

“JALAYAGNAM”- A Boon for the Development of Agrarian Community

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ABSTRACT

Water is a renewable resource, its availability in appropriate quality is under severe stress due to increasing demand from various sectors. Agriculture Community is the largest user of water. The overall development of the agriculture sector and the intended growth rate in GDP is largely dependent on the judicious use of the available water resources. The commitment of 'Jalayagnam' is to allow the water to flow in the new channel of Irrigation, bringing relief to the rural farming community, who are looking for assured water supply for the years to come. Objective of the Paper is to analyse the impact of irrigation project 'Jalayagnam' among beneficiaries of the scheme in terms of improvement in Ayacut and Income generated. The total observations, reports elicited from the sample under the present study on Jalayagnam among agricultural community (the beneficiaries) providing favourable/desirable inferences.

Key words: *Jalayagnam, Irrigation, Community, Ayacut, Impact.*

INTRODUCTION

It is proud to tell that, despite of severe constraints on the countries resources, particularly in relation to India's population, the Country had done a commendable job in providing food and nutrition, security to the people, inspite of the fact that even today 60 percent of the Indian agriculture is under rainfed conditions. When India became independent in 1947, virtually 90 percent of the population depended on agriculture and a large majority of them were illiterate and could be classified as poor (Directorate of Economics and Statistics, GoAP,2011).

Of the total 118.7 million hectares of net area sown in the year 1950, only 20 million hectares was under irrigated agriculture. More than 80 percent of the agricultural land comprised small and marginal holdings with less than 2 acres per capita. As most of the agriculture was in rainfed areas, the farm incomes were very low

and there was, therefore no surpluses for investment(ibid).

Country has to enhance the investment in irrigation and agriculture, have to find resources for investments.

Irrigation

Irrigation is the artificial application of water to the land or soil. It is used to assist in the growing of agricultural crops, maintenance of landscapes, and revegetation of disturbed soils in dry areas and during periods of inadequate rainfall. In addition, irrigation also has other uses in crop production, like protecting plants against frost, suppressing weed growing in grain fields and helping in preventing soil consolidation. Further, irrigation systems are also used for dust suppression, disposal of sewage and in mining.

Importance of irrigation in India

Irrigation and development of irrigation is essential in India as agriculture is the main occupation of Indians. The importance of irrigation is justified as follows:

The rainfall of our country is dependent on the monsoons. Rainfall controls our agriculture. But the agriculture of our country is said to be, "the gambling of the monsoon" as the monsoon rainfalls are uncertain, irregular and uneven or unequal. So irrigation is essential for agriculture. The following are the primary reasons of irrigation in our country.

Investment in irrigation sector has led not only to a substantial increase in agricultural growth, incomes and development, but also to an increase in the gross National product. This has been achieved through major public expenditure.

Jalayagnam refers to the programme initiated by the Government of Andhra Pradesh in 2004 to bring vast tracts of land under irrigation and stabilize the existing ayacut in the State.

Jalayagnam, a High Priority Initiative by the Government of Andhra Pradesh, has a total geographical area of 2,75,045 Sq. Km of which 1,49,880 Sq. Km is fertile and can be cultivated.

Water is a renewable resource, its availability in appropriate quality is under severe stress due to increasing demand from various sectors. **Agriculture Community is the largest user of water.** The overall development of the agriculture sector and the intended growth rate in GDP is largely dependent on the judicious use of the available water resources.

Andhra Pradesh has a heritage of irrigated Agriculture dating back to several centuries. About 40 percent of the States gross cropped area is irrigated, and irrigations contribution to State Agricultural production is about 60 percent. It is in irrigated areas where the bulk of agricultural growth has occurred. Rehabilitation and sustained development of

irrigation infrastructure and its expansion in the backward and drought prone regions of the State are thus, of paramount importance to Andhra Pradesh.

REVIEW OF LITERATURE

The Review of Literature is very important not only to understand the nature and scope of the problem but also the lacuna exist if any in the work already done by several earlier researchers.

The development of water resource is critical to several aspects of welfare of the people and thereby the development of the society. In the development discourse, irrigation has been identified as the leading input for the growth of agriculture.

According to Boyee, the importance of irrigation in the economic development may be seen in terms of stabilization of the agricultural production, increased cropping intensity, productivity of land and labour, and production thereby leading to the growth of agriculture (see **Boyce, 1987**).

