

THE IMPACT OF JALANIDHI PROJECT ON
KULATHOOR GRAMA PANCHAYAT

A dissertation submitted to the University of Kerala in partial fulfillment
of the requirements of the Masters Degree In Social Work.

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DECLARATION

The Dissertation Titled “*The Impact of Jalanidhi Project On Kulathoor Grama Panchayat*” has not formed the basis for the award of any degree, diploma, associate ship, fellowship or other similar time of recognition.

Date : 26.05.2008

Signature.

THE IMPACT OF JALANIDHI PROJECT ON
KULATHOOR GRAMA PANCHAYAT

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CHAPTER I

INTRODUCTION AND METHODOLOGY

INTRODUCTION AND METHODOLOGY

SYNOPSIS

- 1.1 INTRODUCTION
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- 1.17 CHAPTERIZATION
- 1.18 LIMITATIONS OF THE STUDY

1.1 **INTRODUCTION**

Kerala is one of the smallest states in India covering only 1.3% of the total area of the country. The population here is over 30 million. Geographically Kerala can be divided into three district divisions namely Sandy Coastal region, Midland region and the Western Ghats. The annual rainfall of Kerala is about 3000mm. Kerala has 44 monsoon fed rivers. Kerala is also blessed with number of back water lagoons and other natural water sources. In the midst of this Plentyness Kerala is facing severe drinking water scarcity. Scarcity in the midst of plenty is a strange condition. More over the state is lacking an effective drinking water supply programme. The coverage of safe drinking water in the rural areas is less than 50%.

Many factors have been identified for the slow growth of water supply programmes in Kerala. In effective coverage, supply driven approach, poor cost recovery, lack of involvement and ownership of the users, centralization etc are identified as reasons.

In this scenario, the World Bank funded a Rs.380 crore project which was initiated by the Government of Kerala in late 1999. The project is known as the Jananidhi Project. The project brings about a paradigm shift from the traditional supply driven approach to demand driven delivery of water and sanitation services in Kerala's rural sector.

The project is implemented only on selected Grama Panchayat and the purpose of this study is to find out the socio-economic impact of this project on one of the selected Panchayat.

MORE ABOUT THE PROJECT

The World Bank assisted Jalanidhi Project was conceived in mid 1999. The Project Implementation Plan was prepared and project appraised in mid 2000. The agreement with the World Bank was signed on 4th January 2001. The Government has also created an autonomous institution known as ‘Kerala Rural Water Supply and Sanitation Agency’ (KRWSA) to implement this project.

PROJECT OBJECTIVES

The over all project objective is to assist the Government of Kerala in improving the quality of rural water supply and environmental sanitation service delivery to achieve sustainability of investments .

Specific objectives would be to,

- ❖ Demonstrate the viability of cost recovery and institutional reforms by developing, testing and implementing the new decentralized service delivery model on a pilot basis.
- ❖ Build the State’s capacity in improved sector managements in order to scale up the new decentralized service delivery model statewide. This will assist the Government of Kerala in furthering it’s sector related goal of increasing the access of Kerala’s rural population, particularly the poor and socially disadvantaged groups, to drinking water supply and environmental sanitation services.

THE PROJECT COMPONENTS

Sustainable supply of safe drinking water for the project area being the main focus,

sustainability of water sources, sustainability of the delivery mechanism and quality of the water supplied are the major thrust areas and the project components are also designed to ensure these.

The major components of the project are:-

- ❖ Rural water supply
- ❖ Ground water recharge
- ❖ Environment management plan
- ❖ Sanitation and hygiene promotion
- ❖ Women development initiatives
- ❖ Capacity building
- ❖ Grama Panchayat strengthening

INSTITUTIONAL MANAGEMENT

Sustainability through participatory approach is the corner stone of this intervention.

- # There is a State Level Project Management Unit (PMU), situated at Trivandrum.
- # There is a District Project Management Unit (DPMU) in each of the project districts. These DPMUs are the front line contact points of KRWSA, providing technical and financial support to the GPs and SOs.

- # **The Grama Panchayat (GP):-**

Grama panchayat is the Local Self Government institution operating as the nodal body at the panchayat level. The GP shares 10% of the capital expenses and also functions as the final arbitrating authority, being the local governing body under the decentralized planning.

- # **Support Organisation (SO):-**

An NGO is identified at the Panchayat level, to assist the GP and the BGs in technical and managerial matters. The NGO's are funded by the Project.

Beneficiary Group:

The project ensures subsidiarity right down to the grass root level. At the individual level, are BGs, comprising of the actual users who are responsible for the operations right from the source identification, technology selection, community contracting, purchase and implementation to operation and maintenance of the scheme.

PROJECT PHILOSOPHY

Demand Driven Approach:-

Unlike the supply driven approach hither to followed, this Project is implemented based on the need of the people. The Project has been introduced only in areas where interested groups of people show their willingness to participate in the Project and abide by the conditions of cost sharing. The group then gets a legal entity by registering themselves and only then proceeds with the rest of the planning. The source selection, technology selection, purchase, contracting and implementation is done by this registered body, the beneficiary group with technical help from support organizations. This indicates a sense of ownership in the people.

Cost sharing approach:-

To ensure stock holding of the project, 15% of the capital costs is borne by the beneficiary community, of the remaining, the Grama Panchayat bear 10% and the 75% by the State Government through ADB.

Cost Recovery:-

The BGs themselves meet 100% of the recurring costs of operations and maintenance. This lightens the burden of the state, there by helping the Government to utilize this money for other priority needs.

Integrated approach:

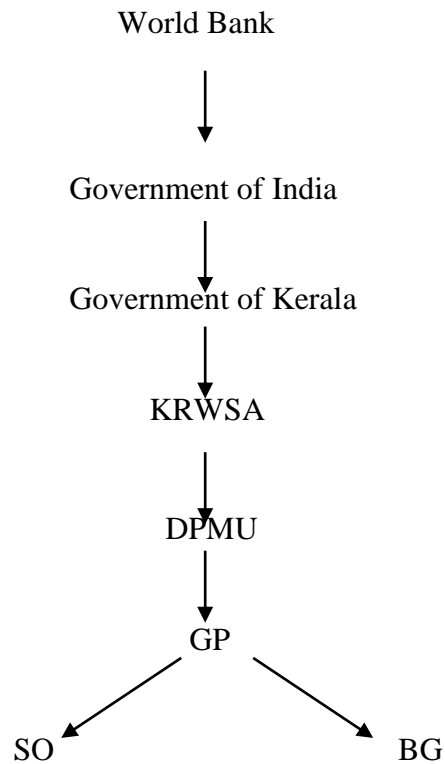
Sustainability of water source is ensured through point-source recharge measures. Quality of water is ascertained through a mix of sanitation and hygiene promotion and provision of infrastructures like latrine, compost pits etc.

Sustainability of system is ensured through community empowerment, capability building, women empowerment through SHGs and social mobilization.

Pro-poor approach:-

Special efforts have been taken in the project design to include the poor and vulnerable sections while selecting the user groups. The 15% capital investment can be through cash or in kind, as labour. Intra group and inter group subsidization is allowed with the responsibility by BGs.

Fund Flow:-



METHODOLOGY

1.2 **Title of the study:**

The Impact Of Jalanidhi Project On Kulathoor Grama Panchayat.

1.3 **Research Design :**

The present study will be evaluatory in nature. That means a study conducted to evaluate the changes brought by the project. The study will be also evaluating how far the project is successful in actualizing its objectives.

1.4 **Research Problem :**

Jalanidhi is a massive project funded by World Bank and implementing by the Government of Kerala. The Project itself is claiming that it is a tool for community development. The overall objective is to provide pure and safe drinking water to the rural areas and to improve the sanitation facilities. The Project has been designed and implemented on a participatory model a new decentralized service delivery model. The actual users are the decision makers right from identification and maintenance. In Thiruvananthapuram district, the Project is being implemented at two Grama Panchayats. Vellarada and Kulathoor on experimental basis. Now with this study, the researcher is going to evaluate the impact of this Project in one of the above mentioned Panchayat. Through this study, the researcher wants to evaluate the effectiveness of the Project in reducing the drinking water problem, functioning of hygiene and sanitation promotion programme under the Project, enhancement of community living due to the Project, participation from the part of Grama Panchayat and Various other elements, hence the study is an evaluatory study about the impact of Jalanidhi Project.

