

IMPACT and PROSPECT of RAINWATER HARVESTING WITHIN VILLAGE BOUNDARY (*JALUKTA SHIVAR ABHIYAN*)

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ABSTRACT

Drought is the major natural problem of Maharashtra State occupying more than 50% area. To overcome this problem Maharashtra Government has a lunched flagship programme named Rainwater Harvesting Within Village Boundary (*Jalyukta Shivar Abhiyan*). "*Jalyukta Shivar Abhiyan*" is one of the ideal water conservation campaign, run by only Maharashtra State Government. This scheme was initiated by Hon. Minister Pankaja Munde and was launched under the guidance of Hon. Devendra Fadnavis, the Chief Minister of Maharashtra in 2015 as per the Government resolution dated 5th 2014. It is one of the successive schemes having the aim to make a farmer believe that each drop of rainwater is owned by him and should percolate in his land through people's participation. The scheme aims of making nearly about 5000 villages drought free in a year and 25000 villages in the next five years. In Maharashtra 11,000 villages, participated in *Jalyukta Shivar Abhiyan*, were declared drought free. The scheme aims at not only increasing water availability but also upgrading socio-economic level of project beneficiaries. The aim of present paper is to observe the impact benefits of *Jalyukta Shivar Abhiyan* for future planning by the Government.

Key words: Community, Domestic, Drought, Flagship, Overcome,

INTRODUCTION

A major part of Maharashtra comes under rain shadow of Western Sahyadri, which is drought prone. Maharashtra State receives rainfall near about 732.5 mm. in a year and it is not sufficient for all users in the state. It is only 73% of total rainfall in India. It means there is 27% deficit rainfall every year in Maharashtra. According to Cabinet note 49, only 13 districts receive 76-100% rainfall, 17 districts receive 51-75% rainfall and remaining 6 districts receive 50% rainfall. It means the most of the region faces water deficit for maximum period of the year. This area is characterized by rainfall variability, uncertainty of monsoon, resources degradation; traditional agriculture system and less development in infrastructure are the basic reasons of less socio-economic development. These problems are adversely affected the income of people. So there is a dire need to conserve the water in all over the Maharashtra. *Jalyukta Shivar Abhiyan* is the water conservation programme, started by Maharashtra Government. This is a cooperative scheme between government and non-government agencies to solve the water problem of the water scarcity zone of Maharashtra. *Jalyukta Shivar Abhiyan* aims to reduce runoff water, increase ground water level, increase agriculture productivity, increase plantation, soil conservation and rural entrepreneurships through small agro base occupation. Water gained from rain must be stored in available places.

Water is most precious resource, which is only one source of human survival. We can't imagine human life without water. Water is needed for industrial as well as domestic use. Rainfall is the main source of water. Rainfall is irregular and there is unequal distribution of rain in the country. Some area faces floods while the most of the area in India has faces drought. Most of the rainwater flows to the oceans without use. According to water cycle only 1% water is used by the world stored in tanks, dams, ponds and rivers. So there is a strong need to harvest the rainwater (Kolekar A. et.al. 2020, Lagad S.J. 2020, 2019, Kudnar N.S. and Rajasekhar, M. 2020). Water scarcity is the major problem of the world. From the last century it increased near about five fold. To reduce the same problem awareness of recycling and sustainable use of water is the best solution (Kummu M.et.al. 2016). Water plays significant role for socio-economic development of nations. Scarcity of water reflects less development while availability of water leads to development. Neighboring countries and India have disputes over water related problems (Damania R. 2020, Lagad S. J. and Kamble B., 2020, Lagad S. J. 2018). India and more developing countries of the world faced problem of water crises. It is natural as

