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A Study of Relevance and Evaluation of Marathwada Water Grid Scheme

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Abstract

Under the Marathwada Water Grid Scheme, drinking water, agricultural water and industrial water will be combined grid to cope with the persistent drought in Marathwada and to curb farmer suicides.Therefore, if water is not available from one place by loop method, the water from another place will be diverted to other parts of Marathwada. E.g., Water from Jayakwadi is released through right and left canals. Instead, the problem of drinking water can be solved by releasing it in other dams. Because in this scheme, a secondary pipeline is proposed to carry pure water from the main pipeline to the taluka through water purification process. Kilometers will be the main pipeline. It will have 11 dams (Jayakwadi, Lower Dudhna, Siddheshwar, Yeldari, Isapur, Vishnupuri, Majalgaon, Lower Manar, Manjra, Lower Terna and Sina Kolegaon) connected by loop method.Overall, this scheme is an important contribution to the development of Marathwada. But the viability of the scheme is being questioned today. Many experts have expressed the view that the scheme has not been properly dealt with Therefore, it is necessary today to evaluate the relevance and evaluation of this plan.

Keywords: Marathwada, Water Grid, drinking water, Agriculture Water, Farmer

Introduction

In Maharashtra, the current government had come up with an ambitious plan called Water Grid to quench the thirst of Marathwada. Due to the bidirectional facility, water will be transferred through a pipeline on both sides. Therefore, if water is not available from one place by loop method, the water from another place will be diverted to other parts of Marathwada Will E.g. Water from Jayakwadi is released through right and left canals. Instead, the problem of drinking water can be solved by releasing it in other dams. Because in this scheme, a secondary pipeline is proposed to carry pure water from the main pipeline to the taluka through water purification

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process. Kilometers will be the main pipeline.11 dams (Jayakwadi, Nimma Dudhna, Siddheshwar, Yeldari, Isapur, Vishnupuri, Majalgaon, Nimna Manar, Manjra, Nimma Terna and Sina Kolegaon) will be connected by loop method. The work of this scheme has been given to a private company. The scheme will cost about Rs 10,000 crore. The plan is to bring water from areas where water is available to dryland areas. For this scheme 8 preliminary collection reports for 8 districts of Marathwada, as well as 2 preliminary collection reports for bringing water from other valleys to Marathwada are proposed. Out of which 2 PDRs have been received from Mekorot for Aurangabad and Jalna districts. The planning, implementation, operation and maintenance of this work will be done through Maharashtra Jeevan Pradhikaran. The total cost for this scheme for Aurangabad district is 2 thousand 764 crore 46 lakhs, out of which the total pipeline is 737 km. And the total capacity of 4 water treatment plants will be 396 million liters. The total cost for Jalna district is 1 thousand 529 crore 08 lakhs. The total length of the pipeline is 458 km. And the total capacity of 3 water treatment plants will be 149 million liters. Also, the total cost for Beed district is 4 thousand 801 crore 86 lakhs, in which the total pipeline is 1078.61 km. And the total capacity of 5 water treatment plants is proposed to be 255 million liters. It is also proposed to supply water from Krishna Valley to Ashti taluka of Osmanabad and Beed districts in future. Seeing the water problem in Marathwada as a whole, people have to wander for drinking water. Considering that in a district like Latur in Marathwada, water had to be supplied by rail during the drought, the drought and drinking water in Marathwada affect the education of children and also the health of women. It also affects the agricultural business which is the economy of Marathwada. Therefore, farmer suicides have increased in Marathwada today. Overall, this scheme is an important scheme that contributes to the development of Marathwada. But the viability of the scheme is being questioned today. Many experts have expressed the view that the scheme has not been properly dealt with. Therefore, it is necessary today to evaluate the relevance and evaluation of this plan.

Review of research and development in the subject

Water is our basic need. Although the world's population is about 790 million today, the amount of natural water they need is limited. Water availability, quality, groundwater level, rainfall are all declining day by day. When water is allocated according to its availability, first priority is given to drinking, followed by agriculture and industry. In such cases, the actual distribution of

water must be done in an equal and equitable manner. Natural disasters, such as modern-day floods or droughts, occurred in the 19th century; But we were able to overcome it with the invaluable contribution of Bharat Ratna Sir Mokshagundam Visvesvaraya in engineering for the country. His plans for construction of dams, canals, water supply, drainage, irrigation block systems, construction and management are considered to be the best in architecture. He understood that the availability of water is the key to the overall development of the country. We have severe droughts in the south, while the northern states face floods. During the monsoons, many rivers in the north carry excess water to the sea. Visvesvaraya knew that if the same was diverted to rivers in drought prone areas, the country's water problem could be solved permanently. His wish for a river confluence project in the country is still unfulfilled. It is the duty of the Central and State Governments to phase out ambitious national projects for water conservation and water use for our future generations. Because in the future, we will not look at water as a limited resource, but in the future, we will have to pay more for fuel than water. Therefore, March 22 is celebrated as World Water Day. The main objective of this day is to create awareness about water through public participation.

