

WASTE TO WELLNESS

Kolathigam's Journey from Waste to Wellness: Building a Climate-Resilient Village through Community-Led Waste Management



Overview

Since March 2023, Kolathigam Gram Panchayat in Rangeilunda Block of Ganjam District, Odisha, has joined hands with Youth for Social Development (YSD) and UNICEF to become a cleaner, healthier, and climate-resilient village. The initiative focuses on protecting the environment through improved waste management, raising climate-change awareness, and involving women, children (10–18 years), youth (19–25 years), the wider community, frontline workers, and local government officials. By setting up a waste management system, running public-awareness campaigns on waste segregation, and engaging frontline workers, statutory committees, and local governance bodies, Kolathigam has become a model of how caring for one’s surroundings promotes everyone’s health and well-being.

The program promotes a circular economy by reducing waste, recycling, and reusing materials, while also advancing hygiene, health, environmental education, and gender empowerment. Its main beneficiaries include women, children, families, the general public, sanitation workers, frontline service providers, Self-Help Groups (SHGs), and elected local officials (PRI members). The project has built basic waste-handling infrastructure, generated awareness, and provided training and capacity building for frontline workers, statutory committees, and line-department officials. These efforts strengthen the local government’s ability to run and maintain the waste management system, ensuring the change remains sustainable and community-owned.



Context and Environmental Issues

Kolathigam Gram Panchayat (GP) is located in the coastal Rangeilunda Block of Ganjam District, Odisha. It comprises three revenue villages—Kolathigam, Daspur, and Solabindha—and covers 310.92 hectares. The GP has a total population of 10,950 people across 1,215 households. Situated just 8 km from the Bay of Bengal, it is particularly vulnerable to extreme weather events such as cyclones and flooding during the summer and monsoon seasons. The Gram Panchayat is divided into 13 wards, with women occupying over 50 percent of the elected seats. The region's literacy rate stands at 66.02 percent, and Odia is the primary language. There are 84 women's Self-Help Groups (SHGs) in the Panchayat of which 15 are currently functional.

The socio-economic profile reflects a rural, agrarian economy. Agriculture, daily wage labor, petty trading, and private-sector employment are the main sources of livelihood. Many families also rear livestock—cows, goats, poultry, and bullocks. Seasonal migration to other states, such as Gujarat and Maharashtra, is common, particularly among young people. A large portion of the population belongs to Other Backward Classes (OBCs), Scheduled Castes (SCs), and the general category. Many households benefit from government social-protection schemes, including the Public Distribution System (PDS), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), various pension programs, and housing support under the Pradhan Mantri Awas Yojana (PMAY).

Kolathigam Gram Panchayat achieved Open Defecation Free (ODF) status in October 2019 after a sustained, village-wide effort. Early on, many households lacked private toilets, and open defecation was common in fields or along waterways. To change this, local leaders, women's groups, and youth organized awareness drives, street plays, and door-to-door visits to explain the health and safety benefits of using toilets. At the same time, the panchayat teamed up with Swachha Bharat Mission Gramin government programs to secure funds and build low-cost, durable toilet units for every home. Slowly, bricks and slabs replaced open spaces, and families began taking pride in their new facilities. The campaign's success rested on both physical infrastructure and community spirit. Today, Kolathigam's ODF status is sustained by regular meetings, local sanitation committees, and continued support from the households and government.

- **Persistent Waste Litter and Sanitation Challenges Post-ODF:** However, even after becoming an ODF village, residents continue to face many challenges related to waste littering roads and streets. Solid waste—plastics, paper, and other dry refuse from households and commercial establishments—piles up alongside animal droppings. At the same time, liquid waste from kitchens, toilets, and general filth water flows unchecked, creating unsanitary conditions throughout the community.
- **Environmental Threats from Lack of Formal Waste Collection:** The area suffers from serious environmental problems due to the lack of any formal collection system—no door-to-door pickup or community bins are in place. Instead, households dump garbage in open spaces near homes, roads, ponds, temples, schools, anganwadi centers, and the health center. This public dumping fosters breeding grounds for disease vectors such as mosquitoes and flies. During the monsoon, rainwater carries debris into drains and local water bodies, further contaminating the village’s water supply.
- **Gaps in Waste Segregation and Infrastructure:** People are unaware of how to segregate their waste. They don’t have dustbins or any protected place to store refuse, nor do they know how to reuse plastic, cloth, paper, or other household materials. The village lacks any system for managing solid or liquid waste, and the Material Recovery Facility (MRF) that was built remains non-functional.
- **Institutional Weakness and Community Apathy in Waste Management:** Local government officials have neither the technical know-how nor the funds to build infrastructure, purchase vehicles, hire staff, or train frontline workers for an effective waste-management program. Institutional leadership on environmental issues is absent: Self-Help Groups and Village Water and Sanitation Committees (VWSCs) are inactive, and no youth groups focus on cleanliness. Daily wage earners prioritize basic survival over sanitation, and without penalties or local by-laws, there is little incentive to change behavior. As a result, widespread apathy persists.



