CHAPTER - III

THE FIELD AND METHOD OF STUDY
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Methodology is a kernel of any socio-economic investigation. The reliability of results depends upon the methodology. It includes objectives, hypotheses, description of the field, tools and techniques of data collection, design of schedules, finally presentation and interpretation of data etc. In this chapter an attempt is made to present the methodology followed for this study.

Objectives and Hypotheses

The present study confines its attention to cover four irrigated villages of Malaprabha command area. Primarily, this study tries to examine the positive and negative impact of irrigation on the life of the farmers. The main thrust is therefore, more on impact of irrigation on the farmers and therefore it provides relevant data and information concerning to socio-economic conditions and changes in the area. The study also tries to analyze some of the problems of the farmers arising out of irrigation.

Objectives

The following listed objectives were considered to analyze the socio-economic impact of irrigation on farmers in particular and rural society in general.
1) To study the socio-economic conditions of the farmers prior to irrigation.
2) To examine the changes in the economic conditions of the farmers due to irrigation.
3) To assess the social impact of irrigation on the life of the farmers.
4) To know the political participation and educational achievements of the farmers.
5) To make an enquiry into problems and prospects of irrigation.

**Hypotheses**

Hypotheses are normally derived from the theoretical assumption without proof as self evident, followed by empirical verification. The hypotheses for this study are made on the basis of the literature reviewed in the earlier section about the irrigation system and its positive and negative impact.

Based on the objectives of the study the following hypotheses are set for testing their validity in this study.

1) Irrigation increases the crop yield and association is found between Size of land holding and crop yield.
2) Irrigation brings about changes in cropping pattern.
3) Irrigation increases the income of the farmers.
4) The investment and expenditure behavior of the farmers varies with the size of land holding.
5) Irrigation prevents out migration of the farmers.
6) Irrigation indirectly brings change in marriage and family system.
7) The changing life style is closely associated with the type of farmers.
8) There is a close association between political participation and size of land holding of the farmers.
9) The educational achievements of the farmers' children is inversely correlated with the size of land holding.
10) The demands of irrigation enlarge the pattern of debt.
11) Extravagance among the farmers is closely related with the size of landholding.
A VIEW OF MALAPRABHA DAM
The Field - Naragund taluk

Prior to 1997 Gadag was under Dharwad district. It was formed as a new district of Karnataka state on 1st Nov., 1997. It is situated in the North of Karnataka and is located in between 15.15 and 15.45 Northern latitudes and 75.20 to 75.40 eastern longitudes. The districts that surround Gadag are; Koppal district in the East, Dharwad in the West, Bagalkot in the North and Haveri in the South.

Gadag district is an inland plane area, rivers Malparabha and Tungabhadra flow in the Northern and Southern borders respectively and stream Bennehalla joins river Malprabha near Ron. Major portion of Gadag district is of black cotton soil and red soil mixed with sand is found in some other parts of the districts. Karwar, Hyderabad and Mangalore highways pass through the districts. Kappath hill and Naragund hill contain rich minerals and windmills are set up on these hills. Iron and gold ores are found in Kappath hills and limestone is available near Dony village of Munderagi taluk.

Climate of the district is generally hot. There is summer from February to May, rainy season from October and November and winter from December to January. During April and May the climate reaches the climax with 42 degree while it comes down to 16 degree during the months of December to January. Generally there is no much variation in the climatic conditions except in the summer and the winter.

Owing to division of Dharwad district, Gadag was formed a separate district with 5 taluks viz., Gadag, Naragund, Munderagi, Ron and Shirhatti. Gadag district has an area of 465 kilometers, and covers
2.48 per cent of the land area of the state. The district has a sub revenue division with taluks namely Gadag, Munderagi, Shirhatti, Naragund and Ron.

As per the census of 2001 the district has 330 inhabited villages. Ron taluk has the maximum i.e. 93 villages whereas Naragund has only 35 villages. Gadag district has 9 Municipalities and 5 municipal punchayats. While Gadag-Betgeri, Naragund, Gajendragad and Laxmeshwar have Municipalities and rest of the five places viz., Mulgund, Mundargi, Naregal, Roan and Shirahatti have Municipal Panchayats.

As per the census report of 2001 the total population of the Gadag district was 9,72,000 and of this 6,30,000 is rural and 3,42,000 is the urban population. As per the census 2001 the rate of literacy of the district is 66.27 per cent. Of the total literates 71.6 per cem: are men and 39.7 per cent are women. The sex ratio of the district is 969 for 1000 men. According to census 2001 the density of population of the district is 184, which is less than as the density of population of the state i.e. 285 per square K.mtrs. The total population of schedule caste according to 2001 census was 1,18,850 whereas schedule tribe population was 20,534 persons. During the decade 1991-2001 there is a rise of 1.13-lakh population, which is 13.1 per cent of the total population.

As per 2001 census the total workers are 4,15,817 persons and total non-workers are 5,14,018 persons. Thus the total work force is 47.1 per cent. Males constitute 56.2 per cent work force and females constitute 37.71 per cent of work force. These workers are classified into two categories viz., main and marginal workers. Main workers are 3,88,763, and marginal workers are 69,054. The categories of workers included 1,30,093 persons, agricultural labourers are of 1,28,535 persons, household
industry workers are 14,660 and other workers consists of 1,15,475 persons.

