

CHAPTER - I

INTRODUCTION

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INTRODUCTION :

1.1 GENERAL DISCUSSION

Drought is a major source of imbalance and instability in Indian economy. In drought period there is acute shortage of water which causes several problems like low agricultural production, shortage of food, fodder and drinking water, the loss of livestock, unemployment and forced migration. In India, in spite of several efforts to develop the economy in the drought prone areas, the problem remains as it is:

In Maharashtra about 30% of the area is affected by drought conditions. The districts of Sangli, Satara, Solapur, Pune, Ahmednagar, Nasik, Osmanabad and Bir are under the influence of droughts for centuries. The present work is related to the study of drought prone area of Sangli district in Maharashtra state.

1.2 SIGNIFICANCE OF THE WORK

In the present work a geographical analysis of drought prone area of Sangli district is attempted and a strategy, based on the analysis, has been formulated for the development of the area. This work is significant in two ways. First, a geographical analysis has been attempted of the problem area of the district. Thus, the study will add in the present fund of knowledge about the drought prone area of Sangli district. Secondly, the physical and economic character of the region is quite different from,

rest of the area in Sangli district. Hence, there is need to consider such problem regions separately while preparing development plans. In this direction, the present work is helped to be a valuable contribution.

1.3 AIM AND OBJECTIVES

The aim is to attempt a geographical analysis of drought prone area of Sangli district and formulate strategy for development of the area. Hence, to achieve this aim the following objectives have been considered.

1. To examine the impact of physical aspects such as physiography, soil, slope, drainage, geology, ground water and climate, on drought conditions of drought prone area of Sangli district.
2. To study the frequency and the intensity of drought in the region.
3. To identify drought intensity zones in the region.
4. To study the agricultural practices in the region and to search for possibilities of (i) assured agricultural production and (ii) to make scientific use of water.

1.4 SCOPE AND LIMITATIONS

Due to short span of time and limited availability of data, the geographical analysis has been done in respect of physical aspects and agriculture only. Demographic characteristics, and livestock keeping, industries and tertiary activities have

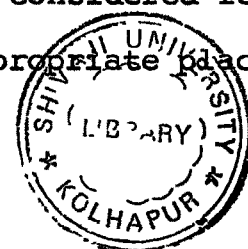
not been dealt with in detail. The analysis has been made for the region as a whole and no attempt has been made to have sub-region wise analysis except identification of drought intensity zones. The strategy has been formulated for agriculture in general and cropping pattern in particular. The strategy has been formulated for region as a whole.

1.5 DATA BASE

The data of different kinds have been collected through primary and secondary sources. To study the occupations, diffusion of dry farming techniques, use of water resource for irrigation, movement of people, a questionnaire has been prepared and was filled in by conducting field work. The set of data of monthly rainfall and mean monthly temperature has been collected from Socio-economic reviews of Sangli district, (1961-1980). However, a set of data of annual rainfall has been collected from 'Irrigation master plan of Sangli district, 1975'. To study the water balance data about the mean monthly rainfall and the mean monthly temperature which is collected is available for 18 years, (1961-1978). Hence only 18 years have been considered for the study. The set of data regarding area under various crops, irrigated areas and other socio-economic aspects has been taken from Socio-economic reviews of Sangli district.

1.6 METHODOLOGY

The following general methodology has been considered for the study. The detailed methodology is given at appropriate places in the thesis.



The study begins with the analysis of aspects like physiography, soils, ground water, drainage, geology and climatic aspects such as annual rainfall, monthly rainfall and intensity of rainfall. This has been done in order to study the impact of these factors on drought conditions.

Secondly, the climatic water balance for six raingauge stations and for the region as a whole has been computed. This is used to study frequency and intensity of drought in the region.

Thirdly, agriculture has been studied. Changes in the area under various crops, correlation between water balance parametres and crop yields and the study of present cropping pattern in relation to scientific use of water, are the major issues studied in detail.

