Commissionerate of Rural Development
Government of Gujarat

Date: 28-05-2025

Sanitation & Cleanliness in Rural Areas Progress In 2 Year.

31-03-2023		28-05-2025
42,76,449	Individual Household Latrines (IHHL)	43,81,280
7,794	Community Sanitary Complexes (CSC)	7,989
9,331	Villages Covered with 100% D2D Collection	11,806
16,189	Collection and Transportation Vehicles	19,700
28,349	Community Compost Pits	47,219
6,908	Segregation Sheds	11,529
60,829	Community Soak Pits	1,31,857

By creating these components, **17,064** have been marked with Solid Waste Management

✓ By creating these components, **16,987** have been marked with liquid Waste Management

*** Total Villages 17,971**

Sustainable centralized Greywater Management

Date of commencement- 2021

- Vedancha Gram Panchayat is located in Palanpur block of Banaskantha District and has **916 households with a population of 4641**
- **Two wastewater ponds in the village**. At one pond, wastewater from 30% of the households is disposed whereas wastewater from 70% of the households is disposed at the other pond.

Location- Vedancha Village, District: Banaskantha Gujarat

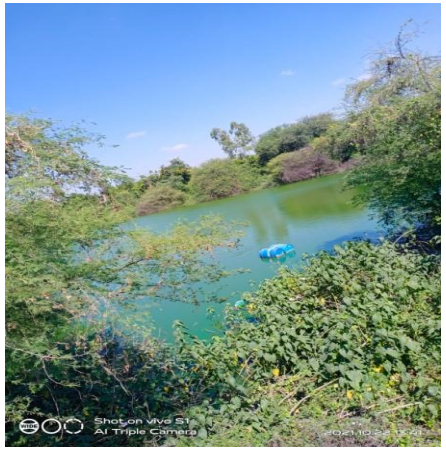
Details

- **More than 10,000 villages covered with drainage line** (60% or more) from 15th FC funds.
- **Greywater Management**
  - **Treatment- Decentralized Options :**
    - Community Level Soakpits/Leach Pits
    - Individual Soakpits/Leach pits
  - **Treatment- Centralized option**
    - Centralized greywater management model scaled across Gujarat

Sustainable centralized Greywater Management

❖ Main Objectives:

- ✓ Prevent contamination of surface and groundwater sources.
- ✓ Reuse treated water for activities such as irrigation.
- ✓ Convert organic waste into compost and use it effectively.
- ✓ Develop a system that is community-owned, low-maintenance, and economically sustainable.



Sustainable centralized Greywater Management

Steps

Stage 1

Lifting greywater from drainage outlet into greywater treatment structure

Stage 2

Filtration of collected greywater using granular filter and dosing of mixture of alum and lime

Stage 3

Greywater transferred to Settling tank no. 1 with large sized pebbles and charcoal

Stage 4

Greywater transferred to Settling tank no. 2 with activated granular charcoal

Stage 5

Greywater transferred to Settling tank no. 3 with sand, gravel, and charcoal powder

Stage 6

Treated water is released into surface pond

Organic manure obtained from cleaning of settling tanks is sold to farmers through village fertilizer cooperative @Rs. 200/30 kg (Rates may vary)

❖ Stakeholders and Coordination:

- The success of the Vedancha model lies in strong inter-institutional collaboration and community participation. Stakeholders at various levels have been brought together:

01

Gram Panchayat: The key link responsible for local-level leadership, resource mobilization, and community organization.

02

WASMO (Water and Sanitation Management Organization): Provided technical guidance, system design, and capacity-building support.

03

District Rural Development Agency (DRDA): Facilitated convergence with rural development schemes and enabled implementation monitoring.

04

UNICEF: Offered advisory and knowledge support in planning, monitoring, and training processes.

05

MGNREGA and the 15th Finance Commission: Financial convergence for civil works such as soak pits, drainage channels, fencing, and plantation.

06

Local Contractors and Village-Level Agencies: Engaged for construction, employment generation, and maintenance activities.

❑ Implementation Approach

1 Community Participation

- Awareness campaigns were conducted to educate villagers about greywater and to encourage active community participation.

2 Technical Survey and Design

- WASMO and DRDA designed a gravity-based wastewater treatment system according to the land and water flow patterns.

3 Financial Convergence

- Funding for the “Vedancha Model” of greywater management was arranged through grants from SBM (Gramin), MGNREGA, and the 15th Finance Commission.

4 Construction and Employment

- The "Vedancha Model" was developed through local contractors, who also provided employment to local people by managing, maintaining, and operating the system.

5 Training and Capacity Building

- Special training on plant operations and monitoring was provided to Panchayat members, operators, and all citizens involved with the Vedancha model’s functioning.