According to animal census of 1997 the total buffaloes are 81,256, he buffaloes are 11,650, sheep's 2,06,335, goats number is 1,22,793 etc. Thus the ultimate animal husbandry number is 6,69,713 and 1,91,325 poultry birds.

The total geographical area of the district is 4,65,715 hectares. Of the total land, total area sown is 4, 42,433 hectares, the net area sown according to 2001-02 census was 3,92,790 hectares. The total barren land is 11,628 hectares, fallow land is 2592 hectares, wasteland is 14,617 hectares and of the total, forest area is 32,614 hectares.

According to 2000-01 census marginal farmers are 21,724 they hold 13,638 hectares of land, 49,715 small land holcers posses 74,375 hectares of land, 43,169 semi-medium farmers hold 1,29,380 hectares, medium farmers are 23,165 own 1,37,504 hectares and 3,821 large farmers possesses 51,476 hectares of land.

According to the census 2002, of the average rainfall of 612.7 millimeter, Gadag district received the actual rainfall of 495 millimeter this is 123.7 millimeter less than the average rainfall. The break-up is as follows; Gadag taluk 528.1 milliliter, Munderagi taluk 579.2 millimeter, Naragund taluk 524.9 millimeter, Ron taluk 446.6 millimeter and Shirahatti taluk 396.0 millimeter.

The taluks like Naragund and Ron have received the benefit of irrigation from the Malprabha dam. During 2001-02, the net area irrigated in these taluks was 50,225 hectares. The break up is; by canals 17,662
hectares, by tanks 962 hectares, by wells and tube wells 3,939 hectares by Yeta Neeravari (lift irrigation) 20,260 hectares and by other sources 974 hectares.

The major crops grown in the area are Jawar, Wheat, Maze, green gram, Bengal gram, and sunflower, Bazara etc. Along with these crops other food crops are also grown (GOI, 2001 and CHBG, 2002-03).

Naragund taluk

The present study is confined to the farmers drawn from 4 villages of Naragund taluk of Gadag district. Naragund taluk falls under the Malaprabha Command Area, which provides irrigation to all 35 villages of the taluk.

The Naragund taluk is selected for the following purposes

1) The study area was under the drought-prone region before irrigation, therefore; to make comparison between before and after irrigation scenario this area was chosen.

2) So far no sociological study was done in this area therefore; attempt is made in this regard.

3) Naragund is the only taluk under the command area, where all villages of the taluk are getting irrigation facility. Before the advent of irrigation Naragund was known as Neerillada Naragund (Naragund that has no water).

4) All the three types of samples viz. small, medium and large farmers are represented in this area.
5) The last and the most important purpose of the selection of the region is that; Naragund is known for ‘Raita- Bandaya’ of 1980; Irrigation and its consequences were the main reason for the peasants uprising.

In this context it is necessary to understand the socio-economic profile of Naragund taluk.

**Naragund taluk**

Naragund town is situated at a strategic point to the north of Gadag district. Dharwad, Bijapur, Bagalkot and Belgaum are the adjacent districts of the Naragund taluk. Naragund was once a petty kingdom ruled by its King Babasaheb Bhave. During the British period it was known for its glory. Babasaheb Bhave made history by revolting against the British. Thus, Bhave has earned name as a Martyr who sacrificed his life to oppose in the British rule. Though Babasaheb was defeated he kindled the spirit of freedom among the people.

Naragund town, which was a small kingdom, become a Petha on 2nd Jan 1871. In the initial stage, members of town Municipality used to get nominated. In the 2nd stage a procedure was adopted to elect the members of the town municipality by holding election, the elected members carried on all functions of the Municipality.

Naragund, which once was known as a ‘Neerillada Naragund’ because of scanty rainfall and this area had remained economically backward. The region availed the facility of irrigation through Malprabha Dam during the year 1973-74. It is believed to be the wonder of the century. Now with the help of irrigation facility the people of this area
have become prosperous. Economic prosperity due to irrigation has influenced the social and economic life of the people to a considerable extent. During the three decades of introduction of irrigation, Naragund has experienced a lot of changes, which it had not seen during many centuries. (Mokashi, 1991).

Naragund taluk of Gadag district in Karnataka is situated in between latitudes 15-45 and longitudes 75.25. As its altitude from the sea level is concerned it is above 2800 feet high. The length of the taluk is 28 square kilometers, south v/s north. Naragund which is situated on the state highway of Hubli-Solhapur and which is near to developed cities like Hubli, Dharwad, Gadag and Bagalkot. There are 35 villages in Naragund taluk and they are all inhabited villages. There is only one town and 12 village panchayats. The geographical area is 43,562 hectares of which, 37,984 hectares is fit for cultivation and 2,117 hectares is unfit.

As this taluk is situated in plain does not have forest area. The wasteland is 2,740 hectares while unused land is 2,838 hectares. The average temperature of the taluk is 18-40 degree and humidity is neither low nor high. The average rainfall is 545 mm, while the actual rainfall is 524.9 millimeter.

