

Changing General Land Use Pattern in Solapur District

Dr. Samadhan Dharma Shinde

Assistant Professor, Department of Geography Shripatrao Kadam Mahavidyalaya, Shirwal

Affiliated to Shivaji University, Kolhapur, Maharashtra

Article Info	ABSTRACT
Article History: Received: 15th Dec 2025 Accepted: 19th Dec 2025 Published: 20th Dec 2025 Keywords: <i>General Land Use Pattern, Forest Area, Land Not Available for Cultivation, Other Cultivated Land, Fallow Land and Net Sown Area etc.</i>	Land is an important natural resource for the human beings because the food grains required for human survival are obtained from the land. Land use is mainly determined by the geology and human development of the region. Considering geographical factors, humans grow various types of crops on the land and changed the land use pattern. In this context, it is necessary to study the aspects of general land patterns. This needs the study of general land use patterns in the study area as a factor affecting human social and economic conditions. This land use pattern has been classified into different groups. These are classified as forest area, land not available for cultivation, other cultivated land, fallow land and net sown area. In this paper investigate General Land Use Pattern 2020-21 and 2024-25 Solapur District is located between 170 10' North to 180 32' North latitude and 740 42' East to 760 15' East longitude. It is a part of Western Maharashtra. The data use for this study has been collected from the Socio-economic Review and District Stastical Abstract, Solapur District, 2020-21 and 2024-25 and Census of India's (2011) District Census Handbooks Solapur District. Out of the total geographical area nearly 70 per cent area is under agriculture (Pandharpur and Barshi is agriculture developed tahsil) but 18 and 13 per cent area is remaining fallow land other than 2.71 and 2.40 per cent area is under forest and near 7.34 and 9.33 per cent area shared by area not available for agricultural in respectively study period years.

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INTRODUCTION

The Socio-Economic condition and physical characteristics of the study area have different from place to place. General land use pattern is mainly being determined by the physiography of the region.

This regional differentiation is the result of complex associations with environmental and geographical factors. The variations are due to the geological complexity of the region and varied geomorphologic evolutions (Deshpande, 1971). Human factors cannot escape from this. Regional differentiation such as uneven growth, distribution, functions, services, facilities have various complex relationships with the natural and cultural environment (S. D Shinde and U. M Ghodake, 2025). Therefore, the study of physical and cultural factors is useful for understanding various factors of general land use patterns.

This will provide an idea of how important physical, social, and economic factors are in studying the developmental characteristics of land use patterns. In this context, for further study of general land use patterns in the study area, a brief assessment is made of physical factors such as landforms, drainage systems, soil, and climate, and cultural factors such as population, cropping patterns, and transportation. A combination of physiocultural factors has led to the changing cropping pattern (Parihar S. 2017). Therefore, this research paper attempts to analyze the general land use patterns in Solapur district during the years 2020-21 and 2024-25.

OBJECTIVES

1. To study the General Land Use Pattern 2020-21 and 2024-25
2. To study the Changing General Land Use Pattern.

STUDY AREA

Solapur District situated in the western part of the Maharashtra state which has been selected for the present study. It lies between $17^{\circ} 10'$ north to $18^{\circ} 32'$ north latitudes and $74^{\circ} 42'$ east to $76^{\circ} 15'$ east longitudes. It is administratively sub-divided into 11 tahsils (Fig. 1). It is bounded by Ahmednagar on the north, Osmaanabad on north-east, Gulbarga district from Karnataka state on east-south, Sangli district on the south-west and Pune and Satara on the west side. It covers an area of 14895 sq km. and supports population of 3849543 (258 parsons in per.sq.km.). Solapur District is situated entirely in Bhima, Nira, Sina, and Man river basins in south-west Maharashtra.

