

CHAPTER - III

=====

GENERAL LANDUSE PATTERN

LAND CLASSIFICATION

1. FOREST
2. LAND NOT AVAILABLE FOR CULTIVATION
3. OTHER UNCULTIVATED LAND
(excluding fallow land)
4. FALLOW LAND
5. NEW SOWN AREA

CONCLUSION

REFERENCES



In the previous chapters the farm population and land systems and level of technological development is presented and now this chapter proposes to analyse the landuse elements and changes therein in light of the preceding discussion. The use of land constitutes a major item in national planning and this is especially so in India where more than 80% of population depends directly upon land for their livelihood.

Land use of a region is interacted between the physical, economic and social parameters of a region. Physical limitations of site find a direct expression in land use. Land-use pattern is a key to understand geographical adjustment of agricultural resources (Balak Ram and Joshi,1984).

This chapter propose to examine the general landuse pattern of Solapur district based on the data abstracted from the census handbook of Solapur district. Taluka level statistics have been used for analysing the distributional patterns of general landuse and changes therein during the period 1951-53 to 1976-78.

LAND CLASSIFICATION :

Land use is an important aspect of studies in agricultural geography and for making the study of landuse it is classified into different categories. The concept of landuse has been used in so many ways that no generally accepted scheme of classification exists despite many years of landuse studies by geographers (Kariel and Kariel,1972). In most such schemes, activity on the land has been

the major criterion for classifying land use which is essentially a qualitative rather than quantitative variable.

Land classification is based largely on the quality and intensity of the use of land (Ali Mohamad, 1978). Census of India have classified land utilisation in nine different categories, but in the present study they have been grouped into five major landuse categories, as the percentage of area under individual categories is relatively insignificant. On the basis of the statistical data abstracted from the sources referred to above, the Solapur district may be divided into five major landuse categories. The following table and fig.3.1 shows the main elements of land utilisation in Solapur district.

Table 3.1 : General landuse pattern in Solapur district.

Sr. No.	Major landuse categories	Area in hectare	Percentage to total geographical area	Percentage of state average
1.	Forest	328	2.18	17.6
2.	Area not available for cultivation	733	4.87	8.0
3.	Other uncultivable land (excluding fallow land)	1,055	7.02	7.2
4.	Fallow land	1,625	10.83	7.2
5.	New sown area	11,280	75.10	60.0
Total		15,021	100.00	100.0

SOURCE : Socio-Economic Review & District Statistical Abstract of Solapur District.

