



IRRIGATION FACILITIES DEVELOPMENT IN MADHA TASHIL OF SOLAPUR DISTRICT - A GEOGRAPHICAL ANALYSIS.

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ABSTRACT :

India is predominantly an agricultural country and near about half of the countries national income are depend upon agriculture allied activity which, absorb nearly three fourth working force. Agriculture provide food to the teeming millions and raw material to our industry. The development of agriculture seems to hold key progress to our economy as a whole. Agriculture sector provide near about 70 to 75% employment opportunities to our people. The agriculture in India has long been carried out a traditional manner, hardly using a modern techniques in the developed parts. However, during the last three decades special attention has been paid modernise the agriculture with adoption of different technology. Since the mid sixties, a great change has taken place in agriculture technology. These changes has been designed by the term of green revolution.

The country like A India , where the rainfall is inadequate and unpredictable it's effect badly on agriculture. In India 80 percent of the total rainfall comes from the south-west monsoon wind. Since the monsoon rains are of uncertain and irregular nature, sometimes wet drought and sometimes dry drought can be seen. Indian climate is also influenced by El-Nino and La-Nina. Water is a very important resource that depends on rainfall. Water is used for agriculture, drinking for animals industrial use . In ancient times, farming was done only along the banks of rivers and lakes, but today, due to the availability of various means of irrigation, a large amount of crop production is achieved through proper use of water . Today's , irrigation has been developed using river water ,lakes Wells, ponds, dam, borewell for irrigation. Unani dam is an important source of irrigation in Madha Tahsil. Before the construction of Ujani Dam, Madha tashil was seen as backward in terms of agriculture. Actually, since the construction of Ujani Dam, Madha Tahsil has seen a lot of development in terms of agriculture as various water supply schemes based on Ujani Dam have been implemented for Madha Tahsil including Ujani canal irrigation, Sina-Madha lift irrigation , Bhima -Sina link canal ,Area under KT weir on Sina river , back water pipeline irrigation. Therefore, due to the development of various means of irrigation in Madha Tahsil today, food crops from agriculture, Orchards, as well as the largest area of sugarcane can be seen. Ujani dam is the main reason ,Madha Tahsil is considered to be the leader in sugarcane production in Solapur district today. Madha tahsil has important irrigation through canals. Farmers of

Madha tahsil have developed water irrigation in their own farm by using through the government scheme. In Madha taluk today most of the water is supplied through drip irrigation.

KEY WORDS: Irrigation, Agriculture Developments, green revolution.

INTRODUCTION:-

Madha Tahsil was one of the drought prone tehsil of Solapur. The process was started in Madha tehsil with the construction of Ujani irrigation project on the Bhima river. The irrigation facilities through Ujani left Bank canal (ULBC), Bima-sina link canal, also irrigation facilities lift irrigation on Back water of Ujani dam, Tube wells, KT weirs, soil dam were developed in Madha Tehsil. Through this perennial water supply was made available. This development of irrigation facilities resulted a shift from traditional farming to commercial sugar farming in the region. Now Madha tehsil is well known for its irrigation facilities agriculture and sugar industry development. In 1981 only 288 hectares of land was under irrigation, which increased up to 29045 hectares in 2015. In 2001-2002 about 5895 hectares of land under sugarcane cultivation which increased to 25633 hectares in 2014-2015. In 2001-2002 first sugar factory was established in Madha Tashil at present there are four sugar factories in the tehsil. Establishment of sugar facilities have brought radical changes in agrarian structure of the region. They are providing different input to agriculture resulted in the increase in the agriculture production. The provision of irrigation facilities, fertilizer, improved implements and modern technology have all resulted into remarkable changes in general as well as in agriculture land use in particular. Therefore during last fifty years 1981-2021 Madha Tehsil has witnessed considerable increase in the quantity and quality of improved agriculture technology like mechanization of agriculture, use of chemical fertilizer, pesticide and insecticide.

STUDY REGION:-

Madha Tashil is one of the eleven Tashil of Solapur district situated at western part of the district. It is extended between 17° 40' to 18° 30' north latitude and 75°00' to 75°40' east longitude. The central upland region lies in the central part of the tehsil having height more than 500 mts above sea level. The climate is typically semi-arid. The annual average rainfall of Madha Tehsil is about 600 mm. It is bounded at North by Karmala tehsil, at North West by Indapur tehsil of Pune district, separated by Bhima river, on the east and north east by Barshi Tashil of Solapur district. In Southern side it is bounded by Pandharpur Tashil and northeast Paranda Tashil of Osmanabad tahsil.

Total area covered by Madha tehsil is about 1544.9 sq.km. and there are 109 villages in Madha Tashil according to 2011. Total population of tehsil is about 3,23,727 and population density is 209 persons per sq. km. in 2011 census. Physiographically Solapur district is a part of Deccan tableland. Therefore, Madha Tehsil is more like a flat like a plateau region, except the central part of ease characterized by broken hills and an upland area, known as Bodaki Hill's. This Central plateau region is continuation of Karmala hills further in Madha tehsil.

Purpose/ Aim And Objective:-

Following are specific objectives,

- 1 To study the geographical setup of Madha tahsil.
- 2 To study the various source of irrigation facilities in Madha Tehsil.