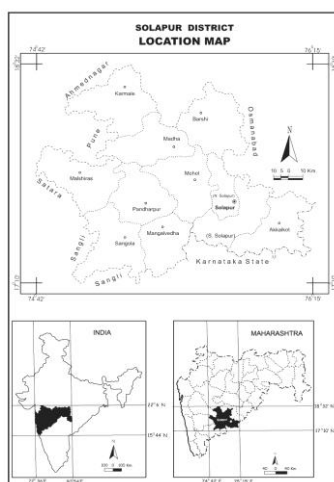


Fig. 1

DATA AND RESEARCH METHODOLOGY

The secondary sources of the data are mainly includes Socio-economic Review and District Stastical Abstract, Solapur District, 2020-21 and 2024-25, and Census of India's District Census Handbooks Solapur District, 2011 etc. also used the sources of data in the present investigation.

The collected data have been used various quantitative techniques and presented in tabular form. The processed data have been elaborated in the form of tables, graphs, diagrams and maps.

RESULT AND DISCUSSIO

A) GENERAL LAND USE PATTERN

It is essential to study land use patterns in the study area as a factor influencing human social and economic conditions. This land use has been classified into various categories, including forest area, land not available for cultivation, other cultivated land, fallow land, and net sown area. Land is one of the most significant gifts of nature to humankind, which should be utilized carefully (Gatade D. G & Pol N. S 2011). The largest portion of the natural resources of India consists of land and by far the largest number of its inhabitant is engaged in agriculture (C. S. Prasad. 2006).

1. TOTAL GEOGRAPHICAL AREA

This land use is classified into various categories such as forest area, land unavailable for cultivation, other cultivated land, fallow land, and net sown area. The proportion of land under net sown area is the highest, at 69.63 and 70.03 percent, while the lowest proportion is under forests (2.71 and 2.40%) percentage in respected study paired years (2021 and 2025) (Table 1, 2 and Figure 2).

2. FORESTED AREA

Forest area is most important to living things. Forest is important natural resources providing the basic requirement of human beings (S. D. Pagar. 2014). It is completed his need of foods and shelter. The rainfall is low in the study area and hence forested area has low proportion. They are the natural habitat for biodiversity and repository of genetic wealth (Datt & Sundharam, 2013). A forest is an area of land inhabited by dance growth of trees and other woody plants (V. Kumaresan, 1995). In the study area are very low land found under the forest i.e. 2.71 and 2.40% in year 2021 and 2025 per cent.

Table 1
SOLAPUR DISTRICT: GENERAL LAND USE PATTERN, 2020-21

Sr. No.	Tahsil	Total Geographical Area	Forested Area	Area Not Available for Cultivation	Unculti-vated Land	Fallow Land	Net Sown Area
		Area in Hectares	% to Total Geographical Area				
1	Karmala	157175	2.78	14.07	3.56	4.80	74.78
2	Madha	152600	1.69	2.94	0.90	19.35	75.11
3	Barshi	152250	1.43	6.00	3.00	8.90	80.67
4	North Solapur	68303	3.11	5.80	1.65	14.64	74.80
5	Mohol	131689	1.21	9.53	0.00	19.96	69.30
6	Pandharpur	129437	4.18	5.68	2.43	5.60	82.11

Sr. No.	Tahsil	Total Geographical Area	Forested Area	Area Not Available for Cultivation	Uncultivated Land	Fallow Land	Net Sown Area
		Area in Hectares	% to Total Geographical Area				
7	Malshiras	160802	5.75	17.50	3.03	15.50	58.22
8	Sangola	159431	0.43	9.27	2.45	38.64	49.22
9	Mangalvedha	114159	6.20	3.34	2.08	28.11	60.27
10	South Solapur	119463	1.53	3.87	1.54	16.40	76.65
11	Akkalkot	140130	1.53	2.76	3.36	27.55	64.80
Solapur District		1485439	2.71	7.34	2.18	18.13	69.63

Source: Socio-economic Review and District Stastical Abstract, Solapur District, 2020-21.