GENERAL LANDUSE PATTERN

1976 — 78

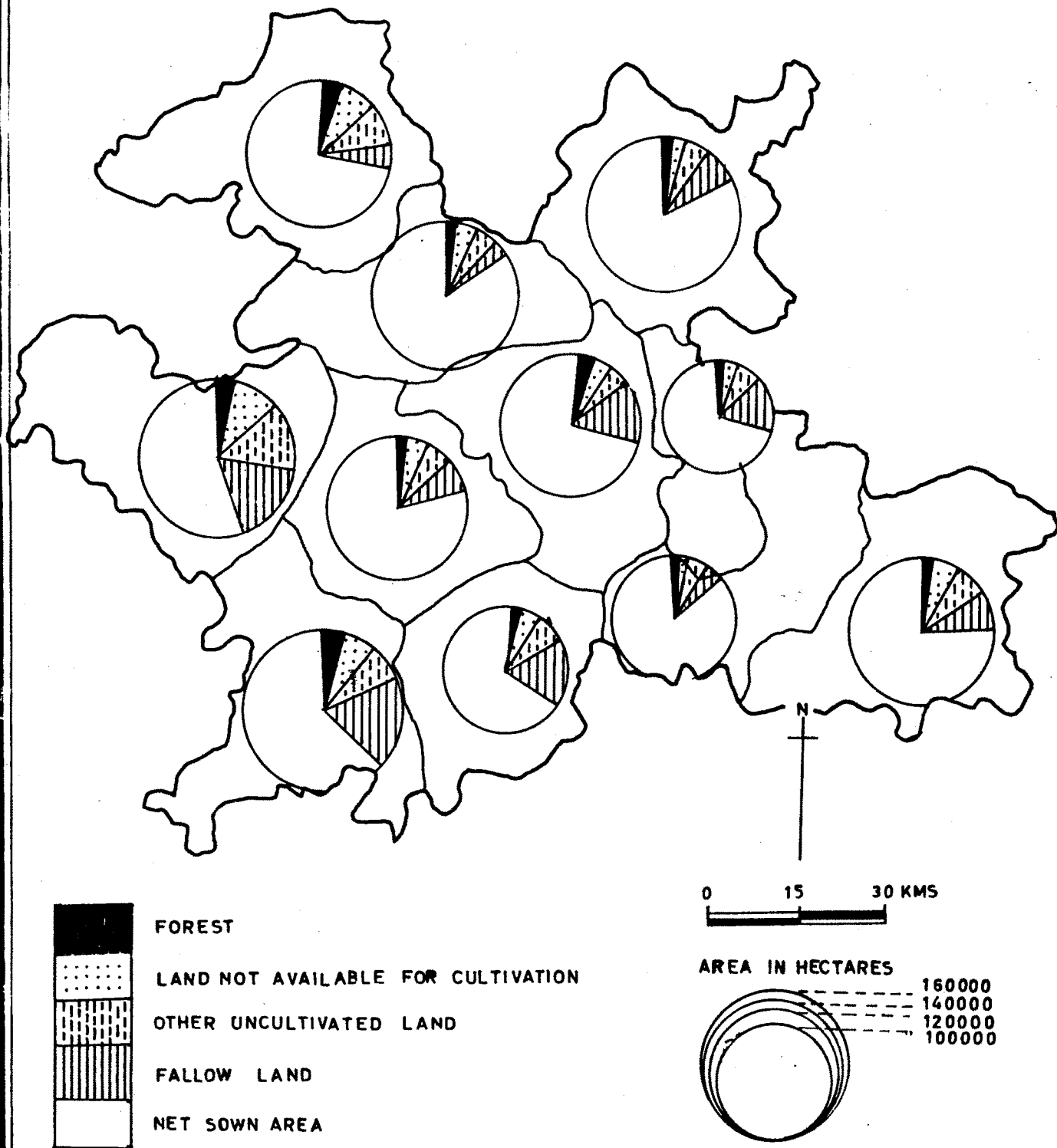


FIG. 3-1

1. FOREST :

This category includes all areas actually under forests whether state owned or private and classified or administrated as forests under any legal enactment dealing with the forests.

The Solapur district has a very limited area under forest, mostly arid and scrub forest patches are recorded in Barshi and Malshiras talukas. The forest area is noted in Malshiras range (Malshiras, Sangola, Solapur, Madha, Karmala, Barshi and Pandharpur & Akkalkot (Fig.3.2)).

Forests occupy about 2.18 percent of the total geographical area in the district being lower than the average for Maharashtra which is 17.5 percent. There are marked variations in taluka levels ranging from under 1 percent in Akkalkot taluka to over 5 percent in western part of the district (Fig.3.3A). Highest percentage is recorded in Sangola, Karmala and Malshiras talukas with 4.32 percent, 3.88 percent, 3.60 percent respectively. In eastern part of this district, forests occupy between 1 percent to 3 percent of the total geographical area. Forest cover gradually decreases from west to east. Most of the forests in the region are situated on hills and ghats of Vadshing Ghat in Barshi, Waghoba and Bodki in Karmala, Guruvad and Phaltan range in Malshiras, Khanapur-Jath hills in Sangola and the Chinchgaon hills of Madha taluka. In this area rainfall is more compared to the other area. These hill slopes have been denuded of the forest cover due to constant overgrazing, excessive and unplanned cutting of trees and general lack of