Irrigation increases the employment generation and thereby well-being of the people. In Indian context, while recognizing the value of irrigation for agriculture there has been efforts in developing irrigation infrastructure since and prior to independence. Over the period, there has a tremendous improvement in the cultivable area brought under the different irrigation sources. Nevertheless, there exist regional disparities across region/state and regions within the states where it is highly concentrated in some pockets (**Barret, Christopher B., 1998**).

JALAYAGNAM: A Project to Quench the Thirst of Farmers' for Irrigation

An increase in the population is posing a new challenge to the state for harnessing the untapped water resources for increasing the irrigation potential which in turn contributes to the **growth of agriculture**, as there will be an increase in the **productivity of agriculture** and

thereby **creating rural employment**. The agrarian crisis experienced in the recent past in Andhra Pradesh and political demands of separate statehood especially for Telangana where the problem is predominantly linked with agriculture

development and irrigation, pressed the necessity to expand irrigation infrastructure across the regions of the state and particularly in backward regions like Telangana (**Simhadhri and Visweswararao, 1997; Revathi, 1998**).

Region-wise No of Projects Proposed, the Ayacut Development and the Estimated Cost in the Completion of the Projects Undertaken in 'Jalayagnam': Andhra Pradesh, 2005

S. No.	Region	No.	Ayacut	Estimated Cost
1.	Coastal Andhra	22	3637719 (43.8)	19665 (45.7)
2.	Rayalaseema	11	1760500 (51.2)	9022 (21.0)
3.	Telangana	26	2911638 (35.0)	14307 (33.3)
Andhra Pradesh		59	8309857	8309857 (100)

Note : 1. Figures in col.4 are in No. of acres; 2. Figures in col.5 are in Cr.Rs.;
3. Figures presented in parenthesis represent the percentages.

Source : Department of I & CAD, Govt. of Andhra Pradesh (2005).

The commitment of 'Jalayagnam' is to allow the water to flow in the new channel of Irrigation, bringing relief to the rural farming community, who are looking for assured water supply for the years to come.

Even under the auspicious Programme of 'Jalayagnam', the Region-wise number of Projects that are Proposed and the Size (Number of Acres) of Ayacut Development and the Estimated Cost in the Completion of the Projects that are undertaken in Andhra Pradesh show that there is a continuity in the regional disparity in spite of the promises of regionally balanced development.

Although most of the dependable water flow from the Krishna is utilized, the Godavari water is yet to be harnessed. From the **total geographical area of the state 2.74 lakh Sq Kms, the total cultivable land is around 392.70 acres, of which 292 lakh acres is, in fact, under actual cultivation**. Within the cultivated area, the land irrigated through different irrigation sources is 133.11 lakh acres, or about 40 per cent of the cultivated land (**ID CAD, (2005)**). The utilization pattern of water resource along the river valleys shows it is less in the actual catchment area but more towards the plains and the command area.

Jalayagnam underwent a high level review for the first time outside the State capital by collection of 15 districts where work is in full-swing on 4 major and six medium projects. Some 400 top officials from the irrigation department, the Pay and Accounts office and the Transco which is to ensure power supply to these life schemes and engineers and contractors attended the review.

The Comptroller and Auditor General (CAG) – (GoAP, Report No.2 of 2012) complimented the initiative to launch Jalayagnam as extremely "timely and laudable" going by the fact that 50 percent of the cultivated area in the State was rain-fed.

With this perception persistently, the then Governance paved the way of germination of the thought that the farmers feel ditched if the Government kept quiet by not taking corrective measures. This resulted with the concept called "Jalayagnam" water-worship. Consequently, the State Government

launched a massive drive taking up 30 major irrigation projects, 18 medium projects at the cost of Rs.72 crores to cultivate 1 crore acres under Jalayagnam. Under these projects, 33,79,00 acres in Telangana, 15,34,100 acres in Rayalaseema, 20,17,00 acres in Coastal Andhra will be irrigated.

At this juncture, the State Government has launched a massive programme to complete 30 Major and Medium Irrigation Projects within a period of 2 to 5 years investing nearly 46,000 crores in the same period with the participation of Banks and other Financial Institutions (GOAP, 2005).

METHODOLOGY

Methodology is the most important part of any research study which enables the researcher to form a blue print for the undertaken study. It involves the systematic procedure by which the researcher starts from the time of initial identification of the problems to its final conclusion.

Statement of the Problem

A descriptive study to assess the social assessment and the impact of Jalayagnam project among the beneficiaries of Jalayagyam project in the selected completed projects under Jalayagnam Scheme of Andhra Pradesh.

