EDUZONE: International Peer Reviewed/Refereed Multidisciplinary Journal (EIPRMJ), ISSN: 2319-5045
Volume 13, Issue 2, July-December, 2024, Available online at: www.eduzonejournal.com

An Analysis of Mission Amrit Sarovar in Sonipat District (Haryana)

Vivek Malik[1], Dr. Sudhir Malik[2]

[1]Research Scholar of Geography, Department of Social Sciences, Baba Mastnath University, Asthal Bohar-124021, Rohtak (Haryana)
[2]Professor of Geography, Department of Social Sciences, Baba Mastnath University, Asthal Bohar-124021, Rohtak (Haryana)

ABSTRACT

This study analyzes the implementation and impact of Mission Amrit Sarovar Policy in Sonipat district, Haryana, focusing on community engagement in water conservation and pond rejuvenation. The mission, driven by the need to address water scarcity and ecological degradation, employs advanced technologies like remote sensing and geospatial tools for site selection, progress monitoring, and project management. Through extensive field visits, stakeholder interviews, and the use of the BISAG-N Amrit Sarovar Portal, the study evaluates the effectiveness of rejuvenated ponds in enhancing water availability, supporting agricultural and livestock productivity, and serving as social and ecological hubs.

The analysis highlights the role of public participation, local governance, and community-led initiatives in the sustainable management of water resources. Crucial challenges, such as pollution, encroachment, and ecological changes, are also explored, alongside recommendations for improving implementation approaches. This research underscores the importance of collaborative efforts in revitalizing rural water bodies and presents Mission Amrit Sarovar as a model for community-driven water conservation and environmental stewardship in the district.

Keywords:-Rejuvenation, Environmental, Amrit Sarovar, Community, Remote Sensing

INTRODUCTION

The Mission Amrit Sarovar was launched on April 24, 2022 to conserve water for the future and to overcome water crises in rural India Water is one of the utmost important natural resource. It is a priceless gift from nature to the entire human race. Two-thirds of the earth is covered with water, but only two to three percent of available water is usable. Today, many countries of the world, including India, are facing a severe water crisis. Realizing the same problem, Govt of India's Hon'ble Prime Minister has called for the construction of 75 Amrit Sarovars (ponds) in each district of the country.

This Mission would be run with a "Whole of Government" approach in all its aspects. Ministries/Departments and Organizations are working together to complete the Mission: Make use of soil excavated from the water bodies for infrastructure projects. The Mission also worked through states and districts by refocusing existing schemes, such as the Mahatma Gandhi National Rural Employment Guarantee Scheme, XV Finance Commission Grants, and Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) sub-schemes.

It also encouraged the mobilization of citizen and non-governmental resources to supplement these efforts. Ministry of Rural Development (Dept. of Rural Development/ Dept. of Land Resources) Ministry of Jal Shakti (Dept. of Water Resources/ Dept. of Drinking Water & Sanitation) Ministry of Culture, Ministry of Panchayati Raj, Ministry of Environment, Forest & Climate Change, Ministry of Road Transport & Highways, Ministry of Railways, Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG-N) 1.

Objectives of the Policy:-

- **i.** Develop or rejuvenate at least 75 water bodies, or Amrit Sarovars, in each rural district of the country, except for Delhi, Chandigarh, and Lakshadweep.
- **ii.** Complete the project by August 15, 2023, or the end of Amrit Varsh.
- **iii.** Focus on water-stressed blocks in rural districts.
- **iv.** Ensure that each Amrit Sarovar has a minimum pond area of 1 acre (0.4 hectares) and a minimum water holding capacity of 10,000 cubic meters
- **v.** Encourage public participation, including crowdfunding and Corporate Social Responsibility (CSR)

Site Selection Process for Ponds:-
BISAG-N will generate a list of around 100 potential sites per district based on factors such as land availability, rainwater drainage, topography, soil type and depth, and geological stability. For new sites, the criteria include:

- **i.** Availability of wasteland.
- **ii.** Adequate rainwater inflow.
- **iii.** Depressions or low-lying areas.
- **iv.** Deep soil with neutral pH (neither alkaline, saline, nor acidic).
- **v.** Geological stability without lineaments or faults.
- **vi.** For rejuvenation sites, additional realizable capacity will be considered, along with proximity to residential areas and infrastructure.

Public Participation: Recommendations from public representatives, Panchayati Raj Institutions (PRIs), civil society, academic institutions, and the public are encouraged. The Amrit Sarovar portal can generate technical assessments of these suggested sites. Districts will prioritize water-stressed blocks, specifically where drinking water is a concern.

