Vol III Issue IX March 2014

Impact Factor : 2.2052(UIF)

ISSN No :2231-5063

# International Multidisciplinary Research Journal

## Golden Research Thoughts

**IMPACT FACTOR : 2.2052**(UIF)

**Welcome to GRT**

**RNI MAHMUL/2011/38595** **ISSN No.2231-5063**

Golden Research Thoughts Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board.Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.



**Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India**
**Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.aygrt.isrj.net**

Golden Research Thoughts
ISSN 2231-5063
Impact Factor : 2.2052(UIF)
Volume-3 | Issue-9 | March-2014
Available online at www.aygrt.isrj.net

# EMERGING TRENDS IN RURAL WATER SUPPLY IN KARNATAKA: AN ANALYSIS

**Chandrashekhar Ramayya**

Research Scholar Department of Studies and Research in Economics Gulbarga University Gulbarga, Katakana, India.

**Abstract:-**Drinking water is a basic requirement for life and a determinant of standard of living. However, besides government efforts, supply and demand side factors of both surface and groundwater determine the level of drinking water available to people. The supply and demand factors increase with the natural and human factors like growing population. This limits drinking water supply provision and raises the delivery cost. This paper examines the nature and magnitude of water available situations and target and achievement of various water schemes in the reported area, causes and impacts in drinking water supply. The study observes those activities like operation and maintenance of drinking water supply schemes; water quality monitoring; water conservation and rainwater harvesting measures have to be implemented for better provision of drinking water supply. Further, an integrated institutional system for water quality monitoring and rural water recharging seems to be necessary.

**Keywords:**Drinking water, Supply and Demand, Various Water Schemes, Population, Bore wells with Hand pumps ect.,

## INTRODUCTION:

In over 50 years of political independence and economic development, India has not been able to ensure the most basic of human needs – safe drinking water – for all its citizens. In April 2002, then Prime Minister Vajpayee confronted this problem openly and clearly. “Scarcity of water is compounded by its unequal, irrational, and unjust distribution in both rural and urban communities,” he said. “Therefore, the situation is forcing us to recognize water security as an overriding national objective…” Accordingly, the 2002 National Water Policy of the Government of India (GoI) states that “provision for drinking water should be a primary consideration” in water resource development projects and that “drinking water needs of human beings and animals should be the first charge on any available water” (GoI, 2002, Sections 6.1, 8). In a further the lack of access to water in India, in December of 2002 Mr Vajpayee launched the Swajaldhara programme, with the aim of providing drinking water to every village by the end of 2004.This is an ambitious World Bank aided programme that marks a departure from traditional government water provision. Instead, it works on the 90/10 financing model -- if communities come up with 10% of the cost of provision, the government will provide the other 90%. This provision is in keeping with the spirit of the 73rdAmendment to the Indian Constitution, which turned over the responsibility for local water supplies to local level governments (Gram and Zilla Pancahayats).

Rural Water Supply is one of the major challenges that has been addressed by the government and attempts made towards tackling the crisis in providing safe and adequate water to the rural people. Lately, the problem has become particularly severe in rural areas. A review of the government's efforts in implementing various programmes, policies adopted has shown inadequate progress in providing sufficient quantity of potable water to all persons (Das 2001; and Rajashekar and Veerashekarappa, 2002, Hirway, 2004; Jaldisha, Durgaprasad). Several factors like increased urbanization leading to negligence of traditional water sources, lack of water management, resource depletion due to overexploitation of existing resources, ineffective co -ordination between departments and inadequate institutional setup in addressing the problem have led to the severity of the problem over the years.

Various dimensions of the problem have been addressed for the effective implementation of rural water supply schemes, which is dependent on a number of factors -Social, Technical, Economic, Institutional, Environmental, Legal and Political. It is important to understand the existing situation and the complexities in order to address the problem in the context of project design and implementation and factors affecting sustainability of Rural Water Supply (RWS) programmes.