Objective of the Paper: The very objective of the present paper is :

To analyse the **impact** of irrigation project ‘Jalayagnam’ among beneficiaries of the scheme in terms of improvement in **Ayacut** and **Income generated**.

Jalayagnam-initiation of mega irrigation project itself is an intervention by the Government for Farmer (Agriculture – based) Development, pivot of Rural Development concept. The Researcher of the present study is trying to disclose the impact of this intervention from the beneficiaries of the mega project.

Limitations:

The sample is limited to the beneficiaries who were participated and co-operated at the time of survey by the Researcher.

Universe of the Study:

The population of the study includes the beneficiaries under Jalayagnam irrigation projects of three areas in Andhra Pradesh, namely **Chagnadu Lift Irrigation Scheme** in East Godavari District, **Veligallu Reservoir** in Kadapa District and **Alisagar Lift Irrigation Scheme** in Nizamabad district. These three projects are among the twelve completed projects under Jalayagnam scheme in Andhra Pradesh at the time of study period.

Descriptive design was undertaken for present study to understand relationships among phenomena as they naturally occur without any intervention, which was found to be ideal to conduct the present study. It is non-experimental research that focuses on obtaining information regarding the characteristics, behavior, differences and knowledge, intentions of a group of people by asking individuals belonging to that group to answer a series of questions.

Study Period : i) The information elicited from among the beneficiaries is during the period 2004 to 2012.

Total sample size of this study is 1400

Sampling Unit:

The sampling unit is a respondent or a **beneficiary of Jalayagnam programme**.

The **beneficiary** is a cultivator / cultivator cum agricultural labour / agricultural labour of that particular areas under study.

The **beneficiary is defined** as “the person who is benefitted by the Jalayagnam project in terms of employment and irrigation facility to his land owned or a labourer under Jalayagnam Project work (labour / Mandays of work / wage generation).

Stage I: Out of the 12 completed Irrigation projects under Jalayagnam, three projects completed were selected, one each from Coastal Andhra, Rayalaseema and Telangana regions. These projects are :

From Coastal Andhra : Chagalnadu Lift Irrigation Scheme (East Godavari District)

From Rayalaseema : Veligallu Reservoir, (Cuddapah District)

From Telangana : Alisagar Lift Irrigation Scheme (Nizamabad District)

Hence, by adopting **Purposive Sampling Technique** the three irrigation projects which come under Jalayagnam scheme were selected purposively for further investigation, as completed projects.

Stage II : In this stage, the researcher sought information with the help of an **Interview Schedule** prepared and standardized for this focused investigation **at random** from about 500 respondents (beneficiaries), covering 15-20 villages covered by this projects completed in each region.

Hence, actual sampling technique adopted for drawing sample size is **Simple Random Sampling Technique**.

By excluding incomplete interview schedules, the total **Sample size is 1400** utilized for further analysis of the study.

RESULTS AND DISCUSSIONS

Beneficiaries / Respondents:

The sampling unit, the respondents or the beneficiaries of the study are those who have been benefitted or enjoyed by the projects in terms of **employment (work/wage) increased ayacut (increased extent of fertile land with irrigation facility (water source)** of the Jalayagnam Scheme of the different projects respectively, under study.

Impact is ‘something new’ generated; namely, ideas, behavioural changes, activities of daily life, improvement in standards of living, etc., with the force of something. Here, that something, the force is irrigation facilitation by the projects under Jalayagnam scheme. Due to water facility, irrigation provided, newly generated, agrarian community could be able to elevate their positions, status by making use of their strengths, efforts to improve their standards of living, conditions of their way of life.

This change may be in terms of positive thinking of themselves on their working conditions, their life; hope of increasing yields, income, savings, better housing, nutrition, education, finally contentment-being satisfied-with what one has, to the extent that brings satisfaction.

Historical evidences disclose that the very human civilization flourished at the edge of water sources, facilities only.

One could recall, bestow and bow to Sir Author Cotton, generations to generations. Here at this junction, the researcher trying to inquire the status/ impact of irrigation facility provided under Jalayagnam scheme from among agricultural community, the beneficiaries of the projects.

Comparative analysis of “ayacut” and “income generation (weekly) of respondents (beneficiaries)” “before and after” functioning of

Jalayagnam Scheme under the selected projects for the present study.

The other way, improvement or increase of ayacut with irrigation facility at individual/family holding; and also improvement or increase of income generated at individual and at family level due to employment generation under Jalayagnam scheme is analysed in terms of '*before and after*' functioning (facilitating) of Jalayagnam Scheme by providing *irrigation (water)* and *income (wages)* of respondents under the selected projects in this study.