1.5 **General Objective :**

To study about the socio-economic impact of Jalanidhi Project on the Kulathoor Grama Panchayat.

1.6 **Specific Objectives :**

- 1) To find out the effectiveness of the Project in reducing the drinking water scarcity of the area.

- 2) To find out the efficiency of the support organization in implementing the Project.
- 3) To identify the role-played by the Local Self Government of the particular Panchayat.
- 4) To study about the empowerment process of women that took place as a result of this Project.
- 5) To study about the impact of sanitation and hygiene promotion programme under this Project.
- 6) Identifying the role played by the beneficiary groups during the different stages of the Project and to evaluate the enhancement of community living by the beneficiary group of the programme.

1.7 **Significance of the study**

Jalanidhi Project is an ADB funded Project, implementing with the help of Government of Kerala, through KRWSA, SO and BGs. The main aim of the Project is to assure pure drinking water to rural Kerala. The Project also includes environment management, women development, initiatives, sanitation and hygiene promotion, strengthening of Grama Panchayat etc are also included as Project component. So as an MSW student specializing in community development, it is the duty of the researcher to evaluate the impact of such a decentralized Project among the target groups.

1.8 **Variables Used**

Independent Variable: Jalanidhi Project

Dependent Variables: Water scarcity, women empowerment, community empowerment, financial sustainability, hygiene and sanitation facilities.

Intervening Variables: Support organization (SO), Grama Panchayats, Beneficiary groups.

1.9 **DEFINITION OF CONCEPTS**

a) **JALANIDHI PROJECT** :-

Theoretical Definition :- A World Bank funded Project initiated by the

Government of Kerala in late 1999 bringing about a paradigm shift from the traditional supply driven to demand driven delivery of water and sanitation service in Kerala's rural sector.

Operational Definition :- An innovative drinking water supply and sanitation programme performed by Government of Kerala, implemented by ensuring people's participation with the help of Grama Panchayats and service organizations.

b) **COMMUNITY ENVIRONMENT** :-

Theoretical Definition :- To increase the capacity of a community, making it able to do things for itself.

Operational Definition :- Community empowerment means increased ability and strength. It means more skills, more confidence, and more effective organization. It cannot come about by charity or donation of resources from outside. It can be facilitated only when all the community members become involved in the entire process.

c) **WATER SCARCITY** :-

Theoretical Definition :- Water scarcity is an extended period of months or years when a region notes a deficiency in its water supply.

Operational Definition :- Water scarcity in a region indicates there is a lack of appropriate water supply in that area resulting in the poor socio-economic development of that particular area.

d) **WOMEN EMPOWERMENT** :-

Theoretical Definition :- Making women more confident and makes them fact that they are in control of their lives.

Operational Definition :- Women empowerment is a process in which there is a system for uplifting the marginalized women socially and economically.

e) **FINANCIAL SUSTAINABILITY** :-

Theoretical Definition :- Betterment in the financial condition that will continue over a period of time.

Operational Definition :- Stability in the income produced leading the villages to savings and thus ensuring a bright future.

f) **HYGIENE AND SANITATION FACILITIES** :-

Theoretical Definition :- The science of healthy living that protect people's health, especially those that dispose efficiently.

Operational Definition :- Providing a healthy ambiance to the common people enabling them to lead a clean and disease free life.

g) **SUPPORT ORGANISATION** :-

Theoretical Definition :- An NGO identified at the Panchayat level to assist the Grama Panchayat and the beneficiary groups in technical and managerial matters.

Operational Definition :- An organisation that will work in hand with the Local Self Government and the community members, which enables a smooth running of the Project.

h) **BENEFICIARY GROUPS** :-

Theoretical Definition :- A group comprising of the actual users who are responsible for the operation right from source identification, technology selection community contracting, purchase and implementation to operation and maintenance to the scheme.

Operational Definition :- A group formed on the basis of the Project, which will enhance the community living of the members which will finally leads to the actualization of decentralization of power to the grass root level.

i) **GRAMA PANCHAYAT** :-

Theoretical Definition :- The Local Self Government institution operating as the nodal body at the panchayat level contributing a 10% shares of the capital expenses and also functions as the final arbitrating authority.

1.10 **UNIVERSE OF THE STUDY**

Kulathoor Grama Panchayat, one of the Grama Panchayats, where the Project has been implemented successfully.

Unit: - Beneficiary group members from the Panchayat.

1.11 **PILOT STUDY**

The researcher conducted a Pilot study on two Panchayats, Vellarada and Kulathoor where the Project has been implemented and selected Kulathoor Panchayat as the universe of the study. The researcher visited some of the beneficiary groups, located the wells and water tanks, identified the piped water supply systems before going to the data collection.

1.12 **SAMPLING STRATEGY** :

Purposive Random Sampling (The researcher will purposively select the

Beneficiary Groups and randomly interviews the beneficiary group members).

1.13 **TOOLS FOR DATA COLLECTION** :-

Interview schedule, observation.

1.14 **PRETEST** :-

The researcher prepared the interview schedule and interviewed some of the Beneficiaries group members. The pretest helped researcher to remove some of the] Questions which seemed to be unwanted.

1.15 **ANALYSIS AND INTERPRETATION** :-

Analysis and interpretation was done through SPSS.

1.16 **STATISTICAL TECHNICIANS USED** :-

The researcher used Statistical Programme For Social Sciences to analyze the data

1.17 **CHAPTERIZATION** :-

The study will be presented in four chapters arranged in the following sequences. The first chapter ‘Introduction’ consists of rationale, objective and methodology of the study. The second chapter deals with the review of related literature. The data analysis and interpretation will be presented in the third chapter. The last chapter gives the summary of findings of recommendations followed by conclusion.

1.18 **LIMITATIONS OF THE STUDY**

- a. A large sample would have given greater validity to the generalization. The researcher in this study could collect only sixty samples, which will limit the validity.
- b. Time constrain is major limitation of the study.

- c. The universe was fixed to be a particular Panchayat. The socio, economic, cultural and geographical features may not equalize with other Panchayats. So the study cannot be taken as a reference.

CHAPTER II

REVIEW OF STUDIES

A case study conducted by Mr.Swaminathan .S. Ayyer reveals what Jalanidhi tells us about community driven development. The title of study was ‘A case study of Kerala’s Rural Drinking Water and Sanitation Project.

Broad Outline of Jalanidhi

The Grama Panchayats lack the resources to attend to all deserving sectors. So they have welcomed Jalanidhi. Under this, communities raise 15% of the capital cost of subprojects, Grama Panchayats contribute 10%, and the balance of 75% is contributed by Government of Kerala (GOKs) (using the Bank loan). The nodal oversight agency of Government of Kerala is the Kerala Rural Water Supply and Sanitation Agency (KRWSA), registered as an autonomous society to try and shield it from political pressures. It plays the role of facilitator, provider of expertise and finance, and trouble-shooter. Its staff is mainly deputations from the civil service and government engineering departments, but includes private sector recruits. Its Board includes representatives of the Ministries of Finance, Local Governments, and Water Resources.

The flow of funds in Jalanidhi is from the World Bank to the GOI, thence of the GOK/KRWSA, thence to the District Project Management Units (DPMUs) of the KW RSA, thence to the GPs, and thence to beneficiary groups (BGs) that actually execute and maintain subprojects. Funds also flow from the DPMUs to the Support Organizations (SOs) that assist communities with mobilization and technical skills. A detailed pictorial chart is given in Annex 14. Once communities have executed and learned to maintain subprojects, the SOs withdraw, GPs are expected to provide any subsequent technical support. In effect, this is a joint venture between KRWSA, the GPs, SOs and communities, each functioning according to its comparative advantage.