DISTRIBUTION OF FOREST AREA

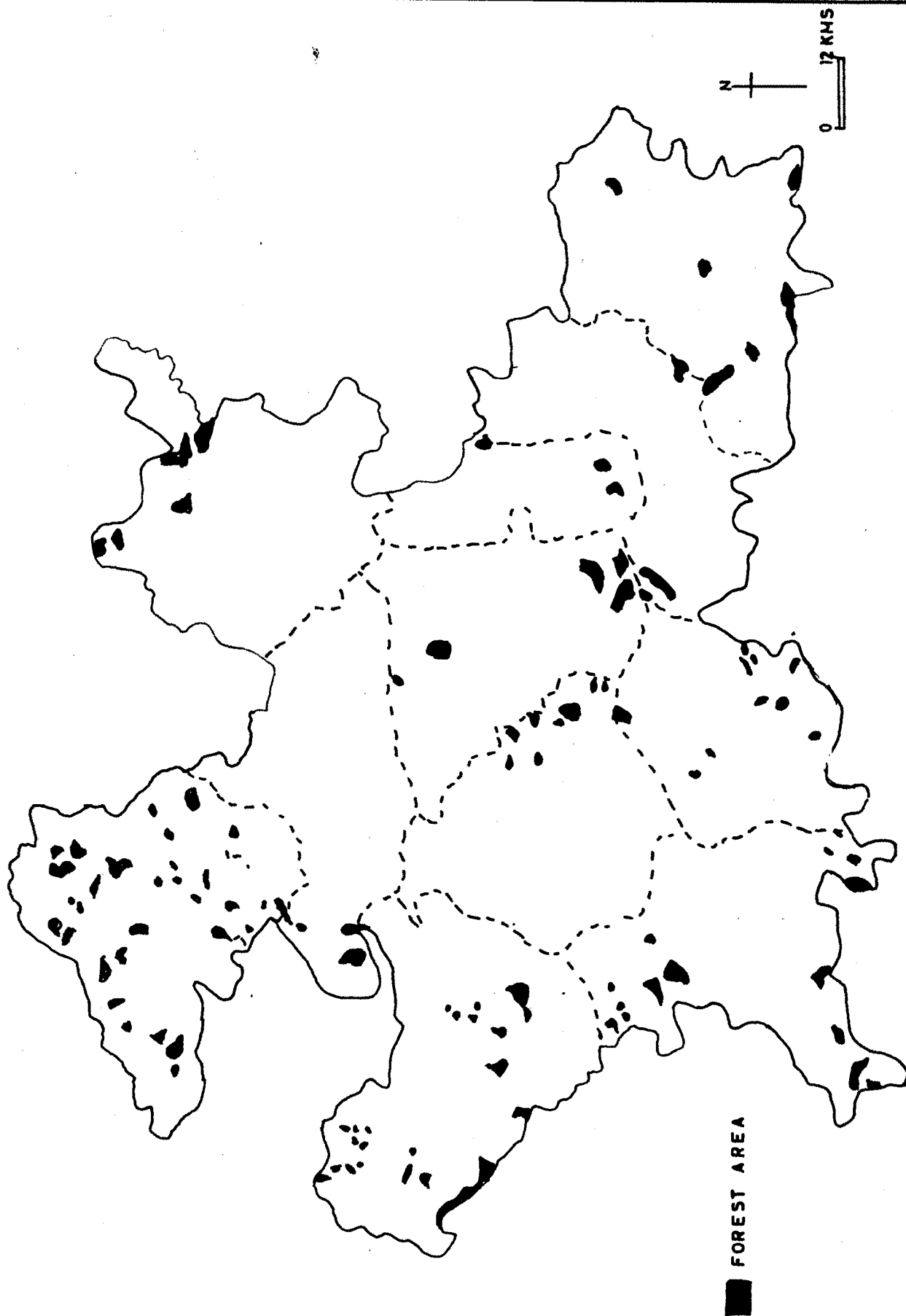


FIG. 3-2

SOURCE - FOREST OFFICE, SOLAPUR.

application of principals of landuse and forest management.

Table 3.2 : Trends in general landuse pattern in Solapur District.

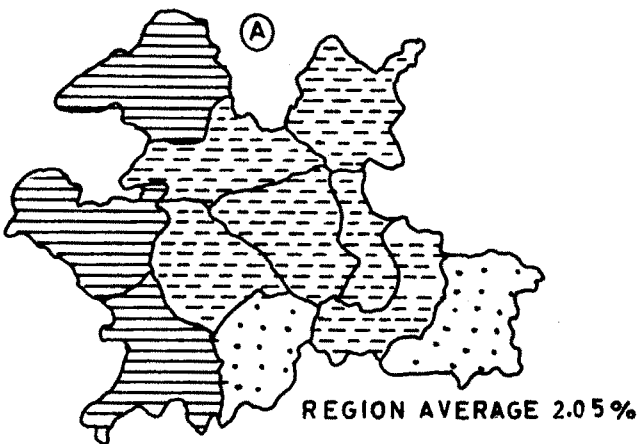
Sr. No.	Landuse category	1951-53 %	1976-78 %	Change %
1.	Forest	2.65	2.18	+ 0.47
2.	Land not available for cultivation	4.40	4.87	- 0.47
3.	Other uncultivable land (excluding fallow land)	6.10	7.02	- 0.92
4.	Fallow land	12.58	10.83	+ 1.75
5.	Net sown area	74.27	75.10	- 0.83
Total		100.00	100.00	<u>+ 2.22</u> <u>- 2.22</u>

SOURCE : Complied by Author.

Volume of change in forested area during the last 27 years is shown in the adjoining map in Fig.3.3B. Although no large scale variations are marked in the pattern, the region has undergone some changes in the forest cover, varying from 1 percent increase to above 2.50 percent increase. Overall increase in forest cover is mostly in Malshiras and Sangola (above 2.50 percent).