3. LAND NOT AVAILABLE FOR CULTIVATION

Land not available for cultivation includes barren land uncultivable land and non-agricultural land such as roads, railways, canals and settlement etc. The land not available for cultivation covers 7.34 and 9.33 per cent in respected years. Karmala (14.07 & 11.89%), Malshiras (17.50 & 18.05%) in year 2021 and 2025 this two tahsil continues above average in year 2024-25 and two are added North Solapur (11.17%), and South Solapur (17.69) and remaining tahsils have below average percentage in respected years (Table 1, 2 and Figure 2).

Table 2

SOLAPUR DISTRICT: GENERAL LAND USE PATTERN, 2024-25

Sr. No.	Tahsil	Total Geographical Area	Forested Area	Area Not Available for Cultivation	Uncultivated Land	Fallow Land	Net Sown Area
		Area in Hectares	% to Total Geographical Area				
1	Karmala	160970	6.94	11.89	4.58	3.79	72.80
2	Madha	154490.49	1.67	3.33	0.89	19.14	74.97
3	Barshi	148310.5	1.80	7.90	2.40	7.90	80.00
4	North Solapur	74630	4.77	11.17	1.31	15.18	67.56
5	Mohol	140840	0.16	4.87	0.00	15.43	79.53
6	Pandharpur	130360	0.77	8.01	3.68	5.75	81.80
7	Malshiras	152220	4.34	18.05	0.08	16.59	60.94
8	Sangola	155070	4.57	7.72	6.99	19.00	61.73
9	Mangalvedha	114090	0.60	3.40	2.08	28.13	65.80
10	South Solapur	119530	0.54	17.69	20.71	7.09	53.97
11	Akkalkot	139030	0.27	8.57	9.62	10.27	71.27
Solapur District		1489540.99	2.40	9.33	4.76	13.48	70.03

Source: Socio-economic Review and District Stastical Abstract, Solapur District, 2024-25.

4. OTHER UNCULTIVATED AREA

The percentage of other uncultivated land was 2.18 and 4.76 per cent in respected year to the

total geographical area in the study area. Karmala (3.56%), Barshi (3.00%), Pandharpur (2.43%), Malshiras (3.03%). Sangola (2.45%) and Akkalkot (3.36%) tahsils have high proportion than the average proportion and very low in Madha and Mohol tahsil of the year 2020-21. In the year 2024-25 Sangola (6.99%), South Solapur (20.71%) and Akkalkot (9.62%) tahsils have high proportion than the average proportion (Table 1, 2 and Figure 2).

