Evaluation of the Ganga Kalyana Scheme From 2008-09 to 2012-13

STUDY CONDUCTED FOR

Karnataka Evaluation Authority,
Government of Karnataka.

AND

Devaraj Urs Backward Class Development Corporation,
Government of Karnataka.

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September 2017

PREFACE

The Government of Karnataka has been striving to promote inclusive growth by mainstreaming marginalized communities through various Central and State Government Schemes. Ganga Kalyan Scheme implemented by Dr. BR Ambedkar Corporation is one such scheme that provides irrigation facilities to the lands of SC/ST farmers to increase agricultural production and productivity, contributing to increase in the income of the farmers. The evaluation of the scheme was initiated by Dr. B. R. Ambedkar Corporation in co-ordination with Karnataka Evaluation Authority. The study is outsourced by KEA to the ECO HKCAL. A sample of 621 beneficiaries was selected for the study from the three components of the scheme- Individual Irrigation, Community Irrigation and Lift Irrigation, across 60 constituencies in 30 districts in the State. The findings of the study indicate positive impact of the scheme on cropping pattern and socio-economic status of the beneficiaries.

I expect that the evaluation study and its findings and recommendations will be useful to Dr. B. R. Ambedkar Corporation to implement the scheme more effectively to achieve the desired outcomes.

The study received support and guidance of the Principal Secretary and the Secretary Planning, Programme Monitoring and Statistics Department, Government of Karnataka. The review of the draft report by members of the Technical Committee of KEA, and an Independent Assessor, has provided useful insights and suggestions to improve the draft report. I duly acknowledge the assistance rendered by all in successful completion of the study.

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Acknowledgement

The "Evaluation of the Ganga Kalyan Scheme from 2008-09 to 2012-13" was compiled with efficient analysis of primary and secondary data obtained from the valuable information contributed by beneficiaries of the scheme selected from 30 districts of Karnataka. HKCAL would like to acknowledge the following persons for their valuable contribution in evaluation of this report

Shri. Shivaraj Singh, IFS, Chief Evaluation Officer, Karnataka Evaluation Authority, Govt. of Karnataka.

Shri Ranganna Consultant, Smt. Chaya Devagaonkar Consultant and Smt. Jyothi Jenni, Additional PO, Karnataka Evaluation Authority.

Managing Director, Devaraj Urs Backward Class Development Corporation, Bengaluru and respective Districts Managers of DBCDC.

We thank all the concerned officers and Staff of DBCDC, HKCAL team, who contributed their time and information in taking up the Evaluation of the Scheme without whom the evaluation would not have been possible.

Director
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List of Abbreviations

BCs: Backward Classes

BIS: Bureau of Indian Standards

BPL: Below Poverty Line

BRADC: Dr. B. R. Ambedkar Development Corporation Karnataka

DBCDC: Dr. Devaraj Urs Backward Classes Development Corporation, Ltd.

ESCOM: Electricity Supply Company

FGD: focus Group Discussion

GKY: Ganga Kalyan Yojane

GOI: Government of India,

GSDP: Gross State Domestic Product

HYV: High Yielding Varieties

KDP : Karnataka Development Programme

MDC: Minorities Development Corporation Limited, Karnataka

SPSS: statistical software package for Social Science

STDC: Schedule Tribe Development Corporation

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Chapter - 1.

EXECUTIVE SUMMARY

India being welfare country with federal structure both Center and state governments are designing and implementing welfare and developmental programmes to enhance household income of the poor, thus alleviate poverty in the country. The Government of Karnataka in this process designed various programmes, among them; the one is Ganga Kalyan Yojane (GKY). This programme has been designed for the benefit of marginal and small farmers belonging to vulnerable groups. The scheme started in 1996-1997; presently it is being implemented through different Corporations for the benefit of particular community. The basic objective DBCDC is to improve the backward classes' livelihood belonging to below poverty line (BPL). In this context multiple schemes are being implemented to cover eligible household. With an objective to provide irrigation facilities exclusively for dry land holding, marginal and small farmers belonging to BCs, to improve the land productivity by bringing change in cropping pattern, enhancing net sown area and hence enhance status of beneficiaries economically and socially the scheme has come into being. The Irrigation facilities are provided through perennial or ground water source depending on accessibility through three schemes Vis a Vis: Individual irrigation scheme, Community irrigation scheme and Lift irrigation scheme.

The individual irrigation scheme is provided to single (individual) farmer. While the community bore-well is provided to a group of farmers, whose land is adjoined to each other. And the lift irrigation benefits are based on water source and area to be covered, and hence the number of farmers and area varies for each scheme. The unit cost for each scheme varies time to time and is fixed considering on various factors. The financial package of the scheme has two components, viz., subsidy and loan. For individual irrigation services, the total financial package was one lakh during 2008-2010, and it was enhanced to one lakh fifty thousand in following years (2011-2013). The community irrigation unit is provided to the group of farmers, having at least three members per group and having land holding up to 8 to15 acres of land. The unit cost of community irrigation scheme

is fixed at Rs. 2.53 lakhs. The cost break up on each item, for two bore wells drilling, pump sets, energisation and costs of other supplementary are met from unit cost. If the holding is more than this however, with the scale of acres the scale of finance differs. For lift irrigation, the unit cost is fixed at Rs. 23,900 per acre, the unit cost varies base on total land to be covered.

A detailed evaluation of the this Ganga Kalyan Yojane (GKY) in entire state of Karnataka was needed to understand the efficacy of the scheme for its design, implementation and achievement of desired outcomes, understand differences in the socio-economic status of the beneficiaries, assess the additional income generated at household level, after deriving benefits from the scheme and finally to understand and suggest scope for improvements in the existing scheme.

The evaluation study was conducted in entire Karnataka covering all its districts; in each district two assembly constituencies were covered. Among the two constituencies, one having higher number and another having less numbers of beneficiaries was selected. Thus, a total of 60 constituencies and large number of villages were covered. The period of study for evaluation was from 2008-09 to 2012 to 2013; all the beneficiaries during this period were considered for study. The list of beneficiaries in respective constituency was obtained from office of the Managing Director of DBCDC. From the list of beneficiaries, 10 per cent sample was selected by simple random sampling method. Proportionate sampling approach was followed, treating each year as population and respective samples were drawn. Thus, the total sample selected for the study was around 621, which were selected from across 30 districts in 60 constituencies, covering around 278 villages.

The evaluation questions were designed categorized into three main stages: Pre-Implementation, Implementation, and Post-Implementation for a thorough evaluation of the program. Primary data obtained from all the 3 districts by above mentioned data collection strategies were analyzed and results were categorized as per requirements expected from the objectives of the evaluation.

It was observed that the mandatory ratio of 70:30 across beneficiary categories of 1,2A and 3A, 3B was followed strictly during selection of beneficiaries in all the districts across all the constituencies sampled. The study also collected information on the size of the family, based on that it can be stated that large number of families are nuclear family followed by joint or extended families. Our study findings revealed that 13.3% of the sampled beneficiaries were female beneficiaries and they are mostly from women headed households and land titles are in their name, hence loan sanction taken place in their name though benefit is reaped by their sons. As per our data analysis it was also noticed that half of the beneficiaries sampled have crossed the age of 50 years, most of them from this age group is illiterate. Of the total sample, 36.2 per cent are illiterate, while about 19 per cent were just literate without completing any formal school education, followed by 9.5 per cent with primary education and about 24 per cent of beneficiaries had completed college education. Of the total sample, 72 per cent were found to be living in kachha house and remaining found living in pucca house. As per the amenities available at the household, the study shows that 51 percent of them have electricity, 70 per cent having access to potable water and around 63 per cent have toilet at the premises of the house. As the scheme was designed exclusively to address the need of marginal and small farmers of backward castes, accordingly during our survey we studied the average land holding size of the beneficiaries; whether it was falling in category of marginal or small farmer. Of the total sample, 52 per cent of the farmers were from marginal category (land holding size up to 2.5 acre); while around 48 per cent were from small farmer's category (owning land between 2.5 to 5 acres). The study collected the beneficiaries' annual income at household level from all sources. The major source of income was found to be from the farming activity; though it was observed that the younger members of family migrated to the towns have found regular wage income there.

The study reported that farmers have very high level of awareness about the scheme; in fact, farmers wait for its announcement. The corporation makes announcements for receiving application for the scheme. In fact, the corporation releases the schedule of events with specific time period. Each activity starting

from the receipt of application to energisation of the bore wells is defined and the stipulated time is also specified. The majority of respondents expressed that, some of them already knew about the scheme. While a fraction was of the opinion that they were made aware by the elected representative and local leaders were instrumental in conveying the information about the scheme. From our FGD it was revealed that local leaders will make arrangements to help selection of more number of beneficiaries from their own constituencies. Thus, relatively large number of persons has been selected from the constituencies of Varuna, Shivamoga and Hiriyur. These constituencies were represented by popular political persons who were very proactive as leaders.

In regards to clarity and knowledge of selection process of the scheme, it was observed that all the participants were clear in their understanding that the scheme was meant for marginal and small farmers. They were also clear on their understanding of the type of documents that were required to be submitted along with application formalities. During FGD and transact walk annual Income Certificate, age proof document, ration Card, caste certificate, land documents and photos were listed out by the beneficiaries as the mandatory documents that need submission for application process. It was also noted that majority beneficiaries stated faced difficulty in obtaining land title and income certificate. The participants also mentioned that in selection process favoritism played an important role in some cases. As the selection committee is headed by legislature, it was stated by some beneficiaries that his followers had an upper hand in getting the scheme benefits.

Similarly with respect to the implementation process during our discussion with officials involved at various stages of activity, it was revealed that following time schedule is difficult in many cases as they have to get coordination from other various departments and agencies and that may cause delay in completion of a single stage of activity. The study mentions how far delay was taking place across each stage of implementation, keeping the primary time schedule set by the department as our guideline. Along with data from structured questionnaire, FGD was conducted to supplement to survey data. The respondents opined that major

delay happens at stages of pump installation and energization. At stage of pump installation beneficiaries of both individual and community scheme benefit expressed that; the geologist will schedule a visit according to his convenience, not according the time schedule of the scheme requirement, adding to further delay. Also there was major delay reported in the process of installation of electricity that was one of the major hurdles in scheme as reported by the beneficiaries. We explored the respondents' experience/satisfaction in process of fixing of motor, pump-set and other accessories. Though, delay in provision of services has taken place overall, the opinion of beneficiaries was sought about the stages of dissatisfaction. According to the finding, 91 per cent of respondents were very comfortable with the source identification; similarly, one fourth of respondents were quite unhappy with pump-set fitting, opining that the finishing touch is of poor quality. The respondents narrated that, the staff of electricity department do not cooperate. Further, it was reported that while drawing the line, the electricity department officials do not consider the request to avoid others private lands, with whom the beneficiary may have differences, later which leads to dispute.

The study explored the awareness of beneficiaries on financial support they are entitled to get from the corporation for entire scheme and break ups for different activity. The cost of drilling up to one lakh was born by the corporation, beyond that it was to be borne by the beneficiary. However, due to the fall in water table in many areas there was a need to drill deeper bore wells, the amount that was allotted for drilling of bore wells under the scheme was hence not sufficient. During our FGD and transact walk the respondents expressed that the amount allotted for the drilling of bore wells should be higher than what has been provided presently.

It was observed that of the total beneficiaries, only 28 per cent have repaid fully, and another 14 per cent have partially repaid. And remaining beneficiaries have not repaid the loan and most of them reported that poor earning and crop failures are the major reasons for the default.

In regards to maintenance and repair under the scheme it was observed that the level of support and commitment from either the DBCDC or the approved supply agencies was not well understood or known by the respondents. Of the total respondents, 55 per cent have access to service centers within 10 kms, followed by 24 per cent who have repair facility within 15 kms. Across the state the distance varies due to geographical terrain and demographic distribution. It has been observed that in north part of state the service provider is located at much longer distance. The average maintenance cost per annum was found to range between Rs 5000 to Rs. 20, 000. Around, 50 per cent of beneficiaries informed that the mechanic visit their place periodically. In southern Karnataka, the beneficiaries have joined together and identified repair mechanics, who make periodic, visits to check on the machines. It was observed that chiefly in southern part of Karnataka there is more and better association between the beneficiaries which in turn is strengthening and negotiating better services from the departments.

The study also explored the functional status of the unit during the survey. It was highly encouraging to note that around 85 per cent of schemes boring facilities were functioning properly, followed by four and nine percent that were showing erratic function and not in operation respectively.

In regards to convergence with other department, it was found that manthan programme has been acting as a great platform for convergence between various departments and it has helped the farmers in connecting with other departments easily. During the FGD, we found out that the agriculture department with their extension programme helped impart knowledge on use of new varieties of seeds and also provided training and methods of using various equipments on hiring basis. Similarly, the horticulture and floriculture department provided knowledge on cultivation during these training programs. In fact many farmers are now growing fruit crops after being made aware about through these training interventions; same has been observed during the field work. The departments on priority basis in several district has been conducting outreach activities to impart knowledge on special schemes designed for the small

and marginal farmers. It was observed that the beneficiaries had maximum interaction with watershed dept, followed by agricultural department through this platform.

We found out that through improved water facility to land, institutional credit to invest in and department imparted knowledge the beneficiaries were enjoying a change in cropping pattern. The study explored the change in cropping pattern majorly because of the scheme. A definite change in crop pattern was observed. The change was grouped in to three categories of cereals, oilseeds, pulses, cash crops; fruits and horticulture. There is a clear shift from traditional cultivation to modern cultivation using new technology. The study revealed that the beneficiaries have adopted HYV and cash crops over the period, within food crops priority has been given to pulses and oil seeds gradually over the time. The FGD with the beneficiaries shows that not only cropping pattern has changed but also cultivation practices in different seasons have been adopted. Now the beneficiaries practice both kharif and Rabi crops. This has contributed for a better set of earnings. Crops like Paddy, sugarcane, cotton and vegetables are being cultivated more now because of assured water source. In the black soil they are cultivating cotton and other cash crops, in red soil fruits and flowers are being cultivated encouragingly.

Similarly, we have explored the post-GKY economic status of beneficiaries during our FGD, the respondents have expressed that there is rise in their household income. We found out that after imparting several trainings on improving knowledge of cultivation practices, there have been follow up practices by other departments, such as Agriculture, Horticulture, etc, to impart knowledge for adoption of scientific method of cultivation as well to the beneficiaries. FGD with beneficiaries revealed that the scheme has been instrumental in improving the beneficiary income levels, which has positively changed the quality of life. The better income leading to better savings has also resulted in availability of funds for sending children for better educational institutions. It was observed that 30 per cent of family is now sending their children to school and 21 percent are sending children further for college education.

The major recommendations based on various observations and interviews with the beneficiaries would be that there is need to increase monitoring efficacy at district office level by recruiting minimum required staff, that will help in timely scrutiny of application and monitoring of the installation of systems. A field level staff is needed at the district office level, who can verify issues such as depth of drilling and yield of water. It is also mandated that transparency should be adopted in the beneficiary selection process by adopting newer software and internal data base should be created. The applicants should know why he has been rejected. This will develop a confidence and trust of the beneficiaries on the scheme. There is paramount need to develop a systematic monitoring system for timely execution of different stages of the scheme.

The team after carrying out the evaluation of the distribution of the scheme are of the opinion that definitive measures should be adopted to prevent failures of new bore well, if bore-well fails within six months there should be a cost sharing mechanism with the beneficiaries to ensure rejuvenation of these bore wells. Also there is need for revision of the cost of a single unit for establishment periodically, considering water table levels as well as inflation rates.

CHAPTER 2

INTRODUCTION

India being welfare state, Government of India and state governments have designed various programmes to alleviate poverty as well as increase the household income of the weaker sections. Similarly the Gangakalyan scheme is designed for increasing the income of small and marginal farmers belonging to backward castes[1] in Karnataka. The aim of the scheme is to provide accessible of irrigation facilities/services in turn to increase the farm output of the marginal and small farmers belonging to backward caste.

The Irrigation facilities are provided by the way of drilling Bore wells in the own lands of individual farmers as well as at community level. In places where perennial surface water is available, lift irrigation facility is provided to farmers. The scheme enables farmers to grow multiple crops in a year and also helps cultivate in all seasons. This programme is being implemented since 1996.

[1] Category-1, Category-2A, 3A and 3B,

CHAPTER 3

LOG FRAME/PROJECT THEORY

3.1. Genesis of the Scheme:

India being welfare country with federal structure both Center and state governments are designing and implementing welfare and developmental programmes to enhance household income of the poor, thus alleviate poverty in the country. The Government of Karnataka in this process designed various programmes, among them; the one is Ganga Kalyan Yojane (GKY). This programme has been designed for the benefit of marginal and small farmers belonging to vulnerable groups. The scheme started in 1996-1997, presently it is being implemented through different Corporations for the benefit of particular community, viz.,

Sl. no	Name of corporation	Community covered
1	Dr. B. R. Ambedkar Development Corporation Karnataka(BRADC)	Scheduled castes
2	Schedule Tribe Development Corporation(STDC)	Scheduled tribe
3	Dr. Devaraj Urs Backward Classes Development Corporation, Ltd.(DBCDC)	Backward castes
4	Minorities Development Corporation Limited, Karnataka (MDC)	Minority

3.2. The basic objective of DBCDC and scheme

The basic objective DBCDC is to improve the backward classes' livelihood belonging to below poverty line (BPL). In this context multiple schemes are being implemented to cover eligible household. Similarly, the GKY Scheme also designed with the following objectives, viz.,

1. To provide irrigation facilities exclusively for dry land holding, marginal and small farmers belonging to BCs. And the specific coverage of groups with a ratio of 70:30 across 1, 2A and 3A, 3B, respectively.
2. To improve the land productivity by bringing change in cropping pattern, enhancing net sown area. Finally to enhance status of beneficiaries economically and socially.

The Irrigation facilities are provided through perennial or ground water source depending on accessibility, under following schemes, viz.,

1. Individual irrigation scheme
2. Community irrigation scheme; and
3. Lift irrigation scheme

The individual irrigation scheme is provided to single (individual) farmer. While the community bore-well is provided to a group of farmers, whose land is adjoined to each other. And the lift irrigation benefits are based on water source and area to be covered, and hence the number of farmers and area varies for each scheme. The unit cost for each scheme varies time to time and is fixed considering on various factors. The financial package of the scheme has two components, viz., subsidy and loan. For individual irrigation services, the total financial package was one lakh during 2008-2010, and it was enhanced to one lakh fifty thousand in following years (2011-2013).

The community irrigation unit is provided to the group of farmers, having at least three members per group and having land holding up to 8 to15 acres of land. The unit cost of community irrigation scheme is fixed at Rs. 2.53 lakhs. The cost break up on each item, for two bore wells drilling, pump sets, energisation and costs of other supplementary are met from unit cost. If the holding is more than this however, with the scale of acres the scale of finance differs.

For lift irrigation, the unit cost is fixed at Rs. 23,900 per acre, the unit cost varies base on total land to be covered.

3.3. Process of implementation

The DBCDC will announce schedule for the scheme and give wide coverage. Accordingly eligible farmers submit application for Ganga Kalyana programme. Each application has to be submitted with required documents such as, caste status certificate, annual income and land holding certificate. The process of selection takes place at two levels, first at district office of DBCDC the scrutiny of application takes place, followed by selection committee with whom

the final selection is made. The selection committee is headed by Member of Legislative Assembly (MLA) of respective constituency. The selected beneficiaries list is forwarded to Head Office, based on verification, the head office will confirm selection list. After establishment of authentication, the work orders are issued for execution of the scheme.

3.4. Review of Work:

The progress of work is reviewed in KDP meetings at district level by Chief Executive Officer and also at Taluk level by the Executive Officer of Taluk Panchayath. This is also reviewed at State level by the Managing Director of DBCDC and Principal Secretary, Backward Classes Department, Government of Karnataka. Thus, the progress of scheme is monitored by at different level by concerned officers.