Site Evaluation and Ranking: Joint teams of technical and administrative officials will visit potential sites to assess technical and administrative possibilities. They will engage with stakeholders, including local farmers and potential users, and inspect catchment areas and drainage channels. Evaluations will also consider the need for encroachment removal, graywater treatment, and dispute resolution. Sites will be ranked based on objective parameters, and the top 75 sites will be selected. Final site selections may be vetted by district decision-making bodies as needed.

Priority Sites: Special importance will be given to sites located in villages associated with freedom fighters and martyrs. Sites within forest areas require authorization from the relevant forest agency, and construction may be managed by the forest department or another authorized agency.

Development Action Plan: Districts will draft an Action Plan detailing Amrit Sarovar sites, capital sources, executing agencies, monitoring and documentation responsibilities, timelines, community engagement, and celebratory activities.

Additional Development Proposals: Proposals may include encroachment removal at both the Sarovar and its catchment area, and the treatment of Graywater incursions.

Structural Care: Special attention will be given to the construction of a Water retention boundary around the Sarovars, ensuring proper layer-wise compaction, use of machinery, turfing, and maintaining appropriate slope gradients. This method aims to ensure effective site selection, community involvement, and sustainable development of Amrit Sarovars, ultimately enhancing water management efforts across districts.

Common Signage (Board and Logo): To mark the occasion, an information board will also be put up at every Amrit Sarovar in which all the information related to the work will be available to the community.

Plantation of Tree: (Azadirachta Indica), ihiy] (Ficus Religiosa), cjxn (Ficus Benghalensis) etc. should be done at Amrit Sarovar work site on 15th August 2022 by freedom fighter or her/his family member or by the family of the martyr (post-independence) or a local Padma awardee. In case there is no such citizen available, the eldest citizen of the specific/local gram Panchayat should be requested to lead the plantation.

People may also participate by donating construction materials, benches and Shram Daan. It may also seek such support through crowd-sourcing and CSR contributions. If the village community desires beautification works on the Sarovar site, it may organize necessary donations.

Role of Panchayat:-
Two dedicated Prabharis for each Amrit Sarovar will be positioned i.e. Panchayat Pratinidhi and Panchayat level officer. Gram Panchayat will recommend Panchayat Pratinidhi, who will act as citizen supervisor and will be responsible for faithful and fair execution of the Amrit Sarovar in the Panchayat while protecting the community interest. Panchayat level officer will monitor the progress and ensure faithful implementation of the mission in the panchayat while reporting the progress in the form of a document, with proper photos and videos.

Events and celebrations at village Ponds:-
The abundance of beautiful Sarovar lies in the social gatherings it can host for the happiness and well-being of the communities. These Sarovars have the ability to capture the attention of all age groups and cater to their needs to become an indelible part of their life.

National Flag hoisting on Independence and Republic Day Birth anniversary celebration and death anniversary commemoration of prominent personalities (Martyr's, freedom fighters, Padma Awardees, Sarpanch, teachers etc.)

Tree plantation drives Diverse plantations to make the Sarovars stay healthy and vibrant. Birds, animals, fish and insects flourish where native plantations flourish. In addition, the plantation helps stabilize bank slopes, prevent erosion, increase soil porosity for infiltration (rather than runoff), improve air quality and improve buffer zones by providing green spaces. Mission Amrit Sarovar emphasizes plantation through community participation around the Sarovars. Special. Cleanliness drives Biodiversity conservation programs and Ecosystem development programs.

Educational School trips- nature walk and environment education Awareness events about social and environmental issues Using lakes as classrooms Citizen science initiative. Recreational School sports March Past Open gyms, walking tracks, sports facilities etc. Cycling track Boat racing, fishing competitions Yoga and spirituality Cultural Dance, Drawing and painting competitions Exhibitions Kite festival Projector movies and documentaries. Tourism Beautiful themed gardens- butterfly garden, Cactus Park, Bonsai Garden, Medicinal Garden etc. Bird watching Eco-Tourism Camping etc.

Siddappa Naragatti et. al. (2023), finds in their study Cleanliness plays a crucial role in maintaining a healthy environment and promoting societal harmony. This abstract explores the concept of scientific evidence-based cleanliness and its impact on empowering the environment and fostering harmony in society.

