

IRRIGATION EFFICIENCY OF MUSI PROJECT IN SOLIPET (V), SURYAPET (M) & (D), TELANGANA STATE

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ABSTRACT

Irrigation efficiency (IE) is the proportion of the measure of water devoured by the harvest to the measure of water provided through water system (surface, sprinkler or trickle water system). The proficiency is the proportion of water yield to the water input. Information short yield is only misfortunes and henceforth if misfortunes are more yield is less in this manner productivity is less. Subsequently, proficiency is contrarily relative to the misfortunes This undertaking "Investigation of Irrigation Efficiency Musi Project" has been completed at suryapet. The Musi Project is a Major Irrigation Project and it was built crosswise over Musi River close Solipet (Village), Suryapet (Mandal), Suryapet Dist. Intended to irrigate 30,000 sections of land in the year 1953. The dam contains two trenches left waterway and right channel. The left primary trench crosses through a length of 41.75 Kms. The correct waterway navigates through a length of 33.80 Kms. The water system productivity of musu venture is estimated utilizing regular or customary methods. They are numerous water system strategies have been utilizing in this fields in particular are surface water system, trickle water system, sprinkler water system. The water effectiveness in the MUSI venture is less because of more loss of water in the trench because of vanishing, permeation and state of channels. The fundamental subject of this investigation is to discover pattern of the productivity of Musi Project with years.

Keywords: *Irrigation efficiency, River, Project, Canal, Runoff.*

INTRODUCTION

Water system is the counterfeit use of water for the development of harvests, trees, grasses thus on. Irrigation is the fake utilization of water to the land or soil. It is utilized to aid the developing of horticultural harvests and re vegetation of bothered soils in dry regions and amid times of insufficient precipitation. Moreover, water system additionally has a couple of different uses in yield generation, which incorporate ensuring plants against ice, smothering weed development in grain fields and forestalling soil combination. Conversely, agribusiness that depends just on direct precipitation is alluded to as downpour nourished or dry land farming. Irrigation in India incorporates a system of major and

minor trenches from Indian streams groundwater very much based frameworks, tanks, and other water gathering ventures for rural exercises.

Of these groundwater framework is the biggest. In 2010, just about 35% of absolute agrarian land in India was dependably inundated. Around 2/3rd developed land in India is reliant on storms. Water system in India improves sustenance security, lessen reliance on rainstorm, improve agrarian efficiency and make provincial openings for work.

Dams utilized for water system ventures help produce power and transport offices, just as give drinking water supplies to a developing

populace, control floods and avert droughts. Indians inundated horticulture segment has been key to India's monetary improvement and neediness lightening. Some 28% of India's Gross Domestic Product (GDP) and 67% of employment is based on agriculture.

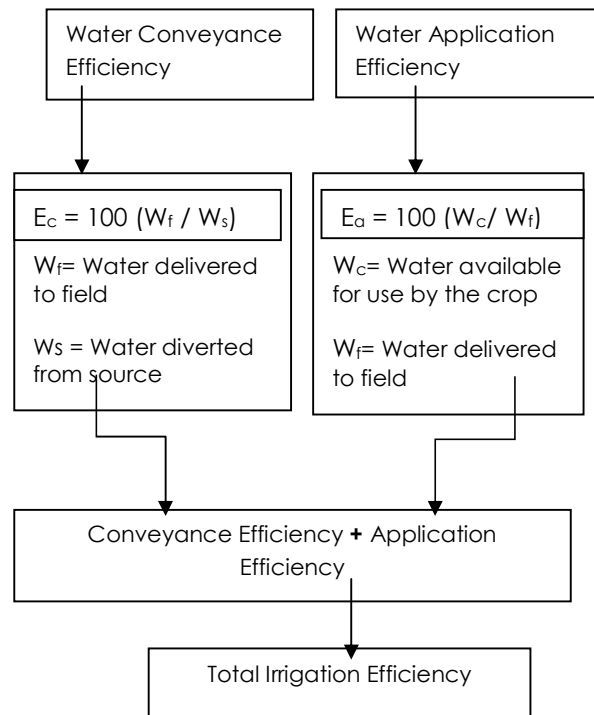
Farming is the essential wellspring of business in provincial territories, which represent 75% of India's populace and 80% of its poor. What's more, thusly, water system is the base for about 56%, potentially a greater amount of all out rural yield. The quick development of water system and waste foundation has been one of India's real accomplishments. From 1951 to 1997, net flooded territory (GIA) (incorporates twofold trimming) extended four - overlap, from 23 M Ha to 90 M Ha. Increment in water system force has added to the development in the general editing power, which expanded from 111.07% in 1950-51 to 131.19% in 1993-94. Subsequently, India has moved from the ghost and fact of sustenance imports and intermittent starvations to independence since the mid 1970s, nourishment sends out and dynamically increasingly differentiated creation. The present investigation has been done at Musi Project.