CHAPTER 4
PROGRESS REVIEW

Karnataka is India's eighth largest state in geographical area covering 1.92 lakh sq km and accounting for 6.3 per cent of the geographical area of the country. The state is delineated into 30 districts and 176 taluks spread over 27,481 villages. In Karnataka, agriculture is the major occupation for a majority of the rural population. As per the population Census 2011, agriculture supports 13.74 million workers, of which 23.61 per cent are cultivators and 25.67 per cent agricultural workers. A total of 123,100 km² of land is cultivated in Karnataka constituting 64.6% of the total geographical area of the state. The agricultural sector of Karnataka is characterized by vast steppes of drought prone region and sporadic patches of irrigated area. Thus, a large portion of agricultural land in the state is exposed to the vagaries of monsoon with severe agro-climatic and resource constraints. Agriculture employs more than 60 per cent of Karnataka's workforce.

Agriculture remains the primary activity and main source of livelihood for the rural population in the state. It is characterized by wide crop diversification and remains highly dependent on the vagaries of the southwest monsoon. During 2010-11, food grain production in the state increased at an enormous rate of more than 14% over the previous year and this increase was mainly led by an increase in yield as the area increase during the year was only 2.9 per cent. Agriculture contributed 15.94 per cent (at constant prices) to the state's GSDP in 2011-12.

It is interesting to note that the number of small and marginal holdings as well as their share in the total operated area is increasing over the years. The increase in small and marginal holdings and area operated became more conspicuous after 2000-01. Small and marginal farmers (operating < 2 ha) account for 76 per cent of the holdings and share roughly 37 per cent of the operated area in Karnataka. The average size of operated area of all the land size classes is declining. This clearly indicates the increasing fragmentation of land holdings in the state. The shrinking sizes of holdings and the high proportion of unviable farmers impinge upon the quality of life. The economic unavailability of a

large number of small and marginal holdings and the hardship faced by their holders are reflected in the growing number of suicides committed by farmers.
Irrigation plays an important role in improving production and productivity of agriculture. It facilitates adoption of improved technologies and increases cropping intensity thereby 13 making optimum use of a finite resource i.e., land. There has been a gradual increase in the irrigated area in the state. The gross irrigated area has increased steadily from 9.06 lakh ha during 1960-63 to 27.45 lakh ha during 1990-93 and touched 41.87 lakh ha for the triennium ending 2008-11. The net irrigated area is 34.90 lakh ha at the triennium ending 2008-11 when compared with 22.05 lakh ha during 1990-93.

The cropping pattern of the region is influenced not only by agro-climatic conditions like rainfall, soil, temperature, etc., but also by government policies and programmes for crop production in the form of subsidies, support prices, tariffs and speed of infrastructure development. The overall trends in area allotted for various crops during five decades show that cropping pattern in Karnataka is dominated by food crops, with a share of more than 60 per cent of the gross cropped area in the state.

The productivity of the small farmers is the solution for growing population food needs, the future of the Indian sustainable agriculture is depends on the performance of these small and marginal farmers only. Most of small farmers cultivate the farm land with the support of their family members and local labour. They spend more time on mulching, trellising, weeding, removing the rock stones, soil conservation and building the irrigation systems which are a part of good agriculture practices. They grow multiple crops and sow as soon as they harvest, small farms have been the most efficient for sustainable and biodiversities way of agriculture. India's land holdings average size has been decreasing i.e. 1.16 hectares (as per 2011 data) and at the same time the numbers of land holdings are increased to 138 million which are caused by the population growth and family subdivisions. Small farm land holdings' output is always low and their operating expenses are high. In India small and marginal farmers have been facing lot of problems like credit and Indebtedness, in that 61.0 percent marginal and 18.9 percent small farmers are indebted. In Karnataka 22.8 and 50.7 per cent

small and marginal farmers are having indebtedness, and other problems like; land titles, low skills, globalization challenges and climate changes.

Raghavendra and Kunnal (2004) studied on assessment of economic conditions of small and marginal farmers in dry farming areas. The study was under taken in Bijapur District (Northern dry zone of Karnataka) the study revealed that asset (resource) position of small and marginal farmers were poor. Land formed the major asset of these farmers and they hired implements and draft power.

At present, the area under micro irrigation in Karnataka is less than 0.5 mHa. Much of the current coverage of micro irrigation is with semi-medium, medium and large farmers who have availed subsidies through the horticulture and agriculture departments of the government of Karnataka. Karnataka has opportunities to implement an inclusive micro irrigation program by considering dry land areas that are agriculturally and socioeconomically vulnerable, including districts of Raichur, Yadgir and Koppal. The average land holding in Karnataka is 1.55 Ha; however, this is not evenly distributed across the state's farmers. Nearly half the farmers belong to the marginal farmer category with an average land holding of 0.48 Ha.; another 27 per cent of the farmers belong to the small farmer category and own between 1 and 2 Ha. land with an average holding of 1.41 Ha. Together, more than 3/4th of the farmers in Karnataka are small and marginal and own a little over 40 per cent of the cultivable land. The semi-medium farmers comprise 16 per cent of the population and own nearly 28 per cent of the land while the medium and large farmers number less than 8 per cent but own nearly 32 per cent of the cultivable land. It would also be safe to assume that, at least in the initial years, bulk of the demand for micro irrigation would continue to come from semi-medium, medium and large farmers. It can be assumed that roughly 20 per cent of the demand will come from small and marginal farmers; 40 per cent from farmers with 2 – 5 Ha and the remaining 40 per cent from medium and large farmers having more than 5 Ha. land.

Table 3.1. Landholding pattern in Karnataka

AVG. LAND HOLDING (HA)	FARMER CATEGORY	SHARE IN POPULATION	SHARE IN LAND HOLDING
0.48	Marginal Farmers (< 1 Ha)	49.14%	15.22%
1.41	Small Farmers (1-2 Ha)	27.30%	24.83%
2.68	Semi-Medium Farmers (2-4 Ha)	16.17%	27.90%
5.69	Medium Farmers (4-10 Ha)	6.52%	23.88%
14.71	Large Farmers (>10 Ha)	0.86%	8.17%

Source: GoK (2011)

Ganga Kalyan is one of the major schemes of the government to empower farmers from SC/ST communities belonging to small and marginal farmer category and having dry land holding. It has given top priority for implementing it effectively. The government is contemplating to deposit the money directly to the bank accounts of the beneficiaries to bring transparency in the implementation of the scheme

Development of small and marginal farmers has become a precursor for overall progress and prosperity on the farm front of the state minorities program. To increase farm income, augment agricultural production and productivity, enhance marketable surplus, generate additional employment opportunities and improve the overall economic well-being of the small and marginal farmers, more and more of their operational holdings must be brought under assured irrigational facilities more particularly minor irrigation facilities. Because minor irrigation schemes will have inherent specific advantages over major and medium irrigation projects such as low investment, short duration of construction and quick results etc., are suitable to improve the economic conditions of small and marginal farmers.

CHAPTER 5
PROBLEM STATEMENT

In water-stressed regions in India such as Karnataka – access to water is a major problem. Farmers with large plots of 10 hectares and above and who have access to modern machines and pumps consume large amounts of water, leaving little for the small farmers who are unable to install the same pumps. They are left to rely largely on rains for growing crops, or else, to buy water from nearby tube-wells.

In addition they have limited access to credit and insurance facilities. Due to the low incomes earned by small and marginal farmers, despite higher output produced (nearly 51.2 percent to the total output of the country in 2002-03) and complex operating procedures at formal lending institutions, these farmers are left to resort to informal channels of credit to finance their investment and consumption needs.

Availability of ground water in Karnataka is estimated at 485 TMC. Ground water resources have not been exploited uniformly throughout the state. Exploitation of ground water in the dry taluks of North and South interior Karnataka is higher as compared to Coastal, Malnad and irrigation command areas. There is deficiency of water for drinking, agricultural and industrial use in dry taluks of North and South interior Karnataka. Where adequate surface water is available, utilization of ground water resources is minimum. In about 43 taluks there is over exploitation of ground water resources. Further, groundwater exploitation has exceeded 50% of the available ground water resources in 29 taluks of the State. These 72 taluks are critical taluks from the point of view of the ground water exploitation. In the 72 critical taluks about 4 lakh wells irrigate an area of 7.5 lakh ha. Due to over exploitation of ground water resources, more than 3 lakh Dug-wells have dried. Shallow bore wells have failed and yield in deep bore wells are declining. Area irrigated by ground water extraction structures is decreasing. Consequently, more than Rs.2000 crores of investment made by the individual farmers on the 2 construction of wells, pumping equipment, pipelines, development etc., have become in fructuous.

Rainfall plays an important role in crop production in Karnataka as more than 70 per cent of the cropped area is rain-fed. The average rainfall between1998 and 2008 indicated increased precipitation during summer and south-west monsoon season and modest reduction during the north-east monsoon season.

Table 4.1. Normal and Actual Rainfall (Triennium Average) by Districts in Karnataka

District	Normal Rainfall	Normal Rainy days	Triennium Average Annual Rainfall					CV (%)
			1998-2000	2001-2003	2004-06	2007-2009	1998-2010	1998-2010
Bagalkot	584	40	634	377	489	689	554	31
Bangalore (R)	740	41	893	571	766	792	756	25
Bangalore (U)	835	49	1001	604	895	921	855	26
Belgaum	842	53	899	630	1010	1023	901	20
Bellary	604	40	566	422	524	648	550	23
Bidar	886	49	893	730	799	749	812	16
Bijapur	632	40	583	405	511	668	547	30
Chamarajanagar	730	43	930	673	948	831	936	24
Chikamagalur	2073	87	2362	1777	2445	2690	2321	16
Chitradurga	495	31	586	422	602	722	607	27
Dakshina Kannada	3519	117	4161	3568	3978	4008	3969	11
Davanagere	623	43	638	471	657	832	678	28
Dharwad	787	58	679	474	702	793	676	23
Gadag	631	43	586	417	545	758	587	26
Gulbarga	839	45	765	548	649	723	690	21
Hassan	1148	58	1137	836	1348	1347	1186	21
Haveri	782	61	730	529	730	908	751	24
Kodagu	2692	111	2806	2292	3251	2953	2814	17
Kolar	614	32	675	546	699	819	696	26
Koppal	587	36	602	417	470	736	571	30
Mandya	648	37	816	572	801	696	732	24
Mysore	730	47	894	631	804	721	769	18
Raichur	654	37	664	473	540	663	590	25
Shimoga	2421	89	2452	1764	2407	2582	2308	15
Tumkur	585	32	716	484	630	707	650	22
Udupi	4252	121	4783	4002	4250	4667	4471	12
Uttara Kannada	2887	103	3307	2552	3198	3296	3107	14
Ramanagara	809	46	1011	582	853	785	807	25
Chikkaballapur	677	37	718	582	772	757	725	26
Yadgir	839	45	758	504	621	716	661	27
Karnataka	1198	56	1275	972	1230	1307	1209	14

Source: DES, Government of Karnataka

It is interesting to note that the number of small and marginal holdings as well as their share in the total operated area is increasing over the years. The increase in small and marginal holdings and area operated became more conspicuous after 2000-01.

Small and marginal farmers (operating < 2 ha) account for 76 per cent of the holdings and share roughly 37 per cent of the operated area in Karnataka. The average size of operated area of all the land size classes is declining. This clearly indicates the increasing fragmentation of land holdings in the state.

Table 4.2. Number Holdings and Area Operated under Different Farm Sizes

Number of holdings and Area in %

Years	*< 1 ha*	*1 to 2 ha*	*2 to 4 ha*	*4 to 10 ha*	*10 & Above*	*Total holdings & Area in '000'*
Number of Holdings						
1970-71	30.44	23.66	22.19	17.54	6.17	3551
1980-81	34.56	24.53	21.30	15.36	4.25	4309
1990-91	39.16	27.46	20.14	11.01	2.23	5776
200-01	45.94	26.97	17.78	8.04	1.27	7079
2005-06	48.23	26.55	16.86	7.31	1.06	7581
Area Operated						
	< 1	1 to 2	2 to 4	4 to 10	10 & Above	
1970-71	4.83	10.74	19.40	33.36	31.68	11368
1980-81	6.24	13.14	21.90	34.21	24.52	11746
1990-91	8.70	18.73	25.97	30.60	16.00	12321
200-01	12.12	22.28	27.86	26.95	10.78	12307
2005-06	13.34	23.22	28.00	25.89	9.55	12385
Average Operated Area per holding in ha						
1970-71	0.51	1.46	2.8	6.09	16.43	3.2
1980-81	0.49	1.46	2.8	6.07	15.69	2.73
1990-91	0.47	1.46	2.75	5.93	15.28	2.13
200-01	0.46	1.44	2.72	5.83	14.74	1.74
2005-06	0.45	1.43	2.71	5.79	14.79	1.63

The shrinking sizes of holdings and the high proportion of unviable farmers impinge upon the quality of life. The economic unviability of a large number of small and marginal holdings and the hardship faced by their holders are reflected in the growing number of suicides committed by farmers.

The major challenges faced by agriculture in Karnataka are: threat of stagnation in agriculture growth with possibility of decelerating growth, low value-addition in agriculture, fast approaching optima on technological front, large proportion of rain-fed /dry land area, marginalization of agricultural land base, inadequate growth in public and private investment, regional disparities in investment, low technology adoption and growth, inadequate and inefficient safety nets and finally, conflicting demands of growth versus environmental protection (GOI, 2004). To resolve these issues, it is imperative to focus on rain-fed agriculture, develop initiatives for small and marginal farmers, rebuild natural resource base by promoting an organic approach to farming and develop key infrastructure to provide a boost to growth momentum.

CHAPTER 6

OBJECTIVE OF EVALUATION

The objective of the present study is to enquire the outcome of the scheme with the following objectives:

1. To understand the efficacy of the scheme for its design, implementation and achievement of desired outcomes;
2. To understand differences in the socio-economic status of the beneficiaries; and
3. Assess the additional income generated at household level, after deriving benefits from the scheme.
4. To understand and suggest scope for improvements.

6.1. Objectives and the issue for evaluation

While examining the set objective, the following specific questions were enquired and analyzed.

The study wants know, is there any noticeable change in the household income? If so, to what extent? If not, why not?[2] Followed by what changes have taken place in cropping pattern? Further it has to be evaluated to what extent the beneficiary has benefited relatively when compared to benchmark information[3].

The second set up questions enquired is related to execution. The constraints faced by beneficiaries as well as implementing agencies at different stages, such as;

(a) In process of beneficiaries' selection.

(b) In gathering and submission of required documents.

(c) In identifying the drilling point and in process of drilling Bore-well.

(d) In procuring required pump sets as well energisation.

(e) Problems encountered in sharing water among Community schemes.

[2] Since baseline data for 2007-08 is unlikely to be available, the question can be answered with perception of change expressed by the beneficiaries.

[3]Before and after implementation of the scheme.

The time factor is most important point to be considered for evaluation in commencing the scheme. Normally there would be gaps between time fixed to commence the scheme and time actually taken in finally commencing the scheme. If the delay takes place, evaluation team has to find out at what stage delay has taken place and reason specific for the same. And also whether, the procurement/service agencies are compensating for delay in execution of work or not have to be additionally seen.

After the installation of the unit, the efficient functioning of the unit is evaluated at different level such as, bore well function and yield of water; and function of accessories (pipe/pumps etc) provided as part of this scheme are functional as of date? If not, what are the factors? Further, the measure taken by corporation in procuring standardized items, such as prescribed BIS standard materials such as PVC pipes, pumps and motors is also checked. Whether corporation is encountering any political intervention in procuring the required ancillaries?

The beneficiary satisfaction is evaluated and suggestion has been sought for possibilities of further streamlining at the process of selection and implementation. Similarly, convergence at levels of implementing and coordination among various departments such as Agriculture, Horticulture, etc. would be explored and analyzed. Further, adoption of micro irrigation system will be studied. Finally, the factors contributed for achieving / for not achieving the intended outcome will get evaluated.

CHAPTER 7
EVALUATION DESIGN

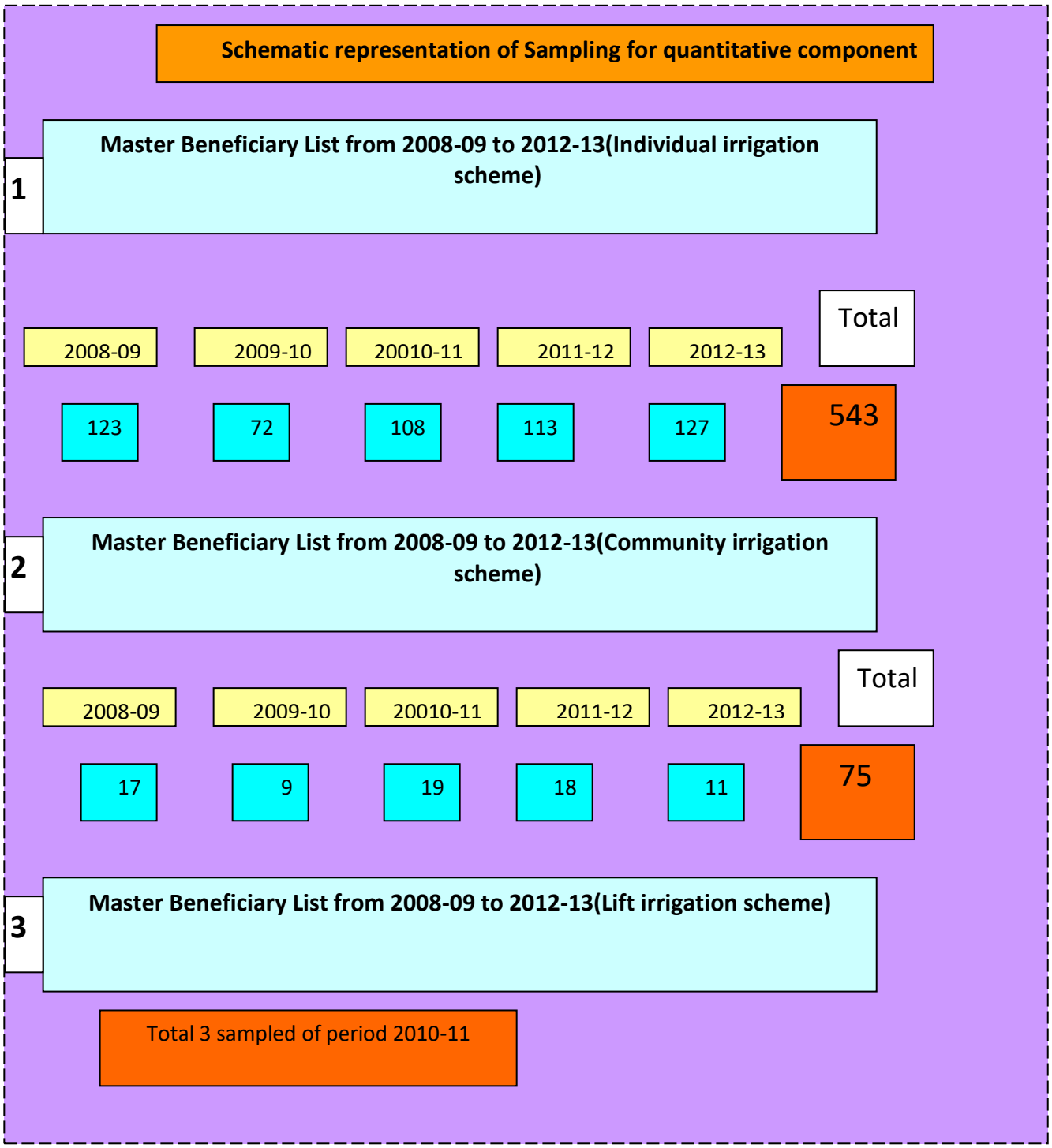
The study adopts a mixed method of research, employing both qualitative and quantitative tools of research to examiner the objective. The focus of quantitative tool would be attribution of change to the program intervention while the qualitative tools would analyze the factors that were responsible for change. The study would adopt methodological triangulation between the qualitative and quantitative findings and also encompass the findings from observation tool to increase the validity of the study. Structured questionnaires were used to collect qualitative data while FGDs and transect walks were used as extensive qualitative tools to collect information by methods of observation, asking, listening and looking.

7.1. Sources of Quantitative data:

- Individual beneficiaries, marginal and small farmers
- PPS approach was adopted treating each year as population and drawing a proportionate sample from each year. In this manner from the listed beneficiaries, 10 per cent sample was drawn by simple random sampling.