As per the tentative census of 2001, the total population is 92,644 persons. The number of male is 47,310 while that of females is 45,334. As the rural-urban ratio is concerned 60,096 people are living in villages while 32,548 are in urban area. Among them 30,728 males and 29,368 females. Out of urban total population 16,582 males and 15,966 female members. Of the total population of taluk, 9,715 belong to scheduled caste and 4,969 belong to the scheduled tribes.
As in other parts of the country there is steady rise in the total population in this area. The population of this taluk during 1981 census was 68,487 and it rose to 86,590 in the 1991 census and in the 2001 census it was 92,644 populations. Men and women ratio is 1000:973. The density of population is 198 per sq.kmtrs. The number of household families is 15,206 as per 2001 census.

From religious point of view the Hindus constitute the majority with 77,755 persons and the Muslim occupy the 2nd place with 8,725 populations. There are 109 Jains and 100 Christians. The number of Buddhist and the Sikh is nil.

As per the census 2001, literacy rate is 64.1 per cent. The male literacy rate is 70.10 and female is 35.18 per cent. There are 82 Anganwadies and 62 Primary schools, 6 Pre-University Colleges, 1 Degree College, 2 ITI Colleges, 1 Branch Library and 12 Gram Panchayat Libraries.

From the view point of health facilities there is one community health center, 7 nursing homes, 2 primary health centers, one primary health unit, two allopathic clinics, one family planning center and 23 sub-family planning centers and 32 medical shops are situated in the taluk.

There are six veterinary hospitals in the taluk. As per 1991 census the cattle number was 33,280. There are 12,849 buffaloes, 2,139 hebuffelows; the number of sheep is 15,572, goats 14,768 and hens 36,758 etc.

The registered and recorded industries are 21 in number. There are 16 Khadi rural industrial units and 18 cotton ginning and pressing
factories. There are 21 Gobargas machines. The banking facility is well developed in the area. There are 7 commercial banks, 3 rural banks, 3 urban co-operative banks and 1 primary land development bank. Thus, there are total 14 banks and several financial institutions.

Transport and communication facilities are very essential to carry agricultural goods and services. There are 2,569 motorcycles, 253 motorcars, 78 autos, 208 luggage-carrying vans and 2,366 other transport facilities. Thus there are total 5,474 transporting vans and vehicles. And there are 14 post offices, 6 telegraph offices, 7 telephone exchange centers, 2,328 working telephones and 79 public telephone booths.

There is a steady progress in the co-operative sector. There are 20 professional co-operative societies, 19 milk producers' societies, 3 Grah Nirman Sanghs, one market association and 71 other co-operative societies with having the 78,000 memberships. There is one APMC and 3 sub APMC markets. There are 34 faire price shops in the taluk of which 19 are in rural area and 15 are in the urban. From the viewpoint of welfare agencies there are 54 Mahila Mandals, 154 Youth Organizations.

Generally soil of the taluk is black and extent of total irrigated area is 37,241 hectares. Kharief area of the taluk is 34,270 hectares while rabbi area is 18,750 hectares. There are 3,104 marginal farmers, 5,212 small farmers, 4,167 semi medium farmers, 2,722 medium farmers and 2,683 large farmers in number. Thus the total landholders according to caste is, Scheduled Caste 527, Scheduled Tribes 517 and others 14,431 in number. Thus the net total landholders are 15,475. According to census 2001 the total sown area of the taluk is 36,671 hectares.
The region of Naragund taluk is known for multi cropped area. The farmers of different categories raised the different varieties of crops like wheat, jawar, maize, paddy, bengal gram, green gram, sunflower etc. The total food crops grown in the year 2001 was 27,044 hectares. Apart from this the vegetables and fruits are also grown in this region. It includes 784 hectares and 14 hectares respectively. Thus, net total food crop grown is 28,180 hectares, 4,298 hectares oil seeds and 4,176 hectares cotton. Hence, the total non-food crops grown in this region is 8,491 hectares.

As Naragund is situated in a dry land area with scanty rainfall, there are no other irrigation facilities other than canal water resources. In other words water for irrigation is availed only through canal water resources. There are no small irrigation projects, which are useful for irrigation. The numbers of wells, which are useful for irrigation, are 65 and 18 tube wells. Therefore canal water has been the only source of irrigation. The total land irrigated through canal is 37,249 hectares during agricultural year 2001-02 (TCHB, 2000-01 and DCHB, 2002-03).

Selection of the Sample

The present study is confined to the study of 340 farmers of Naragund Taluk. Since our study is longitudinal, researcher has selected the respondents above 40-45 years of age group. Naragund taluk consists of 35 villages and all these villages are facilitated with canal irrigation from the Malaprabha Dam. From the selected area a list of villages was prepared along with gross area irrigated and gross cropped in each village for the year 2005.
The samples are selected mainly from four villages and these four villages are selected after taking into account, the relevant factors like size, location, geographical conditions, land holdings and irrigation availability. These villages are Jagapur, Banahatti, Chikkanaragund and Konnur from which the samples are chosen for the purpose of eliciting data. In order to get the samples lists of farmers from each village was obtained by visiting personally to the village office records and also Tahasildar office.

