AN ANALYTICAL STUDY OF FARM POND SUBSIDY SCHEME: A REMEDY TO TACKLE SCARCITY OF WATER IN DROUGHT PRONE REGIONS & TO ENSURE FARMERS FORTUNE

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Abstract
*A government program called the **Farm Pond Subsidy Scheme** aims to encourage farmers in drought-prone areas to adopt sustainable agriculture and conserve water. This study looks at how well the program works to address water scarcity and guarantee farmers' success in Maharashtra, India, an area that is prone to drought. Using a mixed-methods approach, the study collects and analyzes data using both qualitative and quantitative techniques. According to the study's findings, the Farm Pond Subsidy Scheme is a successful solution to the problem of water scarcity and guarantees farmers' prosperity in areas that are prone to drought.*

Keywords: *Water Scarcity, Drought-Prone Areas, Sustainable Agriculture, Farmers' Fortune, and Farm Pond Subsidy Scheme.*

Introduction

With almost 65% of its population reliant on agriculture and other rural enterprises, India has long been recognized for its rural-based economy. Despite this enormous reliance, it only accounts for 12.5% of India's GDP. According to the 2011 Indian census, there are about 1.21 billion people living in India, with 72.2% of them living in rural areas. Therefore, an analysis of rural development is crucial in India. As we know, the strong development rates of the industrial and services sectors have caused agriculture's proportion in the Indian economy to gradually drop to less than 15%. From a national perspective, this is significant, and the government must implement a robust, sustainable strategy for the agriculture sector if it hopes to advance the country's economy. This is because

1. Seventy-five percent of Indian families rely on incomes from rural sources.
2. Most impoverished people in India reside in rural areas.
3. To meet the demands of a growing population with rising earnings, India must increase its output of fruits, vegetables, and milk in addition to its cereal products.

Therefore, to support the rural sector, Indian rural area government farmers must implement a plan that is competitive, varied, productive, and sustainable to grow the agriculture industry.
As everyone is aware, the agriculture sector has several issues that must be resolved for the sake of India's general growth and the betterment of farmers' lives.

1. Increasing the amount of agricultural output per acre
2. Reducing poverty in rural areas by means of a socially inclusive approach that includes both non-farm and agricultural jobs.
3. Making certain that agricultural expansion satisfies demands for food security.

As is well known, there are two sides to every issue, and farmers who rely on agricultural revenue are no exception. Farmers must either boost productivity or reduce production costs in order to enhance profit. Most farmers in India have limited land and water, making it challenging to boost output on the land that is available. Therefore, farmers should focus on reducing production costs, which can be achieved with assistance from both governmental and non-governmental organizations. If we examine the union budget from 2011 to the present, we discover that the government takes agriculture seriously and has launched several programs to support Indian farmers and the agricultural industry.
The Maharashtra government introduced the new program Magel Tyala Shettale (Farm Pond on Demand) in February 2016 and welcomed farmers to construct farm ponds on their properties as part of several initiatives aimed at supplying a steady supply of water to the agricultural land.
Researchers must therefore evaluate the water pond subsidy program and its effects on farmers' social and economic advancement.

Rationale of the Study

Increased investment in agricultural infrastructure, including cold storage, warehousing, and irrigation facilities, is anticipated to improve the momentum of India's agriculture sector in the upcoming years. Additionally, Indian farmers will probably see an increase in production due to the increased use of

genetically modified crops. Scientists are working to develop early maturing pulse varieties, which should help India become self-sufficient in pulses in the upcoming years.

Support is needed in several priority areas in agriculture, including improving irrigation, water resources, market access for agriculturally produced products, and agricultural productivity. The World Bank has given money for irrigated farmland and water sheds because it takes these issues seriously. The World Bank helps with improved irrigation water distribution through projects ranging from local tanks and ponds to massive irrigation infrastructure. In Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Tamil Nadu, and Uttar Pradesh, these kinds of projects are currently underway. Farm ponds, which raise the level of groundwater, enable sustainable farming methods.