7.2. Sources of Qualitative data:

- Focus Group Discussion (FGD) with groups of beneficiaries
- Participatory observation with transact walk
- Open ended discrete in-depth interviews were used to elucidate answers from department officials and with representatives of drilling agency
- A schematic representation of sampling approach for the quantitative component of the study design in depicted below.


Schematic representation of Sampling for quantitative component
1
Master Beneficiary List from 2008-09 to 2012-13(Individual irrigation scheme)
2008-09
2009-10
20010-11
2011-12
2012-13
Total
123
72
108
113
127
543
2
Master Beneficiary List from 2008-09 to 2012-13(Community irrigation scheme)
2008-09
2009-10
20010-11
2011-12
2012-13
Total
17
9
19
18
11
75
3
Master Beneficiary List from 2008-09 to 2012-13(Lift irrigation scheme)
Total 3 sampled of period 2010-11

CHAPTER 8
EVALUATION METHODOLOGY

8.1. Sampling and Evaluation Methodology:

8.1.1. Sample size

This study covers entire Karnataka covering all its districts; in each district two assembly constituencies were covered. Among the two constituencies, one having higher number and another having less numbers of beneficiaries was selected. Thus, a total of 60 constituencies and large number of villages were covered. The period of study for evaluation was from 2008-09 to 2012 to 2013; all the beneficiaries during this period were considered for study. The list of beneficiaries in respective constituency was obtained from office of the Managing Director of DBCDC. From the list of beneficiaries, 10 per cent sample was selected by simple random sampling method. Proportionate sampling approach was followed, treating each year as population and respective samples were drawn. Thus, the total sample selected for the study was around 621, which were selected from across 30 districts in 60 constituencies, covering around 278 villages.

8.1.2. Data Collection and analysis tools

For investigation, at first stage, we conducted Focus Group Discussion (FGD) with groups of beneficiaries. Further, structure questionnaire was administered to individual beneficiaries. We have developed certain questions to be asked during transact walk and during our participatory observation. Participation observation gives deep insights on the functional part of system. Transact walk gave insights chiefly on the enquires made to know the improvements in cropping pattern and convergence with other departments. Further, an open ended in-depth interview questionnaire was used to elucidate answers from concerned department officials and officials at the drilling agency.

8.2. Evaluation questions are grouped based on stage of enquiry:

The evaluation questions are designed categorized into three main stages: Pre-Implementation, Implementation, and Post-Implementation for a thorough evaluation of the program.

8.2.1. Pre-Implementation – Enquiry at this stage included evaluation of all of the processes which takes place before sanctioning of the bore wells, such as outreach effort, application process, application approval, and the final selection process.

8.2.2. Implementation – This stage examines the interaction between the DBCDC, GKY for approval of drilling; with the supply agencies, and with the beneficiaries. The process of bore-well site selection, drilling of the bore-well and installation of the pump-set as well as payment methods, including ESCOM were evaluated.

8.2.3. Post-Implementation: This stage of evaluation is focused on efficiency in functioning of the established units, and utilization of bore well and pump-sets. The various parameters like long-term support mechanisms, potential contribution of the irrigation to increased agricultural income, social graduation of the beneficiaries, sustainability of scheme etc. were evaluated.

CHAPTER 9

DATA COLLECTION AND ANALYSIS

9.1. Preparation for Survey

The required number of surveyors was recruited; training was conducted in a two part series: pre-pilot test and post-pilot test. Pre-pilot test training was conducted during March 2016. A traditional approach to experiential training was adopted and trainee were exposed to interviewing field techniques and oriented on the various interview tools. Potential field challenges were discussed and the trainees administered the interview tools in pairs. Feedback was provided by training staff before the interview was pilot tested in the field.

9.2. Pilot Test

At the end of May 2016, the interview tool was tested in Doddaballapur with five selected farmers. Each interviewer made notes and provided feedback on the feasibility and appropriateness of the interview tools. After the pilot test, the interview tool was updated and the interviewers were re-oriented on the changed formats.

During this time the surveyors were screened and selected based on their field performance. As this survey was huge, covering entire Karnataka; the language across different parts of the state was taken into consideration and hence teams were constituted who had thorough mastery over the language of the area they were to survey. Hence we constituted 4 teams consisting of four members in each team surveying different geographies, two members visited farmer/beneficiary, one supervised and another one was involved in transacts walk and observation. The field work was very intensive as not only the enumerators were to meet the farmers but also they had to visit their fields for observation and to verify functioning of installed system/items.

9.3. Data Entry and verification/cleaning

Controlling the quality of the data collected and processed is the most important function in evaluation. Throughout the fieldwork, field staff was responsible for observing interviews and carrying out field editing. By checking the interviewers' work regularly we could ensure that the quality of the data

collection remains high throughout the survey. Further to maintain the quality of data, supervisor checked the performance of interviewers thoroughly at all the times. The field executive and supervisor spent considerable time evaluating and instructing interviewers during the fieldwork. Spot checks, back checks, validity checks were done to ensure the data validation. Apart from this visiting the department at taluk level also took lot of times. Thus, delay in getting list of beneficiary and related information from departments has contributed to some extent for the delay in data collection.

9.4. Statistical package for data analysis:

A statistical software package for Social Science (SPSS) was used to compute the collected information through research tools. The information gathered through FGD and transact was filtered and supplemented during write up.

9.5. Scope & Purpose of the Study:

This scheme is implemented in all the assembly constituencies of the State; hence finding from this study has wide scope of effect on further implementation process of the scheme, on following issues;

Whether the programme generated additional income as well empowered farmers economically and socially at the household levels and also across the society. Further, how the scheme impacted the access to education and health services by farmer's family members in general and their children in particular.

In addition to above, the study also investigates, whether there is convergence across the departments which are correlated through the scheme, such as Sericulture, Horticulture and Animal Husbandry and Watershed development etc. Also with the convergence taking place, to what extent it has contributed to enhancing the benefits access to the farmers?

9.6 Limitation of the study

With lack of any bench mark data, memory recall method was followed to assess the impact of the scheme, i.e. beneficiaries were asked to recall their memory to explain their situation prior to implementation of the scheme. In couple of places the selected sample were not available, as some of them had out migrated or were dead. We replaced them with other samples that we have kept in reserve. Getting beneficiary list at district offices took quite a lot of time, due to shortage of staff and multiple tasks performed by them. Thus, this factor contributed to rolling out our field work on time. As most of the farmers do not remember the application process details with the evaluation period being a while back, we had to collect and verify the data collected at district office level that made our field work very intensive. In addition study also investigated to know convergence of activities among the concerned departments. Hence, at the taluk level offices of agriculture department, sericulture department, etc, were contacted. Adhering and complying with all the suggestions made during the inception report presentation, the study focused on evaluating the benefits derived by the beneficiaries through this scheme.

Fig1: Display of agency involvement

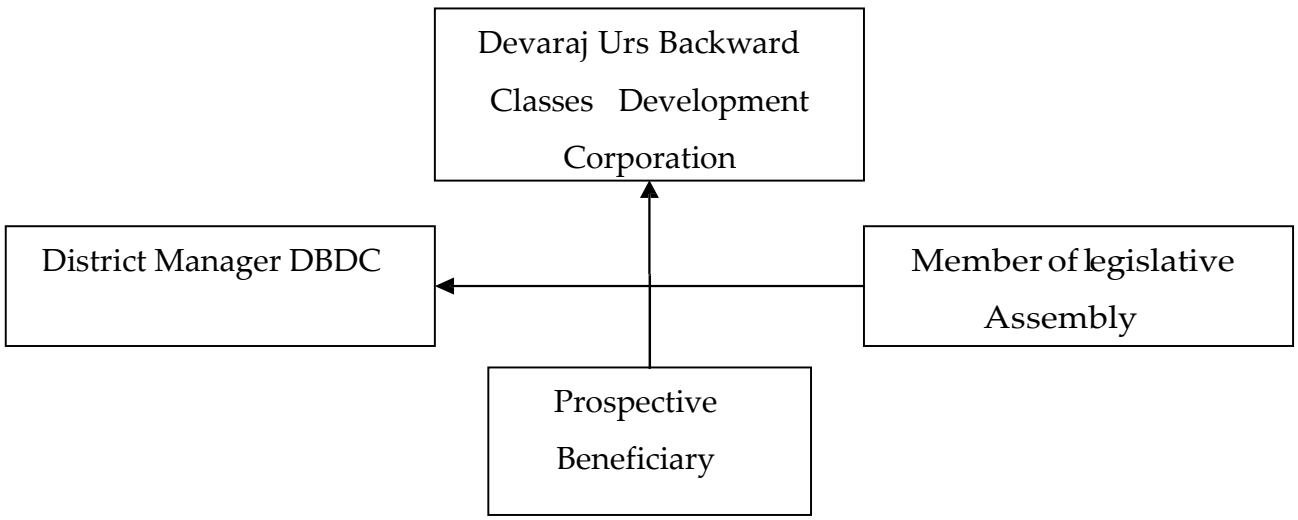


Table 1.1. Distribution of selected samples Across constituencies by size					
Sl. no	Less than nine	Slno	10>14	Sl.no	15+
1	Virajapete	1	Magadi	1	Kuduchi
2	Davanagere North	2	Kollegala	2	Devarahipparagi
3	Bhatkala	3	Yellapur	3	Hiriyuru
4	Bangalore South	4	Gangavathi	4	Vern
5	Kola	5	Gurumitakal	5	Shikaripura
6	Chikkaballapuru	6	Tipturu		
7	Bantvala	7	Chikkodi		
8	Devanahalli	8	Karaganda		
9	udupi	9	Dharawada		
10	Arasikere	10	Hirekeruru		
11	Vijayanagar	11	Bidar South		
12	Surapura	12	Raichur Rural		
13	T Narasipura	13	Koppala		
14	Mandya	14	Srinivasapura		
15	Anekal	15	Hanuru		
16	Bainduru	16	Mudigere		
17	Mangaluru	17	Turuvekere		
18	Madikeri	18	Channagiri		
19	Bilagi	19	Garuibidanuru		
20	Bijapura Urban	20	Hassan		
21	Gadag	21	Chikkamagaluru		
22	Sagara	22	Chitapur		
23	Ranibennuru	23	Bidar North		
24	Chincholi	24	Krishnarajapet		
25	Devadurga				
26	Doddaballapura				
27	Channapatna				
28	Badami				
29	Huballi				
30	Sanduru				
31	Holalkere				

CHAPTER 10

FINDINGS AND DISCUSSIONS
PROFILE OF THE BENEFICIARIES

10.0. Introduction

This Chapter presents a detailed profile of the beneficiaries, which provides an understanding whether the scheme has reached to the deserved target members or not. Also the profile presents details of caste category, age, education, type of farmers, and status of economic condition of the beneficiaries.

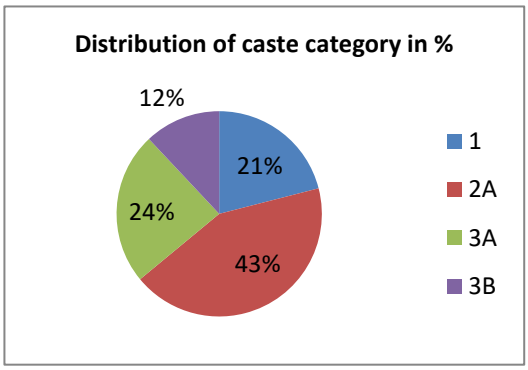
10.1. Caste category

The selected sample belongs to backward castes of Hindu religion, as this scheme is intended for them. Under the scheme, backward castes have been categorized into four categories by the Karnataka Government based on socio-economic homogeneity of each sub caste. First two categories i.e 1 and 2A are considered as most backward castes, followed by other two categories i.e 3A and 3B those are relatively less backward compared to earlier two. Considering this, under this scheme out of total beneficiaries, 70 per cent of beneficiaries were considered from first two categories of 1 and 2A and 30 per cent were selected from later two categories of 3A and 3B. During our visit to district offices for sampling, based on documents made available the ratio of 70:30 was followed strictly during selection of beneficiaries. According to selected sample, first two categories together represent 64.5 per cent and followed by other two groups represent 24.5 and 12 per cent respectively (table 2.1). This limited variation across percentage representation is due to random sampling approach. The study also collected information on the size of the family, based on that it can be stated that large number of families are nuclear family followed by joint or extended families.

Table 2.1. Distribution of caste category

Caste categories	Percent
1	21.0
2A	43.0
3A	24.0
3B	12.0
Total	100.0 (621)

Chart 2. Distribution of caste category



10.2. Sex and Age of the beneficiaries

According to selected sample, of the total the male beneficiaries constitute 86.7 per cent and female beneficiaries 13.3 per cent. Our study findings revealed that these female beneficiaries are mostly from women headed households and land titles are in their name, hence loan sanction taken place in their name. Though in majority of such cases their sons are the actual beneficiaries of the scheme. The age distributions of the beneficiaries showed that 51 per cent are below the age of 50 years and remained beneficiaries are more than 50 years of age, only 12 per cent of the total beneficiaries are less than 35 years of age. In fact, many young farmers are involved in cultivation, but as the land titles and documentation are in name of the elderly family members and there has not been transfer of entitlement hence majority of beneficiaries fall in the higher age group category. This suggests that title documents are largely in the name of the elders; hence they represent more in the beneficiary distribution.

Table 2.2: Distribution of samples across age and sex

Sl.no	Sex		Total	Age				Total
	Male	Female		<25	26-35	36-50	51>	
1	86.7	13.3	100 (621)	1.78	10.50	39.40	48.32	100 (621)

10. 3. Education level of beneficiaries

As per our data analysis we noticed that half of the beneficiaries sampled have crossed the age of 50 years, most of them from this age group is illiterate. Of the total sample, 36.2 per cent are illiterate, while about 19 per cent were just literate without completing any formal school education, followed by 9.5 per cent with primary education and about 24 per cent of beneficiaries had completed

college education. As large number of beneficiaries is illiterate and having informal education, they have less awareness and understanding about the schemes, this fact was also substantiated during our Focus Group Discussion (FGD). However, we found out that it is not a determining factor towards getting benefits of the scheme; it definitely has a negative impact in accessing various services from the different departments.

Table 2.3: Education level of selected samples

Sl.no	Education	Number	Per cent
1	Illiterate	225	36.2
2	Literate	118	19.0
3	Primary	59	9.5
4	High school	71	11.4
5	Puc	92	14.8
6	Graduation	56	9.1
Total		621	100.00

10.4 Type of Household of Beneficiaries'

The study analyzed the beneficiary in regards to the residing place, the type of household and available amenities in their house. It is observed that most of the beneficiaries are living in Kachha houses, followed by pucca houses[4]. Of the total sample, 72 per cent are living in kachha house and remaining is living in pucca house. As per the amenities available at the household, the study shows that 51 percent of them have electricity, 70 per cent having access to potable water and around 63 per cent have toilet at the premises of the house. The water scarcity and inadequacy of household toilet were relatively more prominent in the north Karnataka region when compared to other parts of Karnataka. During our FGD it was noticed that quite good numbers of beneficiaries have got support from the government for construction of houses. Of most of the household, who have constructed toilets in the houses have got financial support from the government.

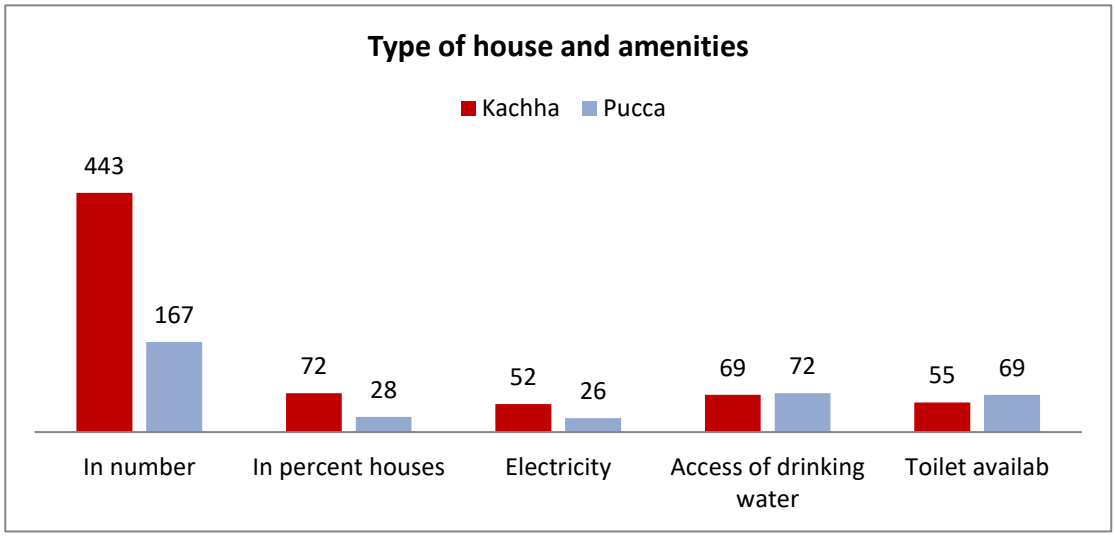
[4] As per census, **Pucca House** is one, which has walls and roof made of the following material. Wall material: Burnt bricks, stones (packed with lime or cement), cement concrete, timber, etc. Similarly, **Kutcha House** is one that the walls and/or roof of which are made of material other than those mentioned earlier, such as un-burnt bricks, bamboos, mud, grass, reeds, thatch, loosely packed stones, etc. are treated as kutcha house.

Thus, most of the beneficiaries have received financial support from the government in regards to their household infrastructure building.

Table 2.4.Type of household and amenities

Type of house	In number	In percentage	**Amenities in house (Per cent)**		
			Electricity access in % cases	Access to drinking water in %	Toilet Availability in %
Kachha	454	72	52	69	55
Pucca	167	28	26	72	69
Total	621	100	51	70	63

Chart 2.1.Type of household and amenities



10.5. Occupation of the Beneficiaries

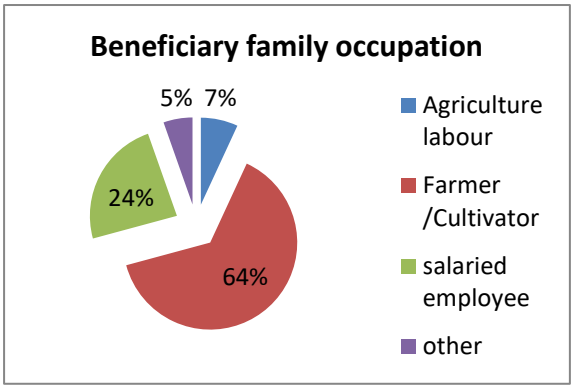
As our entire sample belongs to small and marginal landholding category, hence the primary occupation of all the beneficiaries is cultivation, which was also confirmed by the study finding. In addition some of them have secondary occupation such as dairy farming and rearing of poultry etc., which is adding additional income to the family. Primary occupation of the beneficiaries signifies the activity in which the beneficiary's family spends most of his/her time (60 per cent or more) for earning a livelihood. However, the beneficiary may supplement for their livelihood through other means and sources but does not spend as much time on those other activities. It was found during our field work and FGD that

about 98 percent of the beneficiaries were farmers, while two per cent were involved in leadership and other activity.

Table 2.5.Beneficiary's occupation (primary)

Occupation	In per cent
Agriculture labor	6.9
Farmer /Cultivator	63.9
Other wage labor and Animal husbandry	23.8
other	5.4
Total	100.0 (621)

Chart 2.2.Beneficiary's Occupation



10.6 Beneficiary's Land holding

As the scheme was designed exclusively to address the need of marginal and small farmers of backward castes, accordingly during our survey we studied the average land holding size of the beneficiaries; whether it was falling in category of marginal or small farmer. Of the total sample, 52 per cent of the farmers were from marginal category (land holding size up to 2.5 acre); while around 48 per cent were from small farmer's category (owning land between 2.5 to 5 acres). Thus, among the two categories we found out that priority was given to marginal farmers while sanctioning the scheme, though the percentages difference was not highly significant. While selecting beneficiaries, the DBCDC has given priority to most backward category and farmers holding marginal land. In fact, in the state the marginal and small holding farmers constitute around 67 per cent[5]. And, most of them have dry land; hence these farmers take up other wage work outside their land.