Jalanidhi began in 1999 with a pilot aiming to build 80 drinking water schemes in 5 GPs. The beneficiary groups (BGs) in the pilot are being treated as the first of five overlapping batches in the Bank-supported project. Each batch cycle is spread over 27 months, divided into four phases: 3 months for pre-planning (selection of support organizations, GPs), 12 months for planning (mobilizing BGs, preparing subproject plans, mobilizing community cash contribution), 8 months for implementation (construction of subproject) and 4 months for post-implementation operations (O&M, technical support where needed). A detailed chart of the four phases is given in Annex 17. The Project Appraisal Document (PAD) aims to cover 2,500.

Jalanidhi is does not aim to cover all people, only those who demand it and are willing to pay 15% of capital costs (of which at least half must be cash and rest may be labor) and 100% of O&M costs. These may total less than 40% of the population: the rest will continue to rely on own supplies (through wells and tube wells) and the KWA. Self-selecting beneficiary groups (BGs) have to execute the projects with the assistance of SOs, and maintain the project and collect user fees after completion. BG members who fail to pay are denied water.

ROLE OF GRAMA PANCHAYATS, SUPPORT ORGANIZATIONS

Interested Grama Panchayats in the project districts are asked to apply for funds (a maximum of Rs.30 million each). Since funds do not suffice for all Grama Panchayats, Government of Kerala picks Grama Panchayats for the project on the basis of criteria such as (a) a high proportion of poor and socially disadvantaged groups (like Scheduled Castes and Schedules Tribes); (b) severity of water scarcity; (c) poor latrine coverage; and (d) strong capacity, measured by the proportion of decentralized Annual Plan allocations utilized. The project originally aimed to benefit around 1.5 million people in the four districts, but this target is likely to be exceeded comfortably.

Grama Panchayats are trained by KRWSA for their role in Jalanidhi. They are supposed to gain enough technical skills to support BGs and SOs have exited from subprojects. Grama Panchayats are also given project funds of Rs 1 million each, part of which is used to buy computers into which data for MIS/FMIS can be entered. Of the Grama Panchayats grant,

Rs 0.3 million is untied, and can be used for any purpose flexibly. The District Planning Committees of Grama Panchayats have folded Jalanidhi into their overall water plans.

Technical and community mobilization skills are provided in this project by Support Organizations (SOs), which are sometimes called NGOs but are actually paid technical consultants. A short-list of Support Organizations is prepared by the KRWSA on the basis of criteria such as their legal status; secular and non-government status; at least three years of proven track record; audited accounts; freedom from litigation and staff capacity. Grama Panchayats are allowed to choose Support Organizations from the shortlist. Then a Planning Phase Tripartite Agreement (PPTA) is signed by the KRWSA, Grama Panchayats and Support Organizations, launching the planning phase of the subproject cycle.

Support Organizations and Grama Panchayats undergo training for the project. They then organize public meetings as part of an IEC campaign to disseminate the opportunities for and advantages of community-driven drinking water and sanitation. Citizens are facilitated by the Support Organizations to organize themselves into Beneficiary Groups (BGs) that are willing to contribute to capital and maintenance costs, and take the responsibility for execution and maintenance. Jalanidhi has designed comprehensive rules for Beneficiary Groups formation to ensure social inclusiveness, participation, real empowerment of communities, transparency and accountability.

A QUADRILATERAL PARTNERSHIP

The KRWSA and Support Organizations train Beneficiary Groups to keep books and records, follow mandatory rules and procedures (notably reporting and audit requirements), prepare tender documents, construct wells and rain water harvesting devices, lay pipes for household supply, and handle O&M. The aim is to empower Beneficiary Groups to appraise plan, implement, operate and maintain drinking water and sanitation schemes.

The Support Organizations use participatory methods (transect walk, resource mapping, participatory appraisal) while working with Beneficiary Groups to assess their drinking water needs, identify local water sources, and calculate the capital and O&M costs for various

technical options. In the light of this information, Beneficiary Groups decide which technical option they prefer (open wells constitute almost 90% of the options so far). An independent hydrologist has to certify that the identified water source can provide water for the next 20 years. Detailed Scheme Reports (DSRs) are prepared by the Support Organizations and vetted by KRWSA for costs (the norm, interpreted flexibility, is that these should not exceed Rs 15,000 per beneficiary) and technical parameters. The Detailed Scheme Report also includes other elements of the project. Here again the Support Organizations also works in a participatory manner with communities to work out a latrine and drainage plan, a ground water recharge plan, an environmental management plan, a women's development initiative plan, and a sanitation and hygiene promotion plan. The KRWSA, Grama Panchayats and Support Organizations sign an Implementation Phase Tripartite Agreement (IPTA) to kick off the implementation stage.

Then each Beneficiary Groups has to deposit its contribution of capital cost with Grama Panchayats 15% of the capital cost (10% in the case of STs). Of the capital contribution, at least half has to be cash (one-fifth for STs). This triggers the signing of Implementation Phase Quadrilateral Agreements (IPQAs) by the KRWSA and concerned Grama Panchayats, Support Organizations and Beneficiary Group. This is the key document that incorporates the roles and obligations of all four partners, and it includes the community empowerment plan of the Beneficiary Groups. The Beneficiary Group gets, in three stages, matching grants totaling 10% of project cost from the Grama Panchayat and 75% from the KRWSA for construction. Simple procurement procedures enable most communities to execute many contracts themselves, using only purchased materials. Other communities contract out part or all construction.

Once construction is complete, Support Organizations help Beneficiary Groups to take charge of O&M, collect dues, maintain books and implement M&E. This is a learning-by-doing process. After three months of this handholding, Support Organizations exit from the subproject, and the Beneficiary Groups are in full charge. They can ask the Grama Panchayat for technical support as needed.

The project is demand-driven in a special sense. It does not aim at universal coverage. It covers only those Grama Panchayats that demand it; within them only to Beneficiary Groups

that demand it; within Beneficiary Groups, to those that pay in full. Empowerment flows from payment: those who pay get water, others do not. This reduces the chance of elite capture or social exclusion: payment determines who gets water. The richest (who already have piped water from their own wells) and the poorest (who may not have the upfront cash) may be left out.

SUCCESS, WEAKNESSES, OPPORTUNITIES, THREATS (SWOT)

ANALYSIS ABOUT THE PROJECT

SUCCESS

- a. The project has shown that empowered communities can plan, contract, construct, operate and maintain small drinking water schemes.
- b. The biggest indicator of success is that the pilots will create 120 drinking water schemes against the target of 80, within budget. That shows how substantial are the cost savings (for details see section 2.2.6). This lends credibility to KRWSA's claim that it will ultimately be able to build 3000-35000 schemes in the four districts against the target of 2,500.
- c. Another major indicator of success is that in the latest panchayat elections, two-thirds of incumbent Grama Panchayat leaders were voted out, but all five Jananidhi Grama Panchayats were re-elected. Political success can be even more important than cost-cutting success. Grama Panchayat leaders in the five pilots were all re-elected in the last panchayat election, whereas two-thirds of Grama Panchayat incumbents were voted out.
- d. Corruption is minimal in the project, claim Beneficiary Groups and Grama Panchayats, in contrast to other government programs. This claim again is credible because of proven cost reduction and political success.
- e. Jananidhi is appreciated by Beneficiary Groups for more than just water. It is seen as a source of happiness, reduced family stress and improved social status.
- f. The project has benefited from the strong political commitment in Kerala to CDD, and by the decentralization that preceded it.
- g. CDD has created competition within the water sector that has improved the performance of existing supply agencies.

