RJC
http://www.rasayanjournal.com

RASĀYAN *J. Chem.*
Vol.3, No.4 (2010), 705-709
ISSN: 0974-1496
CODEN: RJCABP

STUDY ON IRRIGATION PROJECTS IN CHAMARAJANAGAR DISTRICT: A REPORT

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ABSTRACT

For the long history the irrigation is the foremost important for agriculture in rural areas. This paper discuses the situation in which knowledge of community irrigation systems, useful for policy makers for the welfare of the people in the district. While the instance of national policy that includes the development of new small scale irrigation systems. Today the Chamarajanagr economy is facing a severe crisis on water for irrigational land use and imbalance in water supply among the water users. Some of the reasons for the crisis are that there is a river flow in the district where low rainfall and failure in planning. Using rain water as a resource for micro level planning of water bodies as alternative use of irrigation in the village levels, instead of depending on irrigational projects is required for sustainability in irrigation.

Key words: Community, Sustainability, Drought, Humidity, catchment.

INTRODUCTION

Irrigation means drawing the water for agriculture from the canal, tank, well etc., for the purpose of growing crops. It can be said that the process of artificially supplying water to soil, for rising crops in areas where the total rainfall is either insufficient or nil for agriculture.

The study made shows that the growth of irrigation in Karnataka has not led to any significant increase in multiple cropping as most of the realized potential has been rising intensively. Irrigated crop like sugarcane, paddy and wheat whose area as a result has gone up, while that of many rain fed ones have declined. In the fore going analysis and evaluation of the aspect of irrigation in Chamarajanagara district, has been made in detail in order to understand the role and impact of irrigation on development of agriculture and its efficiency. The study on irrigation deals on certainly to a greater extent to understand the future course and thereby need for planning of agriculture in Chamarajanagar district.

Objective of this study

1. To know the existing irrigation projects in Chamarajanagar district.
2. To know the development process of irrigation projects carried out in Chamarajanagr district

Study Area

The Chamarajangar district is situated in the southern part of the Deccan Peninsula and Southern most of Karnataka State. Physio-graphically, the region is classified as partly maidan and partly semi-malnad. The district with an area of 5101.00 sq.kms lies between north latitude 11.0 40' 58" and 12.0 06'32" and east longitude 76.o 24'14" and 77.o46'55'. It is bounded by Mysore, Mandya and Ramanagar on north on south by Cannanore District of Kerala State, (Udhaka Mandalam)/Ooty (Nilgiri) District on the east by Salem and Coimbatore districts of Tamilnadu State.

The district Comprises of 4 taluks and 5 towns. It has a population of 965462 according to 2001 census. The district covers an area of about 5101 sq.km and 4 taluks namely, Chamarajangar (1226.67 sq.km), Gundlupet (1392.88 sq km) Kollegal (2785.82 sq.km) and Yelandur (266.34 km).

EXPERIMENTAL

Methodology

For the study of irrigation projects carried out in Chamarajanagar district I have collected the secondary data from the different sources such as, Zilla Panchayat, Engineering division, such as the projects carried out in different period, the storage capacity, water storage, uses for irrigation etc. While the Department of agriculture has given the details regarding the crops which can be grown with the help of irrigation projects .The Water shed development program department has given the details on the amount of water storage, use of water for different crops that can be grown with minimum water from the existing projects in the district. The department of statistics has given the details of the land use, rainfall, crops grown etc in Chamarajanagar district. By the above data has been made use for the analysis for the present study. So for this even I have collected the information with respect to irrigation by use of internet as a tool for the earlier case studies for the review.

Irrigation in Chamarajanagar District

An artificial feeding of the water to the agriculture land for rising crops is known as irrigation. The histories of irrigation as well as agriculture of Chamamarajanagar district has given less important due to scarcity of rainfall. It is on the backward district which was generally suffering from partial or total drought or absent of rainfall. The irrigation was practiced by water drawing appliances namely channels, tanks, wells and underground wells. The below data table of 1995-96 analysis the different types of irrigation that have carried under Chamarajangar district. The data states that wells consists of 21,368 (88.68 percent) followed by the tank irrigation is of other sources is of 1.777(7.36 percent). The third ranks consists of other king of irrigation sources that is 697(2.89 percent), While 175(0.72percent) consists of channels and the last and fourth ranks is of bore well of numbering 86 (0.36 Percentage)