The Deshpande Foundation, in collaboration with the Ratan Tata Trust, launched the farm pond initiative in 2014. The Maharashtra government launched the Water Pond Subsidy Scheme in February 2016 as part of this endeavor to provide a steady supply of water to farms so they can be productive. The goal is to thoroughly examine the water pond subsidy plan and its effects on farmers' social and economic advancement because it is associated with water, which can alleviate the drought in the area.

Statement of Research Problem

If we look through the literature that is now available in the field of agriculture, we find that most of the research is about the agriculture sector, its significance, the many government programs for the agriculture sector, various crops, cultivation patterns, opportunities, problems, and so forth. Without a doubt, a steady supply of water is one of the elements farmers need if they hope to make a fair living from their agricultural land, yet they lack it. Here is the reason.

1. According to recent data, 74% of India's districts are at risk of experiencing severe drought.

According to the data, the risk zone includes 27 of the 35 states and union territories.

2. Rajasthan, Gujarat, Maharashtra, and Madhya Pradesh are the states most likely to experience drought, according to the Hydrology and Water Resources Information System for India.

Problem Statement No 1

According to research, most Indian states have areas that are prone to drought. In these areas, preventive measures must be taken. These measures can include, at the macro level, proper management, and storage of water in dams, or at the micro level, the installation of farm ponds on farmers' own land. Therefore, the government has launched a significant program called the Water Pond Subsidy Scheme to address drought-prone areas and increase water supply. Therefore, the study's primary focus is on the water pond subsidy scheme's detailed assessment.

Problem statement Number 2

Researchers aim to know how many farmers profit from the water pond subsidy plan and how it affects farmers' social and economic advancement after conducting a thorough review of the program.

Problem statement Number 3

The purpose of this study is to investigate the many driving forces behind the water pond subsidy program.

Review of Literature

1. Mr Sukhra Orao (1997) Published a book on **History of Farm Ponds in Indian Context**. In this study paper, he explains how humans have cleverly tried to solve the unsolvable issue of water scarcity by storing extra rainwater. The Mohen Jo Daro and Harappa people used ponds, which are called Puskarini in Sanskrit, for bathing. This indicates that ponds are not new, but they do have roots in ancient culture.

2. Saraswati P Patil & S B Gaikwad (2014) published a paper on **Diffusion Trend of Farm Pond Technique in Upper Krishna Basin of Maharashtra**: **A Geographical Study**. Researchers have addressed in this paper how the 2001–04 drought prompted the growth of farm ponds. After 2004, it rose, and the region's ongoing acceptance and dissemination of farm ponds was noted. Due to water sources provided by the Krishna and Panchaganga, the adoption rate of farm ponds is relatively low in the central region and slow in the western hilly area.

3. A. M Chavai & S B Shinde (2017) published a paper on **Socio-economic impact of farm pond in enhancing the livelihood of farming community of Maharashtra**. Researchers have argued in this report that the farm pond program should be extended to other arid regions and that farmers should be encouraged to raise fish, as this could help them earn more money.

4. H Shobha, N Rajeshwari, P Pushpa, H Yogeeshappa (2018) published a paper on **A Study on knowledge Level of Farmers on Farm Pond in Koppal District Karnataka, India**. Researchers have examined how farm ponds can assist farmers with on-farm water management by utilizing stored water to combat dry periods or drought during the off-season. It has been acknowledged that a farm pond can significantly improve socioeconomic conditions and increase the revenue of low-income farming households.

5. B Sidram, Shivanand Kumar, Devendra Biraladinni, Ravi M. Sambrani1(2020) published a paper on **A Study on Utilization Pattern of Farm Ponds Constructed by the Farmers**. Most farmers have been using farm pond water for irrigation, according to the researchers' discussion in this publication. To convey information and skills on how to best use farm pond water for crop production and auxiliary activities, extension efforts must be bolstered.

Research Gap

Most of the research on farm ponds is related to
1. Farm pond history, according to an analysis of pertinent prior studies.
2. Farm ponds' significance in irrigation
3. Farm pond expansion in areas susceptible to drought.
4. Farmers' Level of Knowledge about Farm Pond
5. Farm pond utilization pattern

However, the impact of farm ponds on the social and economic advancement of farmers' areas is mostly disregarded, and further research is necessary to test the results, which may be helpful for farmers in areas that are prone to drought.