FOREST

(1976-78)

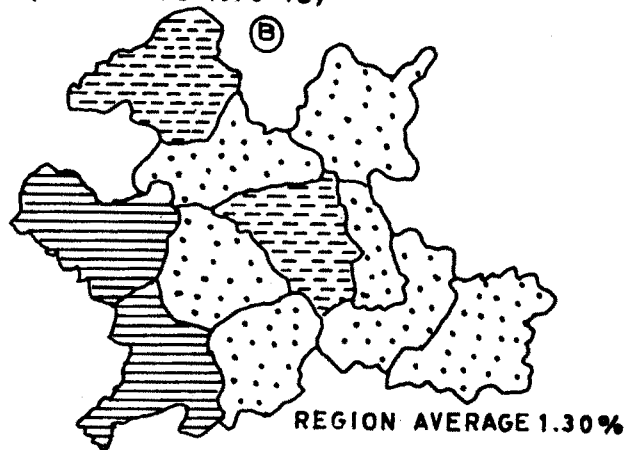


AREA IN %

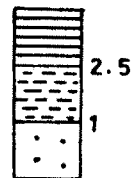


CHANGE IN FOREST AREA

(1951-53 TO 1976-78)

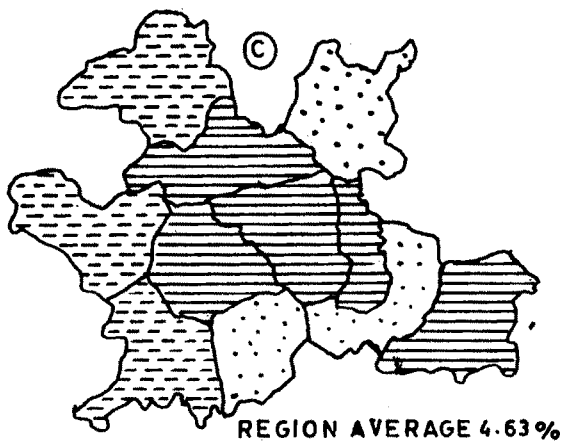


PERCENT INCREASE

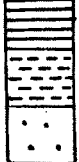


LAND NOT AVAILABLE FOR CULTIVATION

(1976-78)

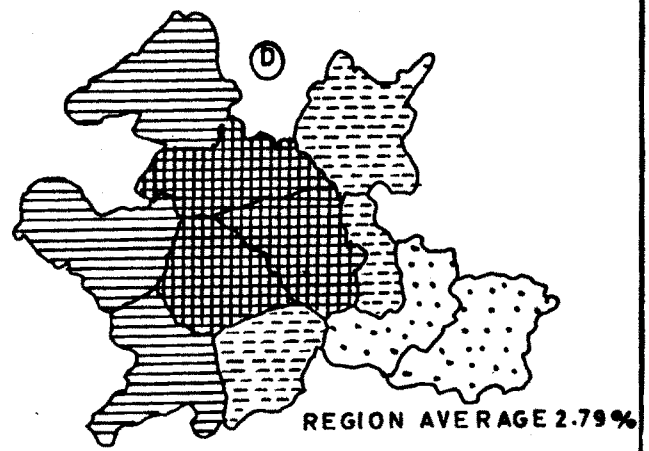


AREA IN %



CHANGE IN LAND NOT AVAILABLE FOR CULTIVATION

(1951-53 TO 1976-78)



PERCENT INCREASE



PERCENT DECREASE

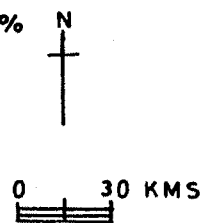


FIG. 3-3

2. LAND NOT AVAILABLE FOR CULTIVATION :

This category includes land put to non agricultural uses, barren and unculturable land like hill ranges, river beds, etc. In otherwords, it includes land which can not be brought under cultivation unless at a very high cost. About 4.82 percent of area belongs to this category which is much less as compared to Maharashtra average of about 8 percent. The area under this category is exhibited in Fig.3.3C. There are remarkable variations in the distribution of land under this category. Malshiras, Karmala and Sangola record over 6 percent of land area under this category. In Malshiras taluka the proportion of area not available for cultivation is 10 percent of total geographical area of Solapur district.

In Solapur district Pandharpur, Madha, Mohol, North Solapur, Akkalkot and Mangalwedha talukas have substaintial proportion (above the region average of 4.63 percent) of areas marked as land not available for cultivation. In Solapur district, Barshi and South Solapur records a lesser proportion of land (below 3 percent) under this category.

-Volume of change in land not available for cultivation is shown in the adjoining Fig.3.3D. No uniform pattern is observable in the distribution of area involved in change. Overall changes are significant. Maximum increase under this category is confined to a western part of this district i.e. Karmala, Malshiras and Sangola talukas. In eastern part there is less change in this category particularly in Barshi, North Solapur and South Solapur

(below 2 percent). In South Solapur taluka decrease in area of this category is upto 0.75% and 2 to 3.99 percent change in middle part of this district.