This information contained the size of the land holdings, extent of irrigation, caste particulars, cropping pattern etc. of the farmers. When the list was obtained then 12 per cent of the farmers from each village irrespective of their size have been selected on the basis of random sampling by using 'Lottery Method'. Then the total number of sample size came to 339 and for the sake of convenience of the study this figure was rounded off, to form a final sample size of 340 farmers. The details of the samples so drawn are given in Table 3.1.

Table 3.1
Selection of the Samples

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Name of the sample village</th>
<th>Total cultivable land (In acres)</th>
<th>Extent of irrigation (In acres)</th>
<th>Number of beneficar ies</th>
<th>Sample size of each village</th>
<th>Percent of the farmers to the total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jagapur</td>
<td>2,994</td>
<td>2,606</td>
<td>500</td>
<td>60</td>
<td>17.65</td>
</tr>
<tr>
<td>2</td>
<td>Banahatti</td>
<td>1,619</td>
<td>1,163</td>
<td>450</td>
<td>54</td>
<td>15.88</td>
</tr>
<tr>
<td>3</td>
<td>Chikkanaragund</td>
<td>4,322</td>
<td>1,512</td>
<td>541</td>
<td>65</td>
<td>19.12</td>
</tr>
<tr>
<td>4</td>
<td>Konnur</td>
<td>10,874</td>
<td>7,816</td>
<td>1,335</td>
<td>161</td>
<td>47.35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19,809</strong></td>
<td><strong>13,097</strong></td>
<td><strong>2,826</strong></td>
<td><strong>340</strong></td>
<td></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source : Census of India 2001.
Director of Census Operations, Karnataka & Deputy Commissioner
An attempt is made to distribute the farmers into three categories on the basis of the size of land holdings. These three categories are; small farmers, medium farmers and large farmers.

Table 3.2 gives details about the sample respondents on the basis of land holdings.

**Table 3.2**

**Distribution of Respondents on the basis of Land Holdings**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the sample villages</th>
<th>No.of. Samples selected from each village</th>
<th>Size of Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Small</td>
</tr>
<tr>
<td>1</td>
<td>Jagapur</td>
<td>60</td>
<td>34 (56.66)</td>
</tr>
<tr>
<td>2</td>
<td>Banahatti</td>
<td>54</td>
<td>33 (61.11)</td>
</tr>
<tr>
<td>3</td>
<td>Chikkanaragund</td>
<td>65</td>
<td>39 (60.00)</td>
</tr>
<tr>
<td>4</td>
<td>Konnur</td>
<td>161</td>
<td>98 (60.87)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>340</strong></td>
<td><strong>204 (60.00)</strong></td>
</tr>
</tbody>
</table>

Note: Numbers in parenthesis indicate percentage.

Source: Self-computation.

**Socio-economic Profile of the Sample Villages**

**Jagapur**

The Study village Jagapur is situated to the Southwest to Naragund Town at a distance of 7 Kilometers from its Municipal boundary. The total geographical area of the village is 3115 acres having 365 households. The main source of livelihood of most people of this village is agriculture. Like other villages of the Taluk, Jagapur village was also under the grip of chronic drought. But after the inception of irrigation through Malaprabha Dam this region turned into green land.
According to the Census 2001, the total population of the village is 2006 persons and as for the sex-wise breakup it is 1026 male persons and 980 females, thus 955 is the sex ratio. The population in the age group of 0-6 years is 258, among them male population is 124 where as female population is 134. Thus the sex ratio of this age group is 1081 persons for every 1000 males.

The total literacy rate of the village is 61.6 per cent; among them the male literacy is 76.1 per cent whereas the female literacy rate is 46.1 per cent. So far as educational facilities are concerned, there are two Anganwadies, two primary schools and one High School (Secondary school).

The major castes in the village are lingayats, Ganiga, Raddi, Kudu vakkaligas and Kurubas. The SC's and ST's stand last in their population size. The caste-wise breakup, Scheduled Caste people are 106 persons consisting of 59 males and 47 female persons. Thus the proportion of SC's to the total population is 5.3 per cent. The total Scheduled Tribe population is 449, having 239 males and 210 females and its proportion to the total population is 22.4 per cent. Thus about 72 per cent of the people belong to other miscellaneous caste groups.

The religion wise breakup is, about 98 per cent of the population belongs to the Hindu community, 1.5 per cent belongs to Jain community and 0.5 per cent belongs to Muslim community.

There are four main temples. The deities are Hanuman Temple, Basaveshwar Temple, Siddharoodmath, Dyamavva Temple and Durgavva Temples etc. Of the five temples, all the village people worship
Hanuman temple invariably and on the eve of Hanuman Jayanthi, fair of the God is celebrated. The people of Jagapur celebrate a number of festivals along with the regional and the national. Among these festivals Nag Panchami, Ganesh Chathurthi, Diwali, Ugadi etc. are the important festivals. 'Karu Habba (taking bullocks in the procession and on that day sweet food is prepared) and Shigi Hunnime (worshiping crops in the Kharief season), Yallu-amavase (worshipping crops in the Rabbi season)are believed to be the important festivals of the farmers.

