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Partners in Development

Sustainable Water Resources Development & Management (SWRDM), Pune, Maharashtra

PepsiCo–ADI Partnership

6	7446	7900	15,346
VILLAGES INTERVENED	WOMEN IMPACTED	MEN IMPACTED	POPULATION IMPACTED



LOCATIONS

Dhangarwadi | Jambhlimala | Nimone | Babhulsar Khurd | Dahiwadi | Warude

Project Overview & Key Outcomes

Executive Summary: The purpose of the Pune SWRDM Cluster project is to convert seasonal rainfall into usable subsurface storage, strengthen water harvesting, improve water productivity, and embed local ownership. Covering six villages in a semi-arid basaltic terrain, the program focuses on detaining runoff to increase percolation and improve agricultural resilience.

Key Achievements

Pond Capacity Restored
21 4,573.80 m³

Recharge Potential Created
235.1 4 TCM

Estimated Recharge (runoff-based)
215.21 TCM (CY 2024) | 194.92 TCM (CY 2025)

Groundwater Rise
(CY 2025 village averages): **2.1–3.5 m**
Dhangarwadi & Nimone (since baseline, linked with canal): **7–10 m**

Intervention Approach

Watershed Engineering

Pond-centric recharge structures designed as detention systems, with strengthened inlets, embankment protection, and canal-to-pond linkages through government convergence (where feasible).

Agriculture & Livelihoods

Promotion of micro-irrigation, seasonal crop planning, and orchard diversification / high-value horticulture to improve water-use efficiency.

Women's Institutions

19 SHGs (274 members) strengthened; enterprise development supported to build financial resilience.

Rainwater Harvesting

Rooftop rainwater harvesting in 5 government schools (catchment 3,570 m²), with potential recharge of 14.65 lakh liters / year.

Pictures depicting the Before and After Condition – Dhangarwadi, Pune

BEFORE



Before



After

AFTER

Hydrogeology Context

Located in hard-rock basaltic geology where groundwater is controlled by weathered zones and fractures. The area experiences moderate rainfall with high temporal variability, necessitating interventions that detain runoff to increase residence time for percolation.

Technical Impact & Results

Village-wise Impact (Annexure A Summary)

Village	Catchment (ha)	Pond Cap. (m^3)	Recharge Pot. (TCM)	Water Table Rise (m)	Income Incr.
Dhangarwadi	411 .00	26,100.00	62.67	6.20	60%
Jambhlimala	102.43	21,729.83	15.62	4.12	40%
Nimone	183.12	26,417.65	27.92	3.60	60%
Dahiwadi	257.18	58,739.99	39.21	4.30	55%
Babhulsar Khurd	340.62	49,624.51	51.94	3.12	25%
Warude	247.74	31,961.82	37.78	5.20	25%
Total / Avg	**1,542.09**	**214,573.80**	**235.14**	**4.42 (Avg)**	**-**

Income increase (%): *Indicative estimate based on field crop economics of selected farmers in each village, comparing [BASELINE YEAR/SEASON] vs CY2025 net profit (₹/farmer/season) for major crops. Figures reflect participating/adopting farmers and are not statistically representative of all farmers in the village.*

Key Technical Indicators (Year-on-Year)

Indicator	CY 2024	CY 2025
Avg. Rainfall (mm)	486	466.72
Estimated Recharge (TCM)	215.21	194.92
Active Women SHGs	13 (190 members)	19 (274 members)
Water User Groups	6	6
Trainings Conducted	**24**	**24**

Groundwater level rise (from baseline): ~5–10 m *(Village-wise variation reflects aquifer type and local fracture/weathered-zone conditions; controlled by transmissivity/storage, recharge pathways, and well type (dugwell/borewell) within the WHS command area.)*

Water Quality Status (2025)

pH : 7.0 – 7.9 (Neutral)

TDS : 250 – 430 mg/L

SAR : <1(Safe for irrigation)

Coliform : 0 (Safe for consumption)

Monitoring Network

Observation Wells : 23 monitoring points across the cluster.

Rain Gauges : 7 stations capturing local rainfall variability.

Methodology : Comparison of pre-monsoon (Jan-May) vs post-monsoon depth to calculate

Economic & Social Impact

Agricultural Transformation

Success Story: Pomegranate (Nimone)

Net Income : ₹1 ,1 5,20,000

Net Profit : ₹93,61 ,728

High-value horticulture was made possible due to improved water availability from canal linkages and pond recharge.

Field Crop Economics

Vegetable and field crop profits ranged from **₹7.8 lakh to ₹8.5 lakh** across villages. Top recurring profit contributors included Onion, Wheat, and Maize.
(Figures are based on indicative crop-economics estimates for participating farmers and are not representative of all farmers

Orchard Diversification

SWRDM strengthened water availability through pond-based recharge systems (and canal-pond linkages where implemented), helping convert seasonal water into usable groundwater storage near farms. Farmers received on-field support on micro-irrigation and water-efficient agronomic practices, enabling a shift towards high-value horticulture/orchards.

Mango	: 1 ,000 trees	**Tamarind**	: 800 trees
Coconut	: 80 trees	**Chikoo**	: 42 trees
Custard Apple	: 20		

Women's Empowerment

SHG Growth (2024 vs 2025)

13 → 19	190 → 274
Active SHGs	Total Members

Financial Strength Cumulative

- **Savings** : ₹ 29 Lakh
- **Loans to Members** : ₹ 24.2 Lakh
- **Bank Balance** : ₹ 11 .9 Lakh

Enterprise Development

6 SHG-led enterprises active across 4 villages, engaging 98 women in production—soap, surf/detergent, agarbatti, and perfume/room freshener (with additional services such as tailoring/beauty work reported). Gross sales ~₹2.2 lakh by late 2025 with ~5,000 units sold.



Capacity Building

48 **Total Trainings Conducted (2024-2025)**
24 in CY 2024 and 24 in CY 2025; topics covered seasonal crop planning, micro-irrigation, water-use efficiency, SHG management, etc.

5 **Soil Health Pilot**
Vermicompost pits promoted to improve organic matter and moisture retention.

Testimonials



"Earlier, we had to walk long distances for drinking water and struggled to manage water for our farms and livestock. After the percolation tank was completed in 2018, water availability improved and we saved time and effort. Along with this, the SHG trainings helped me build skills for small enterprise. I started making and selling products like soap, incense sticks and perfume, supporting my family income."

ANITA KARHE, Dhangarwadi

"For years, my fields had only one source of water—the rain. After the PepsiCo–ADI Partnership of Progress supported the rejuvenation of our village pond, our land has sufficient water and farming is now more stable. Our land has truly become sujalam suphalam, and we are able to irrigate and grow multiple crops. I have established a pomegranate orchard of around 1,000 trees on 3.5 acres, and this has increased our income. We sell pomegranates at ₹100–150 per kg at the farm gate (directly from our farm)."



UTTAM JAGTAP, Nimon