3. OTHER UNCULTIVATED LAND (excluding fallow land) :

This category of land consists of i) culturable waste, ii) permanent pastures and iii) land under miscellaneous tree crops and groves. Culturable waste~~x~~ land includes the land which can be brought under cultivation but which have not been cultivated for some time and not been cultivated successively for more than five years. The category of miscellaneous tree crops includes lands under casuarina trees, grass bamboo bushes or other trees used for fuel. Actually these are the lands which are put to some agricultural use but whose areal extent is not included in the category of net area sown.

Total area under this landuse category amounts to 7.03 percent which is near to the state average of 7.2 percent. Regional distribution under this category varies from below 5% to over 15% (Fig.3.4A). Malshiras taluka records high (10% to 15%) percentage of area under this category. Rest of talukas such as Karmala, Barshi, North Solapur, South Solapur, Akkalkot, Mangalwedha and Sangola talukas have 5 to 10 percent of land classified as other uncultivated land. Only three talukas i.e. Madha, Mohol and Pandharpur record very low (under 5 percent) proportion of land in this category.

The spatial distribution of volume of change in uncultivated land as depicted in Fig.3.4B is very uneven. Most of the increase in area involved in change is confined to Karmala, Malshiras and Akkalkot taluka, in eastern part of Solapur district. Barshi, South Solapur, Mangalwedha, Pandharpur and Madha taluka record medium change having 3 to 6 percent and low volume of change is found in Sangola, Mohol and North Solapur talukas.

4. FALLOW LAND :

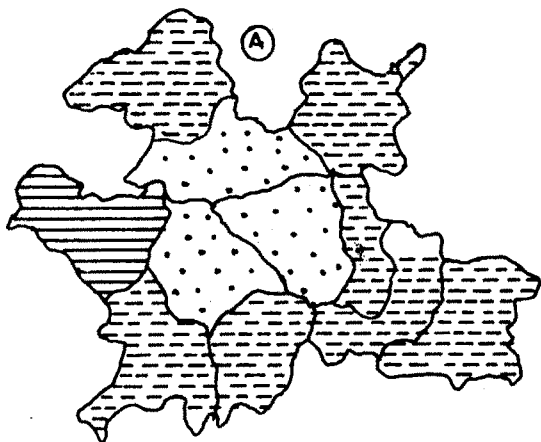
The term fallow is applied to lands not under cultivation at the time of reporting but which have been soon in the past.

The duration of period for which a land remains fallow is different in different parts of the district. Two types of fallows viz., current and other fallow lands, are considered by the census. For the present study, however, these two categories are grouped together.

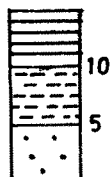
Solapur district has a substantial proportion of fallow land with an average of 10.83 percent of the total geographical area. This is more of the state average of 7.2 percent. Regional disparities in the spatial distributional pattern of fallow lands in Solapur district are exhibited in Fig.3.4C.

Western part of district, Malshiras, Sangola, Mangalwedha, Mohol and North Solapur talukas record high percentage (above 15%). Only Akkalkot taluka record 10 to 15 percent of the land as fallows.