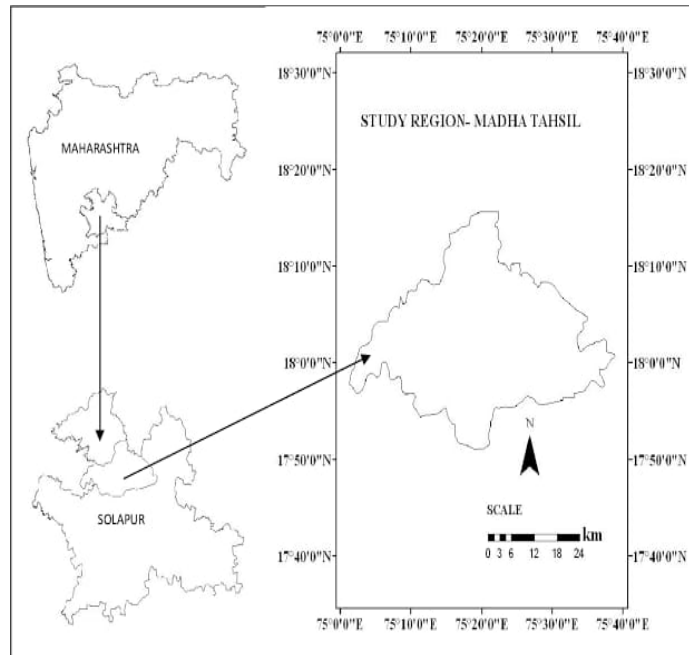


Fig: 1 – Location map of study area

Methodology:-

The Present investigation will be based on primary and secondary data. primary data collected those the questionnaire's and secondary data collected the socio-economic review and statistical abstract of Solapur district.

As the entire research paper data we be analysed by table, charts ,map, diagram etc.

Data Analysis:-

Before the Ujani Dam project, Madha tahsil was known as a drought-prone tahsil . Ujani dam was constructed at Bhimanagar on Bhima river. An area of 2.50 hectares in Solapur district has come under irrigation due to Ujani Dam after construction. Ujani Dam, also known as YashwantSagar Dam or Bhima Irrigation Project, is a tributary of the Krishna River on the Bhima River . It is a limestone gravity dam located near Ujani village in Madha tahsil of Solapur district in Maharashtra. Interestingly, this dam is located in Solapur district and even though there is not even a little rain in this district, this dam fills up 100% because of the heavy rainfall in the western part of Pune district. The water storage capacity of this dam known as Ujani Dam is 1517 GigaLitres . 117 TMC (100%) 123 TMC (111%).

Land under Irrigation by different sources.(Hectors), 1981 to 2018

Sr. No.	Particular.	1981	1991	2001	2011	2018
1	Canal Irrigation	NA	NA	520	1918	2501
2	Lift Irrigation	NA	NA	890	5614	9545
3	Back Water Irrigation	210	1417	1952	1648	1875
4	Wells And Tubewells	78	645	1229	6992	12020
5	Sina River K.T. weir irrigation	NA	NA	1245	10220	11038
	Total:-	288	2020	5836	26392	36979

source:- completed by researcher .

The given table gives information about irrigation facilities and total area under irrigation in Madha tahsil from 1981 to 2018 year. The canal irrigation in Madha tahsil started between 1984 To 1991 but the data are not available, In 2001 the area under canal irrigation was 520 hectares. In 2011, 1918 hectares of canal irrigation has been done, while in 2018 it has increased to 2501 hectares under canal irrigation. Canal irrigation in Madha tashil can be seen based on the Left Bank canal of Ujani Dam. This canal is developed from the western part of Madha tashil along the river Bhima. But this canal passes through low area of Madha tashil.

Lift Irrigation Scheme is an important irrigation scheme in Madha tashil. The First lift canal irrigation scheme , Bhima-Sina Link Canal was started in 2004. In this scheme included a total of 13 villages of Madha tashil and area under Irrigation about 11800 hectors of Madha tashil. The Second Lift canal irrigation Link, Sina – Madha Lift Irrigation Scheme was started in 2005. An area about 10,000 hectares has been brought under irrigation including 14 villages of Madha tashil . These two schemes are detailed in table serial number two and serial number five in details.

Back water irrigation is one of the most important means of irrigation in Madha tashil. In 1981, there was 210 hectares of back water irrigation. After the construction of Ujani Dam, 1417 hectares came under back water irrigation. In that, 2875 ha area came under back water irrigation in 2018 after increasing from 2001 to 2011.

Wells and borewells are also important sources of irrigation in Madha tashil. Before the construction of Ujani dam, irrigation was being done on the basis of wells and borewells in Madha tashil. But due to the drought area, the water level was at a higher depth. After the construction of Ujani dam, irrigation has progressed on a large scale and many areas of Madha tashil have come under irrigation on the basis of canals and pipelines. This led to an increase in the water level. Wells and borewell irrigation is important in some areas. In 1981, the number of wells and borewells was 78. Today, the number of wells and borewells in Madha tashil is 12020 in 2018 with a huge increase.

Based on the above table, if the various means of irrigation in Madha tashil are to be analyzed collectively, in 1981 Madha tashil had an area of 288 hectares under irrigation. It is 36979 hectare area under irrigation in 2018 in Madha Tashil.

CONCLUSION:-

- 1 Irrigation in Madha Tahsil was not much developed before the construction of Ujani Dam.
- 2 The western part of Madha tahsil has been irrigated to a small extent due to the Ujani Left Bank Canal (ULBC). Also the area adjacent to the river has also been heavily irrigated. It has lift irrigation facilities
- 3 Ujani Dam is the only reason for the drastic change in agriculture of Madha tashil.
- 4 Today Madha tahsil is the leading sugar factory in Solapur district due to the development of irrigation facilities in Madha tashil. Sugarcane is produced on a very large scale in the Ujani dam area.
- 5 In the eastern part of Madha tashil, canal water still does not reach some villages. So many people are using modern irrigation equipment for agriculture.
- 6 Wells are very useful source of irrigation

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