Climate change poses a major challenge to India's water resources in the future, according to a 2012 survey by Norwegian research firm Bioforsk. Billions of rupees are spent on natural disasters like floods, droughts, storms, earthquakes, tsunamis. The importance of such things should be with everyone nowadays. Today, as much as water leakage or theft, unauthorized plumbing, excessive groundwater abstraction, and water pollution need to be controlled, it can be recycled by treating the wastewater to meet the growing demand for water. According to a survey by the Central Pollution Control Board, the rate of wastewater treatment in various states is very low. By leaving untreated water in rivers, streams, streams, we are polluting our natural resources.Increasing urbanization has led to depletion of natural resources and increased flooding.

As a result of pollution, the incidence of many serious diseases is increasing day by day. Even today, water is often needed to keep hands clean, even in Corona's time. If 95% of the city's wastewater is treated and reused, the water in the dam may become more potable. Singapore once depended on neighboring Malaysia for water. Today the country has 100 percent sewage treatment. The silt content of many dams in the country is about 30%.Cleaning it will increase the storage capacity of the dam. Polymer encapsulation technology developed in India is available for sludge

removal from the dam. Also, according to the National Building Construction Code, 135 liters of water is required per person per day. It is divided into five liters each for drinking and cooking, 20 liters for washing clothes, eight liters for washing utensils, seven liters for house cleaning, 45 liters each for bath and toilet. In addition, water is used for washing bikes / four-wheelers, cleaning around the house, and gardening. The leakage rate in such places is about 10%. Bathrooms and toilets use the most water. In such a place, if the option of water saving devices is chosen instead of the traditional ones, about 20% savings can be made. The production and use of water saving devices has been made compulsory in countries like Australia, Singapore and Portugal. Water saving devices are rated by the Central Science and Environment Center, Delhi. The Central Government disseminates information on new water saving technologies, its benefits, equipment efficiency, their limitations, disposal of improper equipment, sewerage schemes across the country. This project is implemented with the support of the Ministry of Urban Development.

Population Demographics of Maharashtra & Marathwada

Districts by administrative divisions Maharashtra occupies the western and central part of India and has a long coastline stretching nearly 720 kilometres along the Arabian Sea. The Sahyadri mountain ranges provide a physical backbone to the state on the west, while the Satpuda hills along the north and Bhamragad-Chiroli-Gaikhuri ranges on the east serve as its natural borders. Maharashtra has borne a long history of social reform while having stable governance right from the beginning. Evident from movements such as Jyotiba Phule's Satyashodak Samaj in 1873 to the political assertion of underprivileged caste groups through the Peasant and Workers Party. Maharashtra has created an environment of progressive change and development for itself. Maharashtra is among the most economically developed states in the country along with being one of the largest. The state is also a primary financial centre and boasts of one of the country's largest industrial economies. Mumbai, considered the country's financial capital, is the state's political capital and houses almost all major financial institutions. India's major stock and commodity exchange markets and capital markets are located here. Maharashtra has 36 districts, divided into six revenue divisions for administrative purposes including Konkan, Pune, Nashik, Aurangabad, Amravati and Nagpur.

The state has a long tradition of highly powerful planning bodies at district and local levels. Local self-governance institutions in rural areas include 34 Zilla Parishads, 355 Panchayat Samitis

and 27,993 Gram Panchayats. Urban areas in the state are governed by 23 Municipal Corporations, 222 Municipal Councils. Maharashtra is the second largest state in India in terms of geographical area, spread over 3.08 lakh sq. km and in terms of population. The State's population, which is 9.29 per cent of the entire country's population, is 11.24 crore. While the national urban population average is 31 percentage,45 percent of Maharashtra's population lives in urban areas. The state's sex ratio at 925, is lesser than the national average of 940.An inter-State comparison of key indicators across some major states reveals that Maharashtra's social attainments do not match its high-income level.

