CHAPTER II
RESEARCH DESIGN
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Introduction

In Socio-economic investigation, reliability of results depends upon an appropriate methodology adopted. It consists of sampling technique used for selecting a representative sample, designing of schedules, collection of information, analysis of data and finally presentation and interpretation of analytical results.

In the present study, the researcher aims at looking into the socio economic impact of the canal irrigated area with that of the unirrigated area. As it is already pointed out in the earlier chapter that there is a large difference in the socio economic status between the two said situations, where in one place, due to irrigation there is economic progress and in other it is static or with little change. However, with this economic change we expect to see a gradual change in the social, cultural and traditional front.

The rising population on the one hand and limited land available for cultivation on the other hand have posed a challenging question to the policy makers who have to find a solution to feed all the mouth with sufficient food. Thereby, a review of the effects of irrigation on the society in general and the possible improvements that can take place due to the development in irrigation facility are focussed. Thus, it is the prime duty as a researcher to atleast attempt to find some of the ways by which such challenges are met with little impact on the social life of the inhabitants of each village who in turn prepared to offer better yield by accepting the irrigation facility on the dry land they possess. In addition, the study also expects to look into the economic improvements that take place in the later part of the irrigation by comparing an irrigated village with that of a dry
village. Thus, the need to look into the impact of irrigation on the socio-economic life of the people paves way for this research.

The present chapter discusses on the methodology adopted for the study. In order to understand the study better a few terms are listed and defined here under.

**Definition of the Terms Used**

**Peasant** - According to Oxford English Dictionary, the Ryot or Peasant is a farmer owning or renting a (usually small) piece of land (in the rural areas of some countries) which he cultivates himself, secondly, the farmer meaning of Peasant was 'poor agricultural worker'. He is also an unrefined country man or a rustic. The Chambers English dictionary too gives a similar meaning. Peasant can be a land owner or just farm helps. But can peasants owning lands and living in villages and generally employing farm helps be part of the peasantry? One argument propounded is that people living in villages are not necessarily peasants and do not belong to the peasant class; while a counter argument propounds to classify only those who engage themselves in farming under peasantry. Thus there is a difference of opinion regarding who is a real peasant or Ryot.

Agriculture which continued as an occupation became a tradition and those who followed this tradition and produced grains are called Ryots. There were many trades connected to agriculture in villages. The peasantry which includes farmers and farm helps (coolies) and all these classes combine is called Ryots.

In countries like India, where agriculture is the backbone of an economy, it is very necessary that there is a clear definition of 'Ryot' and a discussion on 'who is a Ryot' be very healthy a worthwhile.
Denial Tharner has classified Ryots into land lords or land owners, land tenants, and agricultural farm helps or workers. Ryot has been described by Tharner anyone living in the country side and making the least use of agricultural techniques and cultivates his land is a Ryot.

Eric Wolf has called Ryots as a class which cultivates land and grows crops for a living and is yet independent and autonomous.

Theodore Shanin has described Ryot as 'Small farmers'.

According to Irfan Habit peasantry is "The class which employs the members of the family and makes use of implements and machinery for agriculture.

The international meet of the workers union at Bangkok in 1974, finalised the definition of 'Ryot' as Lessor of agricultural land, a small farmer who has not a full time job, an agriculturist, a farm less worker and also a hired farm help.

However, a Ryot is one who employs himself in agriculture, the one who has small holdings of cultivable land, the lessee farmer who pays rent to the land lord, the farmer who parts with a share of the yield to the lessor, the farmer who cultivates a part of his land and let the other part to be cultivated by others. All these types of Ryots may not use agricultural machinaries or implements nor modern technology.

This class of Ryots also constitutes villagers of a various occupational trades and agricultural labourers. Most of them are the poor dwellers of the country side. Thus, those engaged in agriculture and allied trades, agriculture labourers and everyone connected with farming can be collectively brought under the peasantry in general.

Ryots are those who cultivates the land. They may be the land owners, or the ones living under the auspices of the land lords, or even the farm helps.
Ryots are not necessarily the dwellers of the countryside. They may also be the residents of the townships adjoining the countryside. Daniel Tharner has compared the word Ryot to the comprehensive rural social life. In the rural social setup, according to him, the peasant class includes the land owners, tenants and agricultural labourers.

In a nutshell, Ryot is one who has apparently employed himself in farming. It includes farmers having small land holdings, the lessee farmer, and also farmers who gives a share of the yield to the lessor. Almost all of these Ryots follow the traditional farming methods. If taken in a broader way, the meaning and concept of Ryot extends itself to other trades in villages and also are the agricultural labourers.

A Ryot means one who cultivates the land by himself. This implies that the Ryot who lessee his cultivable land and earns an income or rent which is his source of livelihood and if he is a Zamindar with a big land holding, such farmers does not stand to be called a Ryot, any more. Thus Ryot necessarily should be agriculturists. And agriculturists are the ones who produce food grains and commercial crops by cultivating the land.

Irrigation - Irrigation is the method of artificially channelising water in a systematic way for growing crops. The successful cultivation of land by mitigating any lack of rain-water itself is irrigation. The artificial utilisation of necessary water for the growing of seedlings on the earth is irrigation.

