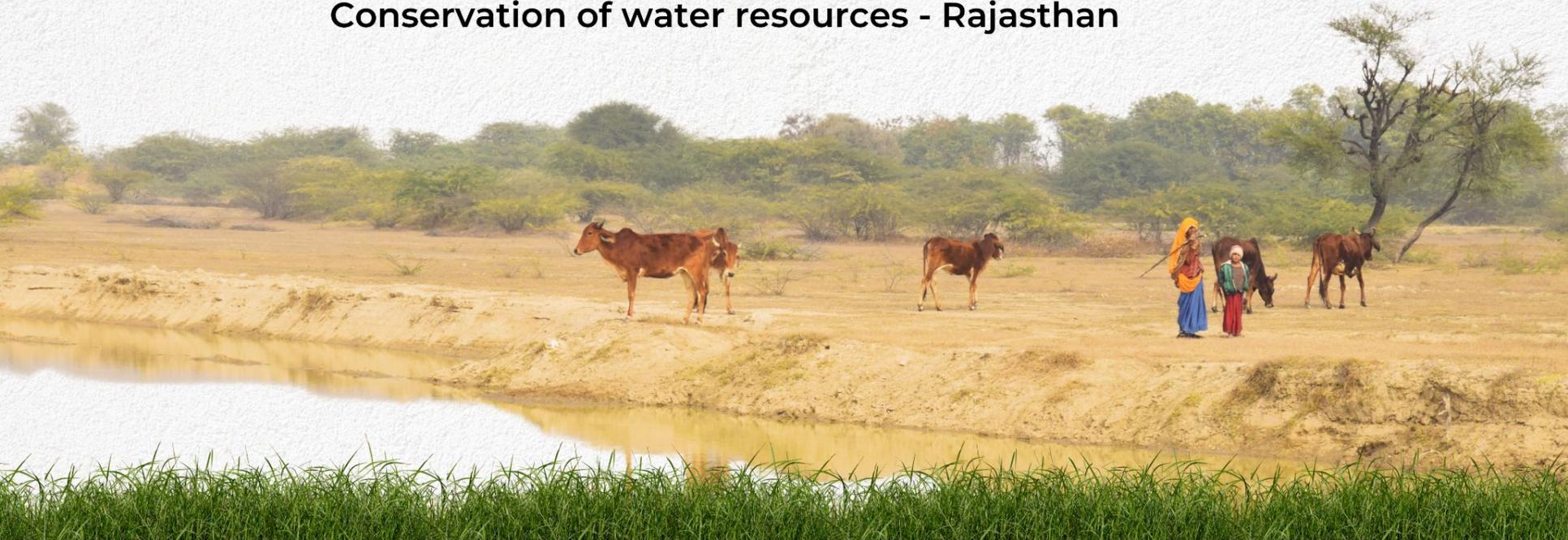


# GREEN GUARDIANS

## SWARAJ PLANT

Conservation of water resources - Rajasthan



Impact Assessment Report

Implemented by: **SMGVS**

Project Year FY-22

Supported by

**mahindra** <sup>Rise</sup>  
services

Submitted by

 **chrysalis**  
services

# Project Highlights:

## Need for the project:



### Intervention -1: Roof Rain Water Harvesting

- Lack of access to clean drinking water for school children and staff in Rajasthan.



### Intervention 2 - Rejuvenation of Traditional Water Bodies (Ponds/Tanks)

- Water scarcity in Rajasthan.
- Need for management and conservation of water bodies.
- Drinking water is significant challenge, especially during hot summers.



## Objective

Project aims to undertake water conservation and livelihood enhancement project through promotion of roof rainwater harvesting structures in Jaipur, Nagaur, Pali, and Sikar districts of Rajasthan and rejuvenation of traditional water bodies in Ajmer (Rajasthan).



## Implementing partner

Implemented by Sarv Mangal Gramin Vikas Sansthan (SMGVS).



## Geography

### Intervention 1 -

Jaipur, Nagaur, Pali, Sikar districts of Rajasthan .

### Intervention 2

Ajmer district of Rajasthan.



Map of Rajasthan

# Activities

## Roof Rain Water Harvesting

-  Construction of roof rainwater harvesting structures.
-  Awareness on health and hygiene.
-  Increased water level sources.
-  Sensitisation on water harvesting to students.
-  Formation of school committee.