Project Intervention

In March 2023, Youth for Social Development (YSD), with support from UNICEF and in close partnership with the Sarpanch (elected head) and the Kolathigam Gram Panchayat, launched a comprehensive Solid Waste Management (SWM) and climate-resilient sanitation initiative. Designed as a holistic intervention, the program addresses the community's mounting environmental challenges while promoting sustainable cleanliness and hygiene, improving public health, and fostering long-term climate awareness and grassroots action.

At its core, the intervention aimed to establish a structured, community-led waste management system with support from the Swachh Bharat Mission (Gramin) ODF+. One of the first steps was to implement a door-to-door solid waste collection mechanism covering every household in the Gram Panchayat. Key infrastructure investments included vehicles for collection routes, a Material Recovery Facility (MRF), and provisions for sanitation workers' engagement, training, capacity building, and social protection. Simultaneously, the project constructed filth-water and wastewater drains to ensure effective liquid waste management and promote its reuse. These were funded through SBM-Gramin, as well as grants from the 15th Central Finance Commission and 5th State Finance Commissions.

- **Analysis of the Gram Panchayat Development Plan and Fund Use :** Under the SBM-G Phase II guidelines, Gram Panchayats must use their own funds to first improve water and sanitation. To make this happen, the Panchayat prepares a detailed plan and gets it approved in a Gram Sabha meeting.



The YSD team reviewed the current fund allocations in the Gram Panchayat Development Plan and recommended that the Panchayat outline specific water-and-sanitation projects. These include building an MRF centre, laying new drains, running community cleaning drives and awareness campaigns, and creating easy-to-use materials on managing solid and liquid waste.

- **Coordination with the Block:** The team held a joint meeting with both Gram Panchayat and block officials to review the updated GPDP's water and sanitation sections, walking through each change, cost estimate, and timeline while answering questions and clarifying priorities. They then outlined the departmental approval process—identifying any additional forms or technical clearances required—and assigned clear responsibilities for completing those tasks. By the end of the session, everyone agreed on a submission schedule for the revised plan to the block office and set follow-up checkpoints to ensure final sanctioning of the water and sanitation projects.
- **Infrastructure Development for Waste Management :** With strong leadership from the Sarpanch and active support from the YSD team, the Gram Panchayat allocated funds from its GPDP (Gram Panchayat Development Plan) budget to purchase a battery-operated vehicle (BOV) for waste collection. The vehicle began operations on 15 August 2024, symbolically launched on Independence Day to reflect the values of community responsibility and self-reliance. To promote waste segregation at the household level, twin bins (blue and green) were distributed to each family—one for wet waste and one for dry waste. Every morning, the BOV makes rounds through the village, playing music to alert residents to bring their waste outside for collection. The collected waste is taken to the local Material Recovery Facility (MRF),



where trained sanitation workers sort it. Non-recyclable and excess waste is then transported to the larger MRF centre in Mohuda, managed by the Berhampur Municipal Corporation, for safe disposal and recycling. With support from government schemes such as Swachh Bharat Mission (SBM), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), and the 15th Central Finance Commission, a total of 3.2 kilometers of drainage systems were constructed. These drains help manage wastewater and have significantly improved overall sanitation and cleanliness in the villages.

