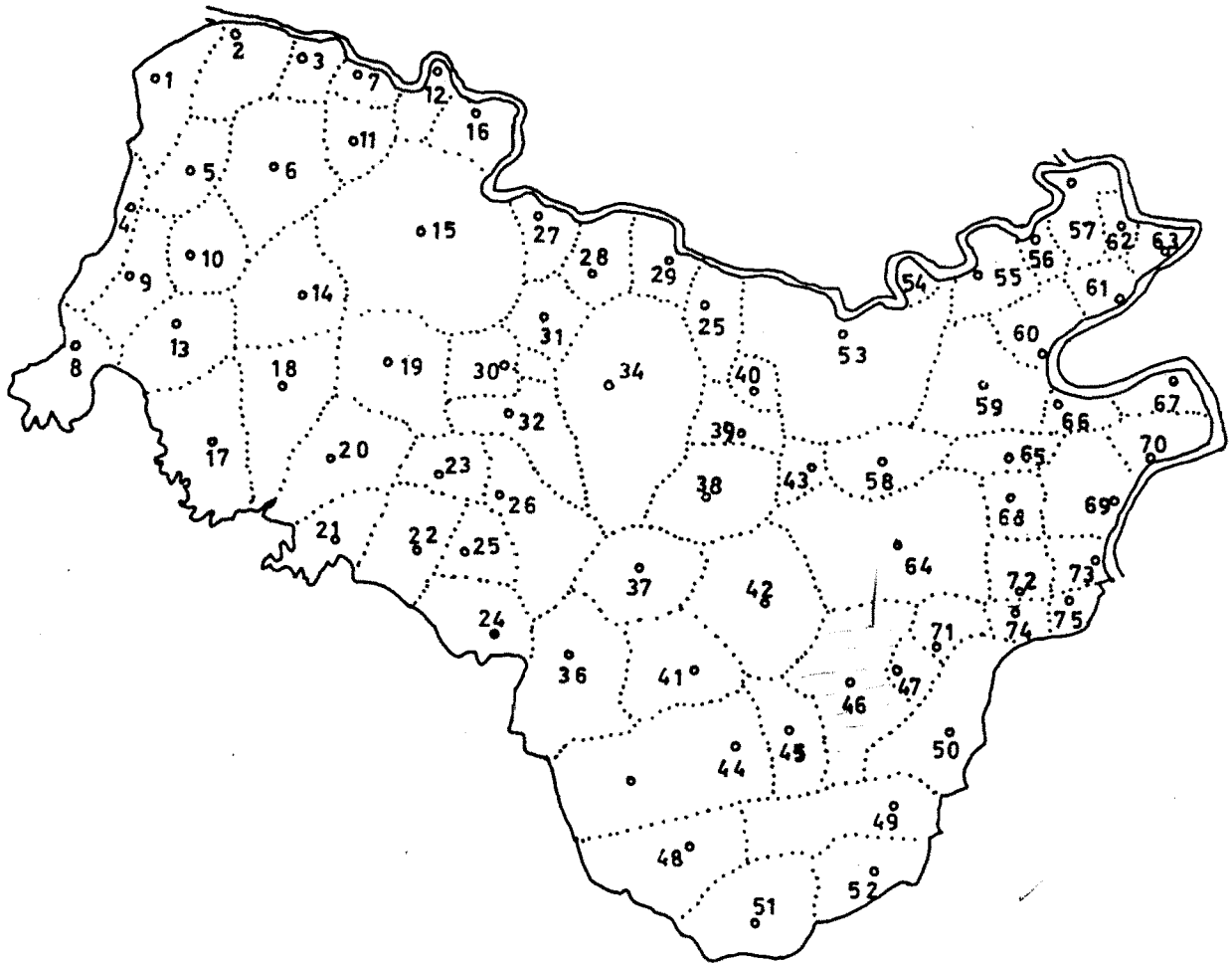


FIG 2.1

VILLAGE LOCATION MAP 1971

MALSHIRAS TAHSIL



The figures in the map are the code numbers of the villages listed in table on page 15

FIG. 2.2

List of villages with code numbers inMalshiras Tahsil - 1971

Code No.	Village	Code No.	Village	Code No.	Village
1	Shindewadi	26	Islampur	51	Shingorni
2	Kurbavi	27	Umbre-Dahigaon	52	Kolegaon
3	Ekshiv	28	Tirwandi	53	Akluj
4	Dharmapuri	29	Chakore	54	Bizawadi
5	Gursale	30	Purandawade	55	Tambave
6	Dahigaon	31	Medad	56	Ganeshgaon
7	Kalambuli	32	Bhamburdi	57	Sangam
8	Kothale	33	Yeliv	58	Khandali
9	Karunde	34	Malshiras	59	Mahalung
10	Morochoi	35	Kondabavi	60	Lawang
11	Pirale	36	Garwad	61	Wagholi
12	Bangarde	37	Tarangfal	62	Babhulgaon
13	Pimpari	38	Khudus	63	Wafegaon
14.	Natepute	39	Paniv	64	Velapur
15.	Fondshiras	40	Girzani	65	Borgaon
16.	Palasmandal	41	Chandapuri	66	Mire
17.	Fadtari	42	Nimgaon	67	Umbre-Velapur
18.	Lonand	43	Vizori	68	Malkhambi
19	Mandave	44	Piliv	69	Jambud
20	Giravi	45	Kusmod	70	Neware
21	Bhamb	46	<u>Maloli</u>	71	Dhanore
22	Rede	47	Shendechinch	72	Bondale
23	Kanher	48	Bacheri	73	Khalawe
24	Jalbhavi	49	Falwani	74	Tondale
25	Mandaki	50	Tandulwadi	75	Dasur

2.2.1 Hilly and ghats region :

Hilly region lies in the southern part of the tahsil occupied about 144 sq.km. (9.46%) of the total geographical area. This hilly and ghats region is known as "Mahadeo Maikal Range" and runs north-west to south-east direction. This range descends from elevation of 650 metres to 580 metres from mean sea level followed by a debris cones on the left. The area is rough, broken ground and fairly dissected by a large number of ephemeral streams descending down a scarp slope and draining towards north and east into Nira and Bhima rivers. The hilly region has a steep scarp face to the north and to the east overlooking the plain region. The hills are bleak, barren and developed excellent pediments under the semiarid climatic conditions. Apart from the hills, in the south-eastern part of the hilly area, there are number of outcrops of rock-boulders and typical tors. The highest peak (708 M) located near Garwad village in Mahadeo Maikal Range, is known as "Sulaka Tukai Dongar".

2.2.2 Foot-hill region :

Foot-hill region lies in the central part of the tahsil. It occupied about 631 sq.km. (41.46%) area of the total geographical area of the tahsil and extends in north-west to south-east direction with an elevation of 480 metres to 580 metres from mean sea level. The region has moderate slope to the north and east overlooking to Malshiras plain (Fig.2.3).