Finally, based on the analysis of physical aspects, agricultural practices and results of sample survey, a strategy has been formulated for the development of agriculture in drought prone area of Sangli district.

1.7 THE STUDY REGION

The drought prone area of Sangli district has been delimited by the fact finding committee for the survey of scarcity areas of Maharashtra state in 1973. The same area has been considered here. (Sukhatankar, 1974).

Site and situation :

The district Sangli is one of the southern district of Maharashtra. The drought prone area of Sangli district is lying between $16^{\circ}45'$ and $17^{\circ}38'$ north latitude and $74^{\circ}25'$ and $75^{\circ}41'$ east longitude (Fig.1.1). On the northern side the region is bounded by Satara district in the north west and Solapur district in the east. On the western side the Yerela river borders the region. The deep black soil belt of Tasgaon and Miraj tehsils borders the region on south western side. On the southern side it is bordered by Belgaum and Bijapur districts of Karnataka state. The district of Bijapur continues to border the study region on the eastern side.

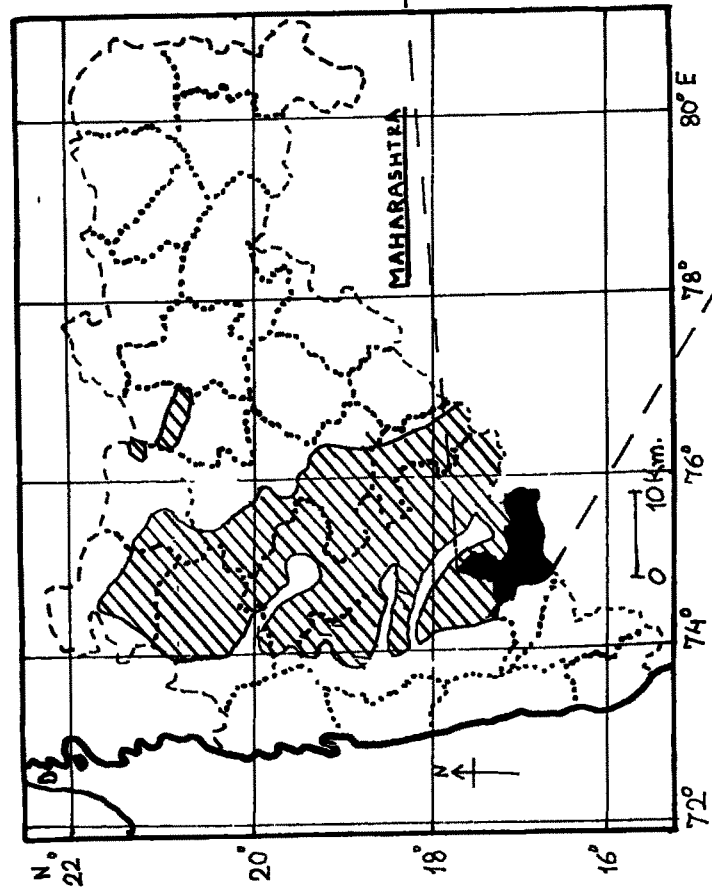
The study region consists of Jath, Atpadi and Kavathe Mahankal tehsils and eastern parts of Khanapur, Tasgaon and Miraj tehsils of Sangli district.



The region has an area of 5671.165 square kilometres (66% of total area of the district) and a population of 6,15,044 souls (40% of total population of the district) with one small town and 275 rural settlements according to 1971 census. In 1980-81 the net sown area in the region was 36,7,578 hectares which is about 65% of the total net sown area of the district.