The infrastructure facilities and basic amenities of this village are drinking water, electricity facility, small kirana shops and small hotels. This village is having road transport facilities and vehicles such as Buses, Tempos, motorcars, jeeps, tractors and Lorries run through the roads of this village.

From the point of view of financial facilities there are no Rural Banks or any branches of Nationalized Banks but there is a co-operative society and two finances in Jagapur village. As regards the other facilities there is one milk co-operative society, two youth clubs and a community center etc.

For maintenance of health and hygiene this village has one health sub-center, two private clinics. Apart from this a few doctors visit the village regularly. Jagapur has a Post Office, One community TV Set and TV Cable connection to provide the communication facility.

Out of total geographical area of the village, the cultivable land is 2994 acres. Out of this cultivable land 2606 acres is irrigated land. It means 85.5 per cent of land is irrigated through canal system. The village
is receiving water as a main source of irrigation from Malaprabha Right Bank Canal. This is the only source of water for irrigation purpose.

The main crops of this village are Maize, Sunflower, Hybrid jawar, green gram etc. and these are grown in kharief season. The crops like wheat, jawar, Bengal gram, maze, sunflower, jaidhar cotton and hybrid DCH cotton are grown in rabbi season but in recent days growing of cotton has decreased. (Demographic census, record of taluk office and primary sources 2005).

Banahatti

Banahatti village is one of the small villages of Naragund Taluk from geographical point of view. It is situated to the southeast of Naragund. This village is 6 kilometers from the Taluk Head Quarters. The total geographical area of the village is 1920 acres. Its population is little more than of Jagapur. According to 2001 census, there are 409 households in the village.

The demographic feature as per 2001 census reveals that the village has a population of 2270 persons of whom male and female population is 1185 and 1085 respectively. The sex ratio of the village is 916 females for every 1000 male populations. The population belonging to the Scheduled Caste is 216 persons of whom 124 males and 92 are females. Thus the proportion of the SC's to the total population is 9.5 per cent. The total number of Scheduled Tribe in the village is 195 persons. Among them 104 are males and 91 are female persons. Thus the proportion of the Scheduled Tribe population to the total population is 8.6 per cent.
The total literates in the village as per the census of 2001 are 1268 persons. Among them 849 are men and 419 are women. Thus the literary rate of the village is 65.1 per cent. The male-female breakup of literacy shows that it is 83.6 per cent among the men and 45.0 among the women folk. These two are the unique features of this village. Because in all the three surveyed villages the literacy of men is ranging from 76 per cent to 80 per cent where as it is 83.6 per cent in this village. This is the highest literacy rate among all the surveyed villages. As regards the literacy rate of women in other village it is 46 to 53 per cent while it is only 45 per cent in Banahatti village. Thus the women folk of this village have lagged behind the women of other three villages in literacy.

The educational facilities of the village ranges from Anganwadies to P.U. College. This village has one Anganwadi, one Primary School, one Higher Secondary School and one P.U. College.

The major castes residing in this village are Lingayats who occupy the highest place in number, the Kurubas have occupied the second place followed by Scheduled Caste and Scheduled Tribe where as Brahmins and Jains come in the last place with their small strength. Hindus constitute the major religious group. There are two Muslim families, which reside in this village.

In Banahatti village there are five famous temples. They are Basaveshwar temple, Rudraswami Math, Siddharoodhmath, Hanuman temple and Kariyavva temple. Rudraswamy fair (Jatra) is celebrated by the Banahatti people every year. Along with this fair, the people of this village also celebrate a number of regiona. and national festivals.
For maintenance of good health and hygiene the Government has set up a dispensary. There is one private clinic and private doctors frequently visit this village to provide medical services.

The people of Banahatti village carry on their financial transactions through a Bank and Co-Operative Societies. Ware-Housing Facility, Milk Co-Operative Society, Fair Price shop and Youth Clubs are the other facilities of this village.

As other villages, Banahatti village is also provided with some civic amenities like drinking water facility through taps and ponds, the facility of electricity. Communication facilities like post office, telephone connections, STD booths, and cable connection are also facilitated to this village. There are some petty kirana shops and a few small hotels. The village has other infrastructure facilities such as provision of services of motorcar, tempo, auto rickshaw, jeep, tractor and lorry along with state transport bus services.

So far as irrigational facility is concerned this village falls under tail-end region. Some farmers of this village use the water from nearby stream Bennehalla (a small stream or Brooke) with the help of lift irrigation along with canal water. The soil of this village is largely black cotton soil.

Out of the total area, 1619 acres is cultivable land and 1163 acres is irrigated land. Thus the irrigated land of the village is 71.9 per cent. The major crops grown are Maze, Sun Flower, Wheat, Green gram, Bengal gram, Jawar etc (Demographic census, record of taluk office and primary sources 2005).
Chikka- Naragund

Chikka-Naragund is situated to the North-West of Naragund and it is 13 Kilometers from Naragund town. The village in recent days is known for two things. Firstly a farmer from Chikka- Naragund was killed in the Ryot riot of Naragund during 1980 and secondly a plywood raw material factory was established a couple of years ago.