RELIEF AND DRAINAGE

MALSHIRAS TAHSIL

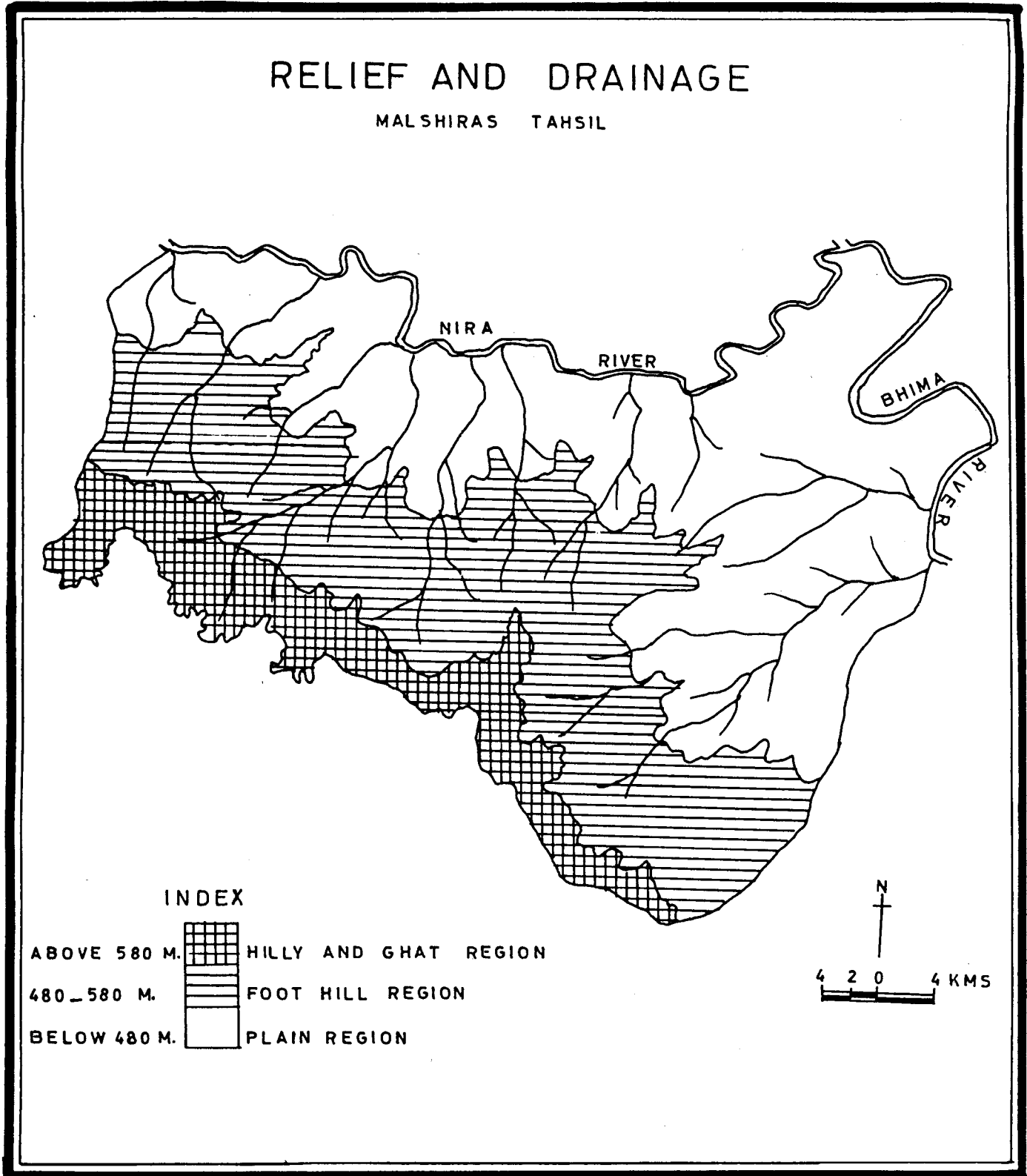


FIG. 2.3

Table No.2.1 : Relief Division.

Sr. No.	Particulars <i>Region</i>	Area in sq.km.	Percentage to the total geographical area
1.	Hilly & ghats region	144.0	9.47
2.	Foot-hill region	631.0	41.46
3.	Plain region	747.2	49.07

Source : An Appraisal of Hydrological conditions in Solapur district.

2.2.3 Plain region : *The Nira-Bhima valley*

This region lies in the northern and eastern part of Malshiras tahsil in between Foot-hill region and Nira-Bhima rivers. The region covers an area about 747 sq.km. (49.07%) of the total geographical area with an elevation of 440 metres to 480 metres from mean sea level. The region is sloping northwards to the Nira river and eastwards to the Bhima river. The slope of the region is moderate and the region is drained by the tributaries of Nira and Bhima rivers.

2.3.0 Drainage :

The Nira and Bhima are the two important rivers of the region. The Nira is the main right bank tributary of the Bhima river. It rises in the offshoots of Sahyadris in Bhor tahsil of Pune district. It runs south-east and east along the border

of Pune district, Satara district and Malshiras tahsil of Solapur district. Of its total length 180 kms. about 40 kms. lie on the border of Pune district and Malshiras tahsil. The Nira river runs south-east forming northern boundary of Malshiras tahsil and skirting part of the village Akluj. It falls into Bhima river near Sangam village of Malshiras tahsil (Fig.2.3). There are number of small streams take their origin in the southern part of the hilly region of Malshiras tahsil and flows towards the north and drains into the Nira river.

The Bhima river, the main feeder of Krishna river rises close to Bhimashankar in Pune district, runs south-east through Pune, Ahmednagar and Solapur districts. It separates the Madha tahsil and Malshiras tahsil of Solapur district. It also separates the Pandharpur tahsil from Malshiras tahsil. The length of Bhima river on the eastern border of Malshiras tahsil is about 34 km. The number of small streams of the eastern part of the tahsil runs towards east and drains into Bhima river.

2.4.0 Climate :

The climate of the region is agreeable and free from extremes of hot and cold except hot months of March, April and May. Climatically there are three seasons in the tahsil, namely summer from the beginning of March to the middle of June, the rainy season from the middle of June to the middle

of October and the winter from the middle of October to the end of February.

2.4.1 Rainfall :

Rainfall is very important factor which influences the agricultural activities. Climatically entire region falls in the rainshadow area. The region receives the rainfall from south-west monsoon as well as north-east monsoon. The monsoon rain covers the region from mid June to the end of September. There are two peaks of rainfall in the region. The first peak is in June and the second peak in September. The rainfall throughout the region is scanty and spread unevenly over the region.

The temporal distribution of rainfall decides the cropping pattern of the region. The Table No.2.2 gives idea about the temporal distribution of rainfall throughout the year. Average of 20 years data (1960-80) is taken for consideration. It appears from the table that premonsoon period is not important for Malshiras tahsil from agricultural point of view. The south-west monsoon season from June to September, the rainfall increases, reaches highest in the month of September. The increase of rainfall is gradual from June to September and descends afterwards again gradually and enters in the winter season. Agriculturally winter season is also of great importance.

Table No.2.2 gives the information of average rainfall (1960-80) of Malshiras tahsil.

Table No.2.2 : Average rainfall in mm. of Malshiras station (1960-80).

Sr.No.	Month	Average rainfall in mm.
1.	January	-
2.	February	0.2
3.	March	1.8
4.	April	5.6
5.	May	18.8
6.	June	80.6
7.	July	60.6
8.	August	88.4
9.	September	144.7
10.	October	83.8
11.	November	25.9
12.	December	6.6
Annual Average		517.0

Source : Compiled by author. *Somra* !

Variability of rainfall in Malshiras tahsil is also evaluated. The co-efficient of variation of rainfall is

calculated by taking annual rainfall figures of Malshiras tahsil of 20 years, the seasonal co-efficient of variation is calculated.

The co-efficient of variation is the percentage variation in the mean, the standard deviation being treated as ~~the~~ the total variation in the mean. It gives the variation of rainfall in the region throughout the year. ?

Table No.2.3 gives the average, standard deviation and co-efficient of variation of rainfall for Malshiras station.

Table No.2.3 : Rainfall Variability.

Sr. No.	Seasons	Average	Standard deviation	Co-efficient of variation %
1.	Rainy season	93.66	31.21	33.34
2.	Post-monsoon season	54.92	28.94	52.71
3.	Winter season	2.26	3.05	135.37
4.	Hot season	8.73	7.30	83.62

Source : Compiled by author.