This is mainly due to economic growth accompanied by population increases, over exploitation and mismanagement of natural

resources, and urbanization and their cumulative effects are resulting in decreasing supply of clean water and other environmental goods. Since water resource size is shrinking, several issues are being seriously addressed such as water management in a holistic way, through water quality maintenance, water allocation to different sectors, decentralization in water allocation, sustainable use of water, improvement of sanitation, water pricing, institutional set-up, technical solutions and awareness creation. Conserving water and using it judiciously has come about only with increasing shortages, depletion of water resources and extremities in weather conditions causing disparity in water availability. In this context, the present paper makes a comparative analysis of Karnataka through an analysis of the existing situation, identifying key issues, describing major approaches adopted, understanding field realities, and implications for future action and arguments for change.

Rural Water Supply schemes have to be implemented as per 2009-10 revised guidelines of National Rural Drinking Water Programme (NRDWP). It aims at providing every rural person with adequate safe water for drinking, cooking and other domestic basic needs on sustainable basis. As per the present NRDWP norms the FC / PC (Fully covered/Partially covered) concept has been modified from conventional LPCD norm to population coverage by percentage provided with water supply schemes. Water and Sanitation Mission has been set up at the state level. The revised guidelines stipulates for allocating the funds of the State and Centre among various components of rural water supply. The Centre would provide entire grants under the sustainability and support activities component of NRDWP. The grants under sustainability will be used exclusively to achieve drinking water security by providing specific sustainability components for sources and systems with major emphasis on water quality affected and over-exploited areas. State Level Scheme Sanctioning Committees (SLSSC) has been constituted and action plans have been approved. There is a provision to continue HRD/IEC program under the support activity component.710.19 crores has been proposed for 2011-12 for implementing various programmes under rural water supply sector. Of this outlay 709.69 crores has been provided for state plan schemes and 0.50 crores of Centre's share for centrally sponsored schemes.

Further, providing logical support, policy instances were cited from worldwide experiences showing a positive correlation between beneficiary involvement, on the one hand, and the efficiency of implementation and the effectiveness of the project sustainability on the other (Harmeyer and Mody, 1997,Pushpangadan and Murgan 1998). Forty-eight per cent of the recent World Bank projects have included community participation in their design as a way to increase project efficiency (Churchill 1994) and reduce cost. Recent literature on water supply systems shows that, proper institutional framework and collective action improve the efficiency (Narayan, 1993). In state led planning, old paradigm of centralized decision ma king and bureaucratic allocation is fading fast to pave way for a decentralized allocation and stakeholder participation (Saleth and Dinar 1999).

**I.Need for the Study:**

Evolving appropriate systems, structures, and policies for effective water supply to rural areas have emerged as key challenges for many state governments in India. Traditional arrangements through which rural communities secured their water supplies community and private wells, tanks, rivers -have gradually declined partly with the spread of modernity and rising expectations and partly because of government efforts to deliver piped water supply. The RWS problem has two dimensions. One is choice of appropriate infrastructure /institutional combine; this is essentially a question of designing for service provision in a viable, sustainable manner. The second is the issue of water- security through better planning and management of water resources; that is of meeting basic household water requirements during droughts and dry spells, when the so-called no-source villages are in dire straits and contribute to a politically surcharged atmosphere.

While irrigation management has attracted vast research attention and resources, RWS are virtually unsearched, with donor documentation being the only or major source of information. The only state where we find significant body of research on RWS is Kerala. As a consequence, there exists limited organized literature on policy and design alternatives in RWS. in Karnataka, there has been growing hiatus between government agencies and civil society of what might be the best approaches to meeting the RWS challenge. The government and donors have been investing huge sums on building pipeline schemes and inter- basin transfer of Kaveri waters.

However, according to civil society institutions, these capital -intensive schemes have done little to meet the RWS challenge; instead, they advocate locally constructed and managed water sources, including roof-water harvesting. The government - as well as scientists -argue that these can at best be supplemental and cannot be a substitute fora 'proper' RWS. One reason why we do not see much common ground emerging is paucity of analyses. This study was an attempt to fill this knowledge gap. The study was carried out in Karnataka, the prominent state of Karnataka in finding alternatives for rural water supplies.