- h. Stakeholders in the project have, by and large, pulled together as partners. Some issues in co production remain.
- i. Jalanidhi has given CDDs a good reputation in the pilot Grama Panchayats. This could encourage a similar approach to other community projects in minor irrigation, local roads and housing. Around 9% of Beneficiary Groups in batch I have diversified out of water into other community-based activities.
- j. Since women traditionally fetch and carry water, piped household water has been an important tool in women's empowerment. It has also shown that supposedly free KWA water is actually a major burden on women.
- k. The project has improved the skills of Beneficiary Groups and Support Organizations in ways that should have an impact long after this project is completed. Many BC members from Batch I have been hired as community experts by Support Organizations. One Support Organization has started a correspondence course in water and sanitation, and people are now willing to pay for such courses.
- l. The project has proved that consumers are willing to pay for services, and this can check the traditional political tendency to provide free services that empty the government treasury, not only in India but other states.

WEAKNESSES

- a. The project has suffered from fund flow problems and time overruns. Government of Kerala suffered a fiscal crunch and could not meet all its financial commitments on time. A strike by government employees led to further delays. The World Bank reimburses Government of Kerala within 50 days, but the fiscal crunch in 200102 was such that Government of Kerala could not advance money even for 50 days. Bills remain pending for a long time in the bureaucracy at the best of times and for all projects. Every bit of paperwork for the PPTAs and IPQAs has to be complete before funds are released, and this proved vexing for Support Organizations, Grama Panchayats and Beneficiary Groups not used to paperwork. KRWSA often had to intervene to try and persuade Government of Kerala to accelerate the flow of funds.
- b. Construction in Kerala needs to be done in the dry season February-May, between the northeast and southwest monsoons, failing which projects typically slip by one year

into the next construction season. This explains why so many subprojects slipped by a year or more in batch I. Even in batch 2, of the 950 subprojects in the pipeline, it seems doubtful if more than 600 will get their funding before the rains come, and the rest will slip by a year. Slippage can be expected in every batch.

- c. Serious problems have been encountered in KWA takeover schemes. (see box 6). One of the best Support Organizations in Erimayur took over a year to persuade existing KWA users to switch to Jalanidhi. At the end of 2002, only four of the 19 KWA takeover schemes in Batch I had been completed.
- d. The time needed for bureaucratic processes, training and community mobilization is often more than provided for in the PAD. Maithri, a prominent SO, argues that more time is needed for every phase of each batch.
- e. The Grama Panchayats in batch I are proven good performers (they were chosen for their track record in utilizing devolved funds), but later batches are likely to be weaker.
- f. Not all Support Organizations are equally good. The KRWSA chief estimates that of the 21 Support Organizations in batch I, half are excellent, another one-third are so-so, and the rest are below par. This implies that scaling up will pose problems of SO quality.
- g. KRWSA has been very active in overcoming glitches and bureaucratic hold-ups in batch I, but may find it increasingly difficult to tackle the rising scale of problems as the project scales up.
- h. Latrine building has been tardy. One reason is that the subsidy for latrine construction is given only to those who are certified by the GP as being below the poverty line. This is a deterrent to some. A latrine costs Rs. 5,000/- but the subsidy is Rs. 2,000/-, which means the owner's capital cost contribution for a latrine (Rs. 3,000/-) is more than for a water connection (typically below Rs. 2,000/-). The quality of the Support Organizations in disseminating hygiene awareness probably matters a lot. Of the 1,600 or so latrines sanctioned in the five pilot Grama Panchayats, 900 are in just one Grama Panchayat, Erimayur, which has a highly regarded Support Organization, Maithri.
- i. The proportion of households washing their hands with soap before meals, after defecation, and after cleaning children were 38.1%, 37.2% and 37.8% against the target of 75% in March 2003. Only 22% of people practiced safe disposal of feces.

- j. The conversion of deep-pit latrines into double-pit latrines is desirable, to reduce sewage infiltration into ground water. Households are entitled to a subsidy of Rs. 500/- (later raised to Rs. 1,000/-), but this falls short of the conversion cost of Rs. 2,500/-, and few households are motivated to spend money on a change with environment externalities rather than direct benefits.
- k. Daily chlorination of water was done in only 36.7% of Beneficiary Groups, according to a review report in March 2003.
- l. Components other than drinking water, such as ground water recharge, drainage, hygiene awareness and women's development are given much lower priority by Beneficiary Groups.
- m. Many communities (especially in tribal areas) appear to be heavily dependent on Support Organizations, so much so that the subprojects sometimes appear to be SO-driven as much as community-driven.
- n. The capacity of ST communities looks weak, and it remains to be seen if they can function properly after Support Organizations exit.
- o. M&E has some weakness. A PME manual is still under preparation, and will draw on pilot experience. Some Beneficiary Groups say they keep registers and books but the data are not regularly transmitted to Grama Panchayats or the MIS. The KRWSA chief says that at this stage the MIS is being used as a project management device, not one to share information between stakeholders. He aims to revamp the system and the Jalanidhi website to rectify this shortcoming.
- p. Most Beneficiary Groups lack a contingency fund, and may not be able to cope with a tank collapse or other major repairs. Ideally, they should insure their assets and collect premiums from members as part of user charges (Kunnumel BG has done this).
- q. Some co production issues have not been resolved (see section 2.2.7). Despite these problems, the project has got off to a good start.
- r. The WDI component has weaknesses. Till February 2003, 162 Self Help Groups (thrift/credit groups) were set up, but only 42 women's micro enterprises were approved, of which only 19 were fully functional. The rules provide a subsidy only for enterprises started by a group of women, not individuals, and this is a hurdle to entrepreneurship.

OPPORTUNITIES

- a. Rural water reform could trigger urban water reform along CDD lines. The KWA may continue handling main pipelines, but the small-pipe network for neighborhoods could be hived off to BGs that levy user charges and take over O&M.
- b. Federations of BGs could be created that can take up large river-based projects with scale economies to supplement small, local schemes. An apex federation of BGs could take over the functions of the KWA.
- c. The good start made by Jalanidhi could encourage the use of CDD in other areas such as minor irrigation, rural roads and street lighting.
- d. Other states are going for CDD in water and other areas. This provides new employment opportunities for Kerala's SOs (and the BC members they are now hiring as staff). In neighboring Karnataka, consultants for CDD water projects are being paid Rs.18 million per scheme, against just Rs 3 million in Kerala.
- e. Kerala is experimenting with a CDD variation, the SRP, in Kasargod and Kollam districts. It is planning another CDD variation in two other districts with Dutch support. These CDD experiments could provide valuable lessons when scaling up Jalanidhi to cover the remaining 8 districts of Kerala.

THREATS

- a. The biggest threat by far is political. Some politicians, trade unions and the KWA resent their loss of power in the CDD approach, and seek ways to reverse the process (see section 2.2.3 for details). Ideally CDD should be accompanied by a plan to phase out the KWA altogether.
- b. The water table is falling in Kerala, and the very availability of piped water through Jalanidhi could increase consumption and lower the water table further. Communities worry whether their water sources will last 20 years, as planned. Some project wells are already running dry in summer.
- c. KRWSA, the nodal agency for Jalanidhi, has so far enjoyed autonomy, but past experience suggests that this cannot be taken for granted once project-funding ends. (see box 8)

Another study conducted by Smt. K.R.Nisha on the topic Institutional Arrangements in Rural Water Supplies in Kerala: constraints and possibilities found to be a theoretical back up for the study.

BACKGROUND OF WATER SUPPLY IN KERALA

Drinking water system in Kerala can be broadly classified into two categories. The first one is the schemes owned and operated by the state government through the Kerala Water Authority and Local Governments. Second one is family managed drinking water supply which includes individual families creating their own drinking water resources by constructing wells on their house compounds and managing the water supply source by themselves (SEUF 2000). Family managed drinking water supply system in Kerala has a substantial role in the water supply scenario especially in rural areas. The provision of piped water supply in rural areas is the responsibility of the state government and funds have been provided in the state budgets right from the commencement of first five-year plan. National Water Supply and Sanitation programme was introduced in social welfare sector in 1954. The states gradually build up the Public Health Engineering Departments to address the problems of water supply and sanitation. In 1972-73, Government of India introduced Accelerated Rural Water Supply Programme to assist the states and union territories with 100 percent grants in aid to implement schemes in problem villages. As a part of it, in 1970s, more than 450 piped rural systems were launched in Kerala. During 1980s, as part of the Drinking Water Supply And Sanitation Decade Programme, several projects were launched with the support of bilateral and multilateral agencies.