Land - The land input has been measured as the gross physical cultivated area in acres. Differences in soil productivity within the village and between regions have been ignored due to lack of authentic data in the official records and conversion factor.

Cropping Pattern - The term 'cropping pattern' denotes the distribution of crop in a given area of a farm, a village, a district or an agricultural region for a given period.
Statement of the Problem

Socio-economic change in parts of Mandya district due to the introduction of Cauvery river water is found. However, the other areas which are not included under irrigation facilities have a very less or no change in respect of social and economic improvement. Thereby, it becomes necessary to find the cause for the improvement in living standards of the people in the wet land and thereby suggest few tips for a balanced growth of the region which may reduce regional disparities.

Objectives of the study

This study primarily tries to raise issues and problems relating to the unirrigated land with regards to the irrigated farm. It also compares the socio-economic progress made by the irrigated villagers. Thus, the study aims at visualising the impact of irrigation on the lives of the inhabitant in comparison with the unirrigated villagers. The thrust is, therefore, more on the factors affecting the farm lands where irrigation is practiced and socio-economic impact on the people living therein with close comparison with its counterpart in unirrigated village.

While these are broad objectives, the specific objectives of the study are to:

1. collect information on the size of family, religion, caste, total family members, land owned by the family, details of moveable and immovable properties, and also to know the value of dry and wet land, thus to compare.

2. to take up a comparative study in the two study taluks regarding various family activities, crops grown, yield and market facilities, thereby know the social and economic change.
3. The present study focuses on the labour migration in both the taluks, the structure and its seriousness, and thereby analyses the impact on their living conditions with regard to social and economic variable.

4. The growth of agriculture after canal irrigation due to change in cropping pattern and yield is under focus in the present study. Further, non agricultural activities and income from other source, other than agriculture is also dealt with.

5. Study on the economic status of people, their living style, education level, and the utilisation of the development facilities available after canal irrigation is carried out. Also the role and other visible change for women due to a change in social and economic outlook are taken under the research.

6. To improve the knowledge regarding issues like traditional marriages, religious and caste related celebrations, and also other feelings which are built around social taboos and the impact of modernisation over them are other areas of concern.

**Hypotheses**

A hypothesis is normally derived from the theoretical postulate followed by empirical verification. Prof. Hicks says, while referring to a sensible hypotheses. "Its status is identically the same as that of a well known class of hypothesis in natural science, hypothesis which cannot be tested directly. But, which can be used for the arrangement of empirical data in meaningful ways, and which are accepted or rejected according to their successor failure as instruments of arrangement". Therefore, the following hypotheses for this study, built based on theoretical information, past empirical researches, and, on researcher's perception and understanding
on related issues in dry and wet lands. The above objectives can be realised by empirically testing the following hypotheses:

1. The income from other source, other than agriculture is very less as people in irrigated land depend largely on agriculture.

2. The landless inhabitants in an irrigated village is expected to have some land in the long run and thereby the class gap narrows to some extent.

3. Due to irrigation facility, the excess labour gets absorbed. Thus, outmigration is reduced.

4. On irrigated lands the backward castes have not developed, as compared with their upper caste counterpart.

5. Irrigation facilities have paved way for an improvement in the socio-economic infrastructure of that particular area with regards to marketing, savings, future investment, etc.

6. Literacy rate is high for both male and female in irrigated area.

Area of the Study

The selection of sample units for bench-mark survey was based on multi-stage sampling, the stages being the districts, taluks, villages and households in the study area. The research focuses on two sets of people one from the dry land and the other from the wet land. Since the thrust of the study was on the Impact of irrigation upon the unirrigated (rainfed) land, two taluks were selected in Mandya district. One of which was a dry taluk, Nagamangala and the other a wet (irrigated) taluk, Srirangapatna. As the hobilies in Srirangapatna are four and in Nagamangala it is five, a village each is selected from each hobilies for the study purpose.
Bench-mark survey was carried out to draw the sample. At stage one, the districts where both irrigation facilities coexisted with non-irrigation facilities were recorded. In the second stage the taluks were identified by adopting the criterion where a taluk was selected which was either fully irrigated or fully unirrigated. And the other criterion which was followed was that the two taluks should be close to each other in order to assess the socio-economic effect on the residents. Then comes the selection of village where every hobly had to be represented to bring out the accurate representation of a taluk. The ultimate unit of study, i.e., the ultimate respondent household was drawn from villages selected for the study. However, the total respondents selected are 200 per taluk which is a mix of people who represent agriculturist, landless labourers, artisans and businessmen.

Study Universe and Sample

A sample of 400 respondents, 200 in each taluk selected randomly after taking the population of each village selected in each hoblies of the taluk for the study. Waitage was given to all section of people and thus, every respondent has been carefully selected without letting out any group. The representation of all castes is taken into account as the respondent ratio was fixed only after analysing the statistics of population received from the village accountant and Secretary of Gramapanchayat.