Table No.2.3 elaborates the seasonal variation of rainfall. It is observed that highest co-efficient of variation is found in winter season (135.37%). It indicates the maximum variation of rainfall in winter season in the region. The lowest

co-efficient of rainfall is seen in the rainy season (33.34%). It clearly shows the less variation of rainfall in rainy season. It is followed by the post-monsoon season (52.71%). The less variation in the rainfall in rainy season assures the cropping pattern of the region. |

2.4.2 Temperature :

Temperature data collected for Malshiras tahsil exhibits some salient features such as a period between October to February records minimum temperature, a period between March to June records maximum temperature.

Table No.2.4 gives the maximum, minimum and average temperature of 20 years (1960-80) for Malshiras tahsil.

Table No.2.4 : Average Temperature in $^{\circ}\text{C}$ (1960-80).

Sr.No.	Month	Temperature in $^{\circ}\text{C}$		
		Maximum	Minimum	Average
1.	January	31.72	14.00	22.86
2.	February	34.39	16.40	25.39
3.	March	38.20	19.53	28.86
4.	April	39.10	23.43	31.26
5.	May	41.40	24.29	32.84
6.	June	36.12	22.34	29.23
7.	July	32.70	22.04	27.37
8.	August	32.32	21.24	26.78
9.	September	32.38	20.64	26.51
10.	October	34.49	19.15	26.82
11.	November	32.03	16.09	24.06
12.	December	30.83	13.94	22.38

Source : Compiled by author.

Source 9.

Average monthly temperature of 20 years is considered. Above table reveals that maximum temperature is noted in the month of May (41.4°C) and the minimum in the maximum temperature in the month of December (30.83°C). The average minimum temperature shows in December (13.94°C), while maximum in minimum temperature is seen in May (24.29°C). But the average figures of maximum and minimum temperature is in May (32.84°C) and lowest temperature in December (22.38°C). These average figures show considerable variation in temperature during the different seasons in this region. ✓

2.5.0 Soils :

Soils are mainly derived from trap rocks. Basaltic rock structure is the main parent material for the formation of soil. The soils of the Malshiras tahsil are classified on the basis of depth and structure of the soil. Shallow soils depth ranges upto 23.50 cm., medium soils depth between 23.50 to 45 cm. and deep soils categorized above 45 cm. depth (Fig. 2.4). ✓

2.5.1 Shallow soils (Depth below 23.50 cms.) :

The shallow soils are found in the southern hilly part of the region mostly on the slopes and foot hills. The soils are of mixed character varying from light brown to redish in colour and are not retentive of moisture. Shallow soils are

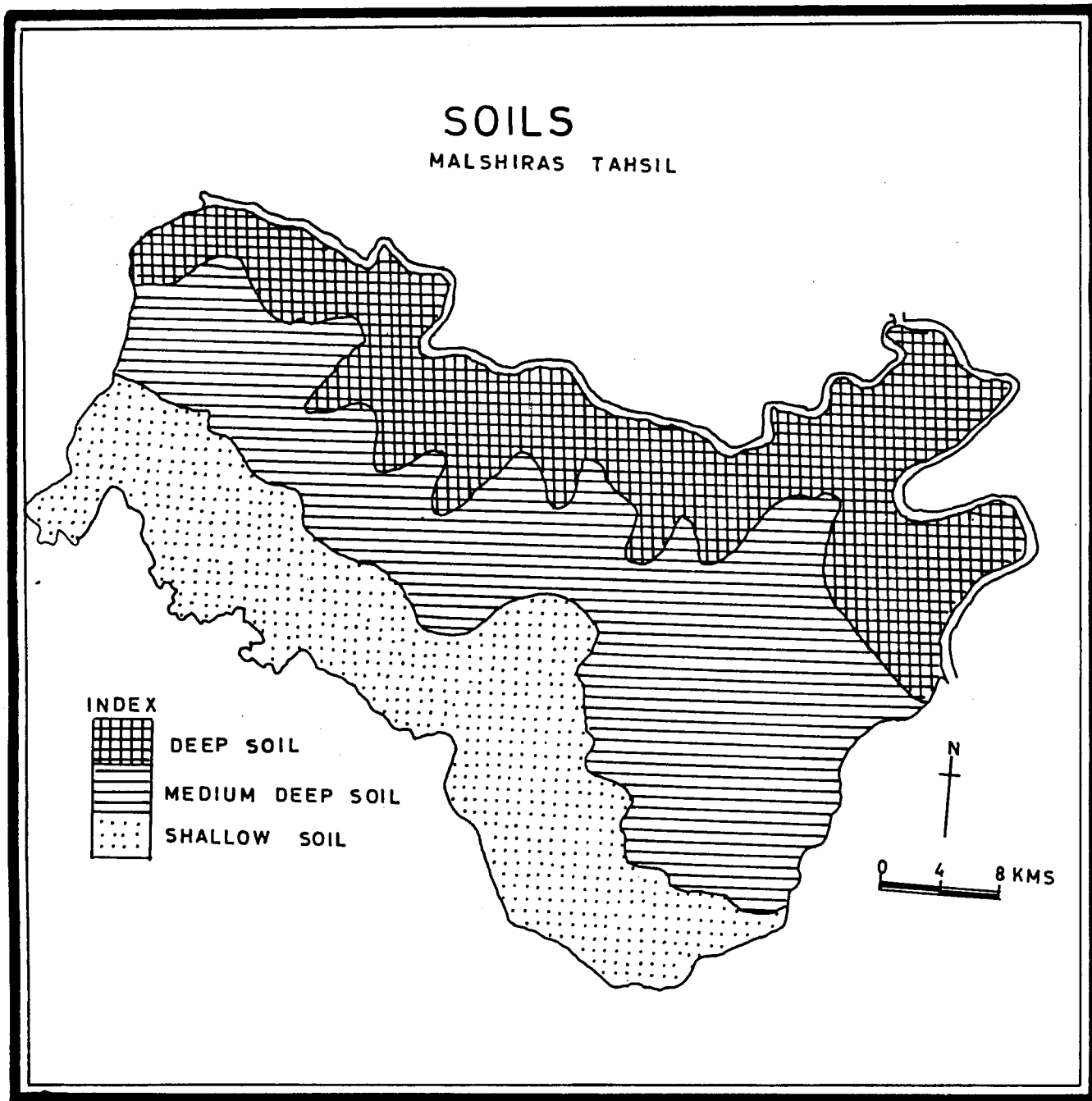


FIG. 2.4

alkaline in character and pH values varies from 7.90 to 8.6 with the soluble salts less than 0.3 to 0.39 percent. Calcium carbonate content varies from 2.8 to 20 percent. The nitrogen content is about 0.04 percent, while organic matter varies between 0.32 to 0.90 percent.

2.5.2 Medium deep soils (Depth 23.50 to 45 cms.) :

These soils are found in the central part of the tahsil. Medium deep soils are dark brown to black in colour and granular in structure. The pH value ranges from 7.2 to 8.3, with soluble salts 0.2 to 0.51 percent. The content of calcium carbonate and those of organic matter varies between 3.0 to 20.0 percent and 0.46 to 1.10 percent respectively. The nitrogen content varies from 0.04 to 0.05 percent and phosphate from 8.20 to 12.30 mgm. percent.

2.5.3 Deep soils (Depth more than 45 cms.) :

Deep soils are found in the northern part of the tahsil along the banks of Nira and Bhima rivers. The colour changes from dark gray brown to dark black. These soils are clayey in texture and alkaline in character. pH value varies between 8.5 to 8.9 with soluble salts between 0.4 to 2.0 percent. The Calcium carbonate content and those of organic matter varies between 6.7 to 15.8 percent and 1.10 to 1.34 percent respectively. The nitrogen content varies between

0.04 to 0.06 percent and phosphate between 16.05 to 43.07 mgm. percent. These soils are most fertile and thus give better yields. ✓

2.6.0 Irrigation :

Irrigation is essential for cultivation and better yield especially in the areas where rainfall is uncertain and scanty. Irrigation plays significant role in the Malshiras tahsil. As the rainfall is uncertain and scanty, canal irrigation and well irrigation are major sources of water. ?
The percentage of net irrigated area to net sown area in Malshiras tahsil vary both in time and space, The significant change is observed over a period of 20 years. In 1960-61 percentage of net irrigated area to net sown area was 28.22 and it was increased to 38.98 percent in 1979-80. ✓ ?