## Rejuvenation of Traditional Water Bodies

-  Desilting/repair of traditional water bodies.
-  Making protocols for water usage.
-  Increased water availability.
-  Formation of Village Development Committee (VDC).
-  Plantation.

# Approach and Methodology

## Approach



## Methodology

Stakeholders		Tools
Students	➔	Paper based survey
Farmers	➔	Face to Face Survey
Teachers and Administration team	➔	Key Informant Interviews
Implementing Partner team	➔	Key Informant Interviews
Roof rainwater structures, traditional ponds (Field based observation)		

# Findings and Analysis: Roof Rain Water Harvesting

100%

of the students knew the importance of and how to use roof rainwater for drinking purposes.

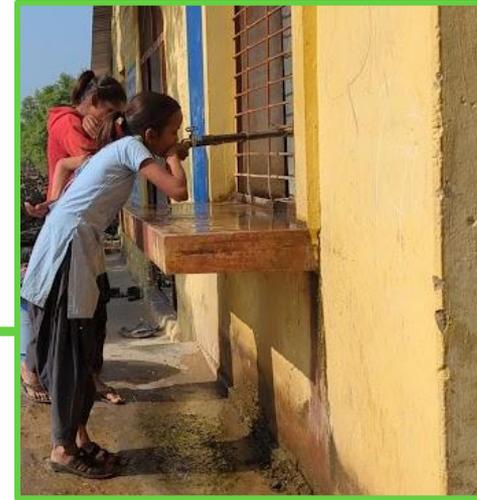


It was observed that the schools followed hygiene norms for potable drinking water by proper maintenance of roof rainwater storage tank, thereby preventing iron bacterial growth.



100%

of surveyed students use Roof Rainwater for drinking and unanimously preferred the taste of rainwater over the borewell water supplied by the panchayat.



# Roof Rainwater Harvesting

Roof Rainwater Harvesting (RRWH) reduced the drinking water shortage issue during the summer in schools covered under the project.

Students from Chenda and Mandawas schools expressed that access to **safe potable water at school improved their health.**



Discussion with girl students in both schools revealed that they **benefited from the Menstrual hygiene awareness training and incineration of the sanitary napkins.**

# Findings and Analysis: Rejuvenation of Traditional Water Bodies

**7678** individuals benefited from rejuvenation of 4 ponds.

**70%**

Pond rejuvenation led to a shift from rainfed to diversified and irrigated agriculture, resulting in a **70% increase in crop yield and income over three seasons** in the surveyed villages.

**100%**

respondents mentioned that project resulted in **improved water availability** status for irrigation and increased agricultural production due to pond rejuvenation.



**100%**

All farmers noted increased water availability, improved water quality, and **a source of income generated from increased agricultural production after the project implementation.** 100% of the survey respondents mentioned that crop production increased after pond rejuvenation.



The study findings suggested that the project also ensured drinking water for approximately 4000-5000 livestock, and with the pond water available year-round, the panchayat could supply water to the entire village.



Intervention effectively converted **fallow land into cultivable areas** for griha vartika cultivation.



The establishment of the **Village Development Committee (VDC)** fostered leadership by engaging VDC members in monitoring and supervisory tasks, and promoted community involvement in the project.



# REECIS - Roof Rain Water Harvesting



## Relevance

The Roof Rainwater Harvesting (RRWH) project in Rajasthan's schools is vital to address the region's severe water scarcity and contamination issues. The project offers a crucial alternative for safe drinking water.



## Effectiveness

The RRWH project has alleviated the drinking water problems previously faced by schools during the summer months. The project's success is highlighted because 100% of surveyed students reported using roof rainwater for drinking. The project has eliminated the need for schools to reduce their hours during the hottest months, as stated by the School Management Authority at Chenda School.



## Efficiency

Thorough planning and implementation, including meetings and educational sessions for students and school staff, followed by regular maintenance supported by the School Management Committee and MGNREGA laborers, demonstrate the project's efficiency.



## Coherence

The activities under the projects are in line with the Atal Bhujal Yojana, a Central Sector Scheme of the Ministry of Jal Shakti, to improve groundwater management through community participation.



## Impact

The RRWH project has significantly impacted the schools and their communities. Beyond providing a reliable source of safe drinking water, it has contributed to improved health indicators among students. The project has also promoted hygiene and sanitation by supplying water for toilets throughout the year, and conducting menstrual hygiene awareness sessions.



## Sustainability

The sustainability of the roof rainwater harvesting structures is ensured by the school management committee and its students, who were trained to clean and operate the water tank.