The history of organized piped water supply in rural Kerala dates back to the beginning of twentieth century. Over the years, the organizational set up for the implementation and Kerala Water Authority (KWA) is one of the main agencies for the design, construction, operation and maintenance of water supply

and sewerage schemes in the whole state. KWA has been implementing piped water supply schemes based on surface and groundwater sources. It also executes multilateral and bilateral funded projects and accelerated rural water supply schemes on behalf of the government of India. As per Economic Review, 2003 KWA was operating 63 urban and 1700 rural water supply schemes. Among the rural water supply schemes, 607 were multi-panchayat and 1093 were single panchayat schemes. Two hundred and twenty four urban and rural water supply schemes were under different stages of implementation, of these, 182 were rural and 42 were urban water supply schemes (State Planning Board 2002).

The public sector experience over the last two decades revealed that the efforts of one agency alone would not be sufficient to meet the drinking water needs of the state especially in the rural areas within a definite time-frame. The new democratic initiatives in the state, 'peoples plan campaign' along with the constitutions 73rd and 74th Amendments provided a firm footing for the decentralized planning process in the state. The State Government devolved powers to local governments to initiate new water supply schemes. Following the structural adjustment programme in the national economy and implementation of neo liberal policies, public investment in necessary services has declined. The new policy approach comprises decentralized administration and collaboration between state, NGOs and Civil Society movements provided far reaching consequences in the state regulated economic approaches. As part of these initiatives Kerala Rural Water Supply and Sanitation Agency, NGOs, Community Organizations, etc., have subsequently entered into the water and sanitation sector. In this context an attempts made to answer the following questions. Why did the prominence of KWA decline? What factors influenced the emergence of new institutions? What are the alternative arrangements in rural water supply in the state?

STATUS OF WATER RESOURCES IN KERALA – 'Scarcity in the midst plenty'

Kerala is one of the smallest states in India covering only 1.3 percent of the total area of the country. The state accounts for 1.18 percent of India's land area, but it has about 4.8 percent of the country's water resources. However, the population density of the state, 747 per square kilometer is much higher than the national average of 267 per sq.km.

But because of the dispersed settlement pattern the provision of safe drinking water became a difficult task. The climate of the state is typically tropical with seasonally excessive rainfall and hot summer.

Among the states, Kerala has conventionally placed as 'water safe' economy. In spite of heavy annual rainfall, high 'well density' and numerous rivers and ponds, the state of Kerala is paradoxically situated among the country's lowest per capita ground water availing state. A few numbers of site-specific studies explained the 'scarcity in the midst of plenty' due to several reasons such as high rainwater runoff, loss of forest cover, sand mining, reclamation of paddy fields, etc. (State Planning Board 2002; James 2003; Bhattathiripad 2003; Mathai 2003; Sooryamoorthy and Antony 2003). It was observed that even under the normal rainfall conditions the cities in lowland area of the state experience severe floods more often than in the earlier times. Also, many household wells in the Kerala were drying and need to be dug deeper and deeper to obtain water (Verone, 2000). Thus, even with abundant availability of water in the state, its beneficial use is constrained by many factors.

RAINFALL

Kerala is experiencing a paradoxical situation of scarcity in the midst of plenty in water availability. Blessed with abundance of rainfall of about 3000 millimeters on an average annually, there is significant variation and shortage of safe drinking water in many places of the state. Even though, it varies across the region. The average rainfall in the low land region ranges from 900 mm in the south to 3,500 mm in the north; in the middle region it ranges from 1,400 mm in the south to 4,000 mm in the north and in the high lands from 2,500 mm in the south to 5,500 mm in the north (SEUF 2000).

Over 90 per cent of the annual rainfall is received during the South-West monsoon, which sets in by June and extends up to September and also from the North- East monsoons during October to December. However, because of the terrain condition in Kerala rainfall runoff is very high. Over 60 percent of the geographical area of the state is covered by laterites and lateritic soil, encouraging little infiltration (Agarwal and Narain 1997). So the

state experiences severe summer from January to May when the rainfall is minimum. As rainfall is the main source of water availability in the state, any failure in the southwest or northeast monsoon will affect the availability of drinking water, electricity production and agriculture and hence the livelihood of the population.

GROUNDWATER

Kerala has an annual replenishable groundwater resource of 7,900 Million Cubic Meters (MCM). The estimated groundwater potential of the state is 7,048 MCM according to the resource evaluation group on groundwater. As per studies conducted by Central Ground Water Board, only 48 percent of the ground water sources in Kerala has been exploited (State Planning Board 2003).

Open wells are the major groundwater extraction structures in Kerala and traditionally, most of the people have been depending on homestead open wells for domestic purposes. CWRDM in 1989 revealed that there are three million wells in the state. Of which 20 lakhs are private wells. The density of open wells is also very high in Kerala, with density around 250 well per sq.km in the coastal belt; 150 in the midlands and 25 in the highlands. However, studies done by Central Groundwater Board revealed that the ground water level in the state is declining and most of the households dug wells more and more.

SURFACE WATER

There are 44 rivers in the state, out of which 41 are west flowing and 3 east flowing. Most of these are ephemeral because the main source of water is the rainfall during monsoon (James 2003). The annual yield of these river basins is found to be 77,883 MCM with 90 percent of the yield available for the state. The annual utilizable yield from the 31 rivers is 49,199 MCM (63 per cent of the total), with the state share of 87 per cent (42, 672). But it is estimated that the state is utilizing only 25 percent of the annual utilizable yield (State Planning Board 2003). Besides various rivers, state has three large fresh water lakes in Trivandrum, kollam and Wayanad. Loss of forest cover, indiscriminate removal of sand from riverbed, clay mining from valley floors and soil erosion in the high land has caused serious threats to surface water availability.

WATER QUALITY

There are variations in quality of water between coastal, midland and highland areas of Kerala with chloride and iron being the major problems in many of the pockets. The health problems arising out of intake of excess fluoride was investigated in Alappuzha and Cherthala region. Wells near to the coastal belt to Kollam, Trivandrum, Alappuzha districts, some part of Ernakulam districts and entire Malappuram region is rich of iron. The Indian standards on drinking water prescribe desirable limit of 0.3mg/litre and in the absence of alternate source 1.0mg/litre is permissible. There are many isolated pockets in Kerala with iron concentration above 1mg/litre, which affects the taste and appearance and has adverse effects on domestic use and water supply structures and promote iron bacteria. It is reported that iron content can be removed by simple filtration, whereas removal of salinity and fluoride is not so easy (Central Ground Water Board 2001; State Planning Board 2003). Besides metallic contamination, surface waters in rivers, especially in the lower reaches, are polluted by municipal and industrial discharges. Wide spread biological and bacterial contamination as well as application of pesticides largely affects the water quality (World Bank 1999; James 2003). According to the NSSO report on Drinking Water and Sanitation (1999) in Kerala only 28.8 per cent of the households report that they are getting satisfactory quality of water. In rural areas only 10.1 per cent of households are getting satisfactory quality of piped water, while the corresponding proportion in urban areas is 41.6 per cent, which is the lowest in India compared to other major states. Kerala, in spite of heavy annual rainfall, high well density and numerous rivers and ponds, paradoxically situated among the country's lowest per capita fresh water availing state. Neglect of the traditional water harvesting systems and the pollution of existing water resources have been, thus aggravating the scarcity problem. Thus, with most of the rivers in Kerala being rain-fed, any reduction in the rainfall affects the water level. Declining water level in turn has an effect on piped water supply of Kerala Water Authority, which is mainly a large scheme depending on river water and groundwater. Besides, a majority of the households depend on open wells for drinking water. So declining water table has a consequence on the family managed drinking water supply. In this background, conservation of the exiting water resources and its efficient management becomes the

priority issue at policy level. But the Government has given very less attention to the conservation of water in the state (Bhattathiripad 2003). All these factors, along with public policy failure had adversely affected the availability of drinking water, and thus, paved the way for looking for the alternative institutional arrangements.