Improvement of Ayacut 'before and after' provision of irrigation facility under the selected projects by region.

Water, watering is the utmost required element for agricultural based yields, inturn elevates agricultural community.

Individual Holding of Ayacut:

Conspicuous improvement is observed in the expansion of ayacut from being without water facility – before initiation of Jalayagnam scheme – to after providing irrigation facility to the agricultural community at individual level under

the three regions of Jalayagnam projects; Coastal Andhra (East Godavari), Rayalaseema (Kadapa) and Telangana (Nizamabad) (Table-1). Expansion of ayacut without water facility (<1 to 3 acres) has increased to with water facility (3 to 6 acres) as expressed by the highest proportion of beneficiaries and also the Officials concerned to the irrigation projects in the respective regions.

Family holdings of ayacut:

Similarly, regarding expansion of ayacut with irrigation facilities under Jalayagnam project at family holdings level of the beneficiaries also, remarkable improvement is observed from the above table (Table-2). Ayacut after providing water facility is expanded from less than one acre to 1 to 6 acres in this study; a family hold of 1-6 acres (64.8 percent) before Jalayagnam period has increased to 91.7 percent (1-6 acres) after functioning of Jalayagnam project. This expansion of ayacut is observed in all three regions – Coastal Andhra, Rayalaseema and Telangana Region - under Jalayagnam Project.

Table-1 – Number and percentage distribution of Beneficiaries according to Improvement of Ayacut 'before and after' provision of irrigation facility under the selected projects by Region at Individual Level

Before Functioning of Jalayagnam at Individual Ayacut *					After Functioning of Jalayagnam at Individual Ayacut						
District Cross tabulation					*District Cross tabulation						
Before	Acres	District			Total	After	Acres	District			Total
		East Godavari	Kadapa	Nizamabad				East Godavari	Kadapa	Nizamabad	
Individual Ayacut	< 1	230	50	598	878	Individual Ayacut	< 1	18	0	29	47
		66.5%	26.6%	69.1%	62.7%			5.2%	0.0%	3.3%	3.4%
	1 - 3	115	119	254	488		1 - 3	245	50	597	892
		33.2%	63.3%	29.3%	34.9%			70.8%	26.6%	68.9%	63.7%
	4 - 6	1	19	13	33		4 - 6	82	119	231	432
		0.3%	10.1%	1.5%	2.4%			23.7%	63.3%	26.7%	30.9%
	>7	0	0	1	1		>7	1	19	9	29
		0.0%	0.0%	0.1%	0.1%			0.3%	10.1%	1.0%	2.1%
Total		346	188	866	1,400	Total		346	188	866	1,400
		100.0%	100.0%	100.0%	100.0%			100.0%	100.0%	100.0%	100.0%

Table-2 – Number and percentage distribution of Beneficiaries according to Improvement of Ayacut 'before and after' provision of irrigation facility under the selected projects by Region at Family Level

Before Functioning of Jalayagnam at Family Income						After Functioning of Jalayagnam at Family Income							
Before	Acres	District			Total	After	Acres	District			Total		
		East Godavari	Kadapa	Nizamabad				East Godavari	Kadapa	Nizamabad			
Family Ayacut	< 1	158	69	263	490	Family Ayacut	< 1	14	0	11	25		
		45.7%	36.7%	30.4%	35.0%			4.0%	0.0%	1.3%	1.8%		
	1 - 3	186	83	538	807		1 - 3	198	71	400	669		
		53.8%	44.1%	62.1%	57.6%			57.2%	37.8%	46.2%	47.8%		
	4 - 6	2	36	63	101		4 - 6	132	84	399	615		
		0.6%	19.1%	7.3%	7.2%			38.2%	44.7%	46.1%	43.9%		
	>7	0	0	2	2		>7	2	33	56	91		
		0.0%	0.0%	0.2%	0.1%			0.6%	17.6%	6.5%	6.5%		
	Total		346	188	866		1,400	Total		346	188	866	1,400
			100.0%	100.0%	100.0%		100.0%			100.0%	100.0%	100.0%	100.0%

Improvements in Income levels before Jalayagnam project initiation and after Jalayagnam project functioning.

Similar effort was made by the researcher to disclose the improvement of income levels of beneficiaries at individual and also at family level due to **employment generation (Weekly Mandays of work with wages)** under Jalayagnam project in all three regions of Andhra Pradesh.