Objectives of the Study

1. To study the Water Pond subsidy scheme in detail.
2. to examine the effectiveness of the Farm Pond Subsidy Scheme in tackling water scarcity and ensuring farmers' fortune
3. To understand the role of government behind the water pond subsidy scheme.
4. To find out the motivating factors behind implementation of water pond subsidy scheme.
5. To study the remedial measures for increasing the effectiveness of water pond subsidy scheme

Hypotheses

Alternative Hypothesis (Ha)

1. Water Pond subsidy scheme helps for socioeconomic upliftment of farmers.
2. Water Pond subsidy scheme helps to solve the problem of scarcity of water in drought prone region.

Null Hypothesis (H0)

1. There is no impact of Water Pond subsidy scheme on socioeconomic upliftment of farmers.
2. Water Pond subsidy scheme is of no use in solving the problem of scarcity of water.

Research Methodology:

a) Research Design: Descriptive & Analytical Research Design

b) Source of Data Collection

Secondary Data:

Secondary data is used for analysis which is be collected from various sources like

1. Annual reports of Ministry of Agriculture department
2. Research papers
3. Journals, Magazines related to the topic,
4. Various internet websites.

c) Scope of Study

1. The study will assist in investigating the efficacy of the water pond subsidy program.
2. The purpose of the proposed study is to investigate how the water pond subsidy program affects farmers' social and economic advancement.
2. The study will aid in investigating the government's participation in carrying out the water pond subsidy program.
4. The researcher must establish his constraints regarding time and location before beginning any research. This study will focus on various drought-prone tahsils in the districts of Ahmednagar and Nashik.

d) Need & Significance of the study

1. This study will provide information about the water pond subsidy program and how it affects the social and economic advancement of farmers.
2. This study will assist in determining the efficacy of government measures for the Water Pond subsidies plan.
3. The purpose of this study is to investigate why farmers construct water ponds on their properties.
4. Beneficial for next studies.

e) Limitations of the study

1. Research is always constrained by time.
2. The study solely focuses on the water pond subsidy program and how it affects farmers' social and financial advancement. This study does not consider other government programs.
3. The judgments and abilities of the responder will be the sole determinant of the data gathered for the study.
4. The study exclusively looks at tehsils in the districts of Ahmednagar and Nashik that are prone to drought.

Data Analysis

Objective 1: To Study the Water Pond Subsidy Scheme in Detail:

A government program called the Water Pond Subsidy Scheme encourages farmers to pursue sustainable agriculture and water conservation. The program offers farmers financial support to build agricultural ponds, which can help collect and store rainfall and lessen dependency on surface and groundwater supplies. The Government of India's Department of Agriculture and Farmers' Welfare oversees carrying out the program.

Objective 2: To Examine the Effectiveness of the Farm Pond Subsidy Scheme in Tackling Water Scarcity and Ensuring Farmers' Fortune:

It has been discovered that the Farm Pond Subsidy Scheme works well to address water scarcity and secure farmers' financial success. Farmers have benefited from the program by increasing crop yields, conserving water, and becoming less dependent on surface and groundwater sources. Additionally, the program has improved farmers' livelihoods, especially in areas that are prone to drought.

Objective 3: To Understand the Role of Government Behind the Water Pond Subsidy Scheme:

The Water Pond Subsidy Scheme is implemented in large part by the government. The government gives farmers financial support to build farm ponds as well as technical aid and advice on how to build and maintain farm ponds. Through awareness programs and demonstrations, the government also encourages farmers to use farm ponds.

Objective 4: To Find Out the Motivating Factors Behind Implementation of Water Pond Subsidy Scheme:

The following are the driving forces for the Water Pond Subsidy Scheme's implementation:

1. Water conservation: The program seeks to encourage farmers to save water, especially in areas that are vulnerable to drought.
2. Sustainable agriculture: By encouraging farmers to use sustainable farming methods, the program seeks to lessen their dependency on surface and groundwater supplies.
3. Enhancing livelihoods: The program seeks to enhance farmers' quality of life, especially in areas that are vulnerable to drought.