Chikka-Naragund is the second biggest village of Naragund Taluk next to Konnur. The total geographical area of this village is 4721 acres; out of this the cultivable land is 4322 acres. The total numbers of household families in the village are 720 in number.

According to the census of 2001 Chikka Naragund has a population of 3920 persons, of them 1973 are males and 1947 females. The sex ratio is ideal i.e. 987 females per 1000 males. The population in age group of 0-6 years is 582 consisting 294 males and 288 females. The total Scheduled Caste population is 179 out of which 89 are males and 90 are females. The proportion of SC’s to the total population is 4.6 per cent. The village has 203 persons who belong to Scheduled Tribe. The sex wise break up is 106 males and 97 females. Thus the proportion of this population to the ST’s population is 5.2 per cent.

The literacy level of the village is 66.7 per cent. The sex ratio breakup of literacy is 80.5 per cent men and 53 per cent women. There are three Anganwadies, three primary schools and one private school in this village. There is a Government Secondary school, which provides education up to 10th standard.
The major castes residing in the village are Lingayats, Kurubas, SC's and ST's. The large portion of the population consists of Lingayats. In Chikka Naragund there are no other religious groups other than the Hindus. There is a lone house that belongs to Muslim community.

In Chikka-Naragund village there are 4 famous temples. They are Basaveshwar Temple, Revansiddeshwar Temple, Hanuman Temple and Durgavva Temple. Every year in the month of May the people of Chikka Naragund celebrate fair of Basaveshwara on a grand scale. The people of this village celebrate all the fairs and festivals with great reverence along with the regional and national festivals.

The village Chikka-Naragund has better civic and other amenities. Though the village is situated in an interior place, it has all the transport facilities. The state transport buses run 2-3 times from Naragund to Chikka Naragund. There is service of tempos, jeeps, and taxies that pass through main road. This road passes from Naragund to Soundatti, Munavalli, Gokak and Belgaum etc.

Drinking water facility has been made available by using tank water. A number of bore wells have been dug to provide water for drinking and other purposes. The entire village is electrified. Chikka Naragund has one health sub-centre and two private hospitals and two clinics and one medical shop.

So far as communication facilities are concerned, there is a post office, telephone connection, two STD booths. And TV cable connection is also facilitated to this village. For financial operations, there is one Rural
Bank (Malaprabha Grameena Bank), one Co-operative Credit Society and one Agro Co-operative society and some finance institutions.

Provision of veterinary, Gram Panchayat Office, Warehousing facility, Plywood factory and milk co-operative society is the other facilities of the village. There are two fair price shops, weekly market is held on every Monday in the village. There are also four Mahila Mandals and two youth clubs.

Agriculture is the main occupation. Out of total 4322 cultivable lands, only 1512 acre of land is irrigated. This indicates that the area under irrigation is only 35 per cent and the total dry land is 2810 acres. Though the right bank canal of Malaprabha Dam passes just by the side of the village, the village people are unable to utilize its water, as the land of Chikka Naragund is not leveled. The main crops grown in the area are maze, wheat, sunflower, Bengal gram and jawar etc (Demographic Census, Record of taluk office and primary sources 2005).

**Konnur**

Village Konnur is the biggest of all the 35 villages of Naragund Taluk. This village lies on the state highway of Hubli-Sholapur and is situated in the Northeast at a distance of 25 Kilometers from the Taluk Head quarter. The village is located at flat surface consisting of cotton black soil. This village is having a good agricultural base because along with 90 per cent of canal irrigation, there is about 10 per cent facility of lift irrigation from the river Malaprabha that flows nearby.
The total geographical area of the Konnur village is 11,216 acres. The village has 1406 households consisting about 8393 populations. So far as the sex wise breakup is concerned it has 4276 males and 4117 females. Thus the sex ratio is 963 persons. The population in the age group of 0-6 years is about 1237, among them 640 are males and 597 are females. Thus the sex ratio of this age group is 933 persons.

The total population of Scheduled Caste is 503, consisting 243 males and 260 females. This proportion of SC’s to the total population is 6.0 per cent. The number of Scheduled Tribe is 98 people having 54 males and 44 females.

From the education point of view Konnur has made better progress. Out of the total 8393 population 4716 were literates. Among them male literates were 2879 and female literates were 1837. Thus the overall literacy rate is 65.9 per cent. The percentage of the male literates is 79.2 while that of females is 52.2 per cent. In Konnur there are 10 Anganwadies, 5 Primary Schools, 2 Secondary Schools, One Pre-University College and one JODC College.