Here also, remarkable improvement is observed regarding improvement in weekly income levels of respondents (beneficiaries) from before initiation of Jalayagnam project to after functioning of Jalayagnam project in all the three regions of Andhra Pradesh (Tables-3), both at Individual and also at Family Income levels.

The similar trend of improvement in Income levels at Family level is also observed from the (Table-4).

This is because provision of work with wages to the agricultural community at individual and also at family point of view. This is the very intention / aim of Jalayanam Irrigation Scheme thought-over by the then Governance of the State.

Table-3: Number and percentage distribution of Beneficiaries according to Improvement of Weekly Income 'before and after' provision of irrigation facility under the selected projects by Region at Individual Level

Before Functioning of Jalayagnam at Individual Income						After Functioning of Jalayagnam at Individual Income					
Before	Weekly Income In Rs.	District			Total	After	Weekly Income In Rs.	District			Total
		East Godavari	Kadapa	Nizam-abad				East Godavari	Kadapa	Nizam-abad	
Individual Income	250 - 500	195	99	500	794	Individual Income	250 - 500	22	2	41	65
		56.4%	52.7%	57.7%	56.7%			6.4%	1.1%	4.7%	4.6%
	501 - 750	133	68	336	537		501 - 750	226	99	541	866
		38.4%	36.2%	38.8%	38.4%			65.3%	52.7%	62.5%	61.9%
	751 - 1000	18	21	29	68		751 - 1000	88	67	259	414
		5.2%	11.2%	3.3%	4.9%			25.4%	35.6%	29.9%	29.6%
	1001 - 1250	0	0	1	1		1001 - 1250	10	20	25	55
		0.0%	0.0%	0.1%	0.1%			2.9%	10.6%	2.9%	3.9%
Total		346	188	866	1,400	Total		346	188	866	1,400
		100.0%	100.0%	100.0%	100.0%			100.0%	100.0%	100.0%	100.0%

Table-4 : Number and percentage distribution of Beneficiaries according to Improvement of Income 'before and after' provision of irrigation facility under the selected projects by Region at Weekly Family Income

Before Functioning of Jalayagnam at Weekly Family Income						After Functioning of Jalayagnam at Weekly Family Income					
Before	Weekly Income In Rs.	District			Total	After	Weekly Income In Rs.	District			Total
		East Godavari	Kadapa	Nizamabad				East Godavari	Kadapa	Nizam-abad	
Family Income	250 - 500	161	105	298	564	Family Income	250 - 500	10	0	18	28
		46.5%	55.9%	34.4%	40.3%			2.9%	0.0%	2.1%	2.0%
	501 - 750	165	58	493	716		501 - 750	249	111	459	819
		47.7%	30.9%	56.9%	51.1%			72.0%	59.0%	53.0%	58.5%
	751 - 1000	20	25	72	117		751 - 1000	71	53	326	450
		5.8%	13.3%	8.3%	8.4%			20.5%	28.2%	37.6%	32.1%
	1001 - 1250	0	0	3	3		1001 - 1250	16	24	63	103
		0.0%	0.0%	0.3%	0.2%			4.6%	12.8%	7.3%	7.4%
Total		346	188	866	1,400	Total		346	188	866	1,400
		100.0%	100.0%	100.0%	100.0%			100.0%	100.0%	100.0%	100.0%

WILCOXON SIGNED RANK (PAIRED) TEST:

This is a non-parametric / distribution test, which is used for larger samples in which in order to get inference on safer grounds of distribution-free properties (Gouri K. Bhattacharyya, Richard A. Johnson, 1977, Statistical concepts and Methods, pp.505-525). This tool is proposed (developed) by F.Wilcoxon (1945). Wilcoxon signed-rank test can be safely applied to paired differences of larger samples. Wilcoxon signed rank test is used to compare progress before and after the programme Jalayagnam, since the source of data under the variables 'Ayacut' and 'Income' are ordinal in nature.

Table-1 & 2, shows that, the progress or the “**improvement of Ayacut (fertile land with irrigation facility)**” and “**income generating works (income levels)**” are highly significant in the present study, before functioning of Jalayagnam project and after functioning, which is very desirable result of the project Jalayagnam. Significance indicates that by facilitating the Agrarian Community with proper irrigation sources, their activities of daily life (adl) and standards of living would be elevated, which is the very object of ‘Jalayagnam’ Scheme.