ALTERNATIVE FORMS OF WATER SUPPLY SCHEMES

Alternative Forms of Water Supply Schemes existing in the state were community managed. Community management in drinking water supply recently emerged as an alternative to the prevailing institutional set up. All the community-managed schemes in the state are funded by either central government or external agencies. External agencies include World Bank and Royal Netherlands Embassy. Alternative forms of water supply schemes existing in the state are explained in detail in the following section.

- a. Jalanidhi is the community water supply schemes initiated in the state with the help of World Bank. In 1999, for implementing the World Bank assisted Rural Water Supply Project, the Government has set up Kerala Rural Water & Sanitation Agency (KRWSA). As per data collected on 2004, KRWSA covered 80 panchayats in the four northern contiguous districts of Kozhikode, Malappuram, Thrissur and Palakkad. The project is covering the areas drained by the Bharathapuzha and the following smaller basins: Chaliyar, Kadalundi, Keecheri, Puzhakkal, Kuttiadi, Korapuzha, Kallai, Tirur and Karuvannur. The main feature of the World Bank assisted program is that the community meets a part of the project cost, implements the project and becomes the owner of the water scheme. Beneficiary Groups (BG) and committees are the most important component in the institutional set up. Besides, there is a project- monitoring unit at district and state level. The monitoring at the state level is done by Kerala Rural Water Supply and sanitation Agency. At the policy level there are central and state governments as well as the World Bank. In Jalanidhi projects, along with the implementation of new schemes, existing single panchayat KWA schemes have been rehabilitated and ultimately transferred to the community. Rehabilitation of KWA schemes will result in gradual withdrawal of water authority from the rural water supply services.

b. SECTOR REFORMS

Under the sector reform project of the Government of India, funds are made available directly to the DRDAs for small water supply projects. The nodal agency for implementing the programme is Rajiv Gandhi National Drinking Water Mission. Unlike in the World Bank projects, in sector reforms there is no involvement of supporting organizations like NGOs. There is a state level steering committee under state secretary. At the district panchayat level, there are project-supporting units. In the selected grama panchayats, there is a Grama Panchayat voluntary Resource Team (GVRT) consisting of engineers and other staff, appointed by the grama panchayats.

For these programmes, 90 percent of the capital cost is provided by the central government and 10 percent by the beneficiary groups. Funds are channeled through state governments to district panchayat, then to voluntary resource team in respective panchayats and then to Beneficiary Groups. Sector reforms programme was operating in two districts in Kerala, viz., Kollam and Kasargode. Forty-four panchayats were selected in two districts to implement the programme and were under the third year of project completion.

c) DUTCH ASSISTED SCHEMES

Dutch assisted water supply schemes are implementing in the state by an NGO named Socio Economic Unit Foundation (SEUF). Socio Economic Unit was a part of KWA in the early 1980s for implementing water supply programmes with community participation with the aid of Danish and Dutch Governments. These schemes were implemented during the period 187-88 to 1996 with Dutch assistance in 3 GPs of Calicut districts. DANIDA assisted projects were implemented in 5 GPs of Quilon and 3 GPs of Thrissur districts. But the status of these two external assisted projects was not explored in detail in this chapter due to the paucity of information.

Later SEUF was registered as an independent agency and has been working in water, sanitation and hygiene sector in the state. From 1998 onwards SEUF was executing Dutch assisted water supply schemes in 2 panchayats in Malappuram district.

The other two districts in which SEUF was implementing community water supply schemes were Alappuzha and Idukki. In these two districts projects were in the implementation stage. Eighteen GPs have been selected for the project, 7 in Idukki and 11 in Alappuzha. Neither Government of Kerala nor water authority is involved in these projects. Fund is directly channeled to SEUF and then to beneficiary committees and groups. Cost sharing arrangement in the project is that same as that of World Bank assisted schemes. Eighty five percent of the capital cost is given by the external agency and 15 percent from the BGs. Operation and maintenance cost is fully borne by the users.

CHAPTER III
DATA ANALYSIS AND
INTERPRETATION

DATA ANALYSIS AND INTERPRETATION

Table No:3.1

Educational qualification of Beneficiary group members.

Qualification	Frequency	Percent
Illiterate	42	70.0
Primary	6	10.0
Upper Primary	6	10.0
High School	5	8.3
Pre degree	1	1.7
Total	60	100.0

70% of the total persons interviewed were illiterate, showing that majority of the beneficiary group members don't know to read or write. This figure also given indication for the scope of starting a literacy campaign as a part of the project follow up activities.

Table No: 3.2

TYPE OF RATION CARD THE GROUP MEMBERS ARE HOLDING

Type of ration card	Frequency	Percent
APL	21	35.0
BPL	39	65.0
Total	60	100.0

Majority (about 65%) of the interviewers were holding BPL ration card, showing the economic backwardness of the beneficiary groups.

Table No.3.3

EXPERIENCE OF WATER SCARCITY BEFORE JALANIDHI PROJECT.

Water scarcity before Jalanidhi project.	Frequency	Percent
High	55	91.7
Moderate	2	3.3
Low	3	5.0
Total	60	100.0

After interviewing the researcher came to know that the region was experiencing severe water scarcity before the Jalanidhi Project. About 91.7% of the respondents said that they have experienced severe water scarcity.

Table No:3. 4

PERFORMANCE OF THE BENEFICIARY GROUPS .

Functioning of beneficiary groups.	Frequency	Percent
High	45	75.0
Moderate	8	13.3
Low	7	11.7
Total	60	

A good number of respondents have the opinion that the beneficiary groups is performing very well. 75% agreed with the fact that the beneficiary groups should a high performance.

Table No: 3.5

PERFORMANCE OF SUPPORT ORGANIZATION.

Performance of so	Frequency	Percent
High	36	60.0
Moderate	16	26.7
Low	8	13.3
Total	60	100.0

Like the beneficiary group, 60% of the interviewed persons have the opinion that the support organization have done their best.

Table:3.6

FINANCIAL TRANSPARENCY SHOWN BY SUPPORT ORGANIZATION.

Financial transparency	Frequency	Percent
Often	42	70.0
Rarely	15	25.0
Never	3	5.0
Total	60	100.0

70% of the interviewed people said that the support organization kept financial transparency in all most all the transactions.

Table No: 3.7

AWARE ABOUT HYGIENE AND SANITATION PROMOTION PROGRAMME OF THE PROJECT.

Aware about hygiene & sanitation promotion programme.	Frequency	Percent
Yes	14	23.3
No	46	76.7
Total	60	100.0

This is an important figure, 76.7% of the interviewed people said that they were unaware about the hygiene and sanitation promotion activities of Jalanidhi project, one of the core objective of the project.

Table No: 3.8

FOLLOW UP ACTIVITIES OF JALANIDHI PROJECT.

Follow up	Frequency	Percent
Rarely	3	5.0
Never	57	95.
Total	60	100.0

95% of the respondents openly said that there is no follow-up activities in the Panchayat.

Table No:3.9

RALATIONSHIP WITH NEIGHBOURS DUE TO JALANIDHI PROJECT.

Relation with neighbours due to Jalanidhi	Frequency	Percent
Good	53	88.3
Not bad	7	11.7
Total	60	100.00

A very high percentage of respondents said that they were able to create a constructive relationship with their neighbors due to the project.

Table no: 3.10

HEALTH PROBLEMS DURIG THE TIME OF WATER SCARCITY.

Health problems during the time of water scarcity	Frequency	Percent
High	43	71.7
Moderate	7	11.7
Low	10	16.7
Total	60	100.0

71.7% of the respondents said that they or their family members experienced severe health problems during the time of water scarcity.