Table No.2.5 indicates the hectarage of land under different means of irrigation in Malshiras tahsil.

2.6.1 Canal irrigation :

Canal irrigation is the cheapest and permanent source of irrigation than other sources of irrigation in this region. ?
The Nira Right Bank Canal (NRBC) is the major source of canal irrigation. It ^{was} has taken out from the Nira river near Bhatghar ?
dam in Poona district in 1930. Canal runs in a north-west to

CANAL IRRIGATION

NIRA RIGHT BANK CANAL AND ITS BRANCHES

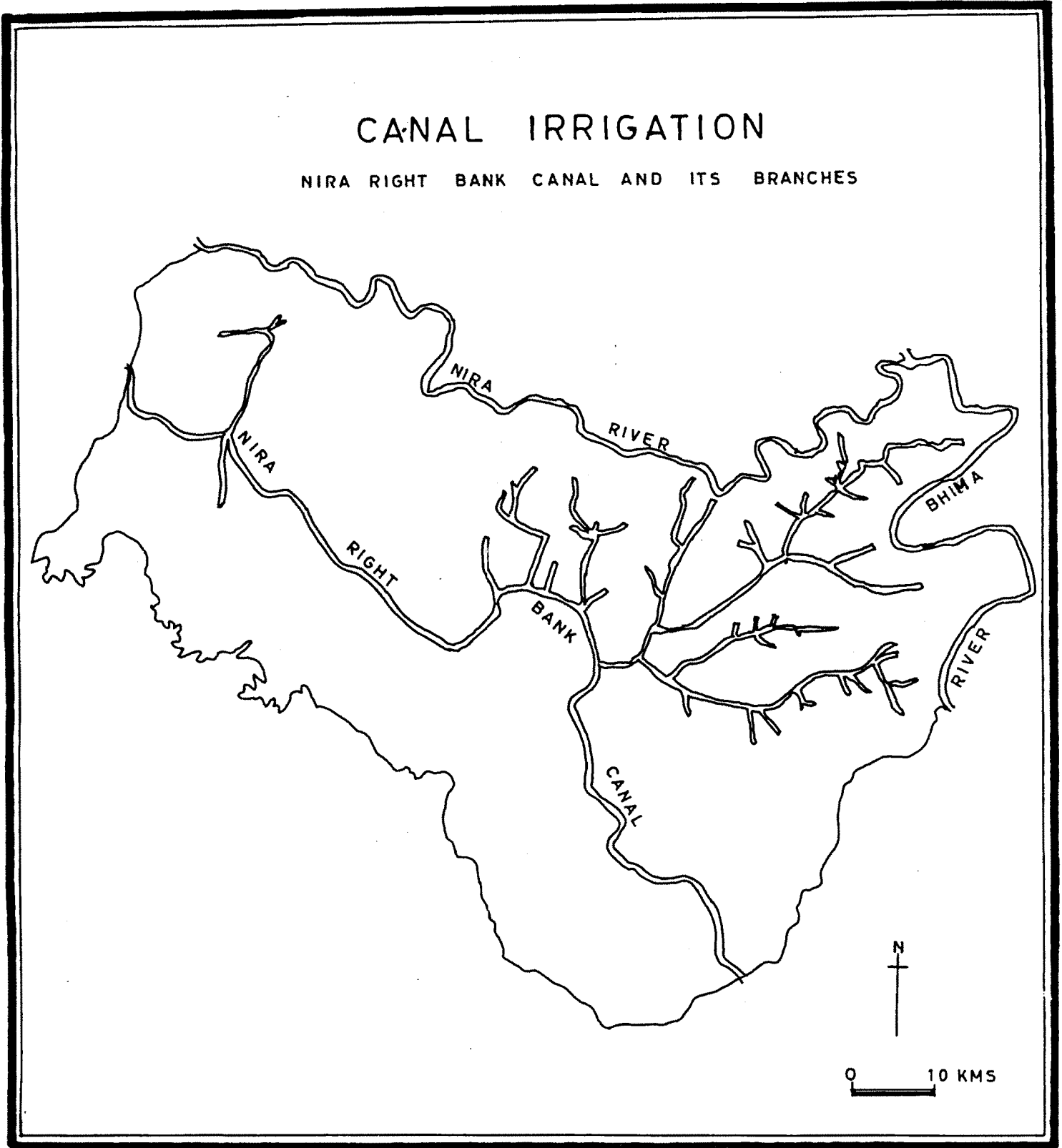


FIG 2.5

south-east direction through central part of the tahsil with its branches (Fig.2.5). The canal irrigation caused to change the cropping pattern of the region and increase the yield per hectare of irrigated crops.

Table No.2.5 : Irrigated Land In Malshiras Tahsil

(area in hectare).

Sr. No.	Source of Irrigation	1960-65		1975-80	
		Area	Percent	Area	Percent
1.	Government canals	14,605	57.39	16,962	51.51
2.	Wells	10,841	42.61	15,968	48.49
3.	Other Sources	-	-	-	-
4.	Net area irrigated	25,446	100.00	32,930	100.00

Source : Socio-Economic Review and District Statistical Abstracts of Solapur District (1960-80).

Table No.2.5 reveals that area under canal irrigation was 14,605 hectares ⁱⁿ (1960-65). It was about 57.39 percent to the net irrigated area. After two decades percentage of canal irrigation to net irrigated area decreased to 51.51 (16,962 hectares). This decrease in the percentage of canal irrigation to net irrigated area is due to increase in the area under well

irrigation. Canal irrigation provides irrigation for 8,000 hectares for 12 months, 4,000 hectares for six months and 4,962 hectares for three months. ✓

2.6.2 Well irrigation :

Well irrigation is important and indigenous method of irrigation. The total number of wells was 4,936 in 1982-83. Table No.2.5 reveals that area irrigated by well irrigation was 10,841 hectares (1960-65). It was about 42.61 percent to the net area irrigated. After two decades percentage of well irrigation to net irrigated area increased to 48.49 percent (15,968 hectares). There were 581 oil engines with pumps for irrigation purposes in 1960-61, and 4,200 oil engine pumps in 1979-80. The tremendous increase is observed in electric pumps from 9 in 1960-61 to 3,119 in 1979-80. Due to scanty rainfall and less availability of underground water 40 percent of the wells are seasonal in character. ✓

Major concentration of wells is observed in northern and central parts of the tahsil as compared to southern part.

2.6.3 In near future area under irrigation will increase due to Kolhapur Type Reservoirs (KTR). These are sanctioned by the Government and work of these reservoirs is in progress. These reservoirs are on the Nira river near the Tambve and Chakore villages. Region will also get water by canal irrigation

from Ujani canal in near future. Construction of canal work is in progress. Due to this canal eastern part of the tahsil will be benefitted.

2.7.0 Land utilization :

The census of India has classified land-use types into 9 categories. These are the forests, barren land, uncultivable land, land put to non-agricultural uses, cultivable waste land, permanent pasture and grazing land, land put to miscellaneous trees and crops, fallow land and net sown area. For convenient landuse pattern of Malshiras tahsil is grouped into broad three categories, viz. non-agricultural land, Potential agricultural land and Agricultural land (Fig.2.6) (Singh, 1979).