**II.OBJECTIVES, DATABASE AND METHODOLOGY OF THE STUDY:**

a.The present study has been undertaken in Karnataka state from where rural water supply takes place. Rural water supply is major issues in India and also Karnataka. This study purely based on secondary sources. Data collected from Economic Survey of Karnataka, and LokSabha Unstarred, RajyaSabha Unstarred Questions.

The present study focuses on, water supply, expenditure, progress and performance of water supply in Karnataka with a detailed analysis to understand the rural water supply in Karnataka.

b.Objectives of the Study

The main objectives of the present study in Karnataka states are:

1.To assess the fund allocation of national rural drinking water programmes in Karnataka.
2.To study the various rural water supply schemes in Karnataka.
3.To suggest the suitable policy implication in rural water supply in Karnataka.

**III.RURAL WATER SCHEMES IN KARNATAKA:**

In Karnataka there are various schemes to provide the drinking facilities to rural as well as urban masses, because water is the very impotent and need of basic want for every human and animals, in that way GoK has also introduced several water schemes for rural drinking water to peoples such as National Rural Drinking Water Programme. This programme has sanctioned huge amount of money to fulfill the water needs of peoples in Karnataka and India.

**Table 1.1 Funds Allocation and Released under National Rural Drinking Water Programme in Karnataka**
**(Rs. in Lakh)**

| Years | Karnataka | | India | |
|---|---|---|---|---|
| | Allocation | Release | Allocation | Release |
| 2009-10 | 53946.00 | 53946.00 | 747738.24 | 738171.51 |
| 2010-11 | 46639.40 | 722250.00 | 51439.40 | 764784.36 |
| 2011-12 | 44123.90 | 681701.10 | 48127.00 | 716373.80 |
| 2012-13 | 68157.00 | 56324.00 | - | - |

Source: LokSabhaUnstarred Question No. 3559, dated on 26.04.2012.
RajyaSabhaUnstarred Question No. 984, dated on 03.12.2012.

**A) STATE SECTOR SCHEMES**

**a) Central Plan Schemes:-**

**1. Bore wells with Hand pumps:**

Bore wells fitted with hand pumps are the major source of potable drinking water in rural areas. Since inception 213725 bore wells have been drilled in the State up to the end of March 2010. During 2009-10 it has been programmed to install 3,038 bore wells with hand pumps at a cost of 101.68 crores under all sectors. During 2009-10 up to end of March 2010, 3,782 Bore wells have been installed at a cost of `41.90 crores. An amount of 600 per Bore well is being provided for the annual maintenance of Bore wells entrusted to the Gram Panchayaths.

**Table 1.2: Target and Achievement of Borewell and HandPump Schemes in Karnataka:**
**(Rs. in Lakh)**

| Year | Financial (`crores) | Physical (Nos.) | | |
|---|---|---|---|---|
| | Target | Achievement | Target | Achievement |
| 2005-06 | 32.10 | 41.84 | 5083 | 4413 |
| 2006-07 | 37.74 | 25.81 | 4575 | 3129 |
| 2007-08 | 37.74 | 56.93 | 4026 | 5993 |
| 2008-09 | 68.53 | 57.76 | 4457 | 6011 |
| 2009-10 | 101.68 | 41.90 | 3038 | 3782 |

Sources: Karnataka Economic Survey2010-11.

**Mini Water Supply Scheme**

In this scheme water is pumped to a small tank (Cistern) fitted with 3 - 4 taps, from where water can be collected by households. Since inception of the programme to the end of March 2010, 34,073 Mini water supply schemes have been completed and commissioned. During 2009-10, it was programmed to take up 2,661 Mini Water Supply schemes both under State and Central Sectors at a cost of 88.97 crores. The achievement till the end of March 2010 is 3,227 schemes at a cost of 94.11 crores. Gram Panchayaths are maintaining these Schemes at a cost of 3,500/- per annum per scheme. Financial and Physical progress achieved under this scheme during the last 5 years is as below years.

