

## Case Study

# Solar Powered Drinking Water Facility (Jal Minar)

Project Code: P0857 | Location: HRDP Project Villages



## Introduction

Access to safe and clean drinking water has long been a challenge for the rural communities under the HRDP project area. Many villagers relied on traditional water sources such as ponds, lakes, and tube wells. These sources often contained high levels of iron and harmful bacteria, making them unsafe for drinking and household use. To address this pressing need, Suvidha, in collaboration with HDFC Bank Parivartan, initiated the installation of solar-powered drinking water facilities—popularly known as Jal Minars—across three project villages.

## Project Objective

- Ensure access to safe, clean, and iron-free drinking water for rural households.
- Promote sustainable and environment-friendly water solutions using solar technology.
- Improve community health by reducing the incidence of waterborne diseases.
- Empower local governance bodies and communities through participatory water management.

# Intervention Overview

- **Key Features of the Jal Minar Installation:**
- **Number of Units Installed:** 3
- **Storage Capacity per Tank:** 10,000 Litres
- **Technology Used:** Solar-powered water pump (3 HP) Iron Removal Unit installed at each tank Water Filtration System integrated with storage tanks
- **Water Source:** Groundwater through 6-inch boring up to 200 feet depth
- **Energy Source:** Solar Panel Units installed for pump operation

# Community Impact

Before Implementation:	After Implementation
<ul style="list-style-type: none"><li>• Villagers depended on unsafe and unhygienic water sources.</li><li>• High iron content and bacterial contamination were common.</li><li>• Increased cases of diarrhea, dysentery, cholera, and typhoid.</li><li>• Daily hardship, especially for women and children, to fetch water.</li></ul>	<ul style="list-style-type: none"><li>• Villagers now have access to safe and clean drinking water at the community level.</li><li>• Iron removal units ensure the elimination of harmful iron content.</li><li>• Drastic reduction in waterborne diseases.</li><li>• Time and effort saved, enabling villagers to engage more in livelihoods and education.</li><li>• Enhanced community awareness around water quality and health.</li></ul>

# Sustainability and Maintenance

- **Community-based Water User Committees** have been formed for regular maintenance.
- **Local youth** trained on basic troubleshooting and operation of the system.
- **Routine cleaning** of tanks and filters is being ensured with local support.



# Conclusion

The installation of the solar-powered Jal Minars has significantly transformed the water scenario in the HRDP project villages. This model has proven to be a sustainable, scalable, and community-friendly solution to rural water problems. Through innovation, partnership, and local engagement, Suvidha and HDFC Bank Parivartan have created a lasting impact on the lives of hundreds of villagers.