Table: 2.6, Type of Land Holding

Sl.no	Type of farmer	Beneficiaries in number	In per cent
1	Marginal	317	52
2	Small	304	48
4	Total	621	100

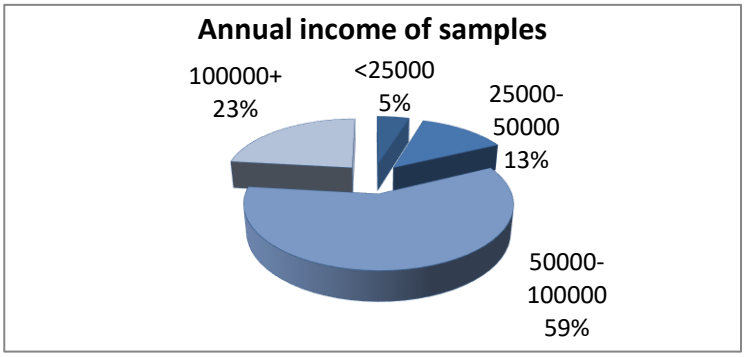
[5] Directorate of Economic and Statistics, Govt. of Karnataka, 2010

10.7 Income and source

The study collected the beneficiaries' annual income at household level from all sources. It is important to understand income source of beneficiary. The major source of income is found to be from the farming activity; though the younger members of family migrated to the towns have found regular wage income there. Among the categories, group 3A and 3B are involved in non-farm activity; however, the respondents are unable to reveal the nature of job they held. Thus, it was found that the source of income is not only from the farming but also from multiple sources. The following table explains the beneficiaries' annual household income. The average household income was calculated for the beneficiary for a given year. In regards to the average annual income from all sources of income for the beneficiary households, the beneficiary income varies from Rs 25 thousand to more than one lakhs. The table no 2.7 provides the details. It was observed that around 59 per cent of them presently have an annual income of Rs 50thousands to one lakh; around 5 per cent have mentioned that their income is less than 25000. Though we observed that this low income was under stated, when we cross checked with their life style and cropping pattern, if found inconsistencies.

Table: 2.7: Annual income of beneficiary Chart: 2.3: Annual income of beneficiary

Income classification	**Per cent**
<25000	4.8
25000-50000	13.1
50000-100000	58.9
100000+	23.2
Total	100 (621)



CHAPTER 11

EVALUATION OF IMPLEMENTATION PROCESS

11.0. Introduction

In this Chapter we present our evaluation findings of the scheme implementation process; this has been presented in two sections. The first section represents the findings in regards to the outreach and selection process. The second section discusses the study findings about the scheme execution process. Thus, this section presents our evaluation findings for the pre-execution and execution stages of the scheme. The pre-execution will have sub-sections on outreach activity, scrutiny of application and role of selection committee in the process of implementation.

11.1. Outreach activity

As the scheme objective is to reach out to more and more eligible farmers of backward classes, hence it is imperative that the avenues of the scheme is being conveyed to farmers through different channels of media and mass media. The first step in the scheme implementation is the widespread advertisement in print media, through local panchayat raj institutions and also through several department initiatives. Thus, the word spreads from mouth to mouth to reach large number of beneficiaries. Further, this scheme is being implemented since more than a decade and hence farmers are well aware of this scheme, in fact, farmers wait for its announcement. The corporation makes announcements for receiving application for the scheme. In fact, the corporation releases the schedule of events with specific time period. Each activity starting from the receipt of application to energisation of the bore wells is defined and the stipulated time is also specified. To what extent this time schedule is followed is examined in the study findings in later sections.

We enquired with the farmers during FGD as well as transact walk about the process through which they came to know about the scheme. The majority of respondents expressed that, some of them already knew about the scheme. While a fraction was of the opinion that they were made aware by the elected representative and local leaders were instrumental in conveying the information

about the scheme. Further, some beneficiaries informed that they came to know about the scheme through the backward class department officials.

During out FGD, majority of the beneficiaries expressed that the elected representatives and their followers have been the critical persons who have been instrumental in spreading the information about the scheme stages and details thereof. In fact, political leaders at village level also mobilize the eligible farmers to apply for the scheme. The farmers then approach the taluk and district officials for further information and clarity. Further, from the FGD it was revealed that local leaders will make arrangements to help selection of more number of beneficiaries from their own constituencies. Thus, relatively large number of persons has been selected from the constituencies of Varuna, Shivamoga and Hiriyur. These constituencies were represented by popular political persons who were very proactive as leaders.

11.2 The selection process

During the FGD, we explored the procedural requirements for the selection of beneficiaries. All the participants were clear in their understanding that the scheme was meant for marginal and small farmers. They were also clear on their understanding of the type of documents that were required to be submitted along with application formalities. During FGD and transact walk, we made them to list out the documents they have submitted. They mentioned following documents to have been submitted mandatorily:

- Annual Income Certificate
- Age proof document
- Ration Card
- Caste certificate
- Land documents
- Photos

The documents have to be obtained for a specific period. The beneficiaries stated that they faced difficulty in obtaining land title and income certificate. Some farmers mentioned that they have sought others help in obtaining documents, filling in and submission of application form. Few respondents who

had good education standard and had good networking with department officials had submitted the applications on their own along with all required documents. Thus, among the beneficiaries, few have submitted the application on their own and few sought others help in submission of application along with documents. The participants also mentioned that in selection process favoritism played an important role in some cases. As the selection committee is headed by legislature, it was stated by some beneficiaries that his followers had an upper hand in getting the scheme benefits.

We enquired about fair selection of beneficiaries with the district officials; they stated that in entire activity political economy is involved. As the scheme is intended to financially support targeted farmers and with the scrutiny of selection being carried out by elected members of particular constituency, in many a times the elected representative tries for fair selection of beneficiaries, however, the political and apolitical obligation makes him yield to the pressure of his followers in certain cases.

11.3. Implementation process.

This section explores issues related to the post sanctioning stage. Once the committee decides on the selection of shortlisted beneficiaries, the list will be forwarded to the corporation. Based on the selection list, the work order will be issued to bore-well drilling agency. The process and time lapse in selection of bore well site, drilling of the bore-well and installation of the pump-set as well as payment methods were evaluated in this section. The entire process are sequenced, the sequence is to be completed in a specified period for each process. This all is detailed out and mentioned during beginning of announcement every year. The time schedule provides details of each activity with a time space between two activities at a given point. For instance, the entire activity from the invitation for application to commencement of the unit should take around eight months. During our discussion with officials involved at various stages of activity, it was revealed that following time schedule is difficult in many cases as they have to get coordination from other various departments and agencies and that may cause delay in completion of a single stage of activity.

The study explored with beneficiaries to understand the actual time taken for various stages of implementation phase. As this issue is highly critical to the study findings great care was taken to formulate questions and carry out detailed probing for questions that would elucidate answers for this section. Considering its due importance much emphasis has given during to it during the field work. In the following section we have mentioned how far delay was taking place across each stage of implementation, keeping the primary time schedule set by the department as our guideline.

During our primary visit to Bangalore Rural district, we had interaction with officials, drilling agents and other stakeholders. The reason attributed for delay was not common to all the drilled bore wells. The reason for delay was mentioned to be different at various stages due to various factors for different cases. We wanted to understand and track what were the major stages/reasons causing delay. To understand it, the time taken between transitions of one activity to other was identified. Time gaps were found to occur at different stages of the execution. Based on discussion with the stakeholders, we have classified the delay into four categories of duration.

- The delay has taken up to three months 0.25years
- The delay has taken from three to six months 0.50years
- The delay has taken from six months to one year 0.75years
- The delay has taken beyond one year 1.00year and more

Along with data from structured questionnaire, FGD was conducted to supplement to survey data. The respondents opined that there was delay at every stage of the process. At the stage of selection it would normally take more time than mentioned in original time schedule. The gap between sanction and actual drilling was found to be 5 to 6 months, including identification of water source. The time delay taken after drilling to the fixing of the motor and other accessories is about 2 to 4 months on an average. The unexpected delay was majorly in obtaining the electricity connection. The reasons attributed were that the drawing of separate new line took a lot of time; in some cases it was necessary to obtain and install new poles for the connection. This activity alone takes time because from various department clearance is to be obtained, as well as transformer and

poles have to be obtained from different locations. In one case a farmer despite of all hurdles got the system installed, but the neighbor has disconnected electricity because it passes through his field.

In fact, many respondents informed that delays make them take endless visits to the different departments. These visits make them to forgo their field level work and incur expenses on transport and other activity. The Corporation officials have also confirmed across districts about the delay at various stages. The data collected from the respondent show that there is enormous delay in each activity in few cases.

Table 3.1: Time gap at different stages.

Stage of activity	Time taken for completion of one activity to other activity in months/year				Total
	0.25 Years	0.5 years	0.75 years	One or more	
	Response in %				
Application approval	40.8	59.2	0	0	100 (621)
Bore-well drilling	30.1	45.9	20.0	4.0	100 (621)
Installing the pump-set	35.6	45.4	17.1	1.8	100 (621)
Energisation	10.0	33.8	28.7	27.5	100 (621)

According to above table 3.1, in around 40.8% of cases approval of application was delayed by one to two months, it was found that as some times the beneficiaries do not submit all the required documents in the initial scrutiny there has been more time lapse in obtaining applications with requisite documents, and also scrutinizing huge number of applications also have taken more time than as was stipulated in the beginning. However, it was found that within six months of period 90 per cent of sanctions were cleared and forwarded. During transact walk, a beneficiary informed us that twice his application was rejected and third time it was approved due to influence of local leader. We found out that sometimes the delay was due to lack of required human resources at offices to scrutinize the received applications; the number of applications can varies from 350 to 400 at a given period of time. The acceptance or rejection of applications largely depends on conjunction with availability of funds. There is contradicting statements

between officials and beneficiaries on delay in installation of the system. Based on document evidence at the offices, we generated above table.

According to department officials the delay was majorly due to tender practice. The tender for entire state is awarded to single agency. The agency starts drilling bore-well one after another district. For the approved agencies of bore well drilling, the supply agencies and electrification department cooperation utmost important should be to complete the entire work. The DBCDC approves of the bore well drilling agency contract on the condition of "No Water, No Money" basis, this makes for very careful identification of water source by the agency. The appointed geologist has to locate water point, many respondents expressed that they had to personally visit and request the geologist for a field visit. The beneficiaries of both individual and community scheme benefit expressed that, the geologist will schedule a visit according to his convenience, not according the time schedule of the scheme requirement, adding to further delay. The drilling agency also outsources to sub agencies which are located in local areas, but this in no way was helping in speeding up of the work. Thus, both the beneficiaries of individual and community irrigation scheme expressed that there was found to be an average delay between 8 months to 24 months in entire process of scheme allotment and installation of scheme. The following table shows in each year the number of applications, total number of sanctions and total number of execution that were carried out. Accordingly, some schemes benefits were spilled over to next year, thus, as per the trend if we have sanctions undertaken in 2012; the final commencement may happen by 2013.

Table 3.2: Number of scheme approved, sanctioned and executed year wise

	Application		**Sanction**		**Execution**	
Year	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
2007	20	3	0	0	0	0
2008	148	24	3	0.5	0	0
2009	69	11	141	22.7	7	1.1
2010	70	11	82	13.2	115	18.5
2011	150	24	125	20.1	82	13.2
2012	143	23	132	21.3	129	20.8
2013	21	3	138	22.2	288	46.4
Total	621	100	621	100.0	621	100.0

From the following table 3.3, it can also be observed that around seven per cent of bore-wells drilled during the evaluation period are not yielding the standard limit of 1000 gallon water per hour. Low yield in beginning itself is an indication to show subsequent chance of drying up the bore well soon. Also according to 15 per cent respondents the water flow is less than 1.5 inches which may increase the time taken in watering their fields.

Table 3.3: Yield, width of bore well and casing pipe provided

Sl. No.	Water yield		Water pressure in out flow		Casing pipe	
	Yield in gallons	Percent	inches	Percent	Casing pipe length in feet	Percent
1	0-1000	6.5	0-1.5	15.8	0-100	61.2
2	1000-1300	31.9	1.5-2	33.5	101-150	11.6
3	1300-1500	21	2-2.5	25.1	151-200	14
4	1500+	40.6	2.5+	25.6	200+	13.2
5	Total	100 (621)	Total	100 (621)	Total	1100 (621)

We explored the respondents' experience/satisfaction in process of fixing of motor, pump-set and other accessories. Though, delay in provision of services has taken place overall, the opinion of beneficiaries was sought about the stages of dissatisfaction. According to the finding, 91 per cent of respondents were very comfortable with the source identification; other 9 per cent were not comfortable with source identification. Similarly, one fourth of respondents were quite unhappy with pump-set fitting, opining that the finishing touch is of poor quality. The respondents narrated that, the staff of electricity department do not cooperate, and their view was that the corporation do not have any hold on electricity department. Further, while drawing the line, the electricity department officials do not consider the request to avoid others private lands, with whom the beneficiary may have differences, later which leads to dispute.

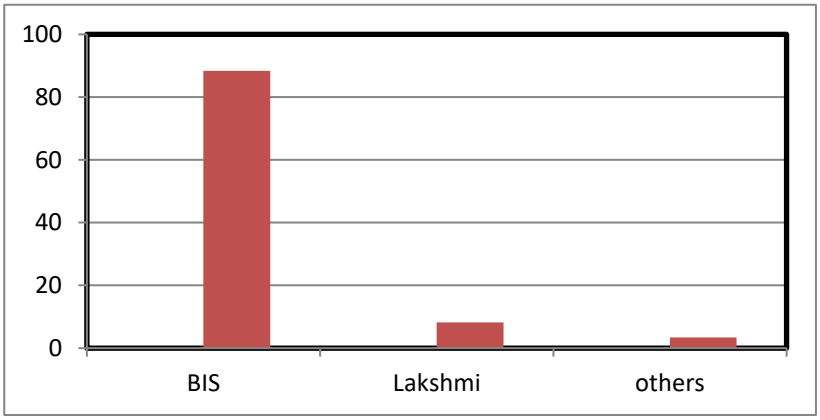
For instance in Doddaballapur, we observed the electric line drawn on other farmer's private lands were disconnected and poles were destroyed. Further, enquiry revealed that the local politics has a major role to play in these incidents. We also enquired about the overall satisfaction on the installation of scheme

benefits and around 55 per cent of the respondents expressed that they have not faced any hardship in obtaining the scheme benefits, the remaining respondents opined that they find hardship in almost all stages of the implementation, However, we found out that the scheme benefits were reaching out to the intended beneficiaries even with some stages of delay. The table 3.5. Provides the details of the difficulties faced by farmers; we found out that across the type of the farmers, the marginal farmers encountered more hardship relatively compared to small farmers. Marginal farmers expressed that delay takes place in obtaining and fixing branded items, hence (10 per cent) opted to settle with local brands, later they replaced with BIS mark.

Table 3.4: Respondents opinion on the overall process

Activity	Good	Average	Did not say	Total
Identification of water source	91.3	7.2	1.4	100.0
Fitting of pump-set	73.8	24.3	1.9	100.0
Fitting of accessories	80.5	17.6	1.9	100.0
Energisation process	89.7	8.7	1.6	100.0
Total	80.5	17.2	2.3	100.0

Chart 3.1: Brand name of pump set items



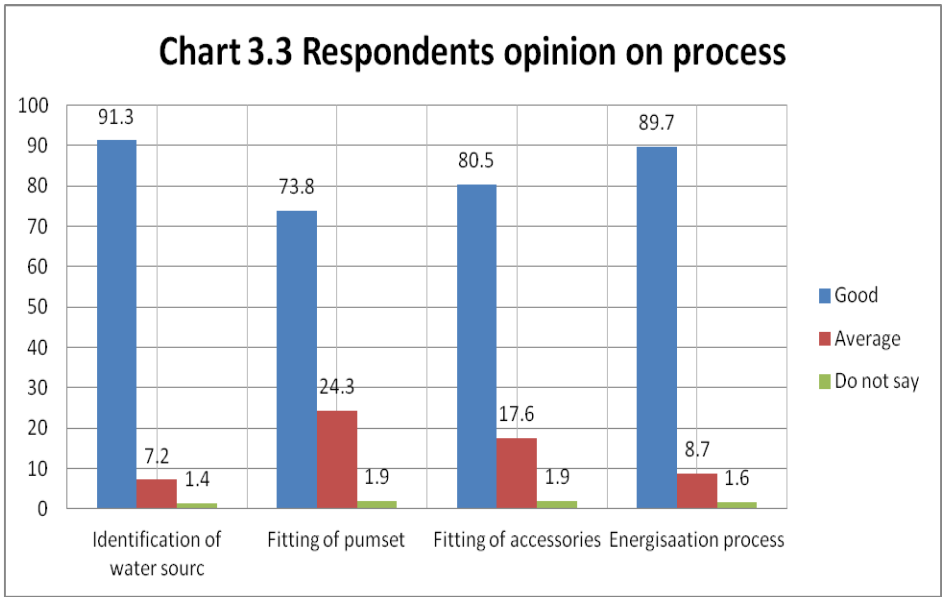
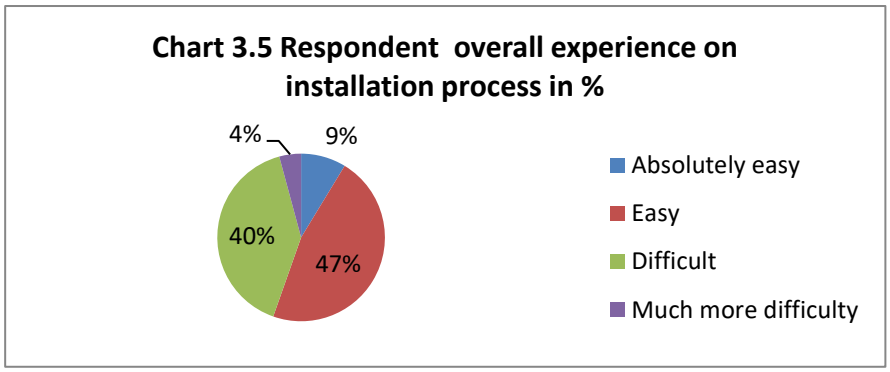


Table 3.5: Respondent experience on installation of entire system

Sl. No.	Installation process	Number	In per cent
1	Absolutely easy	54	8.7
2	Easy	290	46.7
3	Difficult	251	40.4
4	Much more difficulty	28	4.2
5	Total	621	100



11.4 Cost of installation of the scheme

The amount provided under cost for individual irrigation scheme was Rs.1.00 lakh during 2008 & 2010. Out of which Rs. 84000 was subsidy and Rs.16000/- was loan at 4 per cent interest rate. Similarly, for community bore-well the unit cost was fixed Rs.2.53 lakh to provide irrigation to 8 acres of land, Rs. 3.59 lakh to irrigate 15 acres of land. The cost includes drilling of bore-wells, supply of pumps and electrictrification cost deposit of Rs.25, 000/- to each bore-

well included. The rates were revised during 2010-11; the individual bore-well cost was fixed at Rs 150000, out of which Rs 100000 was subsidy and remaining Rs 50000 was a loan component.

The study explored the awareness of beneficiaries on financial support they are entitled to get from the corporation for entire scheme and break ups for different activity. The cost of drilling up to one lakh was born by the corporation, beyond that it was to be borne by the beneficiary. However, due to the fall in water table in many areas there was a need to drill deeper bore wells, the amount that was allotted for drilling of bore wells under the scheme was hence not sufficient. Further, there were few cases of bore well reported those were failures within six months of drilling, that the farmers' rejuvenated with their own funds. In drought prone areas, it is observed in few cases that the water is not found within the boring depth fixed by the corporation for which money was allotted; the farmers had to pay additional money from their own sources to get drilling up to further desired depth.

During our FGD and transact walk the respondents expressed that the amount allotted for the drilling of bore wells should be higher than what has been provided presently. In the present scenario the amount allotted, including loan amount is sufficient for drilling the bore. The expenses incurred on motor, pipes. Other equipments had to be supplemented by the beneficiaries. We have interacted with the drilling agencies, which were given the charge of drilling bore wells. Of the total sample selected 94 of respondents had to supplement with their own funds for drilling and other activities.