**Table 1.3: Target Achievement Target Achievement of Mini Water Supply Schemes in Karnataka**
**(Rs. in Lakh)**

| Year | Financial (`crores) | Physical (Nos.) | | |
|---|---|---|---|---|
| | Target | Achievement | Target | Achievement |
| 2005-06 | 59.98 | 53.41 | 1333 | 1177 |
| 2006-07 | 65.27 | 45.18 | 1160 | 803 |
| 2007-08 | 65.27 | 112.42 | 1248 | 2044 |
| 2008-09 | 182.73 | 91.38 | 1748 | 1786 |
| 2009-10 | 88.97 | 94.11 | 2661 | 3227 |

Sources: Karnataka Economic Survey2010-11.

**Piped Water Supply Scheme**

Under this programme, 24182 PW schemes have been completed and commissioned (since inception to the end of March 2010) both under Central and State sectors. During 2009-10, it has been programmed to commission 1,905 Piped Water Supply schemes at a cost of `63.55 crores. 1,943 Piped Water Supply schemes have been completed and commissioned to the end of March 2010 at an estimated cost of `141.16 crores. Gram Panchayaths are maintaining Piped Water Supply Schemes and an amount of `8000 per Piped Water Supply Scheme is provided per annum towards maintenance. Financial and Physical progress achieved under this scheme during the last 5 Years is as below:

**Table 1.4: Financial and Physical progress of Piped Water Schemes in Karnataka**
**(Rs. in Lakh)**

| Year | Financial (`crores) | Physical (Nos.) | | |
|---|---|---|---|---|
| | Target | Achievement | Target | Achievement |
| 2005-06 | 47.4 | 79.46 | 632 | 715 |
| 2006-07 | 130.69 | 58.47 | 1087 | 489 |
| 2007-08 | 130.69 | 144.45 | 1087 | 963 |
| 2008-09 | 205.58 | 144.59 | 1691 | 1032 |
| 2009-10 | 63.55 | 141.16 | 1905 | 1943 |

Sources: Karnataka Economic Survey2010-11.

**Desert Development Programme (DDP):**

Additional rural water supply schemes in drought prone districts of Bagalkot, Bellary, Bijapur, Davanagere, Raichur and Koppal are being implemented under the Centrally Sponsored Desert Development Programme (DDP) since 1997-98. It is contemplated to provide 70 LPCD of water for human being and cattle in these drought affected districts. Works under PWS, MWS and bore wells are alsobeing taken up under this programme. Water supply to Rural schools and desilting of tank works

are also taken up. Financial and Physical progress achieved under this scheme during the last 5 Years is as below

**Table 1.5: Desert Development Programme target and achievement in Karnataka:**
**(Rs. in Lakh)**

| Years | Financial (`crores) | Physical (in Nos.) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Target | Achievement | Target | Achievement | | | | |
| | | | PWS | MWS | BWS | PWS | MWS | BWS |
| 2005-06 | 20.85 | 19.11 | 246 | - | 117 | 123 | - | 112 |
| 2006-07 | 20.85 | 11.17 | 183 | 212 | 438 | 62 | 71 | 344 |
| 2007-08 | 32.79 | 31.77 | 276 | 259 | 425 | 181 | 167 | 422 |
| 2008-09 | 28.61 | 23.81 | 245 | 310 | 323 | 117 | 188 | 165 |
| 2009-10 | 38.21 | 25.33 | 202 | 260 | 300 | 173 | 243 | 296 |

Sources: Karnataka Economic Survey2010-11.

**Sub-Mission Project**

Drinking water supply schemes under Rajive Gandhi National Drinking Water Mission have been formulated in rural areas with surface water as source to tackle water quality problem. Habitations having Chemical contamination like Fluoride, TDS, Nitrate and Iron in drinking water are provided safe drinking water after treating the surface source water.

Under this Programme, after the issue of NRDWP guidelines during 2009-10, the Centre is providing grants up to 50 per cent of the project cost and the remaining 50 per cent is being borne by the State. The surface water sources viz., River, Tank, Canal etc. are considered for safe drinking water supply.

Prior to 2004-05, 49 sub-mission schemes covering 244 habitations having water quality problems at an estimated cost of Rs.134.30 crores have been taken up for implementation. Out of which 43 schemes have been completed covering 176 water quality affected habitations. Remaining 6 schemes are at various stages of execution.