OTHER UNCULTIVATED LAND (EXCLUDING FALLOW)
1976-78

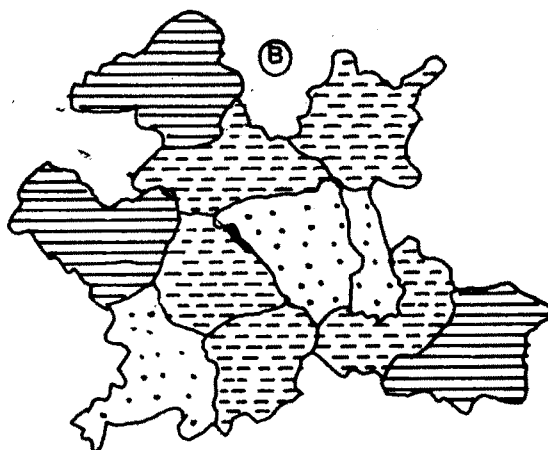


AREA IN %



REGION AVERAGE 6.82%

CHANGES IN OTHER⁸⁰ UNCULTIVATED LAND (EXCLUDING FALLOW)
1951-53 TO 1976-78

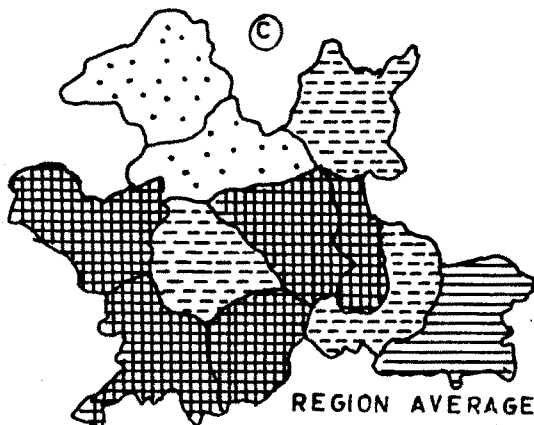


PERCENT INCREASE

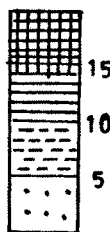


REGION AVERAGE 4.36%

FALLOW LAND
1976-78

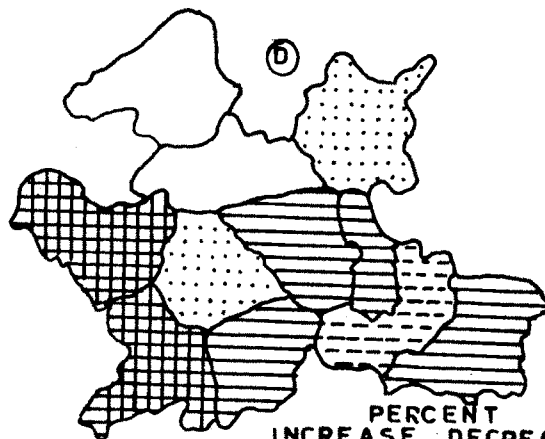


AREA IN %

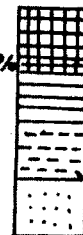


REGION AVERAGE 11.19%

CHANGES IN FALLOW LAND
1951-53 TO 1976-78.



PERCENT INCREASE DECREASE



REGION AVERAGE 6.68%

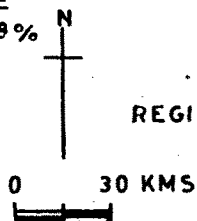


FIG. 3-4

Rest of Solapur district (except Karmala and Madha talukas) have high proportion of fallow lands which is less than regional average. Remaining two talukas of Madha and Karmala record relatively less (i.e. less than region average). Thus, the percentage of fallows in Solapur district decreases from south to north.

Percentage of total area involved in change in respect of fallow lands for the 27 years is shown in Fig.3.4D from which it is seen that substantial proportion of area is involved in change in Solapur district. Increase to the tune of 8 to 12 percent and above has taken place in six talukas of Solapur district (Malshiras, Sangola, North Solapur, Mangalwedha, Mohoi and Akkalkot talukas). As against this trend, percentage decrease in fallow lands is more conspicuous in smaller parts (Karmala 1.63, Madha 3.64) of Solapur district. Maximum value i.e. 12 percent and above, volume of change is recorded by Malshiras, Sangola and North Solapur talukas of Solapur district.

5. NET SOWN AREA :

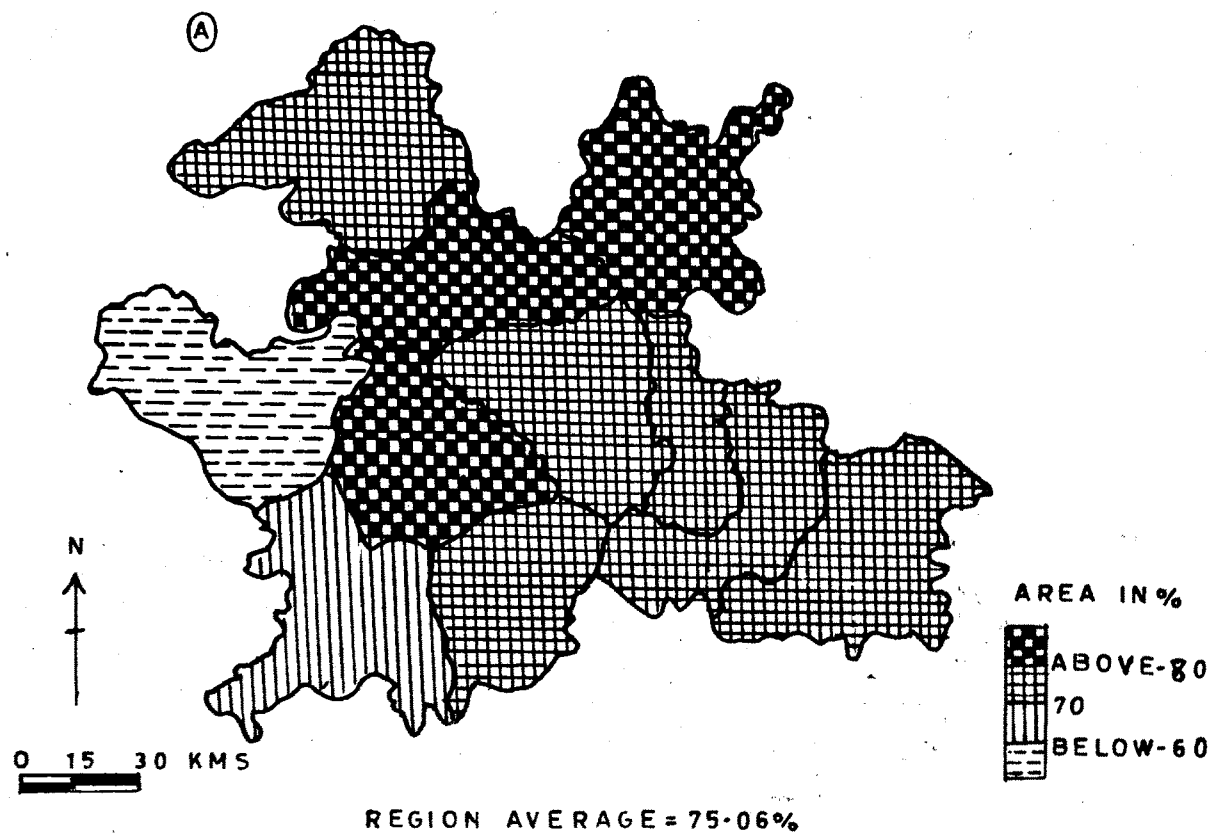
This category constitute the extent of cropped land in any region and therefore, is of vital significance in studies relating to agricultural geography. The net area sown is the actual area under crops sown in the same year only once. In Solapur district net area sown occupies the largest share viz. 75.10 percent in the region's geographical area. It clearly shows that in Solapur district about 75 percent of the total land area is used for cultivation. In river valleys of the district, major