well as manmade problem to some extent. Man cannot have proper management of received rainfall, runoff water and ground water on the earth surface due to less awareness of scientific water conservation methods (Inamdar S.R. 2019, Lagad S.J. 2016, Telore N.V., and Unde M.G. 2016). Farmer suicide is the one of major problems in India. Many scholars suggested many reasons of it, among them water scarcity and uncertainty of monsoon is one. *Jalyukta Shivar Abhiyan* simultaneously carried out some programmes like avail micro irrigation facility in subsidy, changing agriculture tracks for increasing income, establishment of Self Help Groups, agro-base entrepreneurship etc. are best remedies to control problem of farmer suicide (Anirban N. et.al. 2019, Janbandhu I. 2018, Parvathamma G. L. 2016, Kudnar N.S. 2015, Bhagat R.S., Lagad S. J. 2013, Behere A. B. and Behere P. B. 2008). *Jalyukta Shivar Abhiyan* is water empowerment programme of drought affected and semi arid region of the worldwide level, which shows how to conserve water with the help of different kinds of scientific and nonscientific methods (Nanavare N, Khadke N. 2019, Lagad S.J. 2016, 2017). *Jalyukta Shivar Abhiyan* scheme is not only useful for watershed management but also increases scientific temperament of the beneficiaries about sustainable development of physical and manmade environment (Lagad S.J. 2019, Wang G. et.al. 2016). Tree plantation, afforestation and ban on tree cutting are the few components of *Jalyukta Shivar Abhiyan*. These components are helpful to decreases pollution causing the climatic change so *Jalyukta Shivar Abhiyan* scheme is best management system of 'human- land- man' (Katusiime J. et.al. 2020, Kudnar N. S.2019, Mishra A. et.al. 2015). *Jalyukta Shivar Abhiyan* campaign is the first organized action plan wherein many departments are collaboratively and collectively working towards common goal that is 'Water for All'. *Jalyukta Shivar Abhiyan* proposes a framework for village level water balance calculation which includes estimation of crop which has some water requirements, drinking water stress etc. This campaign missed some aims not because of lack of planning but pre construction activities and non-scientific methods implemented in the first stage (Nanaware N., Khadke N. 2019, Lagad S. J. 2019, Khillare N. J.2017). The scheme aimed at solving water woes of drought-prone regions. Due to *Jalyukta Shivar Abhiyan* is already a hit with farmers as many villages are inching towards becoming water-sufficient. This report concludes that the implementing *Jalyukta Shivar Abhiyan* in other parts of country will be helpful to get over drought permanently (Pachkor R.T. et al. 2017). Water scarcity is the major problem of the worldwide. From last century it increased near about five fold, to reduce same problem awareness of recycling and sustainable use of water is the best solution (Kummu M.et.al. 2016).

In present time storage of water in Maharashtra is very less as compared to requirement of population and nature. According to Parinita Dandekar of the South Asia Network for Dams Rivers & People, Maharashtra has 56% live water reservoir storage capacity. But there is again a disparity. Marathwada has 15% storage capacity and Mazalgaon, Manjara, Nim-terna, Nimn-dudhna are at zero live storage. Maharashtra is the third largest state in the India considering population as well as area. Almost 58% population of Maharashtra lives in rural area and is depending on the agriculture and allied occupations. Total geographical area of Maharashtra is 307.70 lakh hecters, among which 225.4 lakh hecters is cultivable land from it 159 lakh hecters area is drought-prone. 82 and 52 percentage area of Maharashtra's has dry land and drought prone respectively (Soil and Water Conservation Department, Maharashtra 2019). Maharashtra has been divided into 36 districts and 358 talukas. Out of them 148 talukas are drought proven especially in Marathwada and Vidhrbha region, several villages' ground water level is drop down rapidly. So water scarcities, water stress, drinking fresh water etc. problems are common for conservation of water, Maharashtra government launched flagship programme named '*Jalyukt Shivar Abhiyan*'. This scheme is initiatively implemented by Devendra Fadnavis, the Chief Minister of Maharashtra and initiated by then Jalsandharan Minister, Pankaja Munde. The aim of the scheme is to make a farmer believe that each drop of rainwater is owned by him and should percolate it in his land. The scheme aims to make nearly about 5000 villages drought free in a year and 25000 villages in the next five years. The scheme includes construction of cement or earthen small lakes, *Kolhapur Bhandhara*, afforestation, check dams, tanks, digging the water reservoirs, irrigation wells etc. to conserve the rainwater. The scheme aim at not only conserving water but also socio-economic development of area through micro entrepreneurship, empowerment of women's in rural area, strengthen the Self Help Groups etc. The

government has implemented the scheme at village level by conducting *Gram Sabha* (Meeting of villagers) to create awareness of the scheme. Government has given wide publicity to the scheme by using electronic media, organizing rallies, essay and drawing competitions, distributing the booklets and leaflets. Then Chief Minister of Maharashtra, Devendra Fadnis made serious appeal to the public and in response to it the film star Amitabh Bachchan, Nana Patekar, Amir Khan, many politicians, social reformer – Padma Bhushan Anna Hajare, Padma Shri Papat Pawar, 'Water Man of Bharat' Rajendra Sing etc and spiritual organizations such as Siddhivinayak and Saibaba Shirdi Temple Trust and corporate organizations like Jankidevi Bajaj, Bridgestone and Volkswagen offered funding and support to the scheme. Government also appealed villagers to respond to the scheme positively and participate in it in the field work itself. *Jalyukta Shivar Abhiyan* is beneficial to sustain old rainwater harvesting structures. With the desilting of lakes, percolation tanks, *Kolahapoor bandara* etc. to increase ground water level and scarcity of water prolonged (Sanade V.M.et.al. 2019, Lagad S.J. 2018, 2013 Bhagat R.S., Bisen Devendra 2015, Bisen, D.K, and Kudnar, N.S. 2013, Kale V. S. 1990, 2002).