# REECIS - Rejuvenation of Traditional Water Bodies



## Relevance

The pond rejuvenation project in Ajmer directly addresses the critical challenge of water scarcity impacting agriculture and daily life. Given the region's dependence on agriculture, which requires substantial water resources, the initiative is highly relevant to enhancing water availability and quality for crop cultivation and livestock.



## Effectiveness

The rejuvenation of four ponds, benefiting 7,678 individuals, showcases the project's effectiveness. Farmers reported a significant increase in water availability, allowing for expanded agricultural activities and the cultivation of a broader range of crops. This led to an enhanced crop yield and ~70% increase in agricultural income following the intervention, indicating substantial improvements in local food security and economic conditions.



## Efficiency

The project's efficiency is evident in its community-driven approach, with villagers contributing to the rejuvenation costs and participating in the maintenance and management of water resources. This collaborative model, supported by the Implementing partner team and the use of Government schemes like MGNREGA, ensured that resources were utilised effectively, maximising the impact of the intervention.



## Coherence

The activities under the projects are in line with the Atal Bhujal Yojana, a Central Sector Scheme of the Ministry of Jal Shakti, to improve groundwater management through community participation.



## Impact

The project's impact extends beyond immediate water availability to a profound transformation in agricultural practices and economic upliftment. The conversion of fallow land to irrigated land, the rise in perennial wells, and the increased crop production highlight the significant positive changes in the community.



## Sustainability

SMGVS established multi stakeholder engagement along with execution through Village Development Committees (VDCs) in implementation villages to ensure the sustainability of the project's work. The continued operation of the VDCs and adherence to water usage guidelines signal a strong foundation for sustained project benefits.

# Alignment with Sustainable Development Goals

Goal	Activity of the Project	Target
	<ul style="list-style-type: none"> <li>Water recharge and harvesting structures and plantation.</li> <li>Water harvest activities in 4 villages like Traditional Pond rejuvenation, Plantation.</li> </ul>	
	<ul style="list-style-type: none"> <li>Collaboration with government departments like Krishi Vigyan Kendra, and education department.</li> <li>Project execution through Village Development Committees (VDCs) in implementation villages.</li> </ul>	
	<ul style="list-style-type: none"> <li>Construction of water harvest and recharge structures and formation of protocol on water usage.</li> <li>Rainwater Tanks at schools and water harvest increased the water level of the wells used for drinking.</li> <li>Sensitization and capacity building on water management like water harvesting, desalination, and water efficiency.</li> </ul>	 

## LAKHPATI KISAN

**Ms. Nandu Mali**, the wife of Gulab Mali from Lodiya village, resides in a joint family of 15 members. Formerly a housewife, she used to fetch water for the family, covering a distance of 3 to 4 kilometres each day to obtain potable drinking water.

When the SMGVS team arrived in the village in 2021, Ms Nandu Mali seized the opportunity to join the **Village Development Committee (VDC)**. Following the pond rejuvenation intervention, with increased water availability in the wells, she transformed fallow land into a productive space for growing vegetables and green fodder.

Managing four cows and four buffaloes, Ms Nandu Mali yields a cumulative daily milk output of 10 litres, selling 3 litres daily at Rs. 60 per litre. Through animal husbandry, she earns Rs. 5400 monthly. Additionally, she markets vegetables such as carrots, tomato, cabbage, cauliflower, radish, and green leafy vegetables, earning a daily income of Rs. 1500 with a daily savings of Rs. 500. The total monthly income and savings amount to Rs. 20,400, empowering her economically.

**-Nandu Mali**



## From Single-crop to Double-crop



**Mr Goverdhan Lal and Mr Haji Mohamad Umar Khan, residents of Lodiyaana Village in Rajasthan's Ajmer district, were engaged in rainfed agriculture due to the absence of irrigation water from October to June. Despite their sustained efforts, their income remained low and insufficient.**

**With 15 Bigha and 35 Bigha of land, respectively, Mr Goverdhan Lal and Mr Haji Mohamad Umar Khan faced challenges as their healthy water dried up by October each year, leaving no water for Rabi crops before 2021.**

**Following the pond rejuvenation project in the village, they witnessed water availability post-monsoon for the first time in a decade. This enabled them to cultivate wheat, mustard, Jowar, maize, and seasonal vegetables for commercial purposes on their land.**

***-Mr Goverdhan Lal and Mr Haji Mohamad Umar Khan***



**Thank You**