From 2004-05 onwards, the State has taken up Rajiv Gandhi Drinking Water Mission Programme under Bharat Nirman Programme to provide safe drinking water to water quality affected habitations in rural areas.

During 2005-06 to 2007-08, 144 Schemes covering 1383 water quality habitations at an estimated cost of Rs. 858.47 crores have been taken up under Sub-Mission Programme. Of the 144 schemes technical sanction to 140 schemes has been accorded up to end of Dec-2010. Tenders have been approved in respect of 139 schemes and works have been started. An expenditure of Rs. 695.37 crores have been incurred to end of Dec- 2010.

**Bharath Nirman Programme:**

A Comprehensive Action Plan amounting to Rs. 6600 crores has been prepared and posed to Government of India seeking adequate grants to ensure supply of 40-55 LPCD of potable water to all the rural habitations including those affected by water quality. It is proposed to address the problematic habitations through a permanent measure by way of at least sanctioning the need-based schemes during the Eleventh Five Year Plan. Achievement during the period 2005-10 (up to March 2010) are indicated below:

**Table 1.6: Target and Achiements of BharathNirmanProgramme in Karnataka**
**(Rs. in Lakh)**

| Year | Financial (`crores) | Physical (Nos.) | | |
|---|---|---|---|---|
| | Target | Achievement | Target | Achievement |
| 2005-06 | 820 | 850 | 23683 | 7015 |
| 2006-07 | 2639 | 232 | 16668 | 9541 |
| 2007-08 | 2407 | 372 | 7127 | 4206 |
| 2008-09 | 2035 | 608 | 2921 | 2016 |
| 2009-10 | 4055 | 3692 | 905 | 105 |

Sources: Karnataka Economic Survey2010-11.

**Suvarna Jala**

Under Suvarna Jala a sum of Rs. 73.66 crores has been released for providing Roof Top Water Harvesting structures to the rural schools. In Karnataka there are 49618 schools of which 39171 schools have been provided with Roof Top Rain Water Harvesting System. GramaPanchayats, Panchayat Raj Engineering department, School Development Management Committees, Nirmithi Kendras. Demonstration of the Roof Top Rain Water Harvesting structures have also been arranged at Talukas. The State has also explored the possibilities of providing incentives for the promotion of the scheme. Up to 20 per cent of exemption in the payment of the annual tax for a period of five years would be provided to those who opt for the scheme in villages while constructing their new houses. Apart from this, a subsidy of Rs.5000 is provided to each of the 20,000 families (SC/ST/BPL families) in the selected 1000 high fluoride affected villages.

**Table 1.7: Fund Released and Expenditure for Rural Drinking Water under Swajaldhara Schemes in India and Karnataka**

**(Rs. in Lakh)**

| Year | Karnataka | | India | |
|---|---|---|---|---|
| | Amount Released | Expenditure reported | Amount Released | Expenditure reported |
| 2002-03 | 161.01 | 40.68 | 17984.61 | 9616.10 |
| 2003-04 | 899.77 | 175.80 | 10934.37 | 3644.61 |
| 2004-05 | 940.15 | 0.00 | 12609.94 | 0.00 |
| 2005-06 | 312.68 | 0.00 | 6832.90 | 0.00 |
| 2006-07 | 1503.75 | 66.77 | 13242.05 | 1554.99 |

Source: Compiled from various official sources.

**I.Implications:**

Negligence of water management will lead to serious consequences. The magnanimity of the problem with its manifestations in various dimensions in the two states indicates the intensity of the problem.

**Depleting groundwater levels:**

Groundwater depletion has been increasing to deeper depths up to 800 –1,000 feet in Karnataka, depleting the aquifers and causing serious quality problems, threatening the survival of the people. The situation can reach a stage where it becomes impossible to tackle the magnanimity of the problem. The groundwater utilization in 21 taluks has exceeded 85 per cent, 22 taluks between 65 to 85 per cent and 29 taluks by 50 per cent causing rapid depletion of aquifers. By the year 1994 about 25 per cent of the taluks have been classified as dark and grey.