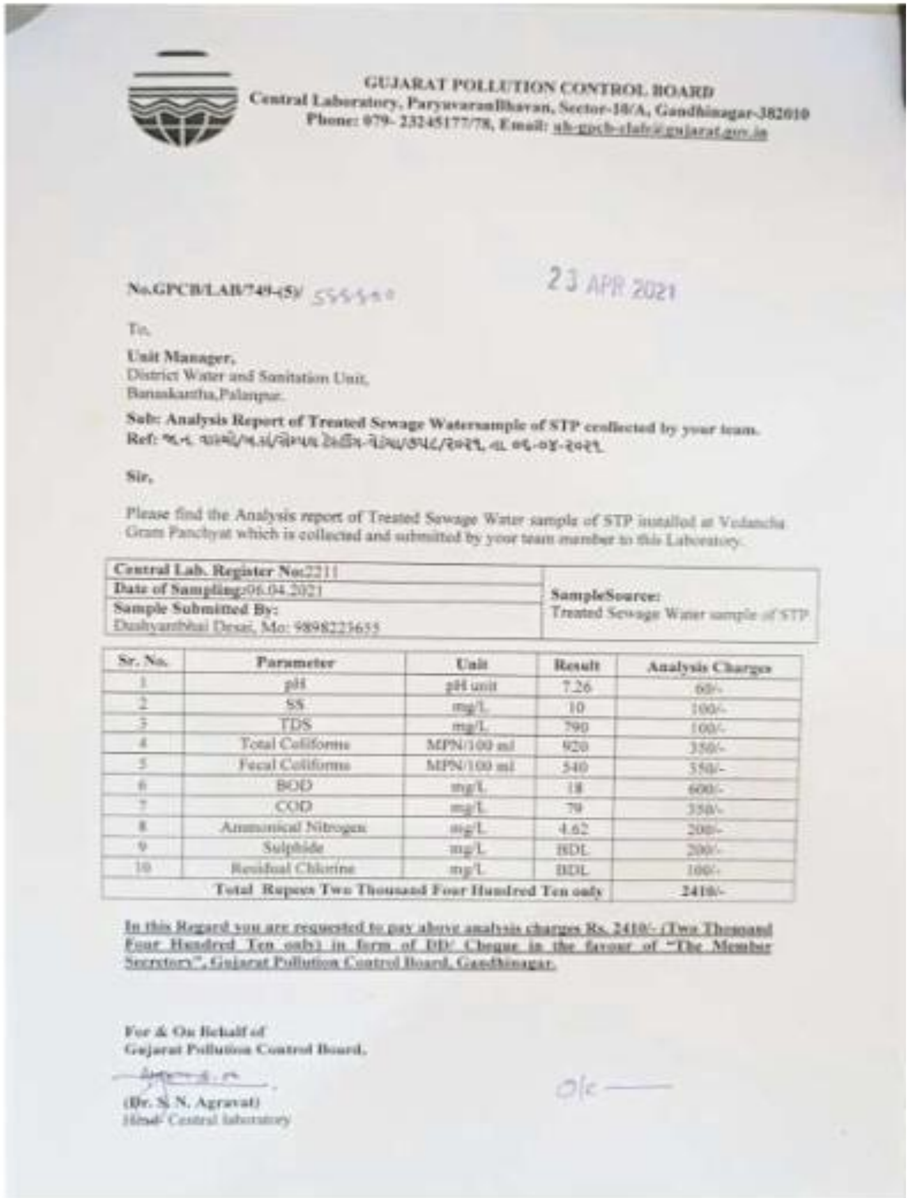
6 Monitoring and Quality Control

- Daily, 200 KLD of greywater is treated, with regular sampling and quality testing of the compost conducted.

❑ Achievements and Outcomes

- **Environmental Protection:** As treated water is used for irrigation, it helps conserve drinking water sources.
- **Income Generation:** The Panchayat earns approximately ₹2.5 lakh annually through the sale of compost and the reuse of treated water. (30 kg bags of organic compost are sold to farmers at ₹200 each.)
- **Support for Organic Farming:** The compost produced is rich in nutrients and promotes sustainable agricultural practices.
- **Groundwater Recharge:** Treated water helps recharge groundwater, positively impacting groundwater levels.
- **Community Empowerment:** Villagers gain skills, awareness, and pride in managing their own sanitation systems.
- **Improvement in Public Health:** There has been a significant reduction in waterborne diseases and mosquito-borne outbreaks.

Water Testing Results



GUJARAT POLLUTION CONTROL BOARD
Central Laboratory, ParyavaranBhavan, Sector-10/A, Gandhinagar-382010
Phone: 079- 23245177/78, Email: [illegible]

No.GPCB/LAB/749-(5)/ [illegible]   23 APR 2021

To,

Unit Manager,
District Water and Sanitation Unit,
Banaskantha,Palanpur.