Table-1: Irrigation bydifferent sources in Chamarajanagara district-1995-96

1 No	TALUKS	CHANNALS	TANKS	WELLS	BORE WELLS	OTHER SOURCES	TOTAL
1	Chamarajanagara	149 (3.78)	200 (5.07)	3,548 (89.91)	NIL	49 (1.25)	3,946
2	Gundlupet	Nil	300 (6.67)	4,096 (91.06)	80 (1.78)	22 (1.49)	4,498
3	Kollegal	26 (1.21)	317 (2.46)	11,822 (91.70)	Nil	626 (4.86)	12,781
4	Yelandur	Nil	960 (33.48)	1,902 (66.33)	6 (0.21)	Nil	2,868
5	Total	175 (0.72)	1,777 (7.36)	21,368(88.68)	86 (0.36)	697 (2.89)	24,093

SOURCE: - Chamarajanagar District at a Glance – 1995-96 (Figures in brackets are percentages

Review of irrigational projects in Chamarajanagar district

The above data shows that there is a change in different types and percent variation. By this we find that the major irrigation projects have been carried out in the Chamarajanagr district from the past decades.

1. Uduthorehalla reservoir

The Uduthorehalla project comprises of a storage reservoir across Uduthorehalla steam (a tributary of river Cauvery) near Ajjipura village in Kollegal taluk. An earthen dam of about 1,560 meters in length and 41.30 meters in height is proposed for constructing and forming the storage with gross storage capacity of 26.19 million cubic meters and live storage capacity of 22.01 million cubic meters. Two canals are proposed on either side to irrigation 6,275 hectares. The existing net area of 325 hectares in Gundapura dam situated about 2 km downstream of reservoir. While the left bank canal with an irrigational command of 2,510 hectares run for 12 kms. The right bank canal runs for 47 kms to

command an area of 3,765 hectares. The catchment area of the dam site is 262 sq. km with 75 percent dependable yield of 25.85 million cubic meters at the dam site. The proposed utilization of water is about 34.84 million cubic meters project at 1977 level .The entire achukattu lies in Ramapura hobli of Kollegal Taluk having rainfall of less than 45cm. But only about 162 hectares of forest land comes under reservoir submersion and about 5 km cart track between Ajjipura and Suttinavelli is affected by this project.

2. Nallur amanikere reservoir

The Nallur Amanikere Project Construction of an earthen dam of 1,920 meters length and 14.54 meters height, with side channel spillway across Gundlu stream near Ingalvadi village in Gundlupet. Two canals one on either sides, provide irrigation over an area of 1,300 hectares lying in Gundlupet. After the completion of the second stage it is proposed to provide irrigation over an area of 2,428 hectares. Only about 195 hectares of land comes under submersion on complete on of storage capacity of 6.56 million cubic meters of water. The left bank canals run only for about 5km having an irrigable command of 279 hectares utilization of 6.23 million cubic meters is completed under this project. Work on this project was commenced during 1975 and full irrigation potential to an extent of 1,051 hectares under the left bank canal and 249 hectares under right bank canal has been created by June 1995.

3. Suvarnava reservoir

The Suvarnavathi dam is 28 meters height and the length of 1,240 meters across the Suvarnavathi River a tributary of the Cauvery near Attagullipura in Chamaranagara. Two canals, one on either side of the bank, take off from the reservoir to irrigate an area of 2,580 hectares in Chamarajanagar including stabilization of 4,362 hectares under existing annekattu. The reservoir has the storage capacity of 35.4 million cubic meters and the proposed utilization is 95.19 million cubic meters. The work under this project was started in 1967 and it was completed in 1984. The expenditure by the end of March 1995 was 368.99 lakes. An area of 508 hectares has been submerged due to the construction of the reservoir.

4. Chickhole reservoir

The Chickahole dam, 745 meters long and 24 meters high is constructed across the river Chickahole, a tributary to the Suvarnavathi River near Ankanasettyyapura village in Chamarajanagar taluk. The work on this project was started in 1958 and completed in 1969. The dam was damaged by the floods of 1972 and it was rebuilt from 1976 to 1984. About 160 hectares of area has come under submergence due to the formation of the reservoir. The storage capacity of the reservoir is 10.65 million cubic meters and utilization proposed is 21.94 million cubic meters.