The Marathwada region is located in Maharashtra state of India. The region has a total geographical area of 64,813 sq. km. The latitudinal extent of Marathwada is 17°37' North and 20°39' North while longitudinal extent is 74°33' East and 78°22' East longitudes. The Marathwada comprises eight districts and seventy-six sub-districts in eight districts the region is located in the rain shadow belt of Sahyadri mountain range at Western Ghats of Maharashtra. The average temperature of day varies between 27.7 to 38.0°C and the mean temperature of night ranges from 20.0 to 26.9° C. The normal average rainfall is about 825 mm but is highly erratic and often there is a significant time gap between the two successive showers of rain. The Godavari is a most important river of the region, also known as 'Ganges of Deccan' and comprises many large- and small-scale irrigation projects. As per the estimates of 2011 census report, the population of Marathwada region is 18 731 872.A large section of Marathwada's population around 74% is reliant on the agricultural sector.

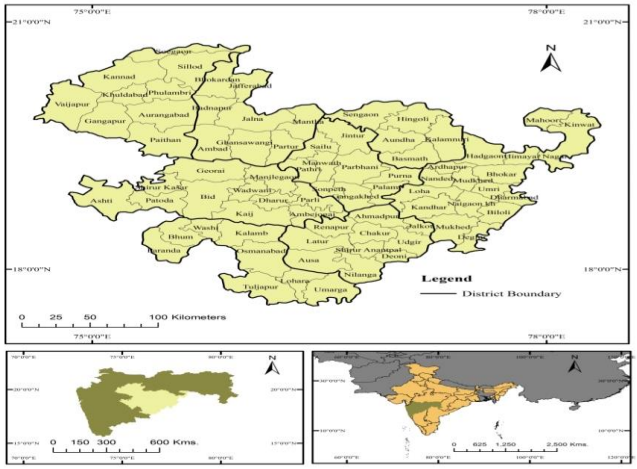

Fig. 1 Location Map of the Study Area, Marathwada Region, Source: Census of India (2011)

Objectives of the Proposed Study

1.To study the global water problem.

2.To study the various issues created by the global water problem.

3.To study the current situation and problems of water in India and Maharashtra.

4.To study Marathwada Water Grid Scheme.

5. To evaluate the relevance and evaluation of the water grid scheme in Marathwada.

Major Research Question/Hypotheses

Due to perpetual drought in Marathwada, farmer suicide, drinking water, agricultural water and industrial water, the development of Marathwada is currently hampered. Therefore, this scheme can be beneficial for the development of Marathwada. Considering the geographical situation in Marathwada, although there are many problems in implementing this scheme, the positive attitude of the government will overcome this problem.

Methodology for the research work:

Primary and secondary Source have been used for this research. The survey, descriptive and analytical method will be used for this research. For this research, each of the two talukas in which the scheme is being implemented in eight districts of Marathwada will be selected at random. Under this scheme, the roles will be known on the basis of interviews of farmers, women, people's representatives, officers in the taluka in which the scheme will be implemented.

Discussion

The global water crisis and its aftermath are approaching. Due to this, the government has tried many measures to solve the problem of drinking water in Marathwada, the problem of agricultural water, and the frequent droughts in Marathwada. However, those schemes could not contribute to the development of Marathwada. Therefore, to overcome the water problem of Marathwada, the Government of Maharashtra has decided to implement a water grid project in Marathwada. Considering the availability and need of water, the water grid project will be implemented in phases in Marathwada. The government will approve this project in phases to alleviate water problem and drought in Marathwada. In the first phase, the project will begin from Jayakwadi dam in Aurangabad's Paithan taluka. The government has approved an initial amount of Rs 285 crore for the project. The second phase will cover other talukas in Aurangabad, which will be followed

by work in dams of Beed, Osmanabad, Latur, Jalna, Nanded, Hingoli and Parbhani districts in the third phase. Overall, the water grid is a form of river confluence project.Under this project 11 dams namely Jayakwadi, (Aurangabad), Yeldari (Parbhani), Siddheshwar (Hingoli), Majalgaon and Manjra (Beed), Lower Terna and Sina Kolegaon (Osmanabad), Dhanegaon (Latur) will be connected in phases.

The survey, descriptive and analytical method has been used to evaluate the relevance and evaluation of the Water Grid project in Marathwada. Interviews of 160 farmers, general public and traders have been conducted almost randomly from 16 talukas in eight districts of Marathwada. He was asked 20 questions during the interview. They are mainly involved in raising awareness about water grid projects, utilization of water grid projects, drinking water, water for agriculture, water available for agriculture, water for industrialization, various schemes of the government on water issues. The following is an analysis of the facts obtained through interviews during the relevant examination of the scheme and the analysis of those facts.

