

## CHAPTER - I

### INTRODUCTION OF THE PROBLEM

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### 1.1 Defining the region of the study :

The Sangli district is one of the important southern districts of Maharashtra. The western part of this district comprises the western hilly area of Shirala with heavy rainfall. It also includes some portion of the central part comprising the basin of the Krishna, Warana and Yerela rivers with medium rainfall. The western hilly zone has the Sahyadrian scarp with its major peaks usually flat topped and with intervening saddles. The western Sangli district includes Shirala, Walwa and western part of Tasgaon, Miraj and Khanapur tahsils. The present study deals with Shirala and Walwa tahsil of Western Sangli district, as well as Miraj and Tasgaon tahsil of Central Sangli district because the author wants to present a better comparative study of the zones including the transitional one.

The important aspect is that Krishna is the major river system of this region. The Krishna with its tributaries, the Warana and Yerela flow from the western part of district. All these rivers are the life lines of the Sangli district. The regions benefited by these rivers are Walwa, Miraj, Tasgaon and Shirala. So the present study deals with the Shirala, Walwa, Miraj and Tasgaon tahsils of Sangli district. The observations obtained from study of these tahsils are similar to those of Khanapur tahsil, although Khanapur tahsil is not included in the study. The western part of Khanapur tahsil has similar physiographic characteristic that of Shirala tahsil. So the results of Shirala tahsil are applicable to Khanapur tahsil also.

The scale of planning that determines the size of regional unit basically is important. The politically defined and delimited regions are not likely to serve the purpose fully, for simple reason that many a time they miss the geographical entity. It is important to bear in mind the characters of a political region and a geographical region. The former is concerned with the administrative aspect and the latter with physiographical aspect. This study focuses on the geographical region. The Upper Krishna basin comprizing the Shirala, Walwa, Miraj and Tasgaon tahsils of Sangli district, as these tahsils though seperated by administrative boundaries, are interesting from the resource point of view. The study aims at presenting a comprehensive picture of resource factors, human interaction, population, food supply relationship and the representations in this geographic region.

### 1.2 Significance of the problem :

The problem of food is very complicated and serious in our country, especially in Maharashtra. The Sangli district as well as the study region is also facing the problem of shortage food supply. Such problem is created due to the rapid growth of population in the many parts of the world. India and the study region is not exception to this situation. There are permanent food shortage pockets in India. So food scarcity has become a normal feature of national life. There is a gap between total output and requirement of the population. This has resulted

into a chronic state of underfeeding and malnutrition. Quantitative aspect of food problem shows inadequacy of common average diets with reference to physiological adequacy. But in qualitative terms, the common diets being cereals, they are unbalanced, lacking in the essential requirements of protective foods, vitamins and minerals. This shortage has resulted into the malnutrition and deficiency diseases. Lastly it erodes the human resources needed for the economic development.

The availability of nutrients depends upon the pattern of land use and production. It becomes rather imperative to arrive at the quantum of deficiency in terms of foodgrain available first. In region where agricultural commercialization is increasing, such shortage is not unexpected. Accepting the trend also it would be advisable to get a realistic idea of the extent of the shortage and the dimensions of the problem. The problem of nutrition is closely related to nature of cropping pattern. The quality and quantity of foodgrains being consumed largely depends upon the existing level of land resource exploitation for food production.

The food production is related to the population pressure of the region. Thus the present work aims at analysing population and food supply, the level of nutrition and nutritional deficiency diseases in Western Sangli district. The level of nutrition and nutritional deficiency diseases is the most applied aspect of this study.

This food problem can be considered at regional level, at district level, village level and at household level. Household is a basic unit of food production and food consumption. All the houses of the sample villages have been classified in to poor, medium, and well off categories and the disparity in food availability in each economic category has been analysed to measure the extent of food problem. In this study some villages were selected from each stratum. These stratum were based on soil, drainage, physiography and transport facilities. Then the representative households from each economic category were selected and the disparity in food availability is analysed. Then the availability of food is related to the population of the region. Thus the nutritional level is analysed. This study deals with malnutrition and undernutrition status of each of the units of people.

Most of the caloric intake comes from cereals and pulses rather than from foods rich in proteins and vitamins. Thus the present study aims at understanding how far existing cropping pattern is responsible for this situation, or is there any possibility of changing the cropping pattern to have more calories from food other cereals. It is also necessary to develop new varieties or new crops which yield a better nutrition at return. It may also be desirable to find ways of changing pattern of food consumption, when supplies are limited. There should be balanced landuse and balanced diet for the people.

The malnutrition and undernutrition result into deficiency diseases, which weaken the productive efficiency of cultivators and result in poor agricultural yield and poor health continues. The locational study of the deficiency diseases would also be useful for locating certain health centres.