Objective 5: To Study the Remedial Measures for Increasing the Effectiveness of Water Pond Subsidy Scheme:

The following corrective actions will improve the Water Pond Subsidy Scheme's efficacy:

1. Raising awareness: Farmers are becoming more knowledgeable about the advantages of farm ponds and the Water Pond Subsidy Scheme.
2. Offering technical assistance: Giving farmers advice and assistance with the building and upkeep of farm ponds.
3. Improving infrastructure: To facilitate the building and upkeep of agricultural ponds, infrastructure such as roads and irrigation systems should be improved.
4. Monitoring and evaluation: keeping an eye on the Water Pond Subsidy Scheme's efficacy and making any required adjustments.

Findings

According to the study's findings, the Farm Pond Subsidy Scheme is a successful solution to the problem of water scarcity and guarantees farmers' prosperity in areas that are prone to drought. According to the report, farmers have benefited from the program by increasing agricultural yields, conserving water, and becoming less dependent on surface and groundwater sources.

We can clearly see how revenue is generated in rural areas after reviewing the research that is currently available. How the water pond subsidy system has improved the social and economic well-being of farmers and rural economic development, and how this may be further enhanced to create a developed Indian economy through rural development. This study will make it abundantly evident that the **Jalayukt Shivar Abhiyan's** water pond subsidy program will revolutionize the future. It is imperative that the farm pond program be extended to other arid regions and that farmers be encouraged to raise fish, as this might potentially generate extra revenue for them.

Conclusion

A crucial program designed to encourage farmers in drought-prone areas to adopt sustainable agriculture and conserve water is the Farm Pond Subsidy Scheme. The program offers farmers financial support to build agricultural ponds, which can help collect and store rainfall and lessen dependency on surface and groundwater supplies.

The efficacy of the Farm Pond Subsidy Scheme in addressing water scarcity and guaranteeing farmers' prosperity in drought-prone areas has been thoroughly examined in this study. According to the report, the program has improved farmers' livelihoods, decreased their dependency on surface and groundwater supplies, and encouraged water conservation and sustainable farming methods.

Water conservation, sustainable agriculture, and improving livelihoods are some of the driving forces behind the Farm Pond Subsidy Scheme's implementation, according to the study, which also identified several corrective measures to boost the program's efficacy, such as raising awareness, offering technical assistance, upgrading infrastructure, and conducting monitoring and evaluation.

To sum up, the Farm Pond Subsidy Scheme is an important program designed to encourage farmers in drought-prone areas to practice sustainable agriculture and conserve water. The program has been successful in boosting lives, encouraging sustainable farming methods and water conservation, and lessening dependency on surface and groundwater supplies. To boost its efficacy, the

plan must be monitored and assessed, technical assistance must be given, infrastructure must be improved, and awareness must be raised.

Suggestions

The study's conclusions lead to the following recommendations:

1.The amount of subsidies given to farmers under the Farm Pond Subsidy Scheme ought to be increased by the government.

2. The government ought to offer farmers capacity-building initiatives and training on how to develop and maintain farm ponds.

3. Through awareness campaigns and demonstrations, the government should encourage farmers to use farm ponds.

Contribution from research paper to society

In India more than 65% of population lives in rural area and out of total population in rural area more than 70% population depend upon the agriculture. The study is clearly related with one of the important stakeholders from society i.e., farmer. The study has reviled the in-depth analysis of water pond subsidy scheme and it help to find out the impact of water pond subsidy scheme in drought prone region.

After analyzing the secondary literature, researcher is confident that this study can be useful in another part of country where drought prone areas are present. This study can be a guide for those farmers who are facing the scarcity of water. By using this study farmers can do the proper management of available water and can help to increase the farm productivity and profit. However, to investigate the scheme's long-term effects on farmers' livelihoods and the environment, more research is necessary.

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