**Water quality threats:**

21,088 habitations in Karnataka are facing quality problems. Quality has deteriorated with contamination beyond permissible limits with salinity ingress in coastal areas, Fluoride, TDS (3500–4000), Chlorides (1200–1500 ppm) and Nitrate. In Kolar, Karnataka, most people get drinking water from outside town and use local water for non-drinking purposes. Some make weekly trips to nearby cities to get a can of water or request guests visiting them from other areas to bring cans of drinking water. Health conscious families spend around Rs.300 to Rs.500/ - for drinking water every month. The ones who cannot afford drink the available water (DH, June 14$^{th}$).

**Declined traditional sources:**

Traditional sources are replaced with PWS, MWS and BWHP or Regional water supply schemes in Karnataka. With depleting groundwater sources failure of technologies due to various reasons like drying up of sources, power shortage, poor management etc accompanied with negligence of traditional sources has led to severe scarcity problems and other consequences.

**Spread effects of Rain water harvesting:**

In Karnataka, rainwater harvesting is still taking shape, farmers at Kurubahalli in Hosakote taluk took to different ways to conserve water by desalting tanks, building check dams, clearing up eucalyptus trees in fallow land thereby preventing rainwater from flowing to the drains. The farmers are also changing the mud bund tanks with granite slabs, which prevent water from seeping into the soil. They are also coming up with new methods to stop water from evaporating, when pumped into the open tanks. All these have yielded positive results with pond being full (DH June 8th2004). Mr. Devraj Reddy's efforts in developing a cost-effective method of charging groundwater by digging a pit around the bore well with 50 to 120 holes around the casing pipe with other technical specifications has done wonders in the arid land of Chitradurga where farmers face severe scarcity with groundwater depletion. By using this technology more than 1,000 borewells have been recharged in Davanagere district. More than 200 houses in Shimoga, Bellary, Chickmagalur and Bangalore districts have adopted this technique while his latest target has been to recharge 4,000 to 5,000 dried up bore wells.

**New policy initiations:**

Various policies towards water management are underway. The new law on water management would empower the authorities to impose certain restrictions for proper management of water resources, inclusive of conserving rainwater through people's participation in water management involving self - help groups. Promise of formation of committees to assess water would be initiated as per recent plans (July 2 2003 The Hindu). Policy decision on supplying water to all the villages between the urban centers while laying water pipelines under urban water supply was to be undertaken in Karnataka. It was made mandatory to provide water supply to the villages connecting a main water source to the urban centers (DH, May 27 2003). First time in the history of the state it was decided to ask its work force of over six lakhs by withholding dearness allowance for drought relief to bail out the state of a difficult financial situation. It resolved to make them sacrifice 5 installments of dearness allowance which amounted to 55 crores.

**Poor co - ordination between agencies leading to ineffective results:**

Segmented approach by various departments has resulted in continuous postponement of actions. Holistic approach to understand the intricacies of the problem is the absolute need of the hour. As long as the approach lacks professional and in depth understanding of the problem, the saga of wasted efforts will continue. The present structure does not have an apex body that can view the total water resources in the state in a comprehensive fashion or formulate an overall water policy for the state and regulate the pattern of utilization of water supply effectively and efficiently. The problems in the field of water supply and water use in the state have been largely created by a fragmented institutional structure.

**Water conflicts:**

Water conflicts can take various form s and are increasing at various levels with scarcity and spurts of water conflicts are being observed in various regions of Karnataka. For instance, Kolar Zilla Shashwatha Neeravari Horata Samiti protested that adequate steps were not taken by the policy makers. Drought accompanied with groundwater depletion and quality had been disastrous. Better share of water from Krishna river to meet Kolar's needs was asked for. The states should implement the recommendation of the committee that 110 tmc of Krishna water and about 168 tmc of non - utilised water from western rivers can be utilized for solving the water problem in Kolar district. The Paragodu project intends to supply 0.137tmc drinking water every day to 82 villages apart from Gudibanda and Bagepalli towns. The project is estimated to cost 968 lakhs. (DH, June 1st2003). A tiny barriage with a capacity to store barely 0.13 tmc water to quench the thirst of Bagepalli and Gudibandataluks of Kolar district has raised the hackles of AP.

