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**The study of Changes in General and Agricultural Land Use in Village Tisangi,  
District Sangli ( Maharashtra ) : A Geographical Analysis**

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### **Introduction**

The degradation of soil resources is a significant part of environmental degradation. The present investigation has an attempt to make deep study of micro level study of Tisangi as sample village in Sangli district of Maharashtra with views to solve the problems of the farmers and to help for better planning and agricultural development of rural area.

### **Study Area**

Tisangi lies in Kavathe Mahankel tehsil of Sangli district in Maharashtra. It is located at 17° 09' north latitude and 74° 51' east longitudes having an altitude of 680 metres above the mean sea level. It is 55 km from the Sangli town and is connected by road. The village is surrounded by Ghatnandre to the north, Dongarsoni to the west, Kundlapur to the south, and Raiwadi to the east. The total geographical area of the village is 1675 hectares having 1874 population according to 2001 Census.

The general slope of the village is from the west to the east. About 90 per cent part of the village is plain. The village experiences typical hot and dry climate. The highest temperature (41°C) is observed in May. The annual average rainfall is 378 mm. The village receives the rainfall from the South - West monsoon. It starts in the month of June and ends in the month of October. Soil in the village is coarse shallow soil. The soil is less fertile

### **Research Methodology**

The entire study is based on primary as well as secondary data. The primary data is collected by conducting field work through questionnaire method. Personal interviews of farmers, talathi and gramsevak are taken. The period selected for study is 20 years. The data for general land use and agricultural land use is collected from village and tehsil revenue departments. The data of agricultural land degradation is obtained from Sangli district soil testing laboratory and agricultural department. Few secondary data are taken from socio-economic review and district statistical abstract of Sangli district. Collected data is tabulated and shown by bar graphs. The period selected for study is 20 years.

### **Objectives**

Main objectives of present research paper are as under:

- 1) To analyse change in general and agricultural land use for the period of twenty years i.e. 1990-91 to 2009-10
- 2) To find out the causes of agricultural land degradation.

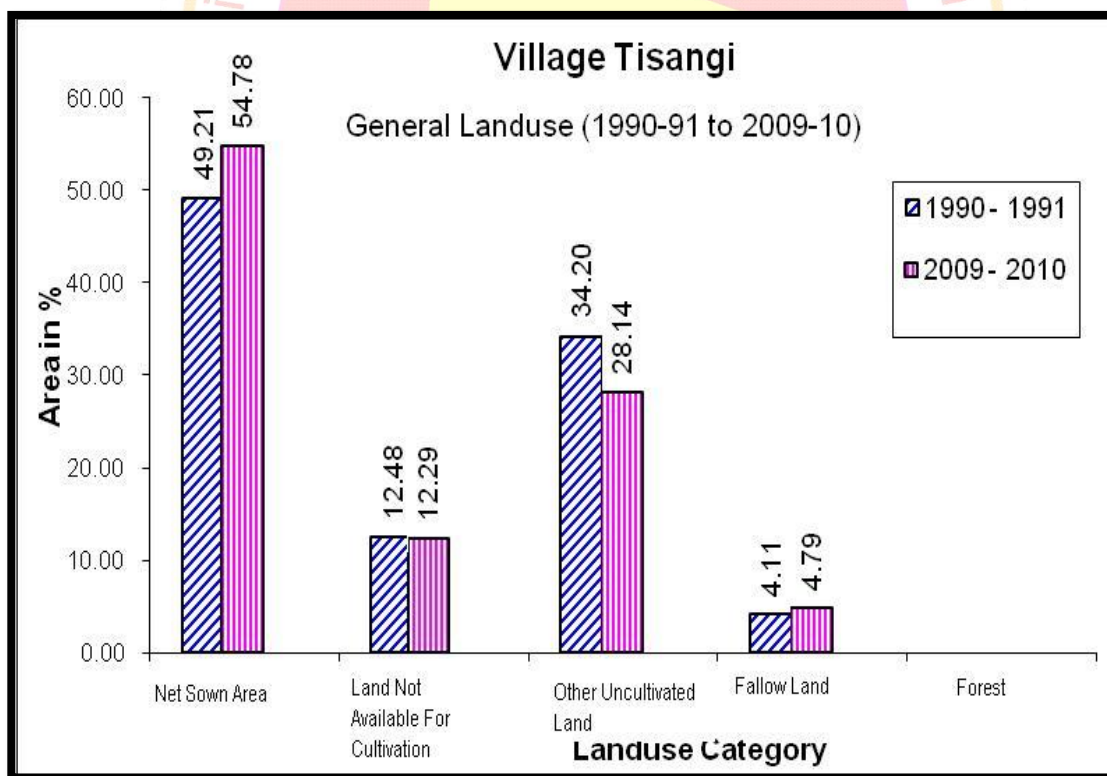
**Temporal Variation in General Land Use (1990-91 To 2009-10)**

In general, the net sown area shows increasing trend. Area not available for cultivation, fallow land, and cultivable waste also shows increasing trend and small change is observed in other uncultivated land. The net sown area was 49.21 per cent in 1990-91 and 54.78 per cent in 2009-10, in these twenty years 5.57 per cent net sown area was increased. The land not available for cultivation was 12.48 per cent in 1990-91 and 12.29 per cent in 2009-10. In these twenty years land not available for cultivation was decreased by -0.19 per cent. Other uncultivated land was 34.20 per cent in 1990-91 and 28.14 per cent in 2009-10. In these twenty years it was decreased by -6.06 per cent. The fallow land was increased by 0.68 per cent. No area under forest was found in both years (Table 1 and Fig. 1).