Table No.2.6 : Land Utilization in Malshiras Tahsil
(1960-65 and 1975-80).

Sr.No.	Land-use category	1960-65	1975-80	Change
1.	Non-agricultural land	13.36	13.31	+0.25
2.	Potential agricultural land	11.60	13.99	+2.39
3.	Agricultural land	75.04	72.40	-2.64
	i) Net sown area	56.42	56.04	-0.38
	ii) Double cropped area	3.22	7.16	+3.94
	iii) Fallow land	18.62	16.36	-2.26
4.	<u>Total</u>	100.00%	100.00%	+2.64
				<u>-2.64</u>

Source : Compiled by author. *Source 9*

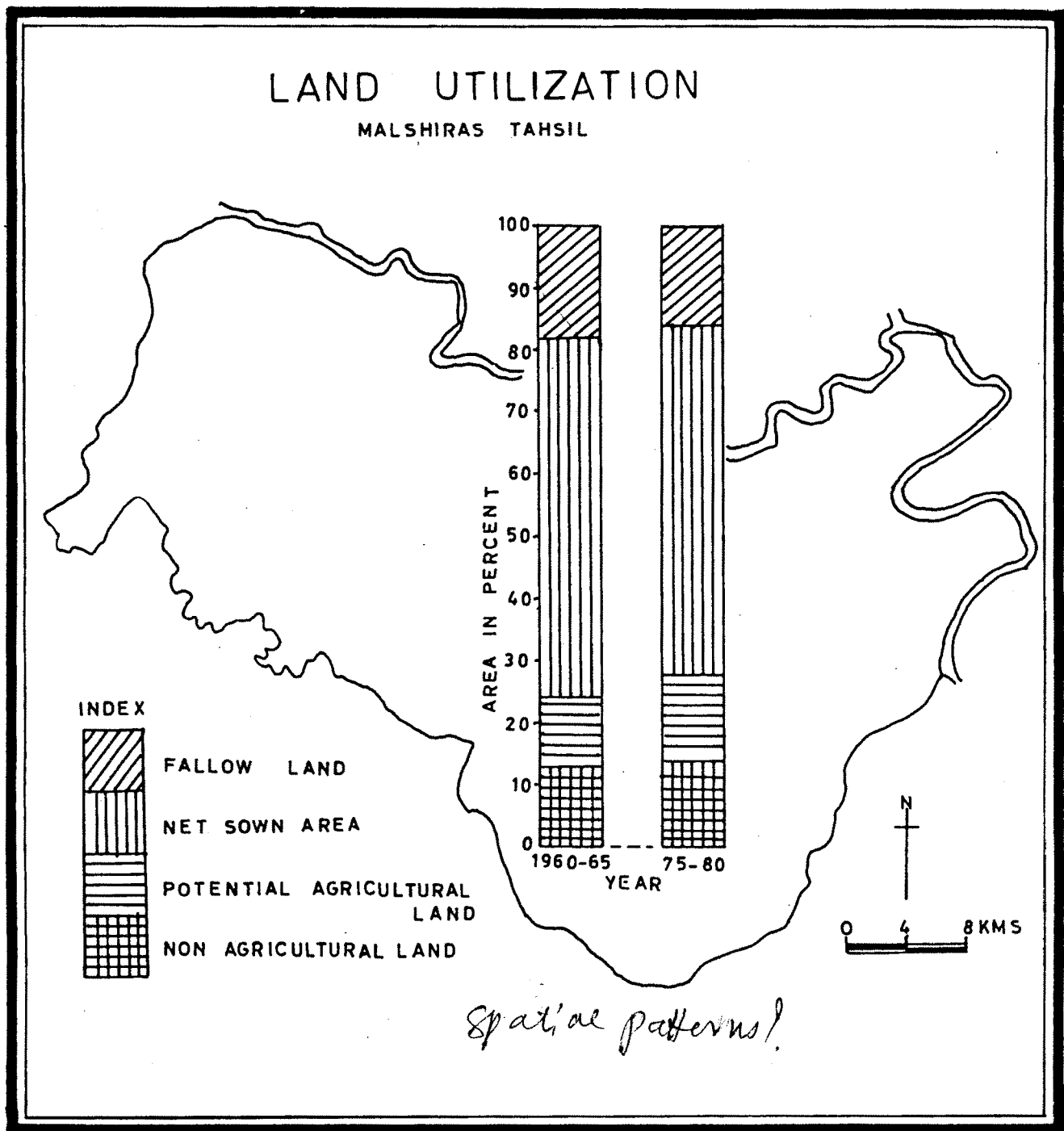


FIG. 2.6

Table No.2.6 shows the trends of these land-use categories in the Malshiras tahsil. *ation distribution?*

2.7.1 Non-agricultural land :

Land not available for cultivation includes, the forests, barren land, uncultivable land and land put to non-agricultural uses. In other words they include the land which can not be brought under cultivation unless at a very high cost (Shinde, 1974).

Of the total geographical area 13.61 percent area belongs to the non-agricultural land. From which 3.60 percent area is under forest, 9.82 percent area is under barren and uncultivable land and 0.19 percent area is under land put to non-agricultural uses. There is a little change (+ 0.25) over a period of 20 years in the non-agricultural land.

2.7.2 Potential agricultural land :

The land for purposes of extension of cultivation can be found only in this category which could be used for cultivation but has not been cultivated owing to certain reasons. It is generally consists, cultivable waste land, permanent pasture and grazing land; and miscellaneous trees, crops and groves.

The land under this category consists ^{of} about 13.99 percent of total geographical area. There is a slight increase in potential agricultural land (+2.39%) over a period of 20

years (Table No.2.6). Spatial distribution of potential agricultural land indicates the possibility of converting the potential agricultural land into cultivable land in the southern part of the tahsil. ✓

2.7.3 Agricultural land :

Cultivated area is the land regularly ploughed and includes both the tillage (Net sown area) and fallow land (Singh, 1974). Table No.2.6 reveals that 72.4 percent area is under agricultural land, of which 7.16 percent area is under double cropping and 16.36 percent area under fallow land. Double cropped area is increased by 3.9 percent and fallow land decreased by 2.26 percent over a period of 20 years. ✓

Malshiras tahsil has a lowest cultivated area in the southern part of the tahsil, whereas percentage of net sown area and double cropped area increase towards central and northern parts of the tahsil, due to plain region and availability of irrigation facilities. ✓

2.8.0 Cropping pattern :

Cropping pattern is the ^{relative areal} proportion of area under various crops, at a point of time. It largely depends upon socio-economic influences which determine the possibility of the enterprise the farmer chooses and the input intensity with

which he farms, with an assured supply of water & availability of modern inputs, specially high yielding varieties of seeds and commercial fertilizers. It becomes possible for farmers to replace less profitable crops with more profitable ones and also to enhance the intensity of use of the available land by growing two or even three crops in the same field in a year (Singh, V.R., 1979).

To study the cropping pattern of Malshiras tahsil statistics of 20 years is used to denote the temporal changes in the cropping pattern. Crops of the region are classified into food crops and non-food crops as below.

A) Food crops :

- 1) Food grains - Cereals and pulses
- 2) Non-food grains
(except sugarcane) - Fruits and vegetables, condiment
and spices
- 3) Sugarcane

B) Non-food crops :

- 1) Oil seeds,
- 2) Fibres,
- 3) Drugs and narcotics,
- 4) Fodder.

The changes in the temporal distribution is studied by comparing two periods, taking averages of five years, 1960 to 1965 and 1975 to 1980 (Fig.2.7).