The village consists of five major caste groups. The Kurubas and lingayats have occupied the highest number fallowed by Raddies and Kudu Vakkaligas. While SC’s and ST’s are occupied the last position so far their population is concerned. Village Konnur consists of three major religious groups’ viz. the Hindus, Muslims and Jains. The Hindus are in majority followed by Muslims. Thus from population point of view Muslims constitute highest number next to Hindus.
Thus, Konnur being the biggest village of this region has been a multi caste and multi religious village. Mouneshwar temple is the famous temple, every year during the month of April/ May people of this village celebrate a grand fair of Mouneshwar. The other famous temples of this village are Siddharood math, Veerbhadreshwar temple, Basaveshwar temple, Raghvendraswami math etc., Kaaruhabba, Sheegi Hunnime, Yellu-Amashi are the regional festivals specially, celebrated by the farmers. The Dasara, Deepavali, Nag Panchami, Moharram, Id-Milad, Ramzan etc. are the important festivals, which are celebrated by the people of this village.

Konnur village has almost all the infrastructure facilities and basic amenities. There is the facility of electricity and drinking water is supplied through tap. Since this village is situated on the State Highway, it has plenty of transport facilities like Buses, Tempos, Jeeps, Tractors, Motor Cars, Auto Rickshaws, and Lorries etc.

The village has 5 Cloth Shops, 15 Kirana shops, 10 Hotels and 5 Non-Vegetarian Hotels, 7 Arrack shops, 2 Bars and 3 Garages. Konnur village has good medical facilities. There is one Government Health Sub-Center, 6 private hospitals, 2 clinics, one veterinary Hospital, 2 medical shops and one Government seeds distribution center and 3 chemical fertilizer and pesticides shops.

Konnur village has better financial facilities. There is a branch of Nationalized Bank (Vijaya Bank), Two Co-operative societies, one credit society and a number of other financial institutions. There is one milk co-operative society, two fare price shops, six mahila mandals, fifteen youth
clubs and one community center at Konnur village. Weekly market is held on every Thursday in this village.

Konnur village has better communication facilities. There is a post office and a telegraph office. A good number of people have obtained the facility of telephone connection. There are 5 STD booths; TV Cable connection facility is also availed by the farmers.

So far agriculture is concerned, out of total geographical area about 10,874 acres of land is used for cultivation. The land, which is under irrigation, is about 7816 acres. Thus the percentage of irrigated land is 71.9 with different sources such as canal, bore well and lifts irrigation (But no single sample is taken from lift and bore well). But out of the total irrigated land 90 per cent is irrigated with Malaprabha Canal.

The major crops grown in this region are maze, green gram, sunflower which are the Kharief crops where as wheat, jawar, maze, Bengal gram, sunflower, and cotton are the Rabbi crops (Demographic census, record of taluk office and primary sources 2005).

**Tools and Techniques of Data Collection**

The essential data for the study is collected from both primary and secondary sources. With a view to assess the changes in the life of the farmers in command area, an elaborate interview schedule was specially designed to collect the primary data. This interview schedule contained 120 questions and it was administered on 25 beneficiary farmers for pre-testing. On the basis of the information received, the schedule was
revised and finalized. The final interview schedule contained questions to elicit of both quantitative and qualitative information.

**Statistical Tools**

The data collected have been analyzed by using appropriate statistical techniques such as; percentage distribution, cross tabulation, diagrams and chi-square test has applied wherever necessary.

**Interview Schedule is Subdivided into VI Sections**

1. **Section I**: This section contains questions regarding the personal information of the respondents such as age of the respondent, education, religion, caste, marital status, age at marriage, number of children, dowry taken etc.

2. **Section II**: Under this section relevant questions regarding family background is included like; type of family, size of the family, housing pattern, household gadgets, land holding, extent of irrigated land, primary occupation, number of working members in the family, livestock and family income was collected.

3. **Section III**: This section contains questions aimed at eliciting information on economic impact of irrigation like; cropping pattern, crop yield, increase in gross cropped area, concept of agriculture market, use of modern technology, hiring labourers, income, agricultural assets, savings and investment, expenditure behaviours credit facilities etc.

4. **Section IV**: In this section questions included to elicit information regarding impact of irrigation on social aspects such as; family and marriage, mate selection, opinion about ideal number of children, caring and rearing of children, matrimonial relations, changing roles of family
members, work burden on females, extent of child labour, migration, practice of dowry, ritual beliefs, change in lifestyle like food habits, dress habits, recreational facilities, health and sanitation etc.

5. Section V: This section contains questions to elicit information on political and educational impact of irrigation. The political impact includes voting behavior, participation in campaign, contesting elections and farmer's participation in agitations etc. The educational impact such as literacy/educational achievements of farmer's children, female education, mass media and education etc. are included.

6. Section VI: This section contains questions aimed at getting information on the adverse impact of irrigation, some of them are land degradation, problem of health, extravagancy, improper water distribution, conflict and litigations among the farmers and authorities, cultivation of bad habits, problem of indebtedness, problem of water availability and overall opinion about irrigation and government schemes and prospects of irrigation.

The secondary source of information includes the documentary sources. This type of data was obtained from different departments like Malaprabha project report, information from chief engineers office Belgaum, CADA Belgaum, Office of the Engineer Malaprabha Right Bank Canal Dharwad, Census Hand Book and Statistical Book Gadag district, general information from Taluk Office Naragund, information obtained from Neervari (irrigation) office and Agriculture Office Naragund. Information is also gathered from Village Accountant Offices and Gram Panchayat Offices of four selected villages. The necessary information is
also collected from Government Bulletins, Government Reports published by the Department of Agriculture and Irrigation.

