



VITTHALGANGA RIVER REJUVENATION PROJECT

Madha Taluka,
Solapur District,
Maharashtra

Project Background



The Challenge

- Recurrent drought conditions
- Declining groundwater levels
- Water scarcity affecting agriculture and livelihoods
- Need for sustainable water resource management



Project Objectives

Key Goals

- River rejuvenation
 - Increase water storage capacity
 - Recharge groundwater resources
- Strengthen rural water security
- Support agriculture and livestock
- Improve environmental sustainability



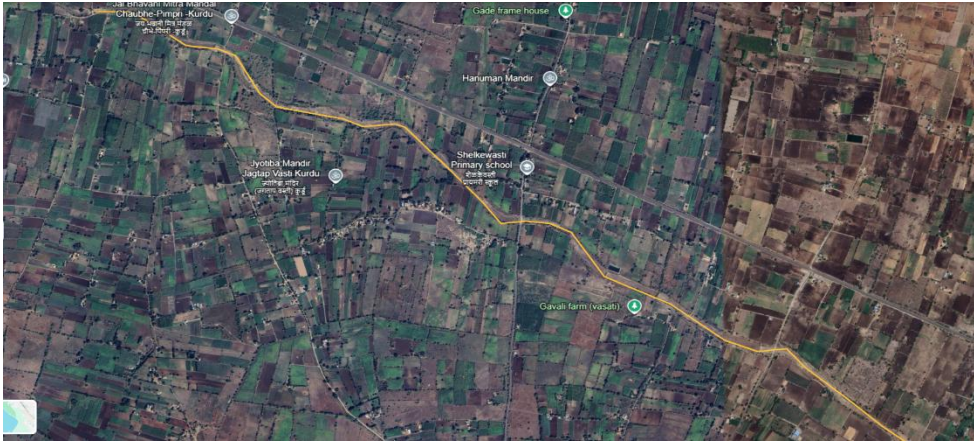
Viththalganga River Rejuvenation Project



Key Facts

- River Rejuvenation through Watershed Development
- Watershed Area: 50,000 + hector
- River Length: 34 km
- Villages Covered: 13
- Rainfall: less than 600 mm annually
- Drought-prone region of Solapur District

Technical Assessment & Challenges



Scientific Survey and Diagnosis

A detailed contour and hydrological survey conducted by NAAM Foundation revealed significant degradation of the stream ecosystem.

Major Findings

- **67 government-built check dams** existed along the 34 km watercourse.
- Heavy silt accumulation had reduced storage capacity drastically.
- Encroachments along both banks had narrowed the natural channel.
- Water carrying and storage capacity had fallen below **20% of its original potential**.
- Technical assessment estimated the need to remove approximately **16 lakh cubic meters of silt**.
- Several check dams had never undergone de-siltation since construction.

Additional Observations

- Hundreds of wells, farm ponds, and natural ponds existed adjacent to the stream.
- Runoff from the entire watershed ultimately drained into Bend Odha before joining the Seena River.

River Rejuvenation Strategy



Integrated Watershed Development Approach

The project was implemented jointly through community participation, government support, and NAAM Foundation

Key Interventions

- ❖ River Deepening and Widening
- ❖ Removal of Accumulated Silt
- ❖ Restoration of Natural Flow Channel
- ❖ De-siltation of 67 Existing Check Dams
- ❖ Re-establishment of Drainage Connectivity
- ❖ Enhancement of Rainwater Storage Capacity
- ❖ Groundwater Recharge Promotion

Engineering Logic

Rainfall → Watershed Runoff → River → Check Dams → Percolation → Groundwater Recharge → Wells & Farms

The project also connected feeder drains and minor streams to ensure all runoff entered the main watercourse and was retained for longer durations.

Hydrological Impact & Climate Resilience



From Seasonal Stream to Perennial Water Source

Following restoration, remarkable hydrological improvements were observed.

Immediate Outcomes

- Natural springs emerged in several locations after de-siltation.
- Previously buried groundwater discharge zones became active.
- Water retention increased substantially across the river system.
- Wells and borewells that had remained dry for years were recharged within days after rainfall.
- Farm ponds and natural ponds filled completely.
- Excess water continued safely towards the Seena River.

Climate Adaptation Benefit

During intense rainfall events and cloudburst conditions in Solapur district, the rejuvenated river channel safely conveyed floodwaters downstream, significantly reducing crop losses and local flooding.

Socio-Economic Transformation & Project Success



Viththalganga Farmer
Producer Company

Impact Achieved

- 400 Crore Litres of Rainwater Conserved
- 63,000 Acres Irrigation Potential Created
- 60+ Check Dams Restored and Strengthened
- Benefits extended to **13 villages**.
- More than **3,000 farmers** collectively established the **Viththalganga Farmers Producer Company**.
- Annual turnover of the FPO exceeds **₹25 Crore**.
- Significant expansion of high-value crops:
 - Banana
 - Grapes
 - Custard Apple
 - Other horticultural crops
- Increased agricultural productivity and export opportunities.
- Milk collection increased nearly **fivefold**.
- Enhanced livelihood opportunities and women's economic participation.



Impact Assessment

Before vs After Rainfall

Before Rainfall	After Rainfall
Dry streams	Flowing water
Low groundwater	Improved recharge
Limited irrigation	Increased water availability
Seasonal scarcity	Enhanced water security



Conclusion & Future Vision



Towards a Water-Secure Madha

- Strengthening watershed infrastructure
- Expanding conservation efforts
- Sustainable groundwater management
- Community-led water stewardship

"Conserve Water, Secure the Future."



Before



After







THANK YOU