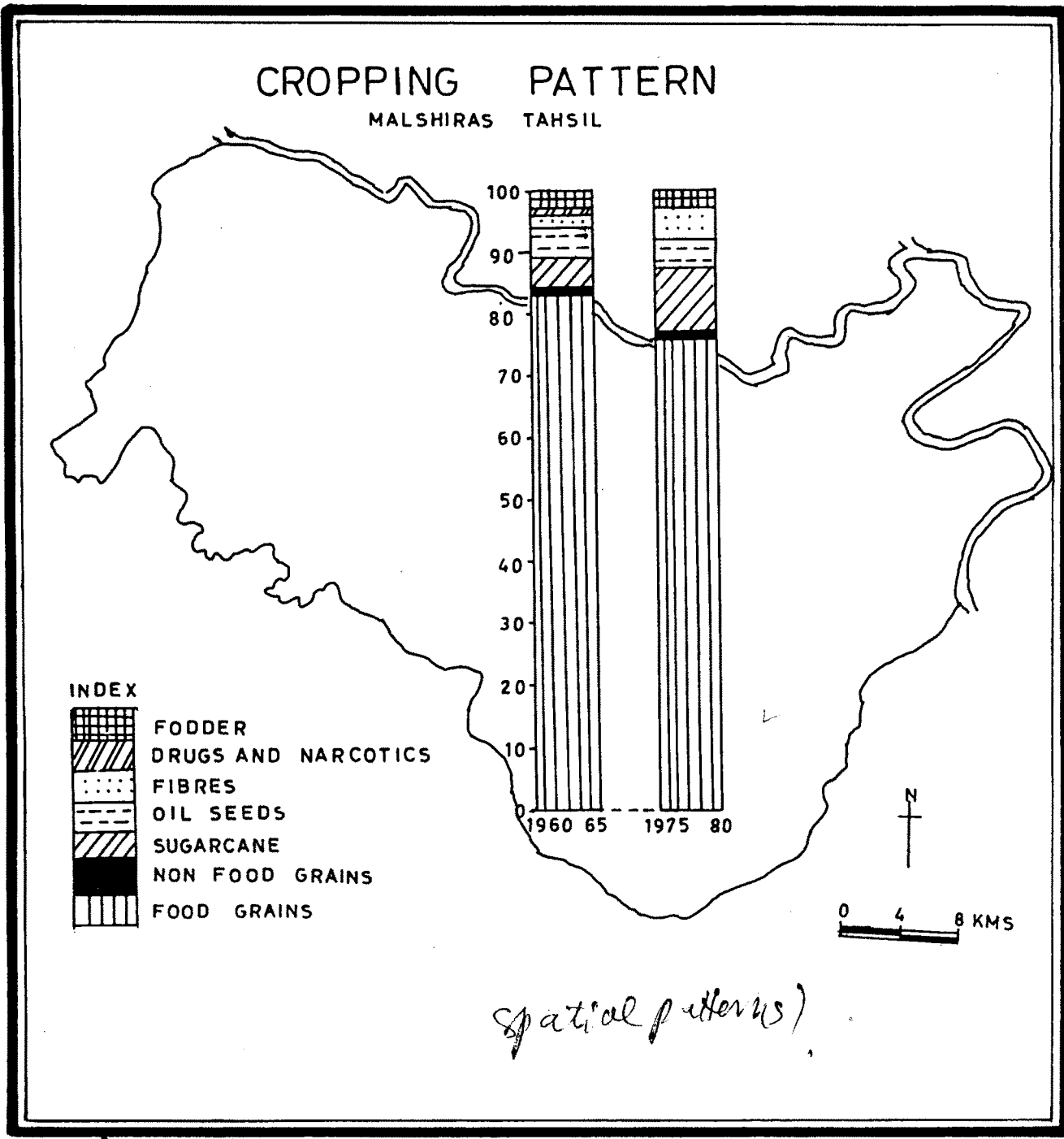


FIG. 2.7

Table No.2.7 gives the clear idea about the cropping pattern in the region.

Table No.2.7 : Area under different crops in percentage
(Malshiras tahsil, 1960-65 & 1975-80).

Sr.No.	Crops	1960-65	1975-80	Change
A)	Food crops	89.67	86.99	- 2.68
1)	Food grains	83.44	76.20	- 7.24
2)	Non-food grain	1.02	1.07	+ 0.05
3)	Sugarcane	5.21	9.72	+ 4.51
B)	Non-food crops	10.33	13.01	+ 2.68
1)	Oil seeds	5.20	4.92	- 0.28
2)	Fibres	2.50	5.31	+ 2.81
3)	Drugs and Narcotics	0.40	-	- 0.40
4)	Fodder	2.23	2.78	+ 0.55
	Gross cropped area	100.00%	100.00%	<u>+10.60</u> -10.60

Source : Compiled by author. *based on 9*

Table No.2.7 reveals that in 1960-65 the area under foodgrains was 83.44 percent, and area under non-foodgrains was 6.23 percent (5.21 + 1.02). In 1975-80, the area under foodgrains was reduced to 76.20 percent and area under non-foodgrains increased to 10.79 percent (1.07 + 9.72). It indicates

the increase in the area under non-foodgrains, especially in the sugarcane. In 1960-65 land under sugarcane was only 5.21 percent, which rose to 9.72 percent in 1975-80. This increase in land under sugarcane encroached upon the land under foodgrain. In non-food crops little change took place. In 1960-65 area under Sunflower was 1.08 percent which rose to 2.82 percent in 1975-80. The area under fibres also rose from 2.50 percent in 1960-65 to 5.31 percent in 1975-80; in which area under cotton rose by 1.40 percent in 1975-80 as compared to 1960-65. It is noteworthy that area under drugs and narcotics was 0.40 percent in 1960-65 which, was completely neglected in the year 1975-80. There is also slight change observed in the fodder from 2.23 percent in 1960-65 to 2.78 percent in 1975-80. This comparative picture of cropping pattern helps to understand the changes in the cropping pattern during the 20 years span of time.

2.9.0 Agricultural implements :

Agricultural implements play important role in agriculture. Twenty years before indigenous implements like, wooden ploughs, sugarcane crushers operated by bullocks etc. were used by the farmers. But now situation is quite changed, because of sugar factories in the region. Credit facilities of the farmers increased and purchasing power enhanced. The sugar factories have taken responsibility of the return of loans taken from banks for the farmers, which gave tremendous impetus to the

farmers. The effect of this is that the farmers started to use modern impliments and productivity of crops increased. Especially sugarcane cultivation in the region enhanced.

Table No.2.8 shows the change in the agricultural impliments over a period of 20 years in Malshiras tahsil.

Table No.2.8 : Agricultural impliments.

Sr.No.	Agricultural impliments	1960-61	1970-71	1979-80
1.	Wooden ploughs Nos	698	1,416	470
2.	Iron ploughs Nos	2,874	4,412	5,773
3.	Carts Nos	4,417	5,034	7,484
4.	Sugarcane crushers worked by bullocks Nos	19	10	10
5.	Sugarcane crushers worked by power Nos	83	86	125
6.	Oil engines used for irrigation Nos	581	3,380	4,200
7.	Electric pumps used for irrigation Nos	9	720	3,119
8.	Tractors Nos	17	128	250

Source : Socio-Economic Review and District Statistical Abstract of Solapur District (1960-61, 1970-71, 1979-80).

Table No.2.8 clearly indicates that there is a significant increase in iron ploughs from 2,874 (1960-61) to 5,773 (1979-80), while there is a decrease in wooden ploughs from 698 (1960-61)

to 470 (1980-81). The number of carts increased from 4,417 (1960-61) to 7,484 (1979-80). These carts are used in the fields in cropping season as well as to transport the sugarcane to sugar factories from October to May, which cause to increase in income of the farmers. The number of oil engines used for irrigation purposes increased from 581 (1960-61) to 4,200 (1979-80) and electric pumps from 9 (1960-61) to 3,139 (1979-80). This tremendous increase in electric pumps shows the improvement in irrigation facility. The oil engine pumps also shows the increase where electricity is not available. The number of tractors increased from 17 (1960-61) to 250 (1979-80). It is observed from the table that there is a significant increase in electric pumps, oil engines, iron ploughs, carts, and tractors over a period of 20 years within the region.