Table:1

Percentage Analysis of relevance and evaluation of the Water Grid project

S. No.	Description	Yes	Percentage	No	Percentage
01	Is there a problem of drinking water and water for agriculture in your area.	144	90.00%	16	10.00%
02	Does the government have different plans for drinking, agricultural and industrial water in our area?	98	61.25%	62	38.75%
03	Are the various schemes of the government on water issues being benefits for drinking, agriculture and industrialization in our area?	96	60.00%	64	40.00%

04	Do you know about the water grid project?	104	65.00%	56	35.00%
05	Will the water grid project be useful for drinking, agricultural, industrialized water and drought alleviation in your area?	86	53.75%	74	46.25%
06	Do you think the water grid project will reduce farmer suicides in your area?	82	51.25%	78	48.75%
07	Do you use traditional cropping methods for farming?	100	62.50%	60	37.50%
08	There are different sources of 12 months Available of water in your area?	16	10.00%	144	90.00%
09	Considering the geographical location of Marathwada, can the water of water grid scheme come to our area?	54	33.75%	106	66.25%
10	Do you think the general public will benefit from the water grid scheme?	40	25.00%	120	75.00%

(Source: Primary Data)

In the case of drinking water and agricultural water problems, 90% of the respondents answered yes, while only 10% of the respondents answered no. 61.25 percent of the respondents answered yes to the various schemes for drinking, agricultural and industrialized water in their area, while 38.75 per cent of the respondents answered no. About 60.00 per cent of the respondents

answered yes to the various schemes used by the government for drinking water, agriculture and industrialization in their area, and 40.00 per cent answered no. About whether you know about the water grid project, 65.00 per cent of the respondents answered yes and 35.00 per cent of the respondents answered no. 53.75 per cent of the respondents answered yes to the question of whether the water grid project will be useful for drinking, agriculture, industrial water and drought alleviation in their area, while 46.25 per cent of the respondents answered no. 51.25 per cent of the respondents answered yes to the question of whether water grid project would reduce the number of farmer suicides in their area. 62.50 per cent of the respondents answered yes to the question of whether you use traditional cropping methods for agriculture and 37.50 per cent of the respondents answered no. 10.00 per cent of the respondents answered yes to the question of whether there are different sources of perennial water in their area, and 90.00 per cent of the respondents answered no.Given the geographical location of Marathwada, 33.75 percent of the respondents answered yes to the question of whether water from the water grid scheme can come to their area, and 66.25 per cent of the respondents answered no. 25.00 per cent of the respondents said yes to the water grid scheme and 75.00 per cent of the respondents said no.

Conclusion

Considering the problems of drinking water and agricultural water, it is seen that the situation in Marathwada is very severe. Also, the benefits of various schemes of the government on water issues are seen to be benefiting the people of Marathwada, as a result of which the development of Marathwada is getting a boost. It is evident that there is a great deal of awareness regarding the water grid scheme being started in Marathwada. Also, due to water grid project, farmer suicides in Marathwada will be reduced. Farmers in Marathwada mainly use traditional cropping systems as they do not have access to perennial water as they do not have access to various sources of water. The agribusiness in Marathwada is largely dependent on wells and borewells. Also, considering the availability of water in Marathwada, even if it is for water, it is not planned properly. As a result, the people of Marathwada are not able to get proper benefit of that water. Many villages in Marathwada still do not have a government drinking water scheme, so the people of Marathwada have to depend on a private water system for drinking water. As a result, they are facing a huge financial burden. Considering the geographical location of Marathwada, water from the water grid scheme cannot reach the entire Marathwada. Therefore,

it is a fact that the common man will not benefit from the water grid project created for the development of Marathwada. That is why experts in the field appear to be questioning the existence of the scheme even before it is launched. Water scarcity is a very serious issue in Marathwada. In summer, the condition of districts in Marathwada was very poor. Because Marathwada and still do not get water according to the principle of equitable water distribution Of different dams in Marathwada The carrying capacity of both the canals is low and the silt of many dams in Marathwada has not been removed yet, so the storage capacity of Jalna km in Marathwada is getting reduced drastically. Although the water grid project will be the backbone of Marathwada's development considering the overall availability and need for water, the shortcomings of this scheme are of a very wide scale so considering the geographical location of Marathwada, access to water for the common man is a difficult problem facing this project. It is a fact that if the government implements this scheme with the objective of implementing only popular schemes and increasing its vote share, then the east, west, north and south parts of Marathwada will never run out of water. Therefore, before the government spends on this scheme again, it will be necessary to check the relevance and feasibility of this scheme.

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