Sub: Analysis Report of Treated Sewage Watersample of STP collected by your team.
Ref: [illegible]

Sir,

Please find the Analysis report of Treated Sewage Water sample of STP installed at Vedancha Gram Panchyat which is collected and submitted by your team member to this Laboratory.

Central Lab. Register No: 2211	**SampleSource:** Treated Sewage Water sample of STP
Date of Sampling: 06.04.2021	
Sample Submitted By: Dushyantbhai Desai, Mo: 9898223635	

Sr. No.	Parameter	Unit	Result	Analysis Charges
1	pH	pH unit	7.26	60/-
2	SS	mg/L	10	100/-
3	TDS	mg/L	790	100/-
4	Total Coliforms	MPN/100 ml	920	350/-
5	Fecal Coliforms	MPN/100 ml	540	350/-
6	BOD	mg/L	18	600/-
7	COD	mg/L	79	350/-
8	Ammonical Nitrogen	mg/L	4.62	200/-
9	Sulphide	mg/L	BDL	200/-
10	Residual Chlorine	mg/L	BDL	100/-
	Total Rupees Two Thousand Four Hundred Ten only			2410/-

In this Regard you are requested to pay above analysis charges Rs. 2410/- (Two Thousand Four Hundred Ten only) in form of DD/ Cheque in the favour of "The Member Secretory", Gujarat Pollution Control Board, Gandhinagar.

For & On Behalf of
Gujarat Pollution Control Board,

(Dr. S. N. Agravat)
Head- Central laboratory

Parameters	Unit	Treated Water	NGT Norms 2019
pH	-	6.98	6.5 – 9
BOD	mg/L	18	< 30
COD	mg/L	79	< 50 for Metro cities
Suspended Solids	mg/L	10	< 50
Total Coliform	MPN/100 ml	920	Desirable – 1000; Permissible – 10,000
Fecal Coliform	MPN/100 ml	540	Not specified (assumed under Total Coliform)

- Treated water meets CPCB norms

- Resulting manure from cleaning meets FCO standard for organic manure

Empowering Women Through Energy: Gujarat's GOBARDHAN Initiative Transforms Waste into Opportunity

Date of commencement- February

About the program/initiative:

- Gujarat's GOBARdhan initiative under SBM-G converts cow dung into clean energy and under SBM-G Phase-2 for sustainable waste management through various model

1 Cluster Model

- Biogas utilization by households, cluster of 200-250 beneficiaries (households)
- Approx. at Rs. 30,000 cost Installation of Individual Biogas plant
- Processing of Slurry obtained from Biogas Plant
- Conversion of slurry into Bio/organic Fertilizer

2 Dairy Model

- Collection of Dung through dairy from around group of 200 to 250 Farmers
- Production of 2000 cum/day CBG kabag through collected dung
- CBG plant operational at Banaskantha district, Guajrat

3 Gau-Shala Model

- Established through Entrepreneurs/co-operative Institutions/Gau-Shala/Animal Asylum (Panjrapol), Small Dairies
- Production and sale of Electricity/Gas or supply to Industry
- Companies and others as End Users

Empowering Women Through Energy: Gujarat's GOBARDHAN Initiative Transforms Waste into Opportunity

Under SBM-G Sate Gobardhan Pilot Project through Cluster Model

7600
Biogas Plants Constructed

7423
Beneficiaries Benefitted

Impact Assessment Shows:

01

Cow-dung Usage:

- Before Bio-Gas Plant (BGP): **80%** used dung as fuel; 20% for agriculture.
- After BGP: **90%** use dung for agriculture; only **10%** use it as fuel.
- Dung Savings: **120.67 kg** of dung saved per day per household, translating to **₹44,044.55** savings per year

02

Fuel Shift:

- Before BGP: Heavy reliance on dung cakes, farm residues, and wood.
- After BGP: Shift towards biogas, eliminating reliance on traditional fuels

03

Time Savings:

- **Before BGP: 3.42 hours/day** spent on fuel-related activities (preparing dung cakes, collecting firewood)
- **After BGP: 1.57 hours/day**, saving **1.85 hours/day per household**

04

Economic Impact:

- Significant reduction in the cost of fuel and increased allocation of dung for agricultural productivity

05

Health Improvements:

- Kitchen Smoke: Reduced to zero post-installation.
- Eye and Respiratory Infections: Significant reduction