11.5 Loan repayment status

The study explored the beneficiaries' loan repayment status. This loan repayment is towards Rs 14000 and Rs 50,000 that corporation has provided as loan as part of the scheme. Of the total beneficiaries, only 28 per cent have repaid fully, and another 14 per cent have partially repaid. And remaining beneficiaries have not repaid the loan and most of them reported that poor earning and crop failures are the major reasons for the default.

11.6. Maintenance and Repair

The maintenance cost was found out from the beneficiaries as an average cost every year. The major repair cost was on motor, starter and other minor items. During FGD, the respondents expressed that due to erratic supply of energy quite often motors get burnt. Due to pressure of water, the outflow pump set in many cases breaks and replacement is needed. And also as the bore system becomes old the maintenance cost also increases. The average cost per annum varies due to various factors. According to the DBCDC, repairs and maintenance for Group Schemes should be handled by them provided funding permits; however, there was no explicit information that concluded Group Schemes were receiving this benefit. The majority of farmers specified that they get support from the local mechanic or a family member, who had learnt to take up minor repair work. Further, it was found that the agencies which have supplied material for the bore system provided warranty, but respondents found quite difficulty in contacting them and getting maintenance services. It was observed that the level of support and commitment from either the DBCDC or the approved supply agencies was not well understood or known by the respondents. The following table 3.6 depicts the available immediate repair within a distance of 10 to 30 kms as stated by the beneficiaries. Of the total respondents, 55 per cent have access to service centers within 10 kms, followed by 24 per cent who have repair facility within 15 kms. Across the state the distance varies due to geographical terrain and demographic distribution. It has been observed that in north part of state the service provider is located at much longer distance. The average maintenance cost per annum was found to range between Rs 5000 to Rs20, 000. Around, 50 per cent of beneficiaries informed that the mechanic visit their place periodically. In southern Karnataka, the beneficiaries have joined together and identified repair mechanics, who make periodic visits to check on the machines. It was observed that chiefly in southern part of Karnataka there is more and better association between the beneficiaries which ion turn is strengthening and negotiating better services from the departments.

Table 3.6: Accessibility of Repair Mechanic

Sl. no.	Distance (km)	Number	Per ent
1	0-10	344	55.4
2	10-15	152	24.5
3	15-20	39	6.3
4	20>	86	13.8
Total		621	100

Table 3.7 Amount spent by beneficiary on an average yearly

Sl. No.	Amount in Rs	Number	In per cent
1	0-5000	342	55.1
2	5000-10000	222	35.7
3	10000-15000	31	5.0
4	15000-20000	13	2.1
5	20000+	13	2.1
Total		621	100.0

Chapter 12

Post installation status and impact evaluation

12.0. Introduction:

This chapter analyses the post-installation impact, at first examines the systems functioning, followed by how the scheme has impacted the change in cropping pattern. Finally, it examines the changes in household economy and social up-gradation of beneficiaries.

12.1. Type of scheme

The study covered a total of 621 samples household, of that 75 were from community irrigation and three from lift irrigation schemes, and rest from individual irrigation scheme. The sample are collected as per sampling method proposed , accordingly10 per cent of beneficiaries are covered in selected two constituency of the each district, thus all total 60 constituencies are covered from which the samples are drawn. Of the total sampled beneficiaries around 543 beneficiaries were from Individual Irrigation Scheme, 75 from Community irrigation schemes. The details are provided in the following table 4.1.

Table 4.1: Beneficiary sampled as per type of the scheme

Sl. No.	Scheme	Number	Percent
1	Individual scheme	543	87.4
2	Community scheme	75	12.1
3	Lift irrigation	3	0.5
3	Total	621	100

12.2. Year of sanction

The study collected information around the system installation year. It was found that large number of schemes were completed during 2009, 2010 and 2011; in later years the scheme implementation was withheld in some districts, viz., Bangalore Rural and Urban. The selection of sample across constituency is listed in Annexure 1 and 2.

12.3. Sharing of the water

We had FGD exclusively with community bore-well as well as with lift irrigation beneficiaries on nuances of sharing of the water. It was found that the land owned by these beneficiaries is adjoined to the one another. Further, among community beneficiaries most of them are cousins and are related. Hence, the water shared is with better understanding and rational concept is adopted for water being used. Similarly, in lift irrigation we found that people belonging to one community or same caste category has opted for the scheme. The water was being used very judiciously in all lift irrigations studied and draining out was being reduced by use of new technology. In regards to the norms and method being adopted in sharing of water, the respondents for community scheme informed that it was as per the convenience of the group; there is no hard and fast rule for it. Most of them chose the option of alternative days, around 47 per cent share the water on alternative days, followed by weekly twice, in the sense they use continuously for two days. For specific crops water is to be provided daily, for this every day use practice is adopted sharing on hourly basis. Whereas, the lift irrigation beneficiary farmers use the water on area basis, i.e for a stretch of two acres each on rotation basis.

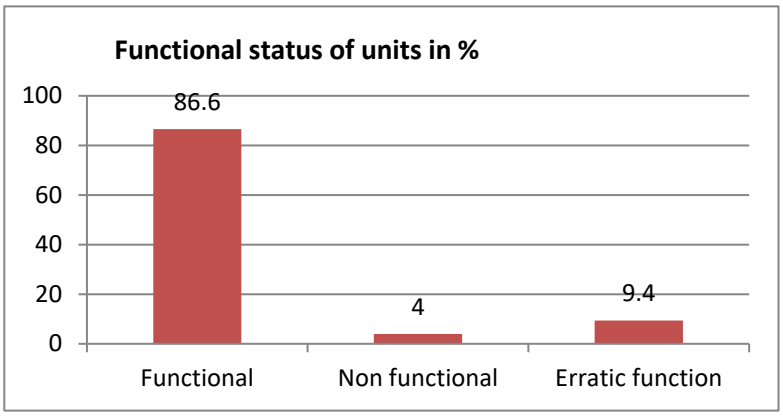
Table 4.2: Sharing of water by community

Sl.no	Method of Water sharing	In number	Percent
1	Hourly basis	8	10.3
2	Alternative day	35	47.4
3	Weekly twice	24	32.1
4	Any other	8	10.3
	Total	75	100.0

12.4. Functional status of the units

The study explored the functional status of the unit during the survey. It was highly encouraging to note that around 85 per cent of schemes boring facilities were functioning properly, followed by four and nine percent that were showing erratic function and not in operation respectively. The fig4.1 depicts the details.

Chart 4.1. Functional status of units



Among the not operating units, it was reported that bore well had either dried up or there was no water in the well. The ones having erratic function was chiefly due to not getting proper electricity supply and/or water table was not sufficiently available for drawing water. Though, most of the community bore-wells were functioning, due to damage in pump sets 3 percent of beneficiaries were not getting sufficient water from these facilities. In fact, the community and lift irrigation farmers confirmed facing problems of improper ancillary fittings.

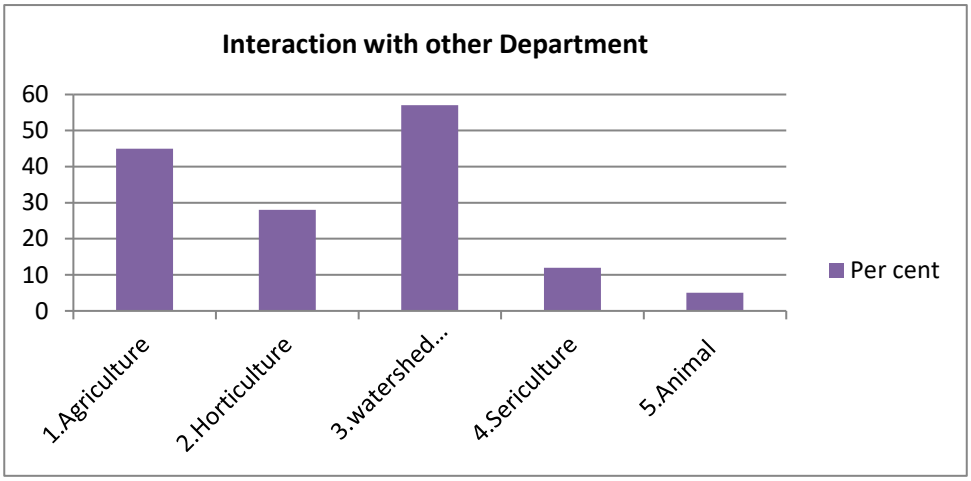
12.5. Convergence with other Deaprtments

The farmers are imparted training in using the bore well system as well as are taught the judicious use of water under **MANTHAN** programme. The farmers have been provides awarness programme on various issues, including high yiedling varities of crop and also on services provided/available in agriculture and allied departments. Farmers expressed there contenentment about this novel training programme initiative, which has provided them a strong platform for connecting with the allied/related departments.

As water to the land is important, equally the capital for current investment is also needed. Many respondent have become the members in cooperative societies, and borrowed crop loan from the Regional Rural Banks after being associated with Manthan. The manthan programme has helped the farmers in connecting with other departments easily. During the FGD, we found out that the agriculture department with their extension programme helped impart knowledge on use of new varieties of seeds and also provided training and methods of using

various equipments on hiring basis. Simlarly, the horticulture and floriculture department provided knowledge on cultivation during these training programs. In fact many farmers are now growing fruit crops after being made aware about through these training interventions, same has been observed during the field work. The deaprtments on priority basis in several district has been conducting outreach activities to impart knowledge on special schemes designed for the small and marginal farmers. We asked the beneficiaries to what extent they have interacted with these various departments through these convergence platform. Accprding to the follwong chart 4.2, the beneficaries had maximum interaction with watershed dept, followed by agricultural department.

Chart 4.2: interaction with other departments by beneficaries (in per cent)



12.6. Change in crop type

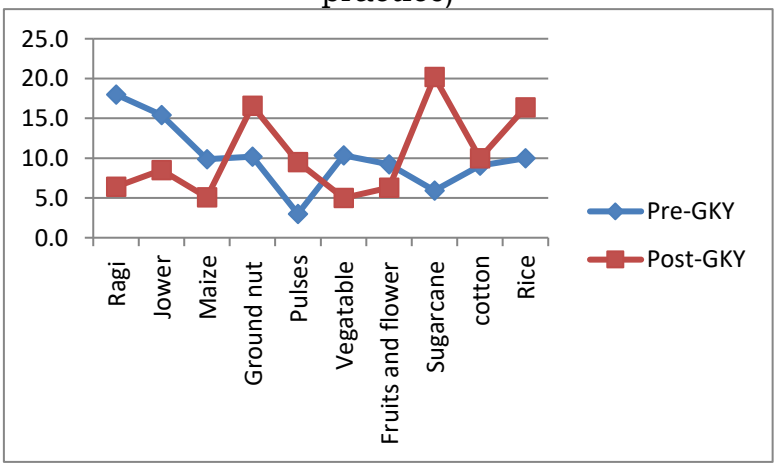
We found out that through improved water facility to land, institutional credit to invest in and department imparted knowledge the beneficiaries were enjoying a change in cropping pattern. The study explored the change in cropping pattern majorly because of the scheme. For this we spent time with the beneficiaries to make them recall the crop they grew during pre and post GKY. A definite change in crop pattern was observed. The change was grouped in to three categories of cereals, oilseeds, pulses, cash crops; fruits and horticulture. There is a clear shift from traditional cultivation to modern cultivation using new technology. The study revealed that the beneficiaries have adopted HYV and cash crops over the period, within food crops priority has been given to pulses and oil seeds gradually over the time.

The FGD with the beneficiaries shows that not only cropping pattern has changed but also cultivation practices in different seasons have been adopted. Prior to the implementation of the scheme the beneficiaries used to cultivate in kharif that also only limited to the crops such as jowar or bajra or other similar crops which required less consumption of water. Now they practice both kharif and Rabi crops. This has contributed for a better set of earnings. Crops like Paddy, sugarcane, cotton and vegetables are being cultivated more now because of assured water source. In the black soil they are cultivating cotton and other cash crops, in red soil fruits and flowers are being cultivated encouragingly. Among fruits, mango, sappota, other similar fruits are grown more. The following table and charts depict the cropping pattern, pre and post GKY, it can be seen that cash crop practices have been encouraged post GKY.

Table 4.3: Change in cropping pattern of Beneficiaries (% of beneficiaries adopting the crop practice)

	Pre-GKY	Post-GKY
Crops	Response in % practicing	
Ragi	18.0	5.4
Jower	15.4	7.5
Maize	9.9	5.1
Ground nut	10.2	16.6
Pulses	3.0	9.5
Vegetable	10.4	5.0
Fruits and flower	9.2	5.3
Sugarcane	5.9	19.2
Cotton	8.0	10.0
Rice	10.0	16.4
Total %	100.00	100.00

Chart 4.3: Cropping pattern change (% of beneficiaries adopting the crop practice)



12.7. Change in Income

We have explored the post-GKY economic status of beneficiaries during our FGD, the respondents have expressed that there is rise in their household income. We found out that after imparting several trainings on improving knowledge of cultivation practices, there have been follow up practices by other departments, such as Agriculture, Horticulture, etc, to impart knowledge for adoption of scientific method of cultivation as well to the beneficiaries. To understand the increase in the household income, in addition to FGD and other tools, we adopted keen observation and through interaction and were able to gather the information in regards to how the income has increased over the years. The income for first year increased around 10 to 15 per cent on an average, following year the income there was around 25 percent increase on an average in the income level. The following two tables inform the change in income post-GKY. According to the table 4.4 and 4.5, pre-GKY around 52 per cent of the beneficiaries had income of 20000, whereas post-GKY, the income level have gone up, the minimum annual income was Rs 20000. Looking at the difference, we had class interval from Rs 25000 onwards.

Table. 4.4: Income of the beneficiaries Pre-GKY

Land holding	Income pre-Gky in %				Total in numbers
	0-12000	13000-20000	21000-50000	50000+	
0-2.5	17.5	40.5	17.8	14.2	325
2.5-5	10.8	54.4	19.6	15.2	296
Total	14.3	52.4	18.7	14.7	621

Table4.5: Income increase post-GKY in Rs (In %)

Land holding	0-25000	25000-50000	50000-75000	75000-100000	100000+	Total
0-2.5	41.3	29.5	11.4	7.6	10.2	100.0 315
2.5-5	27.7	26.4	16.2	12.2	17.6	100.0 296
5+	0.0	10.0	30.0	20.0	40.0	100.0 10
Total	34.1	27.7	14.0	10.0	14.2	100.0 621

FGD with beneficiaries revealed that the scheme has been instrumental in improving the beneficiary income levels, which has positively changed the quality of life. The beneficiaries also stated that some of them were now able to save and are using savings towards purchase of new assets. A few beneficiaries purchased thresher, while few others have purchased land. The better income leading to better savings has also resulted in availability of funds for sending children for better educational institutions. In table 4.6, the category wise land holding shows that the most backward have less land holding. For instance, of the total beneficiaries their ratio is 64 per cent, 35 per cent are of other two categories. Within backward castes, 3A 3B represent more in small farmers then the other two groups. Both the following tables reveal that across categories, the socially advanced caste has better land holding within the group.

Table4.6: Category wise land holding Pre-GKY

Category	Land holding pre-project		
	0-2.5	2.5-5	Total
1	24.3	17.6	21.1
2A	44.6	41.6	43.2
3A	23.4	25.7	24.5
3B	7.7	15.2	11.3
Total	100% (25)	100% (296)	100% (621)

Table4.7:Category wise landholding Post-GKY

Category	Land holding post-Project			
	0-2.5	2.5-5	+5	Total
1	25.0	17.6	0.0	21.1
2A	45.9	41.7	18.2	43.4
3A	24.1	25.4	45.5	25.1
3B	5.1	15.3	36.4	10.5
Total	100 (316)	100 (295)	100 (10)	100 (621)

12.8. Social up gradation

As income increased at the household level, the spending on various activities changed. We asked if there is in change on education, health etc of the beneficiaries. They have expressed that due to improvement in household income, they are sending children to school, otherwise the children would have engaged in the agriculture activities as well. However, on medical facility front they expressed

that they do visit same government hospitals. According to following table 4.7, 30 per cent of family is now sending their children to school and 21 percent are sending children further for college education.

Table 4.8: Education access to children in %					
Category	Primary boys	Primary girls	High school boys	High school girls	College Both
1	25	45	36	19	22
2A	10	23	28	22	15
3A	23	22	22	18	16
3B	15	19	25	4	18
Total	30	36	18	20	21

The major externality which has benefitted the farmers is the market. We studied in detail the access to market for their farm produce and how that has influenced the success of GKY scheme. It has been observed that in north Karnataka farmers have to travel for longer distance to reach the market. But in some places the agent system prevails, who will buy in villages directly. Whereas in southern Karnataka, the distance is lesser in general, particularly farmers residing in mandya, Bangalore, kolar have better access to market. Beneficiaries, who are growing flowers and vegetable, have access and linkages to better market place. The sugarcane is chiefly grown in the districts where there is availability of a nearby sugarcane factory, thus, the externalities also influence the crop selection for farmers and their ability to economically benefit from its harvest. We found out that further investigation of the effectiveness of the village level agent system and addressing the need of sustainable market practices for the beneficiaries could impact the overall effectiveness of the Scheme. Further, for taking care of family health needs, many farmers have obtained Yashswini card. They expressed that they do visit the private hospitals on periodic basis for taking care of the health needs of their children and elders.

Chapter 13

Reflection, Conclusion and Suggestion

13.0. Introduction

This chapter deals with the conclusion and suggestions based on our study findings. We present our evaluation findings on the outcome impact of the GKY scheme on the household economy, as well as other social up gradation of the beneficiaries.

For the assessment purpose the scheme has been presented in three stages. This has been done to identify the constraints at each stage, if any. As the final outcome or expected results depends on various activities at different stages, the conclusion is drawn based on analysis of different stages. For simplicity three stages were identified. Viz, pre-implementation, implementation and post-implementation.

13.1 Pre-Implementation process: As per the methodology, we have selected 621 beneficiaries, from the 60 constituencies across 30 districts. The irrigation systems covered for analysis were individual, community and lift irrigation schemes. This survey geographically covers entire Karnataka. The study has developed appropriate tools to interact with all the stakeholders.

At the beginning of every year the corporation releases the time schedule to carry out different functions of the scheme, which should take approximately eight months for the entire process to complete. The farmers approach the corporation once the time schedule has been released for application and further enquiry. It has been observed that the corporation has created enough awareness in the rural area and each district receives around 500 applications, out of which only 130 - 150 applications get cleared. It was observed that as the district office monitors other welfare schemes along with this said scheme, the staffs were found to be overburdened with too many responsibilities. The staff scarcity was very much apparent, as in all offices the sanction posts were not even filled up. Temporary staffs are being hired to carry out the responsibilities; however the efficacy of the staff is questionable in many cases. Hence, the delay takes place in processing of huge applications; in

couple of districts it was observed that due to these factors the stipulated time scheduled could not be followed. This was due to multiple responsibilities and overburdening of the district officials and non availability of required staff. Further, the selection committee meets as per the availability of the legislature; which may be delayed due to multiple responsibilities of the district head.

However, it was observed that for selection of beneficiaries, the ratio of 70:30 across categories of 1,2A and 3A, 3B beneficiaries is duly maintained. The backward castes has been classified into four categories considering their socio-economic background, via., category 1,2A,3A and 3B. For this scheme it is mandatory that from first two categories 70 per cent, followed by 30 per cent from other two categories of beneficiaries are to be benefited. During the study, we have visited all the district offices and found out from the records that this ratio is strictly followed at all levels. Similarly, we observed that the farmers who have been selected are all marginal and small farmers who are exclusively holding dry land.

However, it was found that the farmers expressed their difficulty in finding and obtaining the relevant documents for application purpose. Particularly, getting land records was found to be cumbersome and large number of the farmers seeks help from others in getting these certificates. All the stake holders have expressed the scheme is very beneficial, however deriving the benefits is somewhat cumbersome process and in many cases it is delayed beyond expectation.