2.10.0 Forest :

Forests of the Malshiras tahsil are not economically important. In 1960-61 about 3.80 percent of the total geographical area was under forest cover. This percentage remains unchanged in 1980-81 also. The mainly southern hilly part of the tahsil is covered by the forest.

2.10.1 Dry thorney forest :

This type of forest consists of Apta, Khair, Bhabul, Bor, Bel, Hiwar, Kawath, Sissam etc.

2.10.2 Dry deciduous type with sparse tree growth :

This type of forest consists of Dhavada, Moi, Ain, Chandan, Palas, Pimpal, Vad, Chinch, Nimb, Karanj etc.

2.10.3 Grasslands :

The common grasses are Bongrut, Bhale-kusal, Kusali, Pandhari Kusal, Sheda, Kunda, Gondawal, Rosha, Marwel etc.

2.11.0 Population :

According to 1981 census, the population of the Malshiras tahsil was 2.82 lakhs. The population of the tahsil is entirely rural population. There were 75 villages in the tahsil in 1971 and according to 1981 census there are 104 villages in the tahsil.

2.11.1 Growth of population :

Population of Malshiras tahsil increased from 226,480 in 1971 to 282,300 in 1981, giving a decadal growth of +24.90 percent; corresponding growth percentage of the district was +15.77 percent.

Table No.2.9 gives the growth of population of Malshiras tahsil and its variation since 1951.

Table No.2.9 : Decadal Variation of Population (Malshiras Tahsil).

Year	Population	Decade Variation	Rate of Variation <i>in per cent</i>	Death Rate
1951	122,830	-	-	
1961	166,521	43,691	+ 35.57	12.4
1971	226,480	59,959	+ 36.01	9.3
1981	282,300	55,820	+ 24.90	8.4

Source : District Census Handbook of Solapur District.

From the Table No.2.9 it reveals that population of tahsil increased from 1.66 lakhs (1961) to 2.82 lakhs (1981) during the period of two decades. But the rate of increase is declined from 35.57 percent in 1961 to 24.90 percent in 1981. This decline in the rate of increase is due to birth control and increase in the number of population is due to decline in death rate.

2.11.2 Population density :

Population density of Malshiras tahsil increased from 109 persons per square kilometre in 1961 to 185 persons per sq.km. in 1981. The population density for convenient, is divided into five categories. These are very high density (above 320 per sq.km.), High density (240-320 persons per sq.km.), Moderate

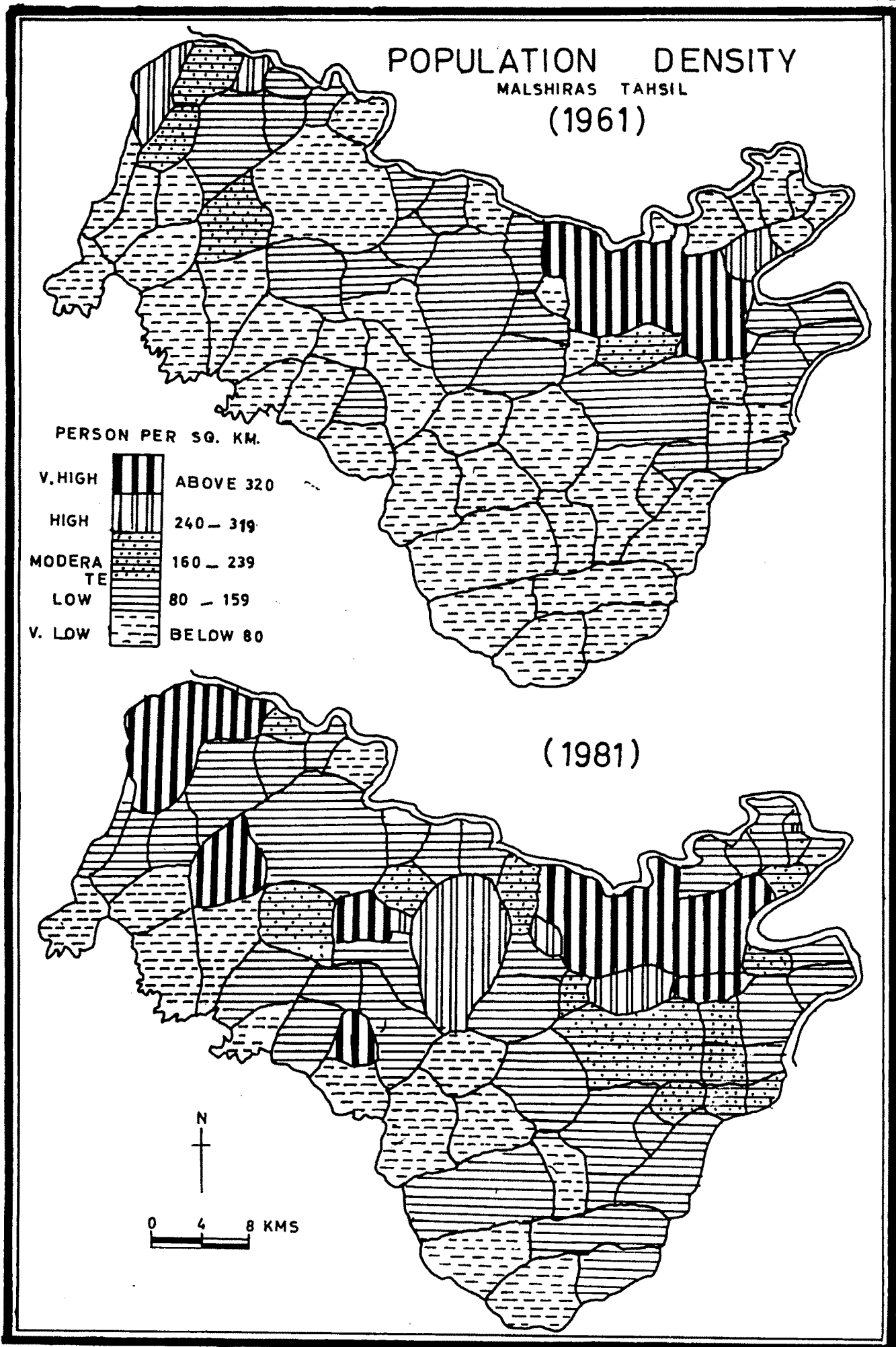


FIG. 2. 8

density (160 to 239 persons per sq.km.), low density (80 to 159 persons per sq.km.) and very low density (below 80 persons per sq.km.).

Table No.2.10 : Villagewise Population Density.

Sr. No.	Density Pattern	Density Range	No. of villages		Percentage	
			1961	1981	1961	1981
1.	Very high density	Above 320 p.p.sq.km.	4	11	5.34	14.66
2.	High density	240 to 320 p.p.sq.km.	2	4	2.66	5.34
3.	Moderate density	160 to 239 p.p.sq.km.	6	16	8.00	21.33
4.	Very low density	80 to 159 p.p.sq.km.	27	31	36.00	41.33
5.	Low density	below 80 p.p.sq.km.	36	13	48.00	17.34

Source : Compiled by author.