- **Mass Visual Cleaning and Community Campaign:** After launching the door-to-door waste collection system, the Gram Panchayat led a mass visual cleanliness drive across all three villages. This initiative focused on clearing old waste dumping sites, removing stagnant garbage from public areas, and cleaning up black spots to transform them into cleaner spaces. The drive significantly improved the local environment and boosted community confidence in the new waste management system. More importantly, it strengthened the shared commitment to keeping the Panchayat clean and healthy. The campaign was carried out with active participation from community members, who were invited to join the effort and take ownership of their village's cleanliness. This collective action helped foster a sense of pride and responsibility toward maintaining a clean and sustainable environment.
- **Strengthening Community Ownership and Sustainability:** To ensure long-term sustainability and foster community ownership, the Om Sri Kholeswar Self Help Group was entrusted with managing the daily operations of the waste management system. Their responsibilities include overseeing waste collection, monitoring service delivery, and collecting user fees from households. A modest monthly fee of Rs. 60 per household (Rs. 50 for water services and Rs. 10 for sanitation) generates approximately Rs. 11,600 in revenue each month. These funds help cover part of the annual operating cost of Rs. 4.32 lakh for the Solid Waste Management system, with the remaining expenses supported by the Gram Panchayat. This model not only promotes financial sustainability but also creates livelihood opportunities for women in the Self Help Group. To further strengthen local institutions, the YSD team collaborated with the Gram Panchayat to reconstitute Village Water and Sanitation Committees (VWSCs) in all three villages. With support from the block administration, committee members received training on their roles, meeting schedules, decision-making processes, and documentation practices. These committees now play a key role in monitoring implementation, conducting quarterly review meetings, addressing community concerns, and ensuring transparency and accountability at the village level.

- **Children and Youth Leading the Way in Climate Awareness:** Children and youth played a central role in the program's efforts to promote environmental awareness and behavior change. YSD, along with school teachers and Anganwadi workers, organized a range of engaging activities such as rallies, drawing competitions, interactive climate education sessions, and practical demonstrations on waste segregation, safe disposal of menstrual pads, and the harmful effects of single-use plastics. These initiatives reached over 977 children across the villages, encouraging them to become active participants in protecting their environment. By involving children in fun and educational campaigns, the program helped instill values of cleanliness, sustainability, and responsibility from an early age. Schools and public institutions also supported the movement by introducing color-coded bins and reinforcing daily messages about hygiene and plastic-free living, ensuring that climate-friendly practices became a natural part of everyday life for the younger generation.



Results and Impact

Door-to-Door Waste Collection

In Kolathigam Gram Panchayat, a comprehensive waste management program has delivered clear improvements across the community. A door-to-door collection system now gathers about 722.5 kilograms of solid waste every day from households, 25 shops and hotels, 17 institutions, and 15 temples. This reliable service has nearly eliminated open dumping, and public spaces—streets, parks, and temple surroundings—are noticeably cleaner and more hygienic.

Over 95% of households now contribute a monthly fee of ₹60 (₹50 for water and ₹10 for sanitation), generating ₹11,600 each month. These funds cover operational costs and reduce reliance on external support, making the system partly self-sustaining. To strengthen liquid waste management, the Panchayat constructed 3.2 kilometers of covered drainage. These new drains prevent water stagnation, lower mosquito breeding risks, and improve grey water disposal across the villages.

Local residents have welcomed these changes, noting fewer foul odours and a healthier environment. The Panchayat continues to monitor performance and maintain the network, aiming to keep services reliable and further enhance community well-being through sustained, strong, ongoing community commitment.



Upgraded Facilities

Schools and health institutions have received significant, much-needed upgrades. At Daspur High School, the hand-washing station has been fully repaired, and a menstrual hygiene incinerator was installed, providing adolescent girls with safer, more private facilities. At the Anganwadi Centre and the nearby health sub-centre, new solar panels now power lighting and equipment, while rainwater harvesting systems capture and store water. These improvements boost water availability and energy access. In addition, children have joined school-based information, education, and communication programs, where they learn about recycling, cleanliness, and water-saving practices. Engaging students in these activities helps foster responsible habits at home and lays a strong foundation for lasting behavior change and greater environmental awareness in families across the community. It supports public health and long-term environmental sustainability.

Women Leaders in Waste Management

The project has sparked many inspiring stories of individual and collective change. Members of the Om Sri Kholeswar Self-Help Group, who once had no formal jobs, now run the Panchayat's daily waste operations. This new role gives them a regular income and boosts their social status in the village. As waste coordinators, they earn community respect, gain financial independence, and develop leadership skills. They speak up at Gram Sabha meetings, take part in key decisions, and feel confident guiding others. Their success demonstrates how effective waste management can open doors to women's empowerment, transforming not only local services but also the lives of the women themselves. Their success encourages others to step forward, showing that community services and social progress align.