A large number of beneficiaries were found to be skeptical about the selection process followed. The farmers want clear defined reasons for rejection of their applications. Around 30 per cent of beneficiaries expressed that though their applications was rejected earlier, they do not know the reasons for it. The study understands that the selection process is determined by political economy of the constituency, we cannot attribute the delay to middle level bureaucracy. Due to political involvement in selection, we found out from the beneficiaries that they feel there is level of arbitrary in selection process.

To overcome this problem we recommend that the Corporation officials should have more control on selection of the beneficiaries. The screening committee level officers can obviously play a major role by upholding the standard fixed in selection process. The rejected applicants should be provided with the reasons for rejection. If the rejected applicant wants to apply again, they should not again be made to fill entire application process; they should rather be allowed for correction and submit missing compliance documents. For this, all the applications and hence the rejected ones as well should be documented in all offices through software help.

13.2 Implementation process: The corporation has a policy of "No water, No money" for the payment approval of drilling agencies. However, there were cases of immediate failures or failure within the six months of drilling. These beneficiaries did not avail the full benefits of the scheme. Hence, there should be some mechanism to review already dug bore wells. While sanctioning new schemes, some proportion of funds should be reserved for this activity. During implementation, there is the need to deal with three agencies, viz., drilling, fixing pump set and energy provider. During our visit we found out that there is couple of cases in the villages wherein the bore well has been dug and the pump-sets are supplied but electrification has not taken place due to technical difficulties. The electrification of the bore wells was identified as the major roadblock to implementation, causing delay spanning even in years. As of today five corporations are implementing the same scheme. All can jointly work together try to get a preferential treatment. These corporations should come to a common understanding sharing information on water table, installation cost etc.

13.3 Post-implementation: The objective of the programme is to enhance the household income of the beneficiaries. It was observed that net income per annum is enhanced to Rs 25000 as a direct benefit of the scheme; there were some beneficiaries who are getting even more economic gains. The farmers who have adopted the cash/commercial crops practice, they are deriving still better returns. There are farmers who have acquired some piece of extra land post-GKY. Further, it is observed that there has been change in quality of

life. It has been narrated by farmers, how earlier all the family members had to engage in wage labor, but now, they are being able to send their children to school, particularly young children have even been put in English medium and travel in school vans. And many farmers have obtained yashswini card for medical facility access. Thus, there was a visible change in the lifestyle of the beneficiaries both economically and socially. However, the major constrains they face is still linkages to markets, as the market places are located at long distances. In many case it was observed that the local agent is purchasing the goods. In south Karnataka it was observed that the pick vans were hired by group of farmers and they were marketing their goods for better prices hence. The second problem faced by the farmers has been with pump maintenance. On an average the maintenance cost of the bore well, especially with motor repairs comes around 21000Rs. Due to fluctuation in energy supply motors get burnt in many cases, rewiring of motors on an average costs Rs 8000. Further due to whether change, the PVC piping gets damaged. It was observed that there are some progressive farmers, who have sound financial support and have adopted water conservation through new technology such as sprinkler or drip irrigation.

It is highly recommended that an orientation program at the taluk or district level could be developed for the beneficiaries and they could be imparted knowledge in regards to mechanics of the established bore wells and how they can manage the minor repairs and also if need be whom can they approach for smooth resolution of their problems. The MANTHAN programme frequency should be increased for new beneficiaries looking at the benefits this program is drawing, and in this platform the old beneficiaries should be allowed to share their experiences and positive case stories should be promulgated.

13.4 The specific suggestions:

1. There is need to increase monitoring efficacy at district office level by recruiting minimum required staff, that will help in timely scrutiny of application and monitoring of the installation of systems. A field level staff is needed at the district office level, who can verify issues such as depth of drilling and yield of water.

2. It is mandated that transparency should be adopted in the beneficiary selection process by adopting newer software and internal data base should be created. The applicants should know why he has been rejected. This will develop a confidence and trust of the beneficiaries on the scheme.

3. There is paramount need to develop a systematic monitoring system for timely execution of different stages of the scheme. There is need to develop a MOU with electricity department. During announcement of time schedule of the scheme, district wise requisition should be sent to the electricity department, it will help them to plan timely.

4. Measures should be adopted to prevent failures of new bore well, if bore-well fails within six months there should be a cost sharing mechanism with the beneficiaries to ensure rejuvenation of these bore wells. The cost of a single unit for establishment should also be revised periodically, considering water table levels as well as inflation rates. However, it was felt that other corporations are sanctioning higher amount of money for same work in the same areas. This has been shown to create unrest among the farmers. On lift irrigation front, it was found that the amount provided per acre is not enough. During our visit to Bellary district we observed that few farmers have petitioned to the corporation for enhancing the amount. According to them, presently the amount provided is only amounting to ¼th of the net cost.

Chapter 14
Recommendations

The Gangakalyan subsidy policy has made sizable impact on the household economy of small and marginal farmers belonging to backward classes but the scheme needs to be strengthened and restructured for promoting welfare of these farmers.

SHORT TERM:

1. It is observed that the scheme is not able to produce the desired outcome due to lack of effective monitoring and supervision. There is need to strengthen the monitoring mechanism at district level by recruiting minimum required staff, that will help in timely scrutiny of applications and monitoring of the installation of systems. A field level staff is needed at the district level, to examine the issues such as depth of drilling and yield of water.

2. It is essential to increase transparency in the implementation of the scheme, particularly in the selection of beneficiaries. The process should be made transparent by adopting new software and internal data base should be created. The applicants should know about why his/her application has been rejected. This will develop a confidence and trust of the beneficiaries on the scheme.

3. The electrification of the bore wells has been identified as the major hurdle in implementation of the scheme. Five Corporations are implementing the same scheme. It is recommended that all can jointly work together and may try to get a preferential treatment. The co-ordination may result in reducing cost and increase efficiency.

4. Orientation programmes to be organized for the farmers to train them in modern cultivation practices. They should also be trained to take up minor repairs of borewells. For meeting the training and other requirements the beneficiaries may be covered under the ATMA scheme.

LONG TERM:

1. In the long run solar and other sources of energy to be introduced for energization of the pump sets.

2. To develop a system for timely execution of different stages of the scheme. There is need to have MOU with electricity department. During announcement of time schedule of the scheme, district wise requisition should be sent to the electricity department, it will help them to plan timely supply of electricity.

3. Prevention of failures of new bore wells is essential. If bore-well fails within six months there should be a cost sharing mechanism with the beneficiaries to ensure rejuvenation of these bore wells.

4. The cost of a single unit for establishment should also be revised periodically, considering water table levels as well as inflation rates.

5. On lift irrigation front, it was found that the amount provided per acre is not enough. There is a need to enhance the amount to cover the cost adequately.

Annexure 1

Year of selection across district individual irrigation scheme

Sl.No.	District	Years						Tota
		2008	2009	2010	2011	2012	2013	
1	Bagalakote	0	4	4	4	4	1	17
2	Banaglore Urban	1	2	6	2	0	0	11
3	Bangalore Rural	0	8	1	0	0	0	9
4	Belagavi	0	6	7	3	5	2	23
5	Bellari	0	0	0	3	6	5	14
6	Bidar	0	3	1	6	5	5	20
7	CNagara	0	3	6	2	2	2	15
8	Chikabalapur	0	1	2	2	2	6	13
9	Chikkamangalore	0	3	3	12	5	2	25
10	Chitradurga	1	21	0	6	5	6	39
11	D Kannada	0	0	0	2	5	2	9
12	D.kannada	0	2	0	3	2	8	15
13	Dharwad	0	3	0	2	3	5	13
14	Gadaga	0	1	2	2	5	6	16
15	Gulbarga	0	4	3	1	4	6	18
16	Hassan	0	5	7	5	0	1	18
17	Haveri	0	2	1	7	4	4	18
18	Kodagu	0	1	3	1	3	0	8
19	Kolar	0	5	2	2	4	2	15
20	Koppala	0	2	0	4	2	11	19
21	Mandya	0	1	1	1	1	5	9
22	Mysore	0	8	5	11	4	10	38
23	Raichur	0	2	0	4	2	9	17
24	Ramanagar	0	0	2	4	5	8	19
25	Shivamogga	0	18	3	6	7	9	43
26	Tumakuru	0	4	2	3	6	3	18
27	Udupi	0	3	0	2	3	4	12
28	Uttara Kannada	0	2	2	1	7	0	12
29	Vijayapura	0	5	7	6	9	1	28
30	Yadagiri	0	4	2	1	3	4	14
	Total	2	123	72	108	113	127	543

Annexure 2

Table 4.3: sanction of community wells by districts.

District	Years						Total
	2008	2009	2010	2011	2012	2013	
Chikkamangalore	0	1	0	**0**	0	0	1
Haveri	0	0	0	**0**	0	1	1
Kodagu	0	0	0	**1**	0	0	1
Kolar	0	0	0	**0**	0	1	1
Bangalore Urban	1	1	0	**0**	0	0	2
Bellari	0	0	0	**0**	2	0	2
Koppala	0	0	0	**0**	1	1	2
Raichur	0	0	0	**0**	1	1	2
Uttara Kannada	0	1	0	**0**	1	0	2
Gadaga	0	0	3	**0**	0	0	3
Hassan	0	0	3	**0**	0	0	3
Udupi	0	0	0	**0**	3	0	3
Yadagiri	0	0	0	**3**	0	0	3
Gulbarga	0	0	0	**4**	0	0	4
Tumakuru	0	1	1	**1**	1	0	4
Bidar	0	0	0	**1**	2	2	5
Chikkaballapura	0	3	0	**1**	1	0	5
Belagavi	0	0	0	**0**	0	6	6
Bangalore Rural	0	3	2	**0**	2	0	7
Chamarajanagara	0	1	1	**4**	1	0	7
Dakshina Kannada	0	0	0	**3**	4	0	7
Dharwad	0	6	0	**1**	0	0	7
Total	1	17	10	**19**	19	12	78

Annexure 3

Details of Lift irrigation observed by evaluation team

Name of the scheme	Caste	Number of persons	Area in acres	Unit cost	Motor	Year of sanction
Gadilingappa &others	Kurbas	3	11.72	3.2	10	
Mallikarjun and others	Achary and lingayat	9	37.62	8		
Eshwar and other	Kurba	8	25.32	8.17		
Diwakar and others	Kurba	4	12.85	8.17		
Mudi nagappa and others	kurba	5	14.22	2.34		

Annexure 4

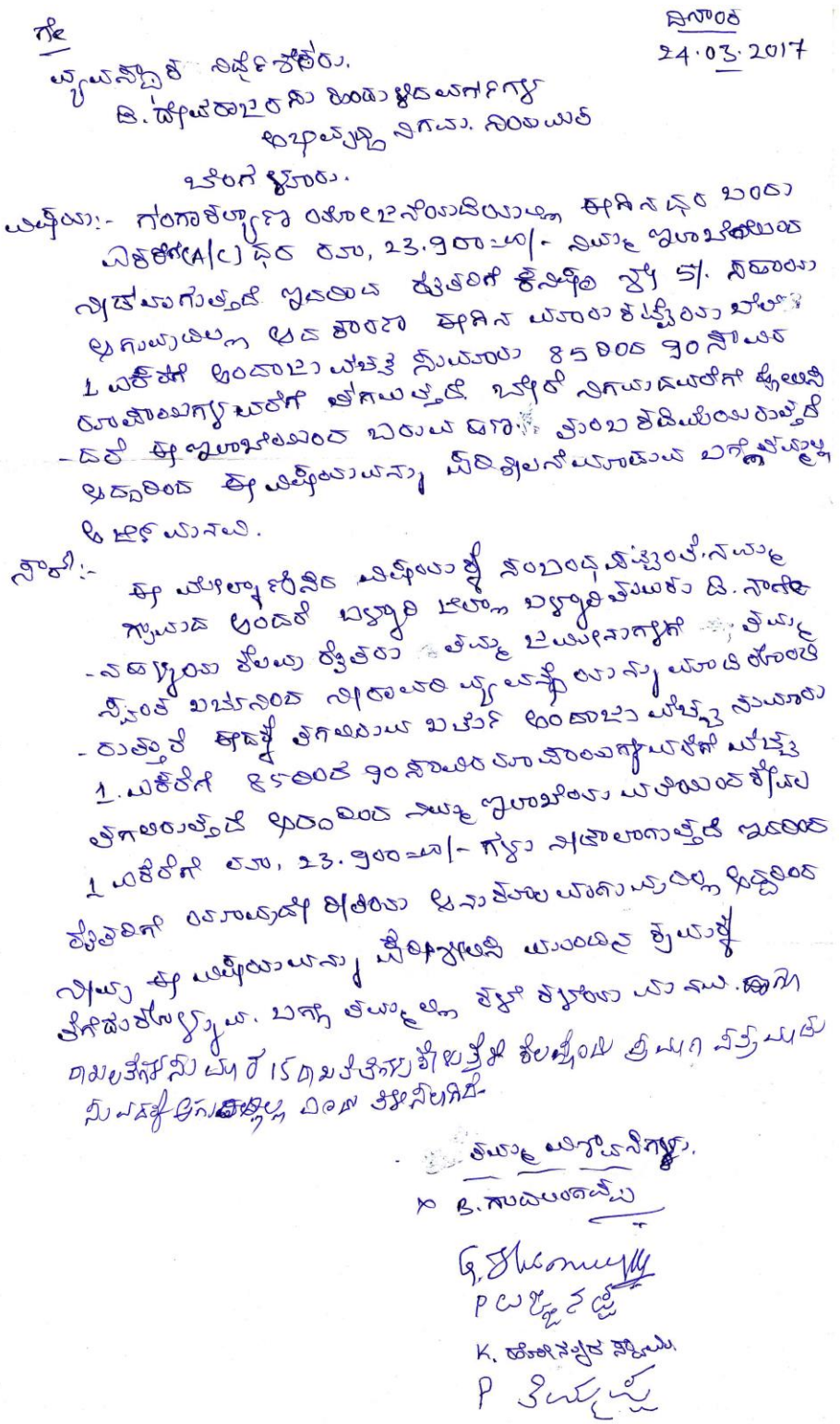
Time schedule format adopted by the corporation

Sl. No.	*Description*	*Time schedule*
1	*Date for advertising in local papers for inviting applications*	*29/4/2016*
2	*Last date for application distribution*	*25/5/16*
3	*Submission of filled application in respective district offices*	*16/6/2016*
4	*Presentation at legislature selection committee last date*	*30/6/2016*
5	*Scrutiny of applications*	*7-16 r mahe*
6	*Selected application forwarding to the central office for approval*	*8-16*
7	*Issue of work order from c entral office*	*9-16*
8	*Identification of borewell point by geologist for drilling*	*10-16 and 11-16*
9	*Steps to be taken for electrification and fitting pumpset*	*12-16 and1-17*

Source: D.DevarajUrs hindulida vargagala abhivruddi nigam "Annual Actual Plan, 2016.

Annexure 5

Request from the farmers for enhance amount



Annexure 6

Terms of Reference For External Evaluation of Ganga Kalyana scheme from 2008-09 to 2012-13 implemented by Devaraj Urs Backward Classes Development Corporation

1. Title of the study:

The title of the study is "*Evaluation of the Ganga Kalyana Scheme from 2008-09 to 2012-13 implemented by Devaraj Urs Backward Classes Development Corporation from 2008-09 to 2012-13*".

2. Background Information:

The scheme is for providing irrigation facilities for the land belonging to small and marginal farmers of backward classes. Bore wells are drilled in the lands of individual beneficiary or on community basis. In places where surface water is available perennially, permission of Water Resources department is taken and lift irrigation facility is provided to farmers. This scheme has been in force since 1996.

(a) Individual Irrigation Bore well Scheme

The unit cost of the scheme is fixed at Rs.2.00 lakhs. Out of this, Rs. 1.50 lakh is the subsidy and Rs. 0.50 lakhs is provided as loan by the Corporation at 4% rate of interest. The drilling cost, cost of pump set and deposit of the ESCOMS and costs of other supplementaries are met out of the total unit cost.

(b) Community Irrigation Scheme

At least 3 beneficiaries having 8-15 acres of land are covered in the scheme. The unit cost of each community irrigation scheme is fixed at Rs. 2.53 lakhs. The cost of drilling 2 bore wells, pump sets and deposit of ESCOMS and costs of other supplementaries are met out of unit cost. For units having more than 15 acres of land, the unit cost is 3.59 lakhs. Unit cost is utilized for drilling 3 bore wells, pump sets, deposit of ESCOMS and costs of other supplementaries.

(C) Lift Irrigation Scheme

The cost is fixed at Rs. 23,900 per acre for the total achcut available for lift irrigation for backward class beneficiaries.

3. Objective of the Scheme:

The main objective of the scheme is to provide irrigation facilities to small and marginal backward class farmers belonging to Category-1, Category-2A, 3A and 3B, who have only dry land without any irrigation facility. The scheme enables farmers to grow more than one crop in a year and also to grow commercial crops using irrigation facilities, rather than only rain fed crops improving their social and economic condition is improved.

4. Implementation Process:

The beneficiaries are selected by a Committee headed by Hon'ble legislators of each constituency. The list of beneficiaries is sent to Head Office of the Corporation through respective District Managers of the Corporation. These proposals are verified in the head office and sanction is accorded. Once the sanctions are made following procedure is adopted.

(a) Work orders are issued to drill bore wells in the land of beneficiary farmers/communities by a drilling agency selected by tender process by the Corporation.
(b) If the minimum yield of water per bore well per hour is 1000 gallons, these are treated as successful bore wells. The total cost of drilling is paid to the agency after drilling is completed. If the yield of water is less than 1000 gallons per hour the well is treated as failed and no charges of drilling are paid to the agency.
(c) For successful bore wells, proposals for energisation are registered and deposits paid by the Corporation to respective ESCOMS on behalf of the beneficiaries.
(d) The pump sets and other equipments are supplied, energisation of pump set is done and irrigation facility is provided.

5. Review of Work:

The work is reviewed in monthly KDP meetings at Taluk level by the Executive Officer of Taluk Panchayath and at district level by Chief Executive Officer of Zilla Panchayath. This is also reviewed at State level by the Managing Director of D.Devaraj Urs Backward Classes Development Corporation and Principal Secretary, Backward Classes Department, Government of Karnataka, in the MPIC meeting every month.

The details of bore wells drilled and Lift Irrigation Schemes implemented from 2008-09 to 2012-13 is as follows:

Sl.No	Year	Bore wells drilled		Lift Irrigation Scheme	Budget allocation Rs-Crores	Expenditure incurred Rs-Crores
		Communi ty	Individual			
1	2008-09	583	2390	23	18.40	18.44

2	2009-10	484	1575	39	20.04	21.82
3	2010-11	607	3061	53	50.00	50.01
4	2011-12	817	3079	65	55.00	55.08
5	2012-13	642	2729	78	95.00	41.12

6. Scope & Purpose of the Study:

This scheme is implemented in all the 193 constituencies of all the 30 districts of the State. The purpose of the study is to know whether the objectives set under the scheme or achieved or not and to-

(a) Assess the additional income generated by the beneficiaries after getting the benefit of Ganga Kalyana Scheme.

(b) Assess the social and economic benefits that farmers received by the scheme.

(c) Know whether the children of the beneficiaries get better education as a result of economic benefit.

(d) Has the convergence of other departments like Sericulture, Horticulture and Animal Husbandry and Watershed development etc. taken place in enhancing the benefits?

7. Evaluation Questions (inclusive not exhaustive):

1. What was the annual family income before implementation of the scheme (i.e. during 2007-08) and what is the present annual family income of beneficiaries? Is there any noticeable change in the income? If so, to what extent? If not, why not? (Since baseline data for 2007-08 is unlikely to be available, the question can be answered with perception of change expressed by the beneficiaries.)

2. What is the change in the cropping pattern of beneficiaries before and after implementation of the scheme? Are they getting the benefit of growing 2 or 3 crops in a year?

3. Have the beneficiaries come across any problems in the implementation process? If so, what kind of problems they have faced such as-

(a) Selection of beneficiaries.

(b) Submission of various records for sanction.

(c) Selection of drilling point and drilling of bore wells.

(d) Fixing of Irrigation Pump sets.

(e) Energisation and related problems with ESCOMS.