Table No.2.10 reveals that 4 villages (5.34%) included under very high density (above 320) in 1961, which rose to 11 villages (14.66%) in the year 1981. The high density (240 to 320) shows 2 villages (2.66%) in 1961, increased to 4 villages (5.34%) in 1981. Moderate density (160 to 239) includes 6 villages (8.0%) in 1961 and 16 villages (21.31%) in the year 1981. Whereas low density (80 to 159) includes 27 villages (36.00%) and 31 villages (41.33%) in the year 1981. The very

low density of population (below 80) includes 36 villages (48%) in 1961, reduced to 13 villages (17.34%) in the year 1981. From the table, it is observed that 44 villages (58.67%) are included in low and very low density, especially in the southern part of the region where natural resources are not favourable (Fig.2.8). On the otherhand it is observed that very high to moderate density observed in 31 villages (41.33%) located in the northern part of the region, where natural resources are favourable (Fig.2.8).

2.11.3 Sex ratio :

There is no remarkable change in the sex ratio over a period of two decades (1961-1981). According to 1961 census there were 952 females per thousand male population while according to 1971 and 1981 census there were 937 and 936 females per thousand male population respectively.

2.11.4 Literacy :

The significant change is observed over a period of two decades (1961-1981). According to 1961 census literacy rate was 20 percent. Male and female literacy rates were 29.7 and 9.8 percent respectively. In the 1981 census literacy rate was 36.38 percent. Male and female literacy rates were 48.72 percent and 23.21 percent respectively. It reveals that male literacy

rate increased from 29.7 percent (1961) to 48.72 percent (1981) and female literacy rate increased from 9.8 percent (1961) to 23.21 percent (1981). This increase in the literacy rate is due to economic uplift of the people and increasing educational facilities in the tahsil.

2.11.5 Occupational structure :

Out of the total population (2.82 lakhs) 1.12 lakhs persons were the working population (1981).

Table 2.11 shows the percentage of working population into three broad categories in Malshiras tahsil.

Table No.2.11 : Occupational structure.

Sr.No.	Particulars	1961 %	1971 %	1981 %
1.	Primary sector	84.82	83.00	78.79
2.	Secondary sector	7.86	8.76	10.02
3.	Tertiary sector	7.32	8.44	11.29

Source : District Census Handbook of Solapur District.

Table No.2.11 indicates the distribution patterns of workers in primary, secondary and tertiary sectors. Primary sector comprises activities like, agriculture, agricultural

labour, livestock, forestry, plantation etc. About 78.79 percent were engaged in primary sector in 1981. Secondary sector comprises manufacturing, processing and construction activities accounted for 10.02 percent workers and in tertiary sector comprising trade and commerce and other services about 11.29 percent workers were engaged. Thus it is evident that employment opportunities in secondary and tertiary sectors are not satisfactory. There is therefore, much pressure on primary sector.

The percentage of workers engaged in the primary sector was 84.79 in 1961 which was decreased to 78.79 percent in 1981. The percentage of workers engaged in secondary and tertiary sectors in the tahsil were 7.86 and 7.32 in 1961, which increased to 10.02 and 11.29 respectively. This is an indication of economic development.

2.12 Transportation :

Transportation is a necessary condition for economic development. Transport sector contributes to the success or failure of nearly every investment in the economy. In Malshiras tahsil road transportation plays important role. The following are metalled roads in the region (Fig.2.9).

- 1) Dharmapuri - Natepute - Malshiras - Salmukh;
- 2) Malshiras - Akluj - Malinagar - Sangam;
- 3) Akluj - Khandali - Velapur - Tondale;
- 4) Sulewadi - Piliv - Salmukh - Tandulwadi.

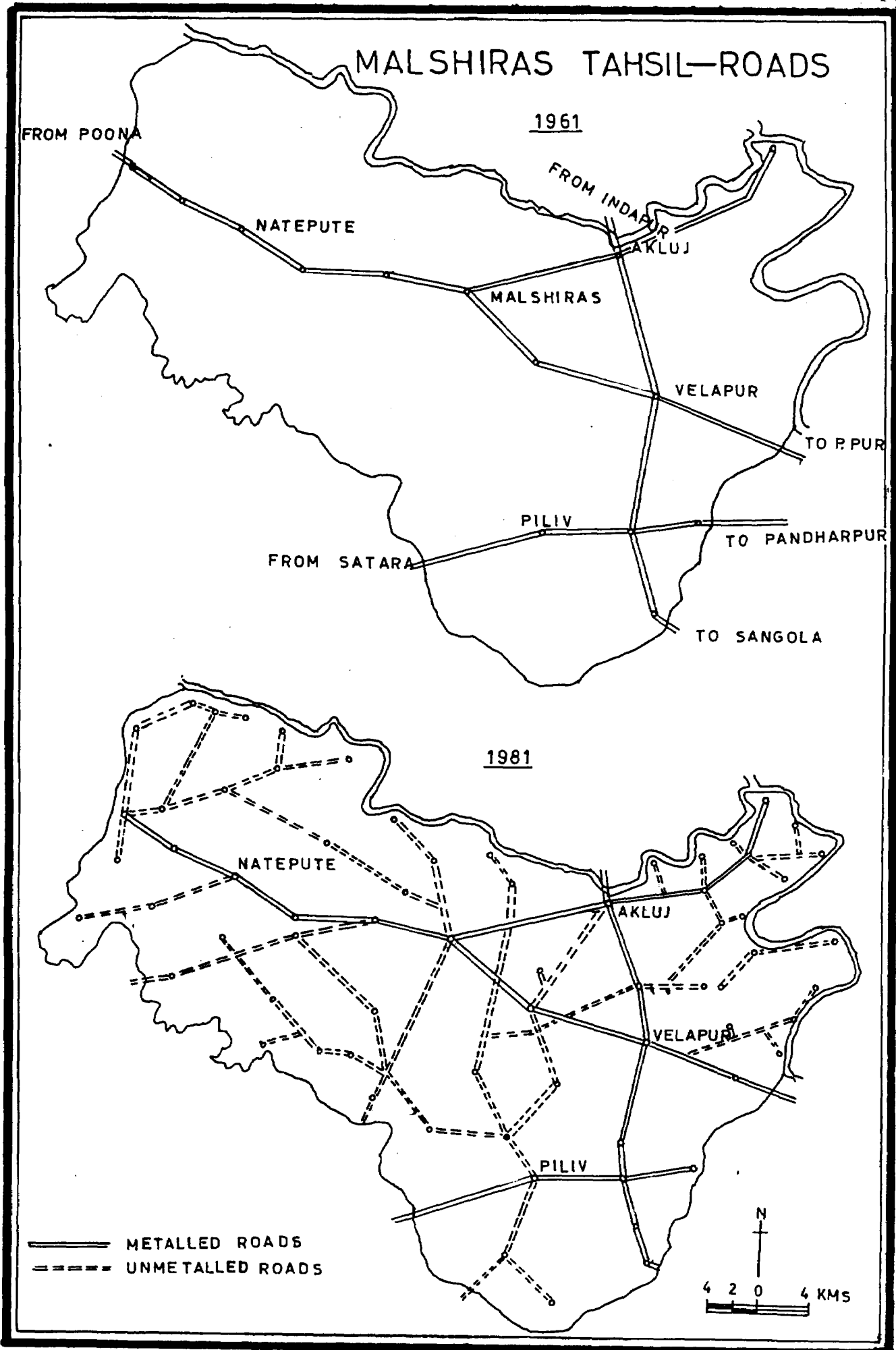


FIG. 2.9

Remaining roads shown on Fig.2.9 are unmetalled roads but they are motorable in all seasons.

Road length per 100 sq.km. area was 9.41 km. in 1961, which was increased to 28 km. per 100 sq.km. area in 1981.

2.13 Summary :

The geographic account of the Malshiras tahsil is represented to indicate potential of the tahsil towards a development of agrobased industries, especially sugar industry. The land resources have been supporting better cropping propositions which did prove from 1960 onwards in the form of sugarcane. Sufficient water resources, fertile soils, able manpower and better infrastructural facilities were highly favourable factors conducive for commercial agriculture, which become a cause of economic development of the region. Ultimately leads to social transformation of the region.

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