### 1.3 Scope of the study :

At present the problem of food and nutrition is being tackled through interdisciplinary approaches i.e. department of public health, nutritional sciences agricultural economists, agricultural geographers as well as by number of research institutes and government offices. As the science nutrition, is a highly complex branch of knowledge. It is essential to delimit the scope of the study. The present work is an attempt to analyse the population growth and food production growth in Western Sangli district. It also aims at analysing the nutritional level and deficiency diseases. While dealing with production, only existing cropping pattern is studied and is not received due attention on the carrying capacity of agricultural land or productivity of the region. A number of factors are responsible for the diseases. But present study deals only with the nutritional deficiency diseases.

For the convenience of the study the area is also delimited. In spite of the total Sangli district only Western part which is comprised of Shirala, Walwa, Tasgaon, and Miraj

tahsil of Sangli district is selected for the study, where regional variations are more as compared to the eastern part of Sangli district. This region is comparatively better watered and there is a good base for agricultural crops. The land resources have diversified claims and hence the region stands to be a characteristic one.

#### 1.4 Design of study

##### 1.4.1 Methodology :

Western part of the Sangli district, is comprised of four tahsils viz. Shirala, Walwa, Tasgaon and Miraj with 360 villages. First the geography of the region was studied and geographic patterns on the basis of topography, climate, drainage, soil and cropping pattern and population characteristics were decided. The most appropriate method for the theme of this study is the survey method. The 'Diet survey' was conducted for 24 villages. The main purpose of this survey was to assess the nutritional level of people, and the occurrence of nutritional deficiency diseases. For this study sampling technique was applied. Sampling reduces the unmanageable heterogeneous item of observation to a handy one, so that all the types are adequately represented in the analysis.

Stratified sampling makes the simple sampling more representative and meaningful as the entire population is divided into a number of strata and then a sample is selected

within each a stratum. If a selected sample is taken from each stratum the whole procedure is described as stratified selective sampling.<sup>1</sup> Stratified selective sampling was used for the selection of villages and for selection of households in each selected villages. Nearly ten percent sampling was taken for the present study. The criteria applied for the selection of villages were the factors like, drainage, soil, relief, a approachable roads to the village. Thus 24 villages were selected for the present study.

After the selection of villages an intensive door to door survey of the dietary habits and nutritional deficiency diseases was also undertaken. There are different methods of conducting food consumption survey. There are three basic methods, of collecting data on food consumption in household survey. The first consists interviewing selected households, to obtain the quantities of food items consumed in a specified period of time. The second method is the method of weighment. In this method the quantities of each of the several foodstuffs used during the survey period are weighed. Foodstuffs may be weighed daily or often before they are used in preparing meals or also the stock may be weighed at the beginning and end of survey period. The third method involves distributing account books and asking housewives to record in chronological order details regarding the type and quantity of foodstuffs purchased or otherwise obtained for household consumption.<sup>2</sup>



Of the three methods, the method of interview is by far the more practical method, though it is liable to large errors for several reasons. But as it is a more practicable one, interview method was selected. For this, an appropriate questionnaire for diet survey was prepared and it was implemented in person.

Food consumption surveys are indeed one of the most difficult types of household survey to conduct. Experience every where indicates that, it is difficult to avoid large biases in these survey.<sup>3</sup>

The present work aims at analysing population growth and food supplies in the Western Sangli district. It is directly related to the quantity and quality of food being consumed; which is largely dependent on the nature of cropping pattern and the economic set up. The analysis of food problem has been done at district and household levels by selecting a specific number of villages from each stratum.<sup>4</sup> Then all the households of the village have been classified in to poor, medium and well off categories and the disparity in food availability in each economic category has been analysed to measure the nutritional level.

Then the population of selected households is converted into man units. The methodology adopted was,<sup>5</sup> a) Children of either six upto the age of ten, being considered as equivalent to 0.5 man unit. b) Adult female equivalent to 0.9 man unit.

c) Adults male equivalent to 1.0 man unit.

Further the data were analysed to arrive at the food pattern, the existing food supply and expected food supply.

#### 1.4.2 Data source :

The sources of information for the present work may be grouped as follows :-

- (1) Published reports and articles.
- (2) Statistical records from various sources of Government of India, Government of Maharashtra, Census reports. Indian Council of Medical Research. Indian Council of Agricultural Research, National Institute of Nutrition, Socio-Economic Abstracts of Sangli district.
- (3) Field work - Primary sources of data for this work is 'Diet Survey'. Selected villages for the diet survey were visited during Rabi season (Nov., 1983).

#### 1.4.3 Tools used of gathering data :

The survey method was used for gathering the data. As the survey method, gathers data from relatively large number of cases at a particular time. It is not concerned with the characteristics of individuals as individuals. It is concerned with generalized statistics that results, when data are abstracted from a number of individual cases. It is essentially cross sectional.<sup>6</sup> Validity and reliability are the qualities that are essential to the effectiveness of any data gathering

procedure.<sup>7</sup> So the most effective tools used for this study is the questionnaire and the interview. A significant questionnaire about diet survey was prepared. It was attractive in appearance neatly arranged and clearly duplicated or printed, at the same time, it was very objective, easy to tabulate and interpret.

The second tool used for this study is the interview. Interviews of medical officers of primary health centre of the selected villages were conducted. This was for the assessment of nutritional deficiency diseases in the selected villages.

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