The Musi Project is a Major Irrigation Project and it was developed crosswise over Musi River close Solipet (V), Suryapet (M), Suryapet Dist. This dam is on the stream Musi. The Musi River is one of the Major tributaries of waterway Krishna. The waterway begins in Anathagiri Hills close Vikarabad, Vikarabad (District) and subsequent to voyaging a length of 240 Kms it joins stream Krishna in Nalgonda (District) close Vadapally (Village). This venture predominantly bolsters for water system in the suryapet locale for some Mandals. There are two trenches from this task.

left and right canals. Left canal serves for Ramachandrapuram, Ramaram, Yendlapally, B. Venkatapuram, Tekumatla, B. Da

charam, Pinnaipalem Pillalamarri, Suryapet, K. T. Annaram, B. Madharam Rayangudem, Kupi reddygudem, Kasarabad, Kesaram, T. K. Pahad, I mampet, KudaKuda, Durajpally Singireddypalem, Anajipuram, Ananharam and Right canal servers for Bopparam, Kasangode, Gudiwada, Kothapet, Uppalapahad, Koppole, Thungathurthy, Kethapally, Bheemaram, Cherkupally, Pamulapahad, Amanagal, Chirumarthy, Poreddygudem, Agamothkur, Bheemanapally, Kalwalapalem, Yellammagudem, Mamidyala. Suryapet also, encompassing towns are decent spot to find in the blustery season as those are with full harvests. 2. Point of the paper: as of late, no examinations have been done about Irrigation productivity of the Musi venture. To decide the study of efficiency we carried this project.

Objective: The goal of the task work is to think about the Irrigation Efficiency of the MUSI RIVER venture close solipet SURYAPET for most recent ten years ie. from 2007 to 2017. System: The philosophy of the water system productivity of the Musi stream project is shown in flow chart



Experimental Investigations & Results:

Required data: To decide the water system productivity of the Musi venture the accompanying information is required Rain fall information Irrigated land Ayacut of the undertaking Length of the trench Water discharged in TMC Amount water came to at the inundated land.

Irrigated Land: The accompanying table comprise of the water discharges from the assets in TMC and comprise of flooded land of Rabi season within the particular years.i.e

S.NO	YEAR	WATER RELEASED (TMC)		AYACUT IRRIGATED (acres)	
		Kharif	Rabi	Kharif	Rabi
1	2006-07	-	4.04	-	30,000
2	2007-08	-	4.14	-	30,000
3	2008-09	-	3.90	-	31,000
4	2009-10	-	3.20	-	28,000
5	2010-11	-	4.39	-	35,100
6	2011-12	-	4.27	-	35,000
7	2012-13	-	4.09	-	31,000
8	2013-14	-	4.40	-	37,600
9	2014-15	-	DEAD STORAGE	-	-
10	2015-16	-	3.60	-	31,000
11	2016-17	-	4.20	-	31,500

Table :1 Irrigated land of the Musi project

Rain fall information: The accompanying table comprise of the downpour fall information of the Musi project within the particular years ie 2007 to 2016.

S.NO	YEAR	RAIN FALL(mm)
1	2007	801.00
2	2008	907.00
3	2009	425.00
4	2010	1043.40
5	2011	946.00
6	2012	826.00
7	2013	1235.00
8	2014	650.00

9	2015	781.00
10	2016	1004.00

Table- 2. Precipitation information of Musi venture Average yearly precipitation of Suryapet district is 820.00mm.

Water delivered to the field: The accompanying table comprise of the information of water discharges from the source in TMC and furthermore water conveyed to the field (approx..) in TMC inside the specific years i.e . 2006 to 2016.

S.No	Year	Water released from source (TMC)	Water delivered to field (TMC)
1	2006	4.04	3.01
2	2007	4.14	3.25
3	2008	3.90	3.50
4	2009	3.20	2.40
5	2010	4.39	3.80
6	2011	4.27	3.67
7	2012	4.09	3.16
8	2013	4.40	2.80
9	2014	DEAD STORAGE	-
10	2015	3.60	2.75
11	2016	4.20	2.72

Table-3 Shows details of water delivered to the field

Water system productivity: The accompanying table consists of the calculated water conveyance efficiency and irrigation land efficiency within the particular years. i.e 2006 to2016.

S.No	YEAR	IRRIGATION EFFICIENCY	
		COVEYANCE EFFICIENCY (%) (approx.)	IRRIATED LAND EFFICIENCY (%) (approx.)
1	2007	78.00	72.73
2	2008	76.09	74.16
3	2009	75.00	66.98
4	2010	86.56	82.77
5	2011	86.00	84.00
6	2012	77.26	74.16
7	2013	90.00	86.12

8	2014	-	-
9	2015	76.38	74.16
10	2016	80.00	75.35

Table:4. Water system productivity of the Musi venture

CONCLUSION:

- The accompanying ends have been gotten from this examination on the Musi venture.
- Dam is working in great condition however the states of the channels are not reasonable.
- The practically 50% of the line waterway of the both left channel and line trench are fell. Considering the most recent five years the productivity is decreased because of permeation of water into the dirt and dissipation.
- The most extreme effectiveness in the year 2010 is 86.56 % The base proficiency in the year 2009 is 75.00% The normal productivity of the undertaking over the most recent five years is 79.00%.
- The most extreme water transport proficiency happened in the year 2013 is 90.00% The base movement effectiveness happened in the year 2013 is 86.12% The normal transport productivity of the venture over the most recent five years is 79%.
- The greatest precipitation happened in the year 2013 is 1235.00mm The base downpour fall is happened in the year 2009 is 425.00mm So, it has been reasoned that the proficiency of Musi venture is palatable and it tends to be additionally improved by fix in the channel where it is required

Drawbacks:

- Musi venture is intended to inundate dry land crops like heartbeats however formers under this Ayacut were developing wet land crops like paddy.
- Paddy is the significant developing harvest here, it required more measure of water at root zone so toward the

year's end there is a deficiency of water in Dam.

- There were illicit engine siphons to fundamental trenches which diminishing water movement proficiency.
- Last part of the trench getting less measure of water.
- For good upkeep, engine siphons ought to be expelled and all formers must develop dry land crops as it were.

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