**Awareness creation – poor and incompetent:**

The approach towards effective awareness creation programmes is ineffective with purpose not served in most projects undertaken at Karnataka. For instance, although defluoridation units are installed in severely affected Hosahudya, Kolar district, HonnaKirangi, Gulbarga district, the need for using treated water is not popularised. People are not involved in the process, installation of the unit is seen as any government's interest and doesn't interest more than 50 per cent of the people.

**Technical limitations: Unaddressed and unknown:**

Information on technical details is not documented resulting in poor accountability and transparency. It is not possible to access information on investment specifics in any village. Poor foresight in adopting available technologies has resulted in non-sustainability of projects and wasted investments are continuing. For instance: in water scarce regions of Karajgi, Gulbarga district, huge investment on PWS schemes have not solved the problem due to drying up of sources. Similarly, with power fluctuations, PWS has remain ineffective in 8 villages. Ineffective workings of defluoridation plants with poor

monitoring, poor quality constructions leading to frequent breakdowns etc., are other associated problems.

**Inadequacies in the strategies adopted –**

In Karnataka, irrespective of the approaches adopted by different agencies, whether World Bank, Danida or SRP, the result was not effective due to various lacunas in the process of implementation. Although the schemes covered various aspects like awareness creation, women involvement, participation at every stage of decision - making like finance, technology, location etc, it was very poor at the field level.

**GPs powerless power-**

Although the GPs were saddled with powers keeping decentralisation in mind, it seems meaningless with their inadequate capacities. Unless GPs are given adequate power, finance and trained to upgrade capacities, monitoring and management will remain poor and inefficient. GPs were very unclear with their roles at times and sometimes were not able to efficiently play their role due to lack of finances or situations that arose beyond their capacities making them helpless. Systematizing the system is important to avoid corruption and local level politics. GPs inadequacies were prominent in Karnataka to a large extent in Turavannur, Chitradurga district where they were not able to supply water due to poor co-ordination between ZP and GP, although hugeinvestments were made on 3 PWS schemes in the village. .

## II.CONCLUDING REMARKS

Safe and adequate quantity of drinking water is an essential input for life. However, the efforts made by the state government and other organisations have not been enough in covering all habitations. Provision of drinking water supply, mainly depending upon groundwater, has been confronting several resource specific constraints such as depletion, deterioration in quality, lack of operation and maintenance, etc., which are related to both supply and demand side factors. Decline in the water supply has serious implications on target and achievements of schemes as discussed in this paper. Considering the status of and problems in drinking water supply the following points might be considered to resolve problems and augment services. Partially covered habitations, in both rural and urban areas, should be brought under full coverage of water supply. Drought prone districts should be given high priority to resolve the problem of inadequate water supply.

## III.REFERENCE:

1.Prime Minister Shri Atal Behari Vajpayee's speech to the Fifth Meeting of the Water Resources Council, New Delhi, April 1, 2002.
2.Indian Express, December 6 2002. 'PM b'day gift: water to drink.'
3.Development Alternatives (2001) 'Too much, too little: The characteristics of water in India', http://www.devalt.org/water/WaterinIndia/characteristics.htmw [April, 2004].
4.Government of India (2002), The National Water Policy , Ministry of Water Resources, New Delhi.
5.Government of Karnataka (2002- 03), Annual Report, Rural Development and Panchayat Raj Department, Bangalore.
6.Government of Karnataka (2002), Report of the High Power Committee (HPC) for Redressal of Regional Imbalances, Bangalore.
7.Government of Karnataka (2004), State of Environment Report and Action Plan , Department o f Ecology, Environment and Forest, Bangalore.
8.PuttaswamaiahS and ShashankaBhide (2004), 'GramaPanchayats and Basic Public Health Services: Expenditure Analysis in Two Districtsof Karnataka', project report 'Restructuring Local Environment Management for Better HealthOutcomes: Towards A District Pilot in Karnataka', Institute for Social and Economic Change, Bangalore.
9.Government of Karnataka (2011) Planning, Programme Monitoring & Statistics Department.

**Chandrashekhar Ramayya**
Research Scholar Department of Studies and Research in Economics Gulbarga University Gulbarga, Katakana, India.