**Table 1**  
**General Land Use in Tisangi Village**

Sr. No.	Land use type	Year			Changes in % 1990-91 To 2009-10
		1990-91	2000-01	2009-10	
1	Net Sown Area	49.21	51.35	54.78	+5.57
2	Land Not Available For Cultivation	12.48	13.26	12.29	-0.19
3	Other Uncultivated Land	34.20	33.10	28.14	-6.06
4	Fallow Land	4.11	2.29	4.79	+0.68
5	Forest	0.00	0.00	0.00	0.00

Source- Village revenue record. Note-Area in percentage



**Fig. 1**

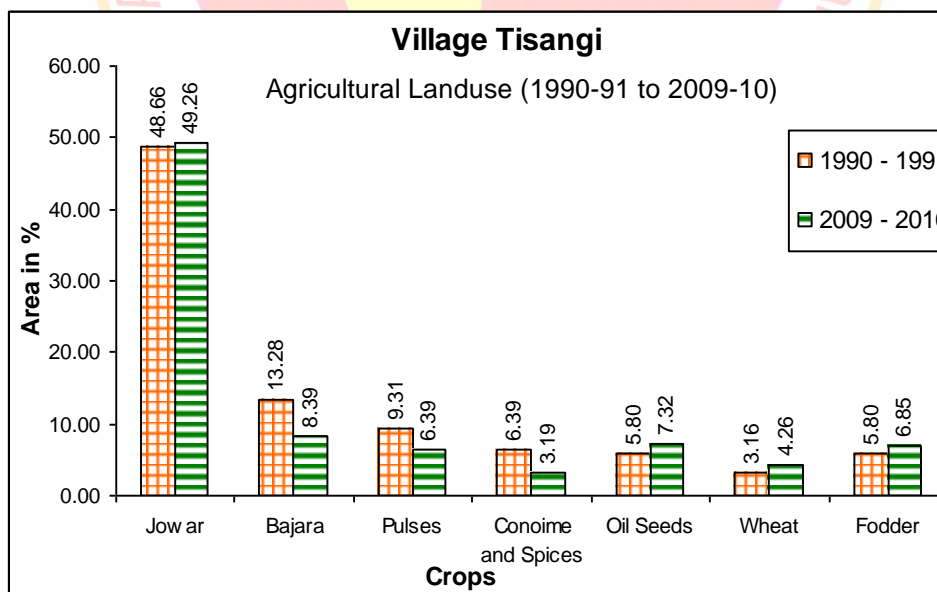
**Temporal Variation in Agricultural Land Use(1990-91 to 2009-10)**

Temporal variation in agricultural land use is shown in Table 2 It reveals that during the span of twenty years area under Bajara, Pulses, Condi ment & Spices crops was decreased by 4.89 per cent , 2.92 per cent and 3.20 per cent respectively . It means area under food crops was decreased. On the contrary area under sugarcane was increased by 3.20 per cent. The area under Jowar, Maize, Wheat, Sugarcane, Oil seeds, Fru & Vegetable and Fodder shows upward trend in the twenty years. It was increased by 0.6 per cent, 3.04 per cent,1.10 per cent, 3.20 per cent, 1.52 per cent, 0.50 per cent and 1.05 per cent. (Table 2 and Fig.2).

**Table 2**  
**Agricultural Land Use in Tisangi**

Sr. No.	Name of Crops	Year		Changes in % 1990-91 To 2009-10
		1990-91	2009-10	
1	Jowar	48.66	49.26	+0.6
2	Bajara	13.28	8.39	-4.89
3	Maize	2.23	5.27	+3.04
4	Wheat	3.16	4.26	+1.10
5	Pulses	9.31	6.39	-2.92
6	Condi & Spices	6.39	3.19	-3.20
7	Sugarcane	2.08	5.28	+3.20
8	Oil seeds	5.80	7.32	+1.52
9	Fru&Veg	3.29	3.79	+0.50
10	Fodders	5.80	6.85	+1.05

Source- Village revenue record Note- Ar5.80ea in percentage.



**Fig. 2**

### Land Degradation

Village Tisangi is located on the Khanapur plateau region and of 680 meters (MSL). The main cause of land degradation is due to slope gully erosion. The electrical conductivity of soil is remaining same in the study period. The cultivation methods are mostly unfavorable for soil conservation. It is observed that the farmers are ploughing the land parallel to the slope that causes soil transportation. Animal grazing is also the cause observed on the eastern and southern part of the village. It helps to increase the intensity of soil erosion.

The farmers are unknown to the conservative techniques of the farming. It clearly shows the gully erosion, running water channels, and the damaged soil of the farm land. Survey No. 483, 484, 499 to 508, 527 are affected. The cutting of the forest surrounding to the village also leads to the soil erosion in the village.

### Concluding Remarks

Study reveals that the cropping pattern in the Tisangi village is a reflection of physiographic, soil type, slope, irrigation and other socio economic factors. Study also reveals that unsuitable agricultural practices, flooding, erosion, deforestation, over cutting of vegetation, over grazing, improper crop rotation, imbalanced fertilizer use, mismanaged irrigation, over pumping of ground water, poverty, population increase, economic pressure, attitude of farmer and artificial soil loss are the major forms of problem of soil degradation.

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