Study Area:-
Sonipat district is lying in the east-central part of Haryana State near the National Capital Region (NCR), Delhi. It is geographically located between 28˚ 48′ 15″ North to 29˚ 17′ 10″ North latitudes and 76˚ 28′ 40″ East to 77˚ 12′ 45″ East longitudes. It falls in the Survey of India (SOI) Topo-sheets no. 53C, 53D, 53G and 53H. The district comprises 8 C.D. Blocks (community development). Sonipat covers 5.11 per cent area of the state. The district is surrounded by Panipat district in the north, Jind district in the west, and Rohtak district in the southwest direction. In its south direction, the National Capital Delhi and Jhajjar district lie. It shares its eastern boundary with Uttar Pradesh in which Yamuna River also makes the State boundary (Administrative Atlas of Haryana, 2011). The headquarters of the district is in Sonipat City. The total area of the Sonipat district is 2,260 sq. km. The district has an average elevation of 224.15 meters (735.4 feet) above mean sea level. The Yamuna River runs along the eastern boundary of the district.

Table 1: *C. D. Block-wise Works Completed in Sonipat District under Amrit Sarovar Ponds Mission*

Sr. No.	C. D. Block	Total Works Completed
1.	Ganaur	15
2.	Gohana	23
3.	Kathura	0
4.	Kharkhoda	9
5.	Mundlana	4
6.	Murthal	0
7.	Sonipat	15
8.	Rai	4
Total Ponds		**70**

Source: amritsarovar.gov.in

Table 1 shows C. D. block-wise Works Completed in Sonipat District under the Amrit Sarovar Ponds Mission. Kathura and Murthal stand out as blocks with no completed works, highlighting areas that require targeted interventions. Gohana is the utmost successful block with 23 completed works, followed by Ganaur and Sonipat with 15 each. The varying levels of completed works suggest differences in community engagement, availability of resources, and possibly varying administrative challenges across the blocks. The data indicates that while some blocks have made significant steps in pond rejuvenation, others have seen little to no progress. The uneven distribution of completed works points to the need for tailored strategies that address specific barriers faced by less active blocks, ensuring a more balanced and comprehensive approach to water conservation and community engagement in Sonipat.

METHODOLOGY

In the Sonipat district, a total of 70 ponds are included under the Mission Amrit Sarovar, with only 4 newly excavated and the remaining 66 rejuvenated. These projects were completed using a variety of government schemes, reflecting a multi-faceted approach to water conservation. This study focuses on 10 ponds where work has been completed and selected through random sampling across various villages. Selected villages are Baroda Mor, Kasandi, Bajana Kalan,

Kailana, Rajlu, Mundlana, Sisana, Moi, Rohat, and Aterna, observation method is employed to assess the impact of these interventions on water quality, ecosystem restoration, and community usage, providing insights into the effectiveness of the Mission Amrit Sarovar initiative in enhancing rural water resources. This approach will provide a comprehensive understanding of the Mission Amrit Sarovar's impact and areas for improvement.

Table 2: ***Observation Points Used for Field Survey in the Sonipat District***

Sr. No.	Observations Points	Type of Observation	No of Ponds
1.	Disposal of Graywater	Yes	2
		No	8
2.	Evidence of Recent Cleaning or Maintenance	Yes	0
		No	10
3.	Newly Planted Saplings of Trees and the Health of Ponds Surrounding	Good	4
		Bad	2
		Worst	4
4.	Pond Water used for irrigation	Yes	1
		No	9
5.	The presence of Sign Boards and Awareness Boards	Yes	4
		No	6
6.	Availability of Pathways Around Pond	Yes	2
		No	8
7.	Availability of benches for Sitting Near Ponds	Yes	6
		No	4
8.	Evidence of Solid Waste Pollution Near Pond	Yes	7
		No	3
9.	The pond used for Rain Water Harvesting	Yes	3
		No	7
10.	Waterlogging or overflowing	Yes	5
		No	5
11.	The pond is used for livestock watering	Yes	7
		No	3
12.	Presence of open Gyms	Yes	1
		No	9
Total Ponds Selected for Study=10			

Source: Prepared by Research Scholar with the help of Data collected during field observation

Photo 1: (a) ***Bajana Kalan Pond during Rejuvenation work (b) After work Completion***

Source: Photos Clicked by Research Scholar during observation survey

(a) **(b)**

Photo 2: (a) *Rajlu Pond during Rejuvenation work (b) After work Completion*

Source: Photos Clicked by Research Scholar during observation survey

(a) **(b)**

RESULTS AND DISCUSSION

The field survey of 10 ponds in Sonipat district highlights vital issues and uses of these water bodies. Only 2 ponds were used for graywater disposal, indicating minimal direct contamination from household wastewater. However, none of the ponds showed evidence of recent cleaning or maintenance, suggesting a severe lack of upkeep efforts. The health of newly planted saplings around the ponds varied, with 4 rated as 'Good', 2 as 'Bad', and 4 as 'Worst', reflecting inconsistent care and management of pond surroundings.