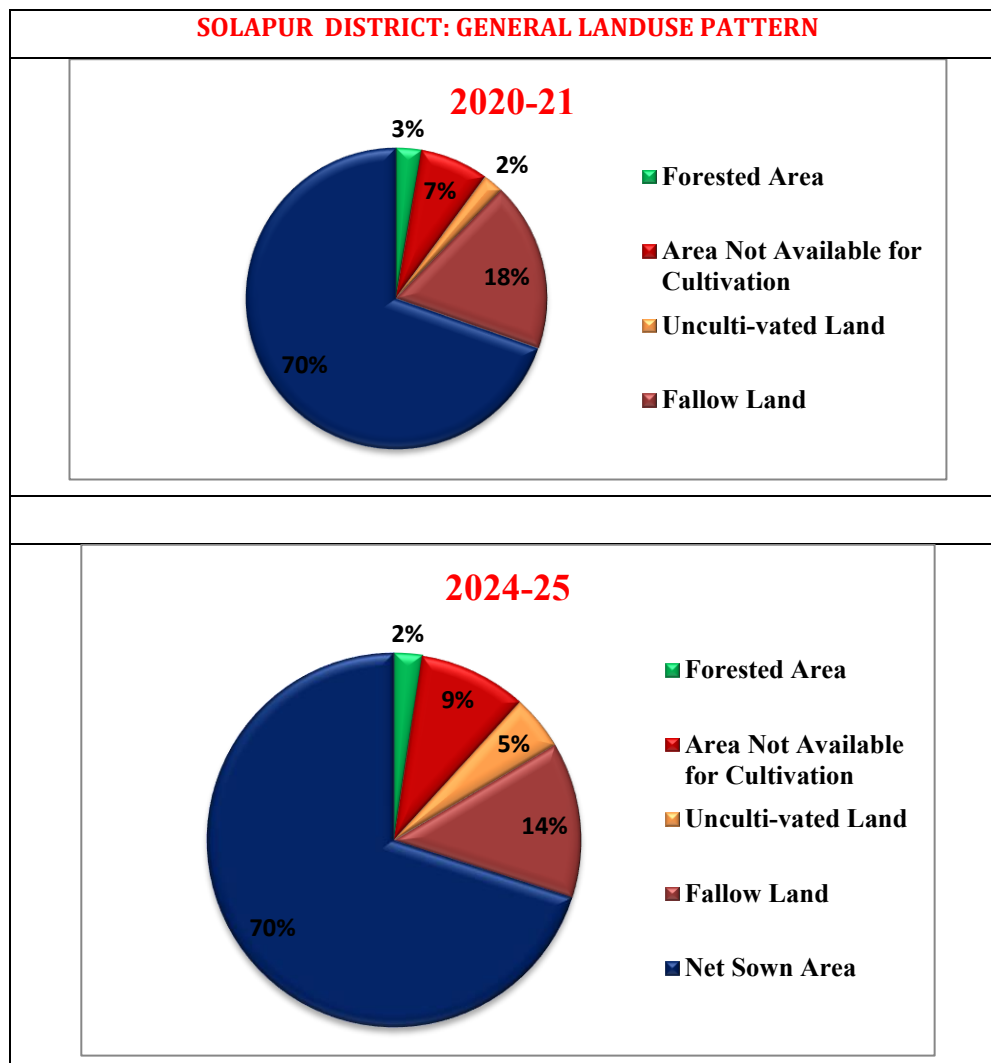


Fig. 2

5. FALLOW LAND

The share of fallow land was 18.13 and 13.48 per cent of the total geographical area in the study area. Fallow land decreasing in 2021 to 2025. The tahsils namely Madha (19.35%), Mohol (19.96%), Sangola (38.64%), Mangalvedha (28.11) and Akkalkot (27.55%) have above regional average proportion and remaining tahsils are below average in the year 2020-21. In the year 2024-25 fallow land is 13.48 per cent of the total geographical area. The tahsils namely Madha (19.14%), North Solapur (15.18%) Mohol (15.43%), Malshiras (16.59%), Sangola (19.00%) and Mangalvedha (28.13) have above regional average proportion and remaining tahsils are below in the average proportion (Table 1, 2 and Figure 2).

6. NET SOWN AREA

The net sown area of the study area found 69.63 and 70.03 per cent in year 2021 and 2025 respectively their no major change. In the year 2020-21 five tahsils have below average of the study area

viz. Mohol, (69.30%), Malshiras (58.22), Sangola (49.22) and Mangalvedha (49.22), Akkalkot (64.80) and remaining tahsils have high percentage than the study areas average. There are some tahsils have below average of the study area in the year 2024-25 but South Solapur tahsil and remaining tahsil have high percentage than the study areas average (Table 1, 2 and Figure 2).

CONCLUSION

Based on the investigation of general land use patterns in the Solapur district for the periods 2020-21 and 2024-25, the following conclusions are reached:

The district maintains a predominantly agrarian character, with approximately 70% of the total geographical area dedicated to agriculture, specifically led by the agriculturally developed tahsils of Pandharpur and Barshi. Despite this dominance, a significant portion of the land—ranging between 18% and 13% across the study periods—remains classified as fallow land.

Environmental constraints significantly influence these patterns; the district's low rainfall correlates with a minimal forest cover, which accounts for only 2.71% to 2.40% of the total area. Furthermore, the proportion of land not available for cultivation (including settlements and infrastructure) showed an increase from 7.34% to 9.33% during the study interval. Ultimately, the land use distribution in Solapur is a direct result of the interplay between favorable pedological (soil) conditions and the limitations posed by scanty precipitation.

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