The sample design of the survey was a stratified multi-stage random sample with an emphasis on canal irrigated taluk and another unirrigated taluk. The multi-stage sample design covers the selection of taluks, villages, and households.
The sample design of taluks was based on two criteria: first that the taluks should be either fully irrigated or unirrigated and second, that the taluks should be close to each other.

The sample design of farm households was prepared on the basis of information obtained from the Gramapanchayat Secretary and Village Accountant. In addition, a case study each was done in each taluk to have a detailed of the inhabitants with and without irrigation.

MANDYA DISTRICT

SRIRANGAPATNA TALUK

Four Hobli

S. Kasaba
K. Shettihally

Belagola
Arakere

Four Village

Chandagalu
P. Hosahally
(50)
Sabbanakuppe
(50)

NAGAMANGALA TALUK

Five Hobli

N. Kasaba
Devalapura

Bindiganavale
Honakere
Bellur

Five Village

Ancheboovanahally
Kambadahally
Samakahally
Ambalageeranahally
(40)
(40)
(40)
(40)

(50)
Note: Sample size is 50 and 40 in each village of Srirangapatna and Nagamangala taluks respectively, thus the total respondent in each taluk account to 200 and thereby, the total sample size comes to 400. The Households selected include Cultivator, Artisan, Landless respondents, and Businessmen

Tools and Techniques

As this is an exploratory type of study, combination method is used in the collection of data, that is both from primary and secondary sources. The present study has been carried out through an empirical investigation by canvassing a structured schedule. A Dry and Wet taluk each is adopted to measure the impact of irrigation. The survey data is treated as primary data of the study villages. Furthermore, the information gathered is attempted to measure the impact. For this purpose irrigated and unirrigated taluks were studied separately by collecting information from the sample households. After scrutiny, the collected data processed to fulfil the objectives laid down for the study. the secondary data is gathered from the books, journals, magazines, newspapers etc.

For data Processing a computer and a calculator were used by the researcher other than working manually. The significance of the result obtained from the various statistical techniques like percentage and multiple regression was statistically tested.

An Interview Schedule containing five blocks with both open and closed end questions was constructed for investigation. The interview method was followed in filling up the schedules. The field investigation was carried out by the researcher. The tabulation was done both manually by the researcher and also done on the desk computer to ensure more familiarity with the data and greater control of quality at all stages of processing.
Data Presentation

Primary data collected by interview method for securing information through face-to-face association with the respondent. For this purpose, a comprehensive schedule was prepared. Data collected through a structured interview schedule designed specially for the purpose. The issues and variables included in the interview schedule are the same for both the survey taluks. Interview method was adopted for collecting data. The data for survey were collected personally by the researcher by interviewing the heads / responsible family members available in the sample households. This was done with a view to obtaining more reliable data on quantitative variables like income, expenditure, agricultural inputs and outputs, household items, agricultural equipment's both large and small, infrastructure available and other data pertaining to the moveable and immovable property.

Also other information such as respondents sex, Age, Religion, Marital status, Education, Caste, Age at marriage of both respondents spouse, Type of marriage, consensus, of respondent arranged marriage sought by elders, occupation of family members, total family members, expenses on marriage and how it was met. Type of house lived in, and who owns the house, when was it build and if the respondents owns another house. If the respondents have power supply (electricity), if yes, how the same was obtained. Fuel used for cooking; source distance and problems in fetching drinking water, Latrine facility available; medical facilities availed, household appliances, Small agriculture equipment's, Consumable durable, Vehicle and pets owned by family also the value of equipment owned by family, and other Women related issues. The sample households representing cultivators, Businessmen, Artisan and Landless labour, was brought under study.
To study the impact of irrigation on socio economic life of the respondent, data about the cropping pattern, yield, staple food, living standard, the economic status of the families, social customs linked with the economic ability were collected for comparing the same with the unirrigated taluk. Information was collected about the developmental activities carried out in the recent past either on land or in the house by the respondents. Questions relating to the social functions conducted in their family during the previous year expenditure incurred on family maintenance, social characteristics and infrastructure developments were also posed. Information was collected about the source of finance to meet the cost incurred due to family problems and/or other agricultural needs; occupational structure of the household, income, assets and debt; disposal of produce; consumption pattern and general household information. Since a majority of farmers do not maintain accounts, it may be difficult for them to remember costs incurred on purchased agricultural inputs as also other costs and expenditure incurred. The margin of errors in reporting is minimised when contacted immediately when the sowing season is over or when harvest is done.

Head of the household was met at his house and was interviewed. In the absence of the head of the household, other knowledgeable responsible person in the house was interviewed. While interviewing a respondent some times three or four persons got together. They however, do not participate in the interview. But while ascertaining opinion on the general issues relevant to the whole community or village others were encouraged to participated for cross checking for accuracy and reliability. Group interview was done in order to cross check the general information pertaining to village. Apart from administering the structured interview schedule, the researcher had informal discussions with progressive and knowledgeable farmers, local leaders, and farmers belonging to scheduled
Reference:

1. Nagesh, H. V. and A. E. Punith, Bharathadalli Rytha Oratagalu, Chandranath Prakasana, Dharwad, 1984, p. 3


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