The researcher has also collected other literature like books, journals, periodicals, magazines etc. Visited several libraries like ISEC Bangalore, Shivaji University Kolhapur, Vaikunthamehta Institute of Rural Development Pune, ICSSR New Delhi, JNU New Delhi, Mysore University Mysore, Goa University Goa, WALMI Dharwad, CADA Belgaum, Agriculture University Dharwad, CMDR Library Dharwad, Karnataka University Dharwad etc. to collect the information and literature of earlier studies.

Field Work and Limitation of the Study

Since the present study is a field survey, all the necessary information was collected through the Interview Schedule. The interviews were conducted at the respondent’s residence. Before commencing actual interview the researcher explained the purpose of research to the respondents and also assured them that, the information given would be used only for research purpose.

With all this, as it generally happens with field research works, there were a number of times when the respondents grew suspicious and thought that the researcher was a government agent. When such situations were confronted all the tactics contained in the books on fieldwork methods were used. Fortunately they worked.

Though schedule was prepared in English, it was translated into regional Kannada language, since the respondents are little literate. After
doing this, the interview was conducted orally in Kannada dialect with free dialogues.

Getting appointments with the farmers was bit difficult. Farmers usually work in the fields from early morning till late evening. Therefore, it was sometimes difficult to meet and collect the information. Moreover since they were, tired and not in a mood to spare their time for us. Under such circumstances the interviews were postponed to some other day convenient for the respondents. Another difficulty was that, some respondents were not ready to disclose the information connected with their personal matters like dowry, age at marriage, income and gadgets possessed by them. But by asking such questions indirectly the researcher was able to collect all such information.

In spite of some of these problems, the respondents were generally co-operative. They participated and furnished all the details in the discussion and spared their precious time with the researcher. The responses given by the respondents were recorded systematically in the schedule and cross-questions were also made wherever necessary. Researcher shared in their personal experience and thus friendly atmosphere created. For conducting interview containing 120 questions and the duration taken for a single respondent was 40-45 minutes and the period utilized for field survey was two months i.e. 12th May to 11th July 2005.

The present survey can be seen as an attempt to overcome all the above limitations. The researcher could be able to collect all the necessary
data for present study to have a real picture of the impact of irrigation on
the life of the farmers.

Out line of the chapters

The present work is organized into nine broad chapters. They are;

Chapter I Introduction: This chapter deals with Indian rural scenario,
meaning and significance of irrigation, scope of the study, theoretical
support used for the study and review of literature..

Chapter II Irrigation: its Origin and Development: It deals with history
and development of irrigation in India, history and development of
irrigation in Karnataka, history of Malaprabha Irrigation Project and
Naragund Ryot Bandaya (Naragund Ryot Riot) is also highlighted to
have a clear picture of impact of irrigation.

Chapter III The field and method of study: In this chapter an attempt is
made to discuss the objectives and hypotheses, the field of study -
Naragund Taluk of Gadag District, selection of samples, socio-economic
profile of four sample villages, tools and techniques of data collection,
field work and limitations of the study.

Chapter IV Socio-economic profile of the farmers: This chapter
highlights socio-economic conditions prior to irrigation and socio-
economic profile of the farmers namely; age composition, education,
religion, caste, age at marriage, nature of the family, size of the family,
housing pattern, main occupation, size of the land holding, size of the
irrigated land and income etc.
Chapter V Economic Impact of Irrigation: Changing Scenario:
Economic factors such as cropping pattern, crop yield, market surplus enhanced income level, mechanization of agriculture, employment opportunities for family members, hiring labourers, saving behaviours, increase in household gadgets, investments and expenditure behavior, credit facilities etc. are highlighted in this chapter.

Chapter VI Irrigation and Changing Social Life of the Farmers: Here an attempt is made to understand the social impact of irrigation; like change in marriage and family system, ideal number of children, mate selection, change in marital relations, dowry system, caring and rearing of children, changing role of the family members, work burden on women and children, female work participation, child labour, impact on ritual beliefs, migration, change in life style such as cress habits, food habits, health awareness and health facilities, recreation facilities etc.

Chapter VII; Political Participation and Educational Achievements of the Farmers: This chapter highlights political participation such as change in voting behaviour, participation in campaigns, contesting elections and participation in agitations, processions, knowledge about Government schemes etc. Educational achievements such as literacy and educational level of the children, female education, and education through mass media are explained.

Chapter VIII Problems and Prospects of Irrigation: It throws light on the problems and prospects of the farmers. The problems such as land degradation, problems of health, litigations among the farmers and
between the farmers and authorities, problem of dowry, cultivation of bad habits, problem of extravagancy, problem of indebtedness, problem of water availability etc. and prospects of irrigation is also carried out.

Chapter IX Summary, Findings and Conclusion: This chapter presents summary, findings and conclusion on the basis of the data presented in the previous chapters.