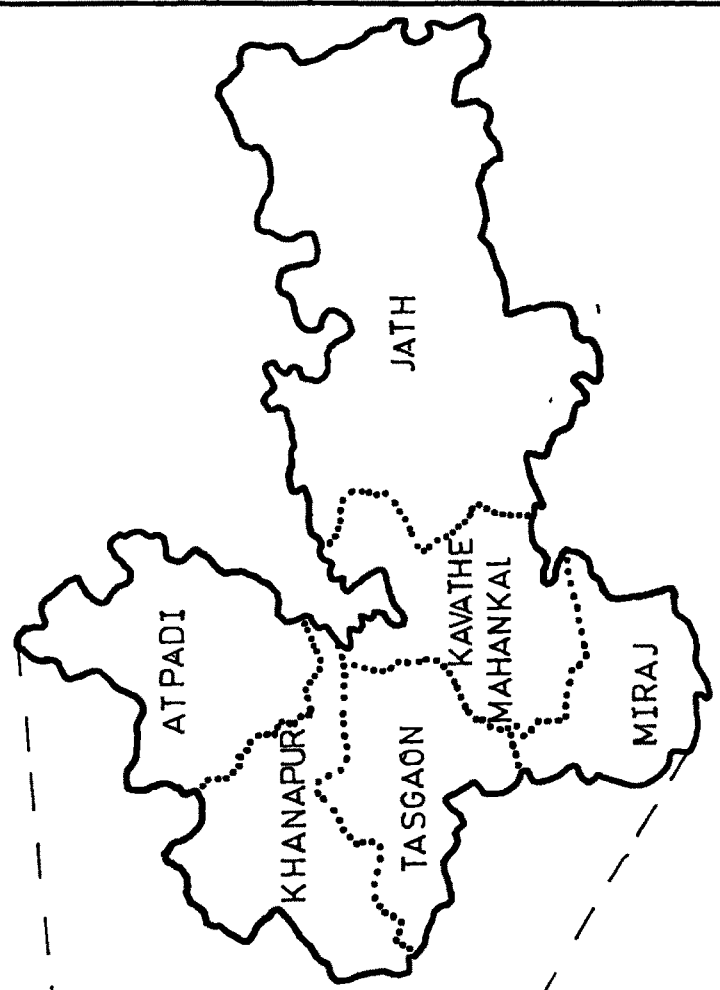
1.8 CHAPTER OUTLINE



The first chapter deals with the aim and objectives of the study, scope and limitations of the study, data base, methodology and introduction to the region.

THE STUDY REGION DROUGHT PRONE AREA OF SANGLI DISTRICT



 DROUGHT PRONE
 AREAS IN MAHARASHTRA
 AS IDENTIFIED BY FACT-FINDING
 COMMITTEE (1973)
 STUDY REGION



 THE STUDY REGION BOUNDARY
 TEHSIL BOUNDARY

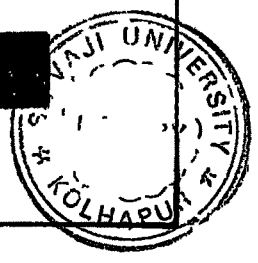


FIG. 1.1

The second chapter consists of the study related to physical aspects, demographic character and economy of the region. It is attempted to examine the impact of physical aspects and climate on the draught conditions of the region.

The third chapter deals with the water balance of the area, based on this study the tehsilwise intensity of drought has been attempted. It also includes the discussion regarding the trends in various water balance parametres.

In the fourth chapter the agricultural practices have been examined. Where area under various crops, use of water for irrigation, correlation between water balance parametres and crop yeild of selected crops has been studied.

The fifth chapter includes the discussion and results based on sample survey conducted in the study region. The occupations, borrowing economy, migration-both, permanent and temporary, farmers awareness, farmers knowledge of social forestry are some of the important aspects dealt with in this chapter.

The sixth chapter deals with the identification of basic problems based on the analysis and formulation of strategy for the development of agriculture in drought prone area of Sangli district. Here, strategy has been suggested for changing the cropping pattern to reduce the intensity of drought in the region.

R E F E R E N C E S

1. Sukhatankar, S.E. (1974). Report of The Fact Finding Committee for the Survey of Scarcity Areas of Maharashtra State, 1973. Bombay : Director, Government Printing and Stationary, Maharashtra State. p.45-73.