cultivated land is found. Regional variations in the net area sown for Solapur district are exhibited in Fig.3.5A.

The outstanding fact immediately noticeable in it is that only four talukas viz. Barshi, Madha, Pandharpur and South Solapur out of the eleven record as much as 80 percent land area as net sown area. Other areas with higher percentages of net area sown ranging from 70 to 80 percent are confined to three talukas in the districts. They are Mohol, North Solapur, Mangalwedha and Karmala taluka. Rest of the Solapur district area is having medium to low percentages of net sown area. There is a significant increase in area under this category. All the eleven talukas of the district record increase ranging from 35% to 55% (Fig.3.5B).

Cropping intensity :

Table 3.3, shows that the net resown area is very low in the period of 1961-62 compared to the 1971-72. In talukas except North Solapur, Barsi, Mohol, Sangola, and Madha the net resown area is decreased in 1971-72. The area sown more than once increased particularly in Malshiras, Pandharpur, and Mangalvedha talukas. The highest cropping intensity is observed in Malshiras taluka, followed by Barsi, Mangalvedha and Madha talukas. The district's net resown area is 36,145 hectares in 1961-62, 45,623 hectares in 1971-72 and 64,534 hectares in 1976-78. The district's net resown area is increased by 28,389 hectares in the period of 1961-1978.