GOBARDHAN

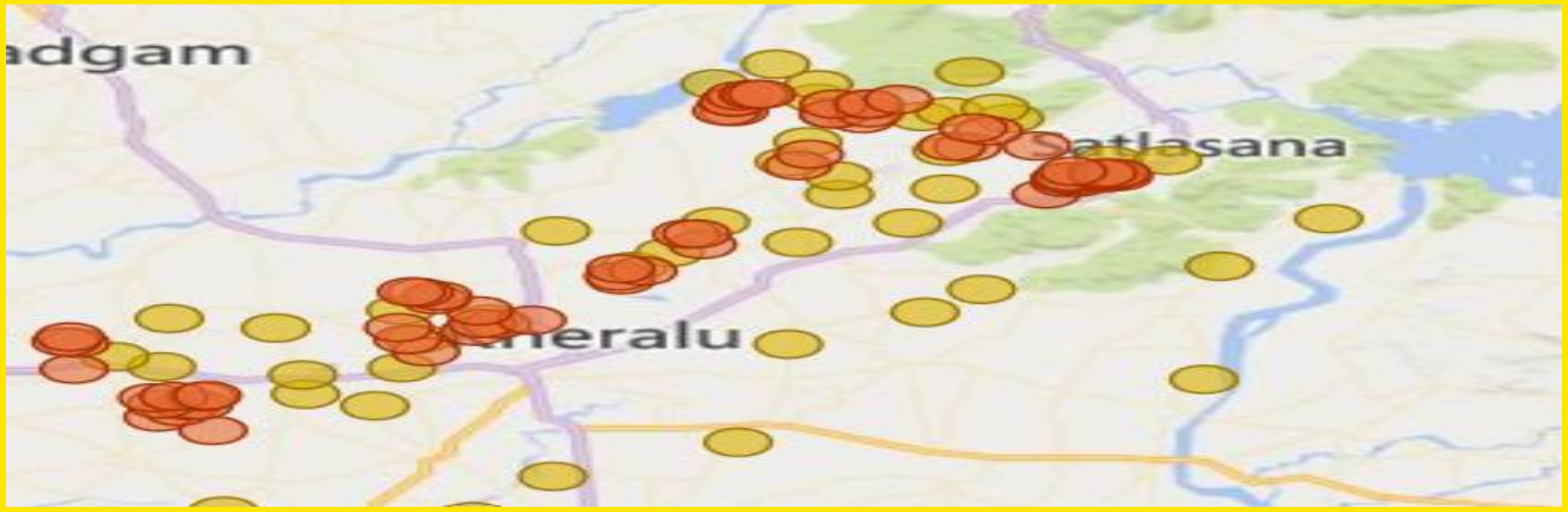
Phase 1: Achievements and Impact

- **7,423 biogas plants (2 m³ capacity)** established in 33 districts at the cluster level (1 cluster = 200 plants).
- **97% plants i.e, 7,200 are functional** ensuring high operational success.
- **Assessment** - UNICEF survey findings:
  - **₹10,364 annual fuel saved** per household.
  - **₹32,440 annual fertilizer expenditure saved** per household.
  - Till date nearly **51.10 crore litres of slurry is produced**.

*(100 L per day per plant)

Phase 2: Expansion Plan

- **100% State Sponsored.**
- **10,000 new biogas plants** to be **established** under the Gobardhan Scheme in 2024–25. **2000 + new biogas plants installed.**
- Part of Nirmal Gujarat 2.0, with a **grant of ₹25.50 crore**.
- Focus on **lowering carbon footprint** and **pioneering waste management solutions.**
- Infrastructure **mapping** is done on the **PM Gati Shakti platform**.
- In phase 2 beneficiaries have been identified near phase 1 plants for slurry processing units at the block level in future.



Empowering Women Through Energy: Gujarat's GOBARDHAN Initiative Transforms Waste into Opportunity

Key learnings:

- Diverse implementation models adapt waste management to local needs, ensuring scalability
- Strong stakeholder engagement, including private players provides crucial support
- Effective public-private partnerships foster innovation and resource optimization
- Robust forward and backward linkages strengthen the scheme's ecosystem
- Ongoing maintenance and support ensure sustainable biogas plant operations
- Slurry Processing Unit We are planning in Block Level as per the need required in fature.

Way Forward :

- **Biogas Energizing Rural Gujarat:**
  - 10,000 new state-funded biogas plants under the GOBARdhan initiative
- **Greening the Environment**
  - Lowering carbon footprints and pioneering waste solutions for Gujarat
- **Collaborative Growth**
  - Fortifying partnerships for the enduring efficacy of Gujarat's biogas journey

❑ RECOGNITION

- **National Level Recognition:** Gujarat's Commissionerate of Rural Development (CRD) received ISC FICCI Award under the **"Special Recognition to Governments" (Category 6) award for pioneering initiatives in waste management under the Gobardhan Scheme and greywater treatment** through the **Vedanchha Model in Banaskantha and "Selected for an award at CIPS (Centre for Innovations in Public Systems)."**

શ્રમયોગ • સંગઠન • સમૃદ્ધિ

Thanks...

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