Pond water usage for irrigation was very limited, with only 1 pond serving this purpose, showing a missed opportunity for sustainable water use. Signboards and awareness boards were present at 4 ponds, highlighting limited community engagement and educational efforts. Access around the ponds was poor, with pathways available at only 2 ponds, which restricts community interaction and maintenance activities. Benches for sitting were found near 6 ponds, suggesting some attention to making these spaces community-friendly.

Pollution remains a critical issue, with 7 ponds showing evidence of solid waste pollution, pointing to inadequate waste management practices near the water bodies. Rainwater harvesting was practised in just 3 ponds, indicating that most ponds are not being used to capture and store rainwater, an essential function for water conservation. Waterlogging or overflowing was observed in 5 ponds, demonstrating poor water management and drainage issues.

Livestock watering is common, with 7 ponds being used for this purpose, showing their importance in local animal husbandry. There is only one pond Where an open Gym is available. Overall, the survey reveals a clear need for better maintenance, pollution control, and enhanced infrastructure around the ponds. The findings underline the importance of active management and community involvement to rejuvenate these critical rural water resources.

Recommendations for effective Pond Management:-

i. **Regular Maintenance and Cleaning**: Establish routine maintenance schedules, including desilting, removal of solid waste, and cleaning of pond peripheries to maintain water quality and prevent siltation.
ii. **Graywater Management**: Redirect graywater away from ponds to reduce contamination. Implement simple filtration or treatment systems before water enters the ponds.
iii. **Erosion Control and Vegetation Management**: Plant and maintain vegetation around pond edges to prevent soil erosion. Ensure the health of newly planted saplings through proper care and watering.
iv. **Pollution Prevention**: Implement community awareness programs to discourage the disposal of solid waste, cow dung, and other pollutants in and around ponds.
v. **Installation of Signage and Awareness Boards**: Increase community engagement by installing educational boards that highlight the importance of ponds and guidelines for maintaining them.
vi. **Pathways and Access**: Construct pathways around ponds to improve accessibility for maintenance and community use. This will also encourage regular inspections and involvement by local residents.
vii. **Sustainable Water Use**: Promote the use of pond water for irrigation and rainwater harvesting to enhance water conservation efforts and reduce reliance on groundwater.

viii. **Encourage Livestock-Friendly Zones**: Designate specific areas for livestock watering to prevent contamination of the entire pond. This will also help in maintaining water quality.
ix. **Waterlogging and Drainage Solutions**: Improve drainage around ponds to prevent waterlogging and overflowing. This may involve constructing proper outlets and maintaining surrounding embankments.
x. **Community Involvement and Training**: Engage local communities in pond management activities, including cleaning drives and maintenance, through training and incentives. Foster a sense of ownership among villagers to protect these vital resources.
xi. **Enforcement of Regulations**: Strengthen local regulations to prevent encroachments, protect pond peripheries, and enforce penalties for pollution.
xii. **Monitoring and Evaluation**: Implement monitoring systems, including remote sensing and geospatial technologies, to track the health of ponds, identify issues, and assess the impact of management interventions.

CONCLUSION

The survey of Amrit Sarovar ponds in Sonipat reveals significant shortcomings in maintenance, water quality, and community involvement. Despite the scheme's potential, inconsistent management and lack of infrastructure hinder its success. Addressing these challenges through improved upkeep, pollution control, and active community engagement is essential for maximizing the pond's benefits.

REFERENCES

[1]. amritsarovar.gov.in
[2]. DCOH. (2011). *Administrative Atlas of Haryana.* Director, Census of Haryana.
[3]. De Blas, I., Muniesa, A., Vallejo, A., & Ruiz-Zarzuela, I. (2020). Assessment of Sample Size Calculations Used in Aquaculture by Simulation Techniques. *Frontiers in veterinary science*, *7*, 253.
[4]. GoI. (April, 2022). *Mission Amrit Sarovar.* Department of Rural Development.