Table No: 3.11

LEVEL OF SATISFACTION WITH THE PROJECT.

Level of satisfaction	Frequency	Percent
High	41	68.3
Moderate	17	28.3
Low	2	3.3
Total	60	100.0

68.3% were highly satisfied and 28.3% were moderately satisfied with the over all performance of the project.

Table No: 3.12

OPINION ABOUT EXTENDING THE PROJECT TO OTHER PANCHAYAT.

Opinion about extending the project to other Panchayath.	Frequency	Percent
High	45	75.0
Moderate	13	21.7
Low	2	3.3
Total	60	100.0

75% of the interviewed people highly agreed with the statement of extending the project to other Panchayath.

Table No: 3.13

INTEREST IN PARTICIPATING IN OTHER SIMILAR PROJECTS.

Interest in participating in other similar projects	Frequency	Percent
High	46	76.7
Moderate	10	16.7
Low	4	6.7
Total	60	100.0

76.7% people expressed their interest in participating similar participating projects which showed the level of acceptance from the part of beneficiaries.

**EFFECT OF HYGIENE AND SANITATION PROMOTION ACTIVITIES OF
JALANIDHI**

Table No: 3.14

HYGIENE AND SANITATION PROMOTION.	FREQUENCY	PERCENT
High	14	23.3
Low	46	76.7
Total	60	100.0

More than 76% of the respondents have an opinion that the hygiene and sanitation promotion activities are very poor.

TIME SAVING ASPECT OF THE PROJECT

Table No: 3.15

TIME SAVING ASPECT OF THE PROJECT.	FREQUENCY	PERCENT
Moderate	39	65.0
Low	21	35.0
Total	60	100.0

65% of the respondents responded that they could save time moderately because of Jalanidhi Project. 35% have the opinion that Jalanidhi Project has no influence over their time saving aspect.

ENHANCEMENT OF COMMUNITY LIVING THROUGH BENEFICIARY

GROUPS.

Table No : 3.16

ENHANCEMENT OF COMMUNITY LIVING THROUGH BENEFICIARY GROUPS	FREQUENCY	PERCENT
High	58	96.7
Moderate	2	3.3
Total	60	100.0

96.7% respondents responded that the beneficiary groups highly enhanced their community living. They want to continue this type of relationships to other activities also.

Table No: 3.17

WATER SCARCITY BEFORE JALANIDHI * EFFECTIVENESS OF THE PROJECT IN REDUCING THE DRINKING WATER PROBLEM.

cross tabulation

Water Scarcity before Jalanidhi Project	EFFECTIVENESS OF THE PROJECT IN REDUCING THE DRINKING WATER PROBLEM			Total
	HIGH	MODERATE	LOW	
High	39 65.0%	15 25.0%	1 1.7%	55 91.7%
Moderate	2 3.3%	0 0%	0 0%	2 3.3%
Low	0 0%	3 5.0%	0 0%	3 5.0%
Total	41 68.3%	18 30.0%	1 1.7%	60 100.0%

91.7% of the responded that they have experienced severe water scarcity before project. From that respondents 65% says that the Jalanidhi Project has reduced their drinking water problem completely 25% responded that their drinking eater scarcity was solved moderately.

EFFICIENCY OF THE BENEFICIARY GROUPS IN IMPLEMENTING THE PROJECT * EFFECTIVENESS OF THE PROJECT IN REDUCING DRINKING WATER PROBLEM.

Table No: 3.18

EFFECIENCY OF THE BGs IN IMPLEMENTING THE PROJECT AND ENHANCEMENT OF GROUP LIVING THROUGH BGs	EFFECTIVENESS OF THE PROJECT IN REDUCING THE DRINKING WATER PROBLEM			Total
	HIGH	MODERATE	LOW	
High	33	17	1	51
F	55.0%	28.3%	1.7%	85.0%
Moderate	8	1	0	9
	13.3%	1.7%	0%	15.%
Total	41	18	1	60
	68.3%	30.0%	1.7%	100.0%

From the total respondents 55% respondents responded that effective functioning of beneficiary groups highly influenced the effectiveness of the project and 28.3% responded that the Beneficiary Groups are having a moderate influence over the effectiveness of the project.

EFFICIENCY OF SUPPORT ORGANISATION * EFFECTIVENESS OF THE PROJECT REDUCING THE DRINKING WATER PROBLEM. cross tabulation.

Table No: 3.19

EFFICIENCY OF SUPPORT ORGANISATION	EFFECTIVENESS OF THE PROJECT IN REDUCING THE DRINKING WATER PROBLEM			Total
	HIGH	MODERATE	LOW	
High	39 65.0%	17 28.3%	1 1.7%	57 95.0%
Moderate	2 3.3%	1 1.7%	0 0%	3 5%
Total	41 68.3%	18 30.0%	1 1.7%	60 100.0%

65% of the total respondents responded that the efficiency of the support organization highly contributed to the effective implementation of the project. And 28.3% of the respondents have an opinion that the support organization is having a moderate on the project.

INVOLVEMENT OF LOCAL SELF GOVERNMENT AND IT'S MEMBERS

***EFFECTIVENESS OF THE PROJECT IN REDUCING THE DRINKING WATER**

PROBLEM. Cross tabulation.

Table No: 3.20

EFFECTIVENESS OF THE PROJECT IN REDUCING THE DRINKING WATER PROBLEM	INVOLVEMENT OF LOCAL SELF GOVERNMENT AND ITS MEMBERS			Total
	HIGH	MODERATE	LOW	
High	41 68.3%	0 0%	0 0%	41 68.3%
Moderate	18 30.0%	0 0%	0 0%	18 30.0%
Low	0 0%	1 1.7%	0 0%	1 1.7%
Total	59 98.3%	1 1.7%	0 0	60 100.0%

Majority of the respondents responded that the local self-government have made a high involvement in the project activities.

IMPROVEMENT IN HEALTH CONDITION * LEVEL OF SATISFACTION. cross tabulation .

Table No: 3.21

IMPROVEMENT IN HEALTH CONDITION DUE TO JALANIDHI.	LEVEL OF SATISFACTION			Total
	HIGH	MODERATE	LOW	
High	34	4	0	38
	56.7%	6.7%	0%	63.3%
Moderate	7	12	1	20
	11.7%	20.0%	1.7%	33.3%
Low	0	1	1	2
	.0%	1.7%	1.7%	3.3%
Total	41	17	2	60
	68.3%	28.3%	3.3%	100.0%

More than half of the respondents said that, because of the project they experienced a higher improvement in their health condition.

INTERPRETATION

Specific Objective No: 1

To find out the effectiveness of the project in reducing the drinking water scarcity of the area.

From the analysis it is clear that the project succeeded to a great extent in reducing the drinking water problem of the Panchayath. 65% of the respondents said that they are getting water all the months in an year after the implementation of the project. They are satisfied with the quality of water also. Thus we can say that the project is providing pure and sustainable drinking water for the area.

Specific Objective No.2

To find out the efficiency of the support organization in implementing the project.

The support organization have played a crucial role in the smooth implementation of the project. The organization could create a healthy relationship with the beneficiary group. Presence of support organization was there in almost all stages of the project. They are also able to keep the financial transactions transparent. Majority of the respondents have the opinion that the support organization efficiency involved in the implementation of the project.

Specific Objective No: 3

To find out the role played by the local self government of the particular Panchayath.

No doubt the local self government very well played the role of nodal body at the grass root level. The local government members actively participated in all the activities from the very beginning. Nearly 70% of the respondents replied that local self government of the Panchayath actively participated and have done their job very well in this project. thus the smoother implication of the project can be raised as a best example of decentralized planning.

Specific Objective No: 4

To study about the empowerment process of woman that took place as a result of this project:-

Even though in the project objectives it is mentioned about starting self help groups and micro financing in order to empower women during the observation and data collection time the researcher found it clear that there is not a single SHG formed on the basis of this project. Thus looking through this specific objective taking this part only the project is an utter failure. Even though there are women at the top of the beneficiary group it cannot be considered as an empowering process.