(f) Issues of sharing water among beneficiaries of community and List Irrigation schemes

4. What is the average time required for completing the entire processi.e. drilling and energisation after the date of issue of work order? Is it beyond or within 60 days? If it is beyond 60 days, where is the delay taking place and what are the reasons for delay?

5. Are all the bore wells and accessories (pipe/pumps etc) given under this scheme are functional as of date? In not, what is the percentage of non-functional bore wells and accessories? What are the reasons of non- functionality? Since how long have they remained non-functional and why are they not repaired/ attended to?

6. Whether the prescribed Quality BIS standard materials such as PVC pipes, pumps and motors are provided in the scheme? If not, whether prescribing such standards is desirable? If not, Why?

7. Whether the beneficiaries are satisfied with implementation of Scheme in terms of quality and timeliness of work? If not, why?

8. Are there any possibilities to further streamline the process of selection of beneficiaries and implementation from the perspective of Block Implementing officers and beneficiaries? If yes, give details.

9. Has net area irrigated increased after drilling of bore well/lift irrigation schemes? If yes, What is the percentage of enhancement?

10. Are the beneficiaries facing any problems during implementation of the Ganga Kalyana Scheme?

11. What actions have been taken by the departments like Agriculture, Horticulture, Watershed Development, Sericulture and Animal Husbandry on convergence and adoption of micro irrigation system so that more income is generated by beneficiaries and what are the possibilities to further enhance the income as a result of "*Manthana Training Programme*" conducted by the corporation.

12. What factors contributed to achieving / for not achieving the intended out comes? In case of negative factors, how can they be ameliorated?

13. The benefits of Ganga Kalyana Scheme are given in the proportion of 70% to Category-1 and 2A, 30% to category-3A and 3B. What percentage of identified beneficiaries of Category-1 and 2A and how many from Category 3A & 3B have got the benefit of the scheme? What is the reason for not giving the benefit to the left out?

14. For completion of the Ganga Kalyana Scheme, is additional amount required over and above the unit cost? What is the breakup of this additional cost?

15. The Corporation provided loans under this scheme? What is the total amount of loan provided by the Corporation? What is the percentage of recovery as against the prescribed repayment schedule? In case of less recovery, what is the reason for it?

8. Sampling and Evaluation Methodology:

Two Constituencies per district one having maximum and the other minimum number of beneficiaries for the evaluation period in the State are to be selected at random (i.e. 60 Constituencies) for evaluation.

It is proposed to evaluate the Gangakalyana scheme from 2008-09 to 2012-13. The list of beneficiaries can be got from office of the Managing Director of D.Devaraj Urs Backward Classes Development Corporation. At least 10% (actual intensity to be such that our estimations are correct within a confidence interval no worse than 10%) of the beneficiaries may be evaluated selecting simple random/systematic random (like arranging names of beneficiaries alphabetically in a sequence and then drawing a sample) samples of beneficiaries treating beneficiaries of each year of each district as population and sampling intensity the same for each district. Thus all years and districts will be adequately and similarly represented in the sample. The beneficiaries will be interviewed and his/her works evaluated individually.

9. Deliverables time Schedule:

The Managing Director, D.Devaraj Urs Backward Classes Development Corporation to issue necessary instructions to all the District Officers, Banks and ESCOMS concerned to provide required information and necessary support to the Consultant Evaluation Organization in completing the study in time. The available information of beneficiaries, guidelines and Government Orders issued on the scheme implementation will be made available by the MD of the Corporation to the Consultant Evaluation Organization.

Individual Interview and Focused Group Discussions should be held at Taluk, District and State levels with all Stake holders to elicit their views on problems faced in implementation and to simplification in the process involved and further improvement of the Scheme so as to enhance the benefit. It is expected to complete the study in 6 months time, excluding the time taken for approval. The evaluating agency is expected to adhere to the following timelines and deliverables.

They are expected to adhere to the following timelines and deliverables or be quicker than the follows.

1. Work plan submission:	One month after signing the agreement.
2. Field Data Collection:	Three months from date of work plan approval.
3. Draft report Submission :	One month after field data collection.
4. Final Report Submission:	One month from draft report submission.
5. Total duration :	6 months.

10. Qualification of Consultant:

Consultant Evaluation Organizations should have and provide details of evaluation team members having technical qualifications/capability as below-

1. One Social Scientist,
2. One Agricultural Scientist/Retired District level Agriculture Officer, and,
3. One at least graduate civil/ electrical or mechanical Engineer.

Consultant Evaluation Organizations not having these number and kind of personnel will not be considered as competent for evaluation.

11. Qualities Expected from the Evaluation Report:

The following are the points, only inclusive and not exhaustive, which need to be mandatorily followed in the preparation of evaluation report:-

1. By the very look of the evaluation report it should be evident that the study is that of the Karnataka Evaluation Authority (KEA) which has been done by the Consultant. It should not intend to convey that the study was the initiative and work of the Consultant, merely financed by the Karnataka Evaluation Authority (KEA).
2. The Terms of Reference (ToR) of the study should from the first Appendix or Addenda of the report.
3. The results should first correspond to the ToR. In the results chapter, each question of the ToR should be answered individually. It is only after all questions framed in the ToR that is answered, that results over and above these be detailed.
4. In the matter of recommendations, the number of recommendations is no measure of the quality of evaluation. Evaluation has to be done with a purpose to be practicable to implement the recommendations. The practicable recommendations should not be lost in the population maze of general recommendations. It is desirable to make recommendations in the report as follows:-

(A) **Short Term practicable recommendations**

These may not be more than five in number. These should be such that they can be acted upon without major policy changes and expenditure, and within (say) a year or so.

(B) **Long Term practicable recommendations**

These may not be more than ten in number. These should be such that they can be implemented in the next four to five financial years, or with sizeable expenditure, or both but does not involve policy changes.

(C) **Recommendations requiring change in policy**

These are those which will need a lot of time, resources and procedure to implement.

12. Cost and Schedule of Budget release:

Output based budget release will be as follows-

a. The **first installment** of Consultation fee amounting to 30% of the total fee shall be payable as advance to the Consultant after the approval of the inception report, but only on execution of a bank guarantee of a scheduled nationalized bank, valid for a period of at least 12 months from the date of issuance of advance.
b. The **second installment** of Consultation fee amounting to 50% of the total fee shall be payable to the Consultant after the approval of the Draft report.
c. The **third and final installment** of Consultation fee amounting to 20% of the total fee shall be payable to the Consultant after the receipt of the hard and soft copies of the final report in such format and number as prescribed in the agreement, along with all original documents containing primary and secondary data, processed data outputs, study report and soft copies of all literature used in the final report.

Taxes will be deducted from each payment, as per rates in force. In addition, the evaluating agency/consultant is expected to pay service tax at their end.

13. Selection of Consultant Agency for Evaluation:

The selection of evaluation agency should be finalized as per provisions of KTPP Act and rules without compromising on the quality.

14. Contact person for further details:

Dr. U.P.Chandrashekar, MD, D.Devaraj Urs Backward Classes Development Corporation Ltd and Sri.Kotappa, GM (Dev), D.Devaraj Urs Backward Classes Development Corporation Ltd, Ph. No. 080-22374832/834, Sri. Jagadeesh J.V. AEE, Ph. 22374814/9880996212 Email ID-md@dbcdc.in.

Annexure - 7

Inception report of the study along with data collection instrument

1. Introduction:

India being welfare state, Government of India and state governments have designed various programmes to alleviate poverty as well as increase the household income of the weaker sections. Similarly the Gangakalyan scheme is designed for increasing the income of small and marginal farmers belonging to backward castes[6] in Karnataka. The aim of the scheme is to provide accessible of irrigation facilities/services in turn to increase the farm output of the marginal and small farmers belonging to backward caste. The objective of this study is:

1. To understand the efficacy of the scheme for its design, implementation and achievement of desired outcomes;
2. To understand differences in the socio-economic status of the beneficiaries; and
3. Assess the additional income generated at household level, after getting the benefit of Ganga Kalyana Scheme.
4. To understand and suggest scope for improvements.

While assessing above objective equal attention will be given to understand the change taken at life style education of children,etc.

The Irrigation facilities are provided by the way of drilling Bore wells in the own lands of individual farmers as well as at community level. In places where perennial surface water is available, lift irrigation facility is provided to farmers. The scheme enables farmers to grow multiple crops in a year and also helps cultivate in all seasons. This programme, being implemented since 1996. In the following sections, each scheme is being discussed in details, first the scheme for individual farmer, followed by community scheme and lift irrigation.

11. Individual Irrigation Bore well Scheme

The financial implication for scheme varies time to time based on unit cost, as this unit cost is fixed based on various factors related to market. Presently the unit cost of the scheme is fixed at Rs.2.00 lakhs for individual bore wells. Out of this, Rs. 1.50 lakh is the subsidy and Rs. 0.50 lakhs is provided as loan by the corporation at 4 per cent rate of interest. The bore well drilling cost, cost of pump set and deposit of the ESCOMS and costs of other supplementary are met out of the total unit cost.

[6] Category-1, Category-2A, 3A and 3B,

12. Community Irrigation Scheme

The community irrigation unit is provided to the group of farmers, having at least three members group and having land holding up to 8 to15 acres of land are covered under the scheme. The unit cost of community irrigation scheme is fixed at Rs. 2.53 lakhs. The cost break up on each item is, for drilling two bore wells, pump sets and deposit of ESCOMS and costs of other supplementary are met out of unit cost. However, the scale of finance differs, if the land holding is more than 15 acres, the unit cost is 3.59 lakhs. Unit cost is utilized for drilling 3 bore wells, pump sets, deposit of ESCOMS and costs of other supplementary.

4. Lift Irrigation Scheme

The unit cost is fixed at Rs. 23,900 per acre for the total achcut available for lift irrigation for backward class beneficiaries.

5. Implementation Process

The beneficiaries are selected by a Committee headed by Hon'ble Legislators of that particular constituency. The list of beneficiaries is sent to Head Office of the Corporation through respective District Managers of the Corporation. These proposals are verified in the head office and sanction is accorded. Once the sanctions are made following procedure is adopted. Before sanctioning, all the required documents ar scrutinized at district level as well as at head office.

(a) Once authentication is established, the work orders are issued to drill bore wells in the land of beneficiary Farmers / community land by a drilling agency selected by tender process by the Corporation. Tender process is followed in drilling borewell in fixing the pumpset. Whereas for enertisation the required amount is transferred for Bescom

(b) If the minimum yield of water per bore well per hour is **1000 gallons**, these are treated as successful bore wells. The total cost of drilling is paid to the agency after drilling is completed. If the yield of water is less than 1000 gallons per hour the *well is treated as failed and no charges of drilling are paid* to the agency.

(c) For successful bore wells, proposals for energisation are registered and Deposits paid by the Corporation to respective ESCOMS on behalf of the beneficiaries.

(d) The pump sets and other equipments are supplied, energisation of pump set is done and irrigation facility is provided.

6. Review of Work:

The work is reviewed in monthly KDP meetings at Taluk level by the Executive Officer of Taluk Panchayath and at district level by Chief Executive Officer of Zilla Panchayath. This is also reviewed at State level by the Managing Director of D.Devaraj Urs Backward Classes Development Corporation and Principal Secretary, Backward Classes Department, Government of Karnataka,in the MPIC meeting every month. The details of bore wells drilled and Lift Irrigation Schemes implemented from 2008-09 to 2012-13 is as follows:

Table1. Progress made over the year

slno	Year	Borewell drilled		Lift irrigation	Budget allocation (crores)	
		Commu	Individual		Allocated	Used
1	2008-09	583	2390	23	18.44	18.40
2	2009-10	484	1575	39	20.04	21.82
3	2010-11	607	3061	53	50.00	50.01
4	2011-12	817	3079	65	55.0	55.05
5	2012-13	642	2729	78	95.00	41.12

7. Scope & Purpose of the Study:

This scheme is implemented in all the constituencies of all the 30 districts of the State. The present study intends to investigate whether the objectives set by state under the scheme are achieved or not, such as;

(a) Whether the programme generated additional income as well empowered farmer economically and socially at the household level as well as across the society. Further assess the changes in accessing the education and health services by farmers family members in general and children in particular..

In addition to above, the study also investigates, whether there is convergence across the departments which are interrelated such as Sericulture, Horticulture and Animal Husbandry and Watershed development etc. taken place what extent they have contributed for enhancing the benefits?

8. Evaluation Questions (inclusive not exhaustive):

As the objective of the programme is to enhance the annual income of the family, hence the priority in evaluation will be given to know what was the annual family income before they integrated into the programme (i.e. during 2007-08) and what is the present annual family income as beneficiaries? Is there any noticeable change in the income? If so, to what extent? If not, why not?[7].

As the second objective of the scheme is to bring change in cropping patter, hence the second point to be evaluated is the change in cropping pattern. Assess the change in cropping pattern as well identify the factors which have most contributed for change in cropping pattern. Further it has to be evaluated what extent the beneficiary has benefited relatively when compared to benchmark information[8].

The third point to be evaluated the problem encountered by the beneficiaries as well as implementing agency during the process of implementation, such as;

(a) In beneficiaries process of selection .

(b) In gathering and submission of required documents.

[7] Since baseline data for 2007-08 is unlikely to be available, the question can be answered with perception of change expressed by the beneficiaries.

8Before and after implementation of the scheme.

(c) In identifying the drilling point and in process of drilling of bore wells.
(d) In procuring required pumpsets as well energisation .
(f) Problems encountered in sharing water among beneficiaries in Community schemes

Most important point for evaluation to be considered the time factor in commencing the scheme. Normally the time fixed to commencing the scheme and time took in commencing the scheme. If the delay takes place, the reasons for delay at what stage delay has taken place. Whether, the procurement / service agencies are compensating for delay in execution of work.

After the installation of the unit, the efficient functioning of the unit is important. The level of unit function will be evaluated at different level such as, bore well function and yield of water; and function of accessories (pipe/pumps etc) provided as part of this scheme are functional as of date? In not, what are the factors. Further evaluate the post installation services from the procurement agencies as well as corporation, if any.

There is need to evaluate the measure taken by corporation in procuring standardized items, such as prescribed BIS standard materials such as PVC pipes, pumps and motors. And also enquiry, whether the corporation is encountering any political intervention in procuring the required ancillaries.

At the beneficiary satisfaction to be evaluated on various parameters and enquiries to be made whether there any possibilities to further streamline the process of selection of beneficiaries and implementation from the perspective of beneficiaries and implementing officials.

The coordination among various departments such as Agriculture, Horticulture, Watershed Development, Sericulture and Animal Husbandry on convergence and adoption of micro irrigation system will be evaluated along with "*Manthana Training Programme*" conducted by the corporation. What factors contributed to achieving / for not achieving the intended out comes? In case of negative factors, how can they be ameliorated?

9. Sampling and Evaluation Methodology:

Two Constituencies per district one having maximum and the other minimum number of beneficiaries. Similarly two district from each division will be selected, thus eight districts and sixteen constituency will be selected at first stage. After selection of district and constituency, the list of beneficiaries in respective constituency will be obtained from office of the Managing Director of .Devaraj Urs Backward Classes Development Corporation. From the list 10 per cent sample will be selected by simple random / systematic random (like arranging names of beneficiaries alphabetically in a sequence and then drawing a sample) samples of beneficiaries treating beneficiaries of each year of each district as population and sampling intensity the same for each district. Thus all years and districts will be adequately and similarly represented in the sample. The beneficiaries will be interviewed and his/her works evaluated individually.

9.1. Tools to be adopted

Apart the structure questionnaire to the beneficiary, there will be Focus group discussion at first stage, we have developed some points to help us during our participatory observation. Participation observation gives insights the functional part of system. Transact act observation will be carried out to know the cropping pattern and development of land. Further an open ended questionnaire will be used to discuss with concerned officials, who involved in execution.

10. Work Plan Submission

Work plan submission	Within one month after the release of first installment of the contact sum
Review of literature and pilot visit to the fields	During the 0 to first month
Preparation research tools	Simultaneously carried out
Field Data collection	Three months from date of work plan
Draft report submission	One month after field data collection
Final report submission	One month after field data collection
Total Duration	6 months

11. Research team and Research process

1. Dr Veerashekharappa : Principal investigator
2. Dr Bhende : Team Member - I
3. Dr Keshavmurthy :Team Member - II

Team : 15 to 20 Members
Each Division consists of 5 Members :
Agriculture, Enggr Diploma and MSWs

Annexure – 8.

Questionnaire for Beneficiaries of Gangaklayna Scheme

I. General information			
Questions			
Name of Beneficiary			
Respondents name			
Sex:			
Age (completed years):			
Village:	Gramapanchayat:		
Constituency:	Taluk	District.	
Sanction Date &Year:		Execution date and year/	
Date of application			
Caste specification			
Type of Scheme	Individual/ community		

II. Demographic profile of the family

Slno	Name	Relation with Beneficiary	Age	Sex	Education	Occupation	Income per annum

III. Land holding (preGKY) details
1. Total Land Holding (Acres)
2. Irrigated land (Acres)
3. Dry land (Acres)

IV. Basic Amenities
Type of House: 1. Katcha House 2.Pucca House (Concrete)

1. *Own house 2. Provided by the government (Scheme)*
2. *Own site 2. Provided by the government (Scheme)*
3. *Electricity available: Yes/No*
4. *Drinking water is available Yes/No Comment:*
5. *Household toilet available Yes/no Comment:*

V. Basic Details of Gangakalyan Scheme:

1. How did you come to know about Ganga kalyana scheme?

1. Radio 2.Telivision 3.Gramapanchayat 4. Any other (specify) ……

2. *Do you know the reservation system is followed while selecting beneficiaries?*

3. *Which category of backward class you belong. Category-1 and 2, category-3A and 3B).*

4. *Sequence of procedure at DBDC &installation*

Slno	*Activity*	*Incidence*	*Remarks*
1	*Approved at taluk office*		
2	*Approved at head office*		
3	*Approval of MLA/MLC*		
4	*Approval at electricity dep*		
4a	*Who selected bore well drilling point for bore wells.*		
5	*Date of drilling*		
6	*Fitting of pump set*		
7	*Date of energisation*		
8	*Yield of water (gallon/ph)*		
9	*Expected area to be irrigated (Acres)*		
10	*Does water tested*		

A. *Do you aware that the successful bore wells, proposals for energisation are registered and deposits paid by the Corporation to respective ESCOMS on behalf of the beneficiaries.*

` *2. Does the programme implement as per schedule*

1. Yes 2.No 3.I cannot tell 4.Long delay

5. *The procedure followed in sanctioning and installing…*

1. Absolutely easy, 2.Easy 3.Difficult 4.much

more difficult (specify cause)

6. *Explain about group/community GKY, If you part of it*

Group Members	*Number of borewell*	*Total land (Acres)*	*Net irrigated*

5. Have you shared borewell among the members or build a tank from their lifting the water. Please narrate.

_____

_____

_____

7. *How you all come to decision in sharing the water explain ……*

8. *Do you find any time dispute in sharing water, if so what is the mechanism you fall in redressing it.* ----------

9. *Do you find other than the member taking water for different purpose?*

1. Viillage panchayt 2. Village festivals 3.Neighbour land holder

8. *How do you prevent from taking water,*
   If so, describe

9. Do you feel after installing the bore well, is there increase in irrigated increase? If yes, what is the percentage of enhancement?

10. Are the beneficiaries facing any problems during implementation of Scheme?

11. *Do the agriculture, Horticulture, Watershed Development, Sericulture were visited together at any time.*
12. *If so, What advice and what type of of help extended by them.*

VI. Agriculture and Technology

1. *Since how long you are involve in agriculture*

   1.Since childhood 2.During adulthood

2.Reasons for involving in this activity

1/Povrty 2.Lack of education 3. Family responsibility 4.Any Other

2. *Land holding (Acres)*

Total	*Own*	*Tenant*	*Irrigate*	*garden*

3. Under the GKY how much land is cultivated

Explain season wise

Slno	*Summer season*			
	Crop	*Area*	*Production*	*Value*
	Rainy season			
	Winter season			

4.Crops grown

Before GKY			*After GKY*		
Crop	*Area*	*valu*	*Crop*	*area*	*value*

5.Utility of the pump set

Summer		*Rainy*		*Winter*	
No hrs	*Days*	*No hrs*	*No hrs*	*Days*	

6.Under GYK how effective water being used

1.Full problematic 2.Problemtic 3.Normal 4. Easy

7. What probme encounter in day to day in procuring Water

Narrate>----------

8.Do you suggest any technology change (pumpset,etc)

9.Do you access to repair and replace items needed during emergency

1. *Name of the place and distance ----------*
2. *Does person visits your place Tes/NO*
3. *Does mechanical attends immediately or delay,*

If delays, how long ----------

Explain last time your experience in getting repair

Problem faced	*How many days bore was idle*	*Who repair it*	*Expenditure incurred*

10.Presently how many hours water you get per day.
Provide in range 2-4, 4-6, 6-8, 8hrs and more.