DATA COLLECTION and METHODOLOGY

The present study is depend secondary data. The secondary data is collected from the record of Grampanchayat, Taluka Krushi Offices, Panchayat Samitti and Ahmednagar District Rural Development and Water Conservation Department. Required data is collected from several published research papers, Ph.D. thesis as well as minor research projects. For collection of data, topic related books and journals are referred. In addition the researcher discussed with state government departments like, District Groundwater Department and officials of different NGOs, Social workers and Sarpanchs of villages.

The present research is depends on observation and retrospective methods. Observation and discussion is carried out in the area, scheme of *Jalyukta Shivar Abhiyan* is carried out.

MATERIALS and METHODS

Relevance of the Proposed Study for Policy Making

Jalyukta Shivar Abhiyan is the motto based programme of Government of Maharashtra. Its aim is to provide water to all and make tanker free villages. Only Government of Maharashtra implemented the *Jalyukta Shivar Abhiyan* in the grass route.

- 1 Implementation of *Jalyukta Shivar Abhiyan* in the other drought prone villages in Maharashtra.
- 2 If the researcher finds the positive impact of *Jalyukta Shivar Abhiyan* in his study, the same campaign will be implemented in the drought prone areas in other states of India.
- 3 If this campaign succeeds, the Government of Maharashtra won't have to spend the grant for expenditure on water supply for irrigation of agriculture and drinking. It will be helpful for reducing financial burden on the economy of Maharashtra.
- 4 The success of this campaign will result into increasing the agricultural production and ultimately it will decrease the number of farmers' suicides in Maharashtra.
- 5 The aim of *Jalyukta Shivar Abhiyan* is to spread awareness about the importance of water among the people. Due to this, there will be no need for the government to organize the awareness programmes such as *Jal Saptah*, *Jal Dindi*, Water Conservation Workshops and conferences etc.
- 6 The availability of water will be resulted into maximum use of agricultural land for cultivation. It will be beneficial for the farmers to increase their income and ultimately their standard of living will be higher.
- 7 The result of the economic development of farmers will change the demographic characteristics positively.
- 8 If the participants of *Jalyukta Shivar Abhiyan* will be given some rewards or awards for their best performance other people also will be inspired to do well and contribute at their best level.
- 9 The present study will be very much helpful for the government of Maharashtra in making various policies regarding water conservation and water management in the state.
- 10 With the help of GIS and RS it will become easy to find out the ideal sites in villages for the water harvesting.

RELEVANCE of PROPOSED STUDY for SOCIETY

1. It will be useful to change the land use and land cover pattern.
2. It will reduce the problem of water scarcity.
3. It will be helpful to aware the population about sustainable use of water.
4. It will be beneficial to the project beneficiaries to increase cash crops.
5. *Jalyukta Shivar Abhiyan* will increase the standard of living of the people of study area.
6. It will increase Gross Domestic Production and Per Capita income.
7. Campaign will be helpful to solve problems of rural area like unemployment, malnutrition, alcohol addiction, gambling, socio-economic conflicts etc.
8. Through this campaign local people will understand the importance of various schemes sponsored by Governmental Agencies and Non Governmental Organizations.
9. It will be useful to reduce outmigration.
10. It will be helpful to start the allied activities of the rural agriculture.
11. *Jalyukta Shivar Abhiyan* will increase ground water level.
12. *Jalyukta Shivar Abhiyan* will cultivate integrity, environment awareness, value of participative work among the people.
13. Scio-economic development will indicate positive changes in demographic characteristics.
14. *Jalyukta Shivar Abhiyan* will teach scientific methods of water harvesting and conservation.
13. It will be helpful to reduce the soil erosion.
14. It will be the helpful to downtrodden community.
15. *Jalyukta Shivar Abhiyan* will be useful to create employability of the unskilled population.
16. It will helpful to control pollution and reduce climatic related changes and its impact on the region.

RESULT and DISCUSSION

Researcher reviewed with the available research and retrospective study, that impact assessment and prospect of *Jalyukta Shivar Abhiyan*. Abhiyan integrated 'government-water-peoples' on the goal of water conservation. Participation of skilled peoples along with non skilled peoples of rural area is must. More awareness of scientific techniques is necessary for greater success. Scheme increases constitutional ethics, values and human rights among society. This model not only increases water literacy but also helps to overall development of society. If the scheme is effectively implemented in down-trodden needy area of Maharashtra and gets success, then *Jalyukta Shivar Abhiyan* is mile stone participative scheme of water conservation and rural development at worldwide level.

AUTHORS' CONTRIBUTION

Conceptualization and design of research design is depends on secondary data. Research is work is depends on retrospective, descriptive and observation methods (SJL).

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