5. Gundal reservoir

The Gundal reservoir constructed across the Gundal stream, a major stream flowing in Kollegal taluk and tributary to the river Cauvery with a saddle spillway on the right side along the Sallgeguda hill ranges. The total length of the dam is 1,220 meters and the height of the dam above river bed level is 30 meters with a gross storage capacity of 23 million cubic meters. The catchment area of the dam site is 93 sq. kms with an estimated average yield of 50.9 million cubic meters at the dam site. This project was started in 1970 and completed in 1980. About 280 hectares of cultivated dry lands got submerged and 300 people were affected under this project. There are two canals running on either side of the dam of the length 16 kms each provide irrigation facilities for total atchkat of 6,112 hectares including stabilizing the existing atchkat of 2,064 hectares under old annekut and channels. The gross utilization is about 50.9 million cubic meters. The inflow pattern into the reservoir is usually poor. However, the Kabini right bank canal when completed runs in the command area of Gundal project providing irrigation benefits over 3,248 hectares and leaving the balance of 2,863 hectares for the direct command under Gundal reservoir project. These are the major irrigation projects have taken place in the Chamarajanagar district, but these are the major projects which is not much useful for the people. So for the development, maximizing and sustainability benefits for the rural area the recommendations have been made for welfare of the people.

RESULTS AND DISCUSSION

The Karnataka's progress in irrigation though impressive but it is adequate to effectively meet the challenges of the field technology by adopting new micro level irrigation systems in the district. The delay in the completion of the several major irrigation projects and neglect of minor irrigation are responsible for the extension of agriculture and land use in the district.

1. The irrigation in Chamarajanagar district is to be carried out in the macro level due to low rainfall in the district, but this can be carried out where there is more amount of rainfall in the Biligiri betta/hills, hillocks of Gopala Swamy Hills, where these two hills is the convergence of eastern and western Ghats in the district. The Male Mahadeshwara Hills a part of eastern Gahts will receive more of rainfall in the month of October to December.The rain water can be channelized for the irrigation or can be connected to the existing projects or to take up micro level irrigation projects. This may lead to increase the agricultural productivity by nearly 18-20 percent crops in the district.
2. The lakes, ponds, canals, wells should be desilted once in 5 years in order to increase the carrying capacity of water ,which increase the irrigational land use in the district in order to help the agriculturists.
3. The rain water should be harvested in the agricultural fields and it should be made compulsory in the agricultural filed as well as the by channelizing through inter linking of lakes and ponds in particular region with respect to amount of rainfall in the catchment region.
4. In order to save/minimize the water for irrigation and to make proper channel for the agricultural fields with limited water. So for this with the help of local people through different employment schemes have to think "Namma Halli" (our Village) "Namma Kere" (Our pond) in several schemes such as desilting, linking of ponds and tanks, rain water harvesting, extension of water for dry lands etc in the villages through government sponsored schemes.
5. The farmers have to think before the cropping area, types of crops, number of crops can be harvested, season depending on rainfall, Humidity, temperature, soil, and the storage of water in the reservoir at local level.
6. The Government has to relook in macro level of irrigation in the hobli wise or Gram panchayat for the maintenance and development of tanks, pond and lakes existing in the area. The local people will know the problems existing in their area such as rainfall, crops, land use, area under cultivation, Geographical area etc.

CONCLUSION

The sustainability of the irrigation depends on the amount of rainfall and their use in the catchment area and the amount of fresh water released from the dams in Chamarajanagar district for agriculture. The operation of irrigation system is rather sophisticated and requires high degree between the district irrigation management and the user for maximizing benefit. There are despites among the irrigated and non irrigational land users are commonly mediated at the district level for the existing crisis on water. These dams reduce the storage capacity and sustainability for the longer duration of water flow for irrigation by silt from the rivers. The local planning has to think of sustainability development with in the district and maximizing the limited rain water as a resource. These are the above recommendations for irrigation to agriculture play a major role in the Chamarajanagar district.

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[RJC-680/2010]