Table-5 : WILCOXON SIGNED RANK (PAIRED) TEST

Overall		N	Mean Rank	Sum of Ranks	Z-value	p-value
Before Individual Ayacut - After Individual Ayacut	Negative Ranks	40	664.50	26,580.00	34.315**	0.000
	Positive Ranks	1,307	674.29	881,298.00		
	Ties	53				
	Total	1,400				
Before Family Ayacut - After Family Ayacut	Negative Ranks	32	614.08	19,650.50	32.626**	0.000
	Positive Ranks	1,174	603.21	708,170.50		
	Ties	194				
	Total	1,400				
Before Individual Income - After Individual Income	Negative Ranks	53	688.09	36,469.00	32.26**	0.000
	Positive Ranks	1,223	636.35	778,257.00		
	Ties	124				
	Total	1,400				
Before Individual Income - After Family Income	Negative Ranks	38	548.00	20,824.00	30.906*	0.000
	Positive Ranks	1,081	560.42	605,816.00		
	Ties	281				
	Total	1,400				
East Godavari		N	Mean Rank	Sum of Ranks	Z-value	p-value
Before Individual Ayacut - After Individual Ayacut	Negative Ranks	18	162.00	2,916.00	16.020**	0.000
	Positive Ranks	309	164.12	50,712.00		
	Ties	19				
	Total	346				
Before Family Ayacut - After Family Ayacut	Negative Ranks	10	148.50	1,485.00	16.050**	0.000
	Positive Ranks	287	149.02	42,768.00		
	Ties	49				
	Total	346				
Before Individual Income - After Individual Income	Negative Ranks	21	170.71	3,585.00	14.5770**	0.000
	Positive Ranks	283	151.15	42,775.00		
	Ties	42				
	Total	346				

Kadapa							
		N	Mean Rank	Sum of Ranks	Z-value	p-value	
Income	Before Individual Income - After Family Income	Negative Ranks	9	121.50	1,093.50	14.452**	0.000
		Positive Ranks	238	124.09	29,534.50		
		Ties	99				
		Total	346				
Before Individual Ayacut - After Individual Ayacut		Negative Ranks	0	0.00	0.00	13.711**	0.000
		Positive Ranks	188	94.50	17,766.00		
		Ties	0				
		Total	188				
Before Family Ayacut - After Family Ayacut		Negative Ranks	3	94.00	282.00	13.24**	0.000
		Positive Ranks	185	94.51	17,484.00		
		Ties	0				
		Total	188				
Before Individual Income - After Individual Income		Negative Ranks	2	141.00	282.00	13.241**	0.000
		Positive Ranks	186	94.00	17,484.00		
		Ties	0				
		Total	188				
Before Individual Income - After Family Income		Negative Ranks	1	92.00	92.00	13.379**	0.000
		Positive Ranks	182	92.00	16,744.00		
		Ties	5				
		Total	188				

Contd.....

Ranks

Nizamabad							
		N	Mean Rank	Sum of Ranks	Z-value	p-value	
Before Individual Ayacut - After Individual Ayacut		Negative Ranks	22	409.00	8,998.00	27.108**	0.000
		Positive Ranks	810	416.70	337,530.00		
		Ties	34				
		Total	866				
Before Family Ayacut - After Family Ayacut		Negative Ranks	19	372.82	7,083.50	25.13**	0.000
		Positive Ranks	702	360.68	253,197.50		
		Ties	145				
		Total	866				
Before Individual Income - After Individual Income		Negative Ranks	30	399.03	11,971.00	25.613**	0.000
		Positive Ranks	754	392.24	295,749.00		
		Ties	82				
		Total	866				

Before Individual Income – After Family Income	Negative Ranks	28	335.50	9,394.00	23.85**	0.000
	Positive Ranks	661	345.40	228,311.00		
	Ties	177				
	Total	866				

* significant at 5% level , ** significant at 1% level

We conducted Wilcoxon Signed rank test to compare progress before and after this programme since our data under the above variables is ordinal in nature.

CONCLUSION:

The total observations, reports elicited from the sample under the present study on Jalayagnam among agricultural community (the beneficiaries) providing favourable/desirable inferences. The statistics of the sample under study – percentages, χ^2 -squares and non-parametric test like Wilcoxon Signed Rank (Paired) Test-are providing the very intension of Jalayagnam project. The agrarian community the cultivation and the related occupations would be improved in their professions and their activities of daily life by facilitating with proper timely irrigation sources.

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Be faithful in small things because it is in them that your strength lies.

~ **Mother Teresa**