Specific Objective No: 5

To study about the impact of sanitation and hygiene promotion programme under this project.

Like the women empowerment Process majority of the respondent said that they have even not heard about the hygiene and sanitation promotion programme. More than 75% of them have not even heard about the programme. Thus the hygiene and sanitation promotion programme also found to be a failure.

Specific Objective No: 6

Identifying the role played by the beneficiary groups during the different stages of the project and to evaluate the enhancement of community living by the beneficiary group.

From the analysis it is clear that the groups played a crucial role in the implementation of the project. They were active even from the planning stage. The group members feel a type of we feeling and majority of them have the opinion of extending those groups to other activities.

CHAPTER IV

FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

1. The jalanidhi Project is able to reduce the drinking water scarcity of the Kulathoor Grama Panchayath.
2. People are satisfied with the quality of water.
3. The support Organisation have done their job very well in the Planning, implementing and monitoring stages. But evaluation is rarely done is
4. Follow up procedures are not there. Grievance redressal activities are also lacking.
5. The support organization maintained the financial transparency.
6. The local self government make their role very well. Members actively participated in the entire process. Political interventions were completely absent.
7. Beneficiary groups functioned very well. Group dynamics is present in the group. The group members expressed the we feeling aspect.
8. The hygiene and sanitation promotion activities of the project found to be very poor. Majority of the beneficences have not even heard about those activities.
9. Women empowerment through self help groups formation and micro financing were also found in the paper only. The researcher could not found any group formed on the basis of Jalanidhi Project.
10. Majority of the respondents said that they are not making or getting economic benefit from the project.
11. People were happy to say that they were able to improve their health condition due to Jalanidhi
12. Majority of the people have the opinion that they could moderately save time with the coming of piped water supply system and majority of them were not able to say what they are doing with the scared time.
13. The respondents were found to be very supportive in extending the project to other Panchayath.
14. There is some irregularities in the supply of water and some problem with the quality of water in the costal areas.
15. Majority of the respondents were ready to co-operate with similar projects.

16. Majority of the respondents interviewed were illiterate.

SUGGESTIONS

1. Since the project is a public water supply programme it will be better to check the quality of water repeatedly.
2. Follow up procedures should be strengthened, it will be better to start monthly meeting of beneficiary groups.
3. A grievance redressal committee will be very useful at the Panchayath level.
4. Steps should be taken to start self help groups and forming micro finance system, which will ensure the women empowerment process.
5. Project should start working with the hygiene and sanitation promotion programmes.
6. Introducing sanitary latrines and composting facilities will be very useful to the panchayath.
7. Vocational training to the women members will help them to generate income by utilising the saved time due to the Jalanidhi project.
8. More number of field staffs should be appointed at the grass root level in order to have an evaluation and follow up procedures.
9. Since majority of the respondents are found to be illiterate it will be a social justice to start literacy campaign on the basis of jalanidhi project.
10. Special care should be given to the costal areas were water scarcity is high. Quality of water should also be assured in those areas.

CONCLUSION

Jalanidhi Project has reduced the drinking water problem of the Kulathoor Grama Panchayat to a great extent. As per the Project objective, it has been implemented on a participatory basis. The actual users lead the major role in all the steps of the Project. The Support Organization and the Local Self Government played crucial role in the Project. But there are some drawbacks like the Hygiene and Sanitation Promotion Programme is found to be very poor, economic benefit or betterment through this Project is very rare and most importantly the Project has done nothing on the part of women empowerment activities. As a whole the Project is very good and like the Kulathoor villages the researcher also have the opinion that the Project should be implemented to all the Panchayats in Kerala.

BIBLIOGRAPHY

<http://www.jalanidhi.com>

<http://www.jalanidhi.com/faq.htm>

[http://www/thehindu.com/2007/29stories](http://www.thehindu.com/2007/29stories)

<http://www.keralaplanningboard.org/html/economic/20review>

<http://www.planetkeral.org/studies.htm>

<http://www.allworld.com>

Agarwal Anil (Editor) 'making water everybody's business, Centre for Science and Environment, New Delhi, 2001

Barua A.K. 'Water Technology Management' Dominant Publishers and Distributors New Delhi, 2001

Soorymoorthy. R and Antony Palakkal (Editors) (2003) 'Managing water and water users. Experience from Kerala 'Maryland' University Press America.

State Planning Board (2002) Report on kerala water authority, Trivandrum. Government of Kerala.

State Planning Board(2003). Report on working group on drinking water: Formulation of tenth five year plan 2002-2007, Trivandrum: Government of Kerala.

World Bank (1999) Rural water supply and sanitation India water Resources Management. Washington DC: The World bank.

APPENDIX

The impact of Jalanidhi Project On Kulathoor GramaPanchayath

1. Name :
2. Address :
3. Educational Qualification :
4. Name of the Panchayath :
5. Type of Ration Card :
6. a) Male/Female :
b) Age :
7. Are you a member of jalanidhi Projects beneficiancy group?
Yes No
8. Whether you were affected by water scarcity before the introduction of Jalanidhi Project?
Highly Moderate Low
9. Whether the project reduced your drinking water scarcity
Highly To an extend Not at al
10. Are you getting drinking water all the months in an year.
Highly To an extend Not at all
11. Your level of satisfaction with respect to the quality of drinking water is
High Moderate Low
12. The Beneficiary group you are including is working actively
all the time sometimes Never
13. The active participation of group leaders lead to the smooth running of the project
Highly To an extend Not at all

14. Relation with Support organization and beneficiary group is
 Good Not bad bad
15. Level of satisfaction with regard to the functioning of support organization
 High moderate Low
16. Whether the support organizations authorities are present in all stages of the project.
 all the time sometimes never presence
17. Whether the support organization kept transparency in financial transactions
 All the times Some times Never
18. You are aware about the hygiene and sanitation promotion activities of Jalanidhi
 Yes No
19. You have got sanitary latrines or composite as part of Jalanidhi Project.
 Yes No
20. You are made aware of the technological aspects of the project.
 Highly To an extend Not at all
21. Whether your suggestions were accepted by the officials?
 All the time Sometimes Never
22. Local self government have given special interest towards the implementation of the project.
 All the time sometimes Not at all
23. Grama Panchayath members were present in all the stages of the project
 all the time Sometimes Not at all
24. Whether you are aware about the formation of self help groups as a part of Jalanidhi Project
 Yes No
25. Whether you or your family member is involved in those SHG's
 Yes No
26. The formed SHG have started Micro financing
 Yes No
27. Micro financing have brought assistance to your family
 Highly Moderately Not at all

28. Whether you was discouraged by the cost sharing approach of Jalanidhi in the beginning
 Highly to an extend Not at all
29. Whether the beneficiary group gave due consideration to your financial constrains
 Yes No NA
30. Whether you are getting any subsidy from the beneficiary group
 Yes No
31. Whether the project is taking any follow up activities
 highly In a moderate level Not at all
32. You have noticed any political interference during any of the project stages
 Often rarely Not at all
33. Whether you could attain economic benefit from the project
 Highly Moderately Not at all
34. The group activities in the beneficiary group created..... with the group members
 very good relationship Moderately good relation ship bad relation
35. You are wishing to extend the relationship in the beneficiary group out of the project
 Highly Moderately Not at all
36. Group conflicts are settled with in the group
 Often rarely Never
37. You or your family members have experience health problems during the time of water scarcity.
 Severe Moderate no
38. Whether the project brings about any changes in your health condition]
 highly Moderately not at all NA
39. Whether the project has bring about any change in the time use pattern of your family
 High change Moderate change No change
40. Whether you are able to divert that saved time to other productive activities.
 highly Moderately Not at all NA
41. Level of satisfaction with the all round activities of Jalanidhi Project
 High Moderate Low

42. You are joining with the opinion of e4xtendency the project to other Panchayath

Highly Moderate Low

43. Whether you are interested in joining other similar projects

Highly interested Moderated interested No interest