CHANGES IN NET SOWN AREA
1951-53 TO 1976-78

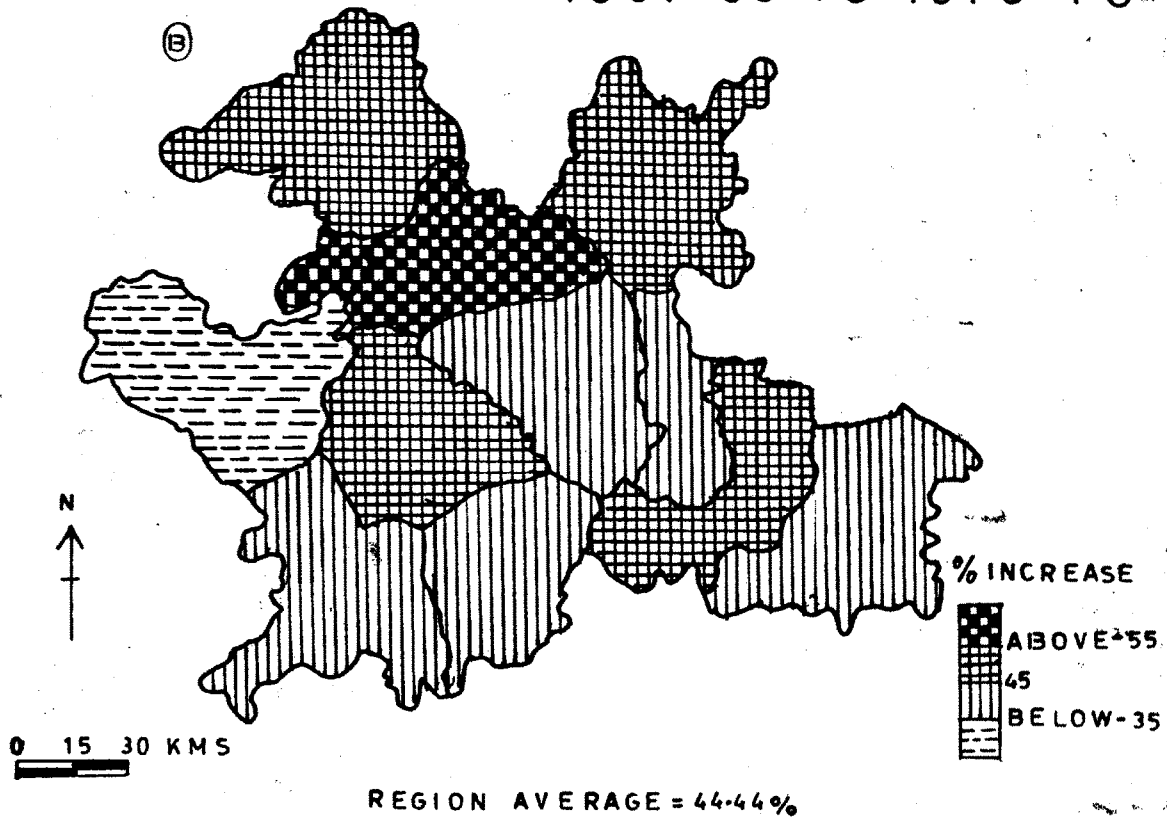


FIG-3-5

Table 3.3 : Area sown more than once in Solapur district.

Sr. No.	District/ Taluka	1961-62	%	1971-72	%	1977-78	%
1.	North Solapur	1,247	3.45	777	1.70	2,783	4.31
2.	Barsad	5,604	15.59	3,426	7.51	9,327	14.45
3.	Akkalkot	2,780	7.69	2,928	6.42	4,206	6.52
4.	South Solapur	965	2.67	7,011	15.37	4,142	6.42
5.	Mohol	3,217	8.90	2,892	6.34	3,089	4.78
6.	Mangalvedha	1,630	4.51	1,775	3.89	4,340	6.73
7.	Pandharpur	3,289	9.10	3,608	7.91	5,155	7.99
8.	Sangola	4,549	12.59	3,682	8.07	4,955	7.68
9.	Malshiras	4,439	12.28	5,292	11.60	11,706	18.14
10.	Karmala	4,007	11.09	10,052	22.04	8,696	13.48
11.	Madha	4,414	12.21	4,170	9.15	6,132	9.50
District		36,145	100.00	45,613	100.00	64,531	100.00

SOURCE : Socio-Economic Review & District Statistical Abstract of Solapur District.

The extent of cultivated area in Solapur district has changed over the past 27 years. From nearly 33,989 hectares in 1951-53 it rose to about 82,574 hectares in 1976-78. The volume of change in net area sown is depicted in Fig.3.5B which indicates the overall increase. The net area sown is remarkable and varies

from 35 percent to over 55 percent in some parts of Solapur district. Madha taluka records maximum increase and ranks first in the net area sown. Other areas recording medium (i.e. 45 to 55 percent) increase are Karmala, Barshi, Pandharpur and South Solapur talukas. Relatively lower increase ranging from 35 to 45 percent is observed in many widely separated areas throughout Solapur district but more in Mohol taluka.

CONCLUSION :

The physical factors have a strong control on land use pattern of district. The general land use pattern in west is in many ways different from that of east. The western part of the district and some northeast part of Barshi taluka has a higher percentage of land not available for cultivation because of rugged relief and forest area whereas the eastern part has more agricultural land. The other uncultivated land which provides an extension for cultivation is concentrated in western part of the region. The fallow land is noticed more in the south western talukas, while in irrigated areas with high population density its proportion is low. With regard to cropping intensity, the region is characterised by a low percentage, which is mainly due to the predominance of food crops and low irrigation.

Change in general land use pattern is the outcome of interactions between the physical factors on one hand and socio-economic factors on other. As such, the land use pattern of

the region is not so stable as there are many spatio-temporal oscillations. The increase is observed in agricultural land. Whereas the decline is observed in non-agricultural land and fallow land. Increase in net sown area and corresponding decreases in fallow land in north western part of the district are observed. Larger changes in landuse have occurred on the poor lands (western part) and the least on the fertile lands (eastern part).

R E F E R E N C E S

1. Ali Mohamad (1978) : Studies in Agricultural Geography.
Rajesh Publications, New Delhi.,p.30.
2. Balak Ram, and Joshi D.C. (1984) : Landuse Soil
Relationship in Arid Zone. The Deccan Geographer,
Vo.XXII, p.505.
3. Karil, H.G. and Karil,P.E. (1972) : Exploration in Social
Geography. Addison-Wesley Publishing House,London.,
pp.117-193.