11.What alternate energy use for pumping water during the electricity failure
1.Desel pumpset 2. Any other

12.What type of irrigation method you are adopting:
1.Normal 2.Sprinkler, 3.Drip Irrigation 4.Micro-layer 5.Any other

13.Among the above which one is good and easy to Adopt.

---

14. What is the strength of horse power your Pump set, since beginning same or have you changed at any time, if so why.

15. What is depth of your borewell in mtrs----------

16. I s there any attempt to redril same borewell?

17.Will you recall the crop you have grown last couple of years (Since 2011)

Crop	*Crop type*	*Year*	*Area (acres)*	*Yield (quintal)*	*Value*
1st crop		*2011*			
2nd crop		*2011*			
3rd crop		*2011*			
1st crop					
2nd crop					
3rd crop					
1st crop					
2nd crop					
3rd crop					
1st crop					

2nd crop					
3rd crop					
1st crop					
2nd crop					
3rd crop					

18. Economic support from DBCD provide in detail, if Any

Total expense	*Govt. Assistance*		*Repayment schedl*		*Beneficiary saving accout*
	Loan comp	*Subsidy*	*Term*	*Amt (Rs)*	

19.Marketing

Crop	*Market*		*Distance*	*Mode of transport*	*Remarks*
	Regulated	*unregulated*			

20.Assets

Items	*Units*	*Year of acquire*	*Present value*
Land			
Animals (cows &buff			
Poultry(birds)			
Agri equipment			
1.			
2			
3.			
4.			
5.			
TV			
Two wheeler			
Cycle			
Gold			

21. Does your family as local body member/panchayat raj institution

Yes/NO

22. Are you affiliated any political party Yes/No
If yes, which party

23.Does your family members are associated with SHG, if yes

Since when	*It is registered*	*Does it helping family*	*Borrowed for con/inve*	*Normally how much borrowed*

24.Still you are keeping contact with officials of GKY, if yes,
a. With whom b. Purpose c. Does they response

25.Does the contact is satisfactory/not satisfactory

26. Pleas narrate your experience with the official since recent years

Annexure-9

Dissenting views by evaluation team member or client if any

No such Dissenting views

Annexure-10

Short biographies of the principal investigator

Dr. VEERASHEKHARAPPA
Ph.D in Development Economics
Email: vshekhar146@gmail.com

I. Academic and other Positions held

Position	Place	Responsibilities	No of years
Associate Professor & Head	Center for Economic Policy and Studies, Institute for Social and Economic Change-Bangalore	1.Handling Ph.D classes 2. Taking up Research projects 3.Conducting Training Programme 4.Guiding Doctoral students	From Jan 1st 2009 June 30,2015.
Associate professor (4/1/2007-31/12/2008)	Post Graduate Department of Management Studies and Research **Siddaganga Institute of Technology (SIT) Tumkur 572103.**	1.***Teaching MBA students*** 2.Guiding student in management for Doctoral work. . 3..Handling research projects	Two Years (on lien) (AICT scale)
Associate professor (1/4/2005-2007)	RBI Chair Center for Economic Policy and Studies Institute for Social and Economic Change-Bangalore.	1.Handling Ph.D classes 2. Taking up Research projects 3.Conducting Training Programme 4.Guiding Doctoral students	19Months (Scale UGC)
Assistant Professor (Sept1995-2005)	Center for Economic Policy and Studies ISEC Bangalore.	1.Teaching to Ph.D students 2. Research 3.Conducting Training Programme	10 years
Consultant	J SS Consultant, at Mysore On deputation 1998-99	"Community Management Expert" in Karnataka Integrated Water Supply and Environmental Sanitation" project (Sponsored by World Bank).	Nine months on lien
Additional teaching	Vivekananda college, Bangalore	- Managerial Economics; Environmental economics	One year
Ph.D student At ISEC	Naveenshetty – ICSSR fellow- registered under Mysore University-	Micro Finance Institutions in Karnataka: An Analysis of Sustainability and Impact of Credit Services (submitted Dec, 2009)	

Administrative Experience: In charge as Chief Administrative Officer-six months PGDMS –SIT Tumkur

II. Recent Publications :

A. BOOK

1. Financial Inclusion to Livelihood: Entangled to gain, **Monograph, ISEC,** no 38, September 2015.
2. Reforming Cooperative Credit Structure in India for Financial Inclusion ,ICDD **Rainer Hampp Verag.,2015.**
3. Impact of the Revival Package for Short-Term co-operative credit Structure, in Madhya Pradesh**, Monograph, ISEC.** Bangalore 2014
4. Has the SHG-Bank Linkage Helped the Poor Gain Access to Capital?: A Comparative Study between Karnataka and Gujarat, Social and Economic Change **Monographs, 1,** ISEC Bangalore. 2005
5. **Institutional Finance for Rural Development**, Rawat Publications, (1999) Jaipur , INDIA (Recommended as reference book for MBA students in Punjab University & Satya Sai Institute of Higher Learning (Ananthpur-Andhra).

B. Articles

1. **Access of Bank Credit to Scheduled Castes: A Case Study of Karnataka (2014) Indian Journal of Inclusive Growth V1(2) June 2014.**
2. Co-author "How Important are Self-Help Group Promoting Institutions? A Case of Karnataka**, International Journal of Economics and Management Science, Vol 1(2) July-December, 2012, released 2013.**
3. Co-author" Outreach and Sustainability Micro Finance Institutions: Case Study from Karnataka**, International Journal of Economics and Management Science, Vol 1(2) July-Decmber, 2012, released 2013.**
4. Financial inclusive and Exclusive: Role of Micro Finance Institutions**, International Journal of Microfinance, Vol1 (2)July December 2011, Published from Pondicherry University.**
5. (Co-author)Progressive lending in Microfinance Program: An Empirical Study of Microfinance Groups" is published in **The MICRO FINANCE REVIEW,** Vol-III(1),Jan-Jun 2011,
6. (Co-author) The Role of Self-Help Groups(SHGs)as Micorfinancial Intermediaries: A Study in Sabarkantha district of Gujarat (India) **Working Paper 211, IRMA 2009**
6. (Co-author) Promotion of Sanitation in Karnataka: A Review of Strategies for Latrines, **Participation and Governance**, Vol 3(1) January 2010.
7. Community participation in rural drinking water supply and sanitation: A Case study of Karnataka, **Journal of Indian Water Works Association**, vol. 34 (1) Jan-March 2002.
8. Community Participation in Rural Drinking Water Supply and Sanitation: A Case Study of Karnataka, **Journal of Development and Social Change,** Vol VI(3&4), June-August, 2009.
9. (Co-author)Institutional Innovations and Access to Micro-Health Insurance for Poor: Evidence from Karnataka, India**. The ICFAI University Journal of Risk & Insurance**, 6 (1): 50-68, January 2009.
10. What should be the Role of Local Governments: Delivery of Services or Governance of Service Delivery? In Bidyut Mohanty (edit) Women and Political Empowerment, **Institute of Social Science,** New Delhi 2008.
11. (co-author)1. Perception and Politics: Grey Zones in rural Water Supply";

12. Understanding People's view on rural Water supply: A citizen card approach;,
13. Financing Rural Drinking Water Supply: A Case study of Karnataka and Gujarat
(three above articles) in Raju, K V (ed)**Elixir of Life**: **The socio-ecological Governance of Drinking water, published by IWMI-TATA-ISEC, Banggalore** (2007).
14. Credit Accessibility to Vulnerable Sections" in USHUS Journal of Business management VI (1) 2006, Bangalore, Published in 2007.
15. Community participation in rural drinking water supply and sanitation: A Case study of Karnataka, **Journal of Indian Water Works Association**, vol. 34 (1) Jan-March 2002.
16. Institutional Farm Finance during Reforms, in Choudhury and Singh (eds) (2000)" **Rural Prosperity and Agriculture Policies and Strategies**, National Institute of Rural Development Hyderabad, 2000.
17. Reforms in Rural Drinking Water Supply: Perspective and Problems, **Economic and Political Weekly**, Vol 34(52) December 25, 1999.
18. Dimension of Overdue in Karnataka, **Savings and Development**, XXI (3), 1997.
19. Rural Credit in VIP Districts: A Study in Uttar Pradesh, **Economic and Political Weekly**, Vol XXX (39), September 28, 1996.
20. Determinants of Institutional Credit Flow to Agriculture – Interdistrict Analysis: Karnataka, **Journal of Rural Development,** XIII (3), July-Sept, 1994.
21. Institutional Farm finance in Changing Scenario, **Agricultural situation in India**, XLVIII (12), March, 1994.
22. (Co-author) Employment Generation India, **Indian Journal of Labour Economics**, XXXVI (4) Oct-Dec, 1993.
23. Impact of Structural Adjustment - On working Class, Indian Journal of Labour Economcs, XXXV (4) Dec 1992, and it is reprinted in the edited volume **Saxena GS and Nayayana Rao J S (Ed) Industrial Restructuring and Surplus Labour Rehabilitation,** Delta Publication House, Hyderbad, 1995.
24. The Scheduled Caste Women Workers: The Most Exploited Group, The Indian Journal of Labour Economics, XXXI (4), Jan 1989, and it is reprinted in the edited volume, Anita Banerji and Raj Kumar Sen (Ed) **Women And Economic Development**, Deep &Deep Publications Pvt. Ltd, New Delhi, 2000.
25. Does Priority Sector Lending help the Poor, **Kurukshetra,** July 1994.
26. Institutional Farm finance in Changing Scenario, **Agricultural situation in India**, XLVIII(12), March, 1994.
27. (Co-author) Employment Generation India, **Indian Journal of Labour Economics**, XXXVI (4) Oct-Dec, 1993.
28. (Co-author) Employment: Problems and Perspective, **Southern Economist**, XXXII (9) September 1993.
29. Priority Sector Lending, **Southern Economist**, XXXI (21) March, 1993.
30. Impact of Structural Adjustment - On working Class, **Indian Journal of Labour Economcs**, XXXV (4) Dec 1992, and it is reprinted in the edited volume **Saxena GS and Nayayana Rao J S (Ed) Industrial Restructuring**

and Surplus Labour Rehabilitation, Delta Publication House, Hyderbad, 1995.

31. Business Policy in Indian Industry, (Review Article), **Journal of Scientific and Industrial Research**, Vol 49, April 1990.
32. Community Participation in Drinking Water Supply, **Social Welfare**, 15 February, 1990.
33. (Co-author) Sickness in Small Scale Sector: Causes and Cure **SEDME** XVI(1)March, 1989.
34. (Co-author)Rural Community Water Supply System -Some Observations, **Kurukshetra,** XXXVII (9) (Special Issue on Water) June, 1989.
35. Regional Development and Industrialization - Cause or Effect, A Case study of Karnatka, **Southern Economist,** XXIV (13), November, 1985.
36. (Co-author) Female Participation in Sericulture, **Satavahan**, III (4) 1984, Kakathiya POST Graduation Center, Karimnagar, Andhra Pradesh.
37. Labour in an Organised Sector, **VISION** IV (2), Oct-Nov 1984, Bhubaneshwar.
38. (Co-author) Urban Local Government In Karnataka, **Quarterly Journal of Local Self-Government**, **155**(25) Jan-March, 1984, Bombay.
39. Food for Work, **Samanvaya** (Kannada) 4(3) October, 1982, Mysore.
40. Disparities in Development, **Samanvaya** (Kannada) 3(2) July 1982, Mysore.

C. Working Papers

41. Sanitation Strategies in Karnataka: A Review, Working Paper 222. (2009), Institute for Social and Economic Change, Nagarbhavi, Bangalore 72.
42. 39. Community Contribution to Environment Sanitation: Myth or Reality?, Working Paper 171 (2006),
43. Institute for Social and Economic Change, Nagarbhavi Bangalore- 560072.
44. Financing Rural Drinking Water Supply: A Case Study of Karnataka, Working Paper 168(2006), Institute for Social and Economic Change, Nagarbhavi, Bangalore 560072.
45. Promotion of Individual Household Latrines in Rural Karnataka: Lessons learnt, Working Paper 160 (2004), Institute for Social and Economic Change, Bangalore 560072

D. Studies completed in recent years

1. Quality and Sustainability of SHGs : In Karnataka State
2. **Economic up gradation of Vulnerable groups through GSY programme** (with Mypsed),
3. Sponsored by Government of Karnataka. June 2008.
4. **Survarna Grama Yojan (Action plan for two villages), Sponsored** by Government of Karnataka, June 2007.
5. **(Co-author) The performance of Self-Help Group (SHG)- Bank Linkage Programme in India: A comparative Study of Karnataka and Gujarat (Sponsored by Ratan Tata Trust) .**
6. (Co-author) 'RWS in Karnataka -**Moving towards organized complexity**' **- A Ecological - Governance Approach,** sponsored by IWMI-TATA collaboration, 2004.

7. (Co-author) **Role of Local Organisations in Water Supply and Sanitation Sector: A Study in Karnataka and Uttaranchal States**, Funded by World Bank, 2003.
8. **Karnataka Integrated Rural Water Supply and Environmental Sanitation in Pilot Villages: An Impact Study for Government of Karnataka, study** completed for Department of RDPR Government of Karnataka and supported by World Bank, 1999.

E. Seminars, Workshops attended

9. Paper presented on " Financing Rural Drinking Water Supply: A Case Study of Karnataka presented in IWMI-TATA Partners Meet February 24-26, 2005 at Anand, Gujarat, INDIA.
10. The meeting on partnership meet of WaterAid was attended and discussant for Delhi Study on 15th March at IIPA, New Delhi.
11. Interaction Section Meeting with Business Delegation from SPAIN at Hotel Taj West End, Bangalore on 11th April, organised by Bangalore Industry and Commerce. The Interaction concentrated on privatization of Municipal waste management.
12. **Paper presented on " Sanitation and Wastewater Management: The way forward" at Asian Development Bank" Manila on 19-20 September, 2005.**
13. Paper presented on " Daliths Role in water supply and sanitation programme" paper presented in IWMI-TATA Partners Meet March 7-8 March 2006 at Anand, Gujarat, INDIA.
14. Paper presented "Community contribution for Environmental Sanitaton: Myth or Reality", Natioonal Seminar on Paradigm Shift in Governance: The Emerging challenges and Strategies, 28-29th March 2007.
15. Attended seminar on "Learning to leadership adaptively" organized by Cambridge learning Associates USA &SIT at Bangalore on 5th & 6th June 2007.
16. Attended workshop on "Case writing" at PESIT Bangalore on 12th April 2007.
17. Attended workshop on "Decentralization and governance: Experiences of Karnataka and Kerala, Center for Rural Management, Kottayam sept 7-8, 2007.
18. Workshop on " Training on Leadership and team Building at karl Kubel, Coimbatore on 16-18th Agugust, 2007.
19. Paper submitted on "Service Delivery by Local Government: Perspective and Problems" at National conference On Panchaytraj and Rural development at Tirupathi, organized by AGRASRI & RRDF 19-20th August, 2007.
20. Participated in a Seminar on "Microfinance and challenges" organized by Grammna Koota on 30/5/09 at Hotel Capital, Bangalore.
21. *Organised Seminar on" Sustainability of SHGs: Challenges on 21st November, 2008 at Siddaganga Institute of Technology.*

F. Visits Abroad in recent years

1. Visiting Professor as Tagore chair professor at University of Social Science and Humanities, **Hochiminh City Vietnam** for a semester 2013-2014 (**sponsored by ICCR, MEA,New Delhi**).
2. Visit to Philippines to present paper on " Public private participation in sanitation at workshop" on "Sanitation and Wastewater Management: The way forward" organized by **Asian Development Bank September** 19-20,2005.
3. Visit to Thailand and Kaulalampur to study 'Public Health Reforms" during March 2005. The objective of the tour was to learn and possibility of incorporating best practices of population based health services (Drinking water and Sanitation) in Karnataka health Project, **supported by GOK.**

Annexure-11

The suggestions and recommendations received from the Independent assessor (IA) are incorporated by the evaluation agency and the details of the page number bearing the changes are listed in form of a table below:

Sl. No	Comments and suggestions from independent assessor	Current document page number, with correction	Response against suggestions
1	Elaboration on research design	23-26	The research design is discussed and elaborately presented in Chapter 7 & 8 of the final report draft. Also *exclusive method for answering the questions are presented.*
2	Suggestion on usage of specific statistical method	13-20	The presentation was not only made through frequency and tables but also it has been presented graphically wherever needed, please refer to chapter 3 and 4 for the same. The suggestion made on usage of specific statistical methods, those methods can be adopted, if we have time series data. As the study has its limitations in a cross sectional study some of the methods suggested are not applicable. However, we have made efforts in presenting variation in deriving the benefits in different years. There is correlation in year of joining and deriving the scheme benefits. The report projects how farmers who have joined 2009 have got more benefit relatively compared to the ones who have joined in the year2013.
3	Suggestion on comparing similar programmes in other states	9-12	It has been mentioned that, the study should have compared similar programmes in other states that would have given new dimension for programme implementation in future. Based on our study, we recommend that there is great scope for exploring the scheme implementation in other states

			that would throw greater insights into enabling and hindering factors in scheme success. However, as an external evaluator we have adhered to the study mandate assessing only the present programmed within the state. However, similar programs have been compared within the state, chapter 2 and 3.
4	Suggestions on findings and recommendations and overall presentation	57-62	While presenting the conclusion, we have elaborately presented the same in last chapter. The conclusion and suggestion made are based on findings that have been described in earlier chapters. For instance, the type of problem encountered by the middle level bureaucracy has been presented based on data findings depicted earlier. How to overcome those problems has been presented in last chapter. The economic and non-economic benefits derived by the beneficiaries are presented in last chapter. The study has made efforts in fulfilling all the study objectives and answering specific questions mentioned in work order and inception report. The study has been able to bring all parameters in fulfilling set objectives of the study.

The suggestions and recommendations received from the KEA are incorporated by the evaluation agency and the details of the page number bearing the changes are listed in form of a table below:

Sl. No.	Point discussed/ issues raised in the Technical committee meeting on 01.03.2017	Oblique suggestions incorporated as in page number
1	Annual distribution of 621 sampled beneficiaries during the evaluation period (2008-2013) to be reported	A detailed year wise break up of beneficiaries across Individual irrigation, community wells and lift irrigation scheme is given in Annexure 1, 2, 3 respectively in page number 63,64 and 65. In addition Table 3.2 in page number 42 categorically defines the year of application submission, year of sanctioning and year of scheme execution for all sampled 621 beneficiaries.
2	Land distribution among the samples to be analyzed at the time of availing the Scheme's benefit	The percentage distribution of beneficiaries across the category of marginal and small farmers; their land holding status at the time of availing the Scheme's benefit is detailed out at page number 36 in Table 2.6. Additionally category wise land holding is described Pre GKY and Post GKY in Tables 4.6 and 4.7 across page number 55.
3	Analysis of delay in implementing process to be reviewed	Chapter 11 in detail analyses the delay at different stages of implementation and also analyses the major causes contributing a

		specific process to stretch beyond its stipulated time period. We in discussion with the department have taken the time schedule set by the department as our guideline, which has been presented in annexure 4 at page number 66
4	Recommendations are to be synchronized with the objective of the scheme	The specific suggestions and recommendations are proposed in line with the scheme objectives, detailed at page number 61 and 62

FILE NO. KEA 152 EVN 2015 (V-III)

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Karnataka Evaluation Authority

Evaluation of Ganga Kalyana Scheme from 2009-2013