Youth Climate Champions

Another inspiring development emerged from the children of Kolathigam, Daspur, and Solabandha villages. 977 students took part in rallies, drawing contests, and climate awareness workshops held at schools and Anganwadi centres. Under the guidance of teachers and Anganwadi workers, these participants became sanitation and climate champions at home—encouraging family members to sort waste, use bins, and refrain from open dumping. Their energy and commitment resonated throughout their households, motivating parents and siblings to adopt improved hygiene practices. This child-led initiative has proven remarkably effective in transforming long-established habits around cleanliness and environmental stewardship, demonstrating the power of youth engagement in community change.

Sensitised to Change

At the community level, mindsets have transformed. Initially, many households resisted user fees and waste segregation. Following regular door-to-door counseling, proactive Village Water and Sanitation Committee meetings, and clear improvements in public spaces, most residents began embracing the system's benefits.

This shift fostered strong community participation and a sense of shared ownership. Today, villagers proudly celebrate their cleaner environment and the accolades their Panchayat has earned. The door-to-door waste collection vehicle was officially inaugurated on August 15, 2024. Later, the program's success received national recognition when Sarpanch Jagamohan Patra was honored by the Prime Minister in Delhi under the Swachh Bharat Mission.

By mid-2025, the post-intervention landscape shows clear progress. A fully operational door-to-door waste collection service runs on a battery-powered vehicle, and every household uses twin-bin segregation. The material recovery facility (MRF) is back online, regularly dispatching recyclables to the Mohuda MRF—four consignments have already generated ₹18,000 in revenue. Over 95% of households now pay the user fee, ensuring stable funding. Village Water and Sanitation Committees have been reconstituted and meet quarterly to review performance, troubleshoot challenges, and guide ongoing improvements. This structured approach has cemented community participation and set a strong foundation for sustainable waste management.

Although designed to improve solid and liquid waste management, the program delivered unexpected benefits. Clean public spaces and visible child-led campaigns sparked community pride and ownership. Residents now actively maintain shared areas. Inspired by Kolathigam's success, neighboring Panchayats, officials, and NGOs have visited to explore and adopt its model. The initiative also changed household habits. Families now prioritize hygiene, embracing safe disposal of sanitary waste, and reduced plastic use. These spillover effects reinforce the program's lasting impact.



Challenges

- Households were reluctant to pay a new sanitation fee since they'd never been charged before. It felt like an unexpected expense, and many initially refused until they saw how regular waste collection protects health and keeps their surroundings clean.
- Winning their support required intensive household-level counselling. Field staff and VWSC members visited each home, sharing clear examples of how a reliable service prevents disease and improves daily life.
- In the first three to four months, many families mixed wet and dry waste. Without proper bins or guidance, food scraps, plastics, and paper all went into the same container, reducing recycling efficiency.
- To address this, YSD team and VWSC members held multiple home visits and small group sessions. Practical demonstrations helped residents learn exactly how to sort kitchen waste, paper, plastics, and metals correctly.
- The local material recovery facility (MRF) has limited capacity and can't process all the recyclables generated. When it fills up, waste piles up, risking contamination and spoilage.
- Dependence on the Mohuda MRF (by Berhampur Municipal Corporation) for overflow creates a logistical risk. If transport breaks down or coordination falters, excess recyclables can accumulate in the village, undoing gains in cleanliness.



Key Lessons Learned

The Kolathigam intervention offers clear lessons in building climate-resilient waste systems at the village level. Initial resistance to paying user fees gave way after sustained home-to-home counseling, open community meetings, and honest explanations of how fees fund reliable services. At the same time, overflow at the local Material Recovery Facility was solved by linking it with the larger Mohuda MRF, keeping waste moving and reducing local pollution.

Strengthening institutions proved just as vital. The Youth for Social Development team and the Block Resource Coordinator provided hands-on training and mentoring to Panchayati Raj members, self-help groups, and Village Water and Sanitation Committees. Regular capacity-building sessions helped these bodies plan, oversee, and maintain waste services on their own, deepening local ownership and ensuring long-term sustainability.

Children's leadership in Information, Education, and Communication activities created powerful behavior change. Through rallies, art contests, and home-visit campaigns, young sanitation ambassadors shifted family habits around hygiene and waste segregation. From women-led waste operations and community monitoring to school-driven awareness and the use of rainwater harvesting and solar power, these best practices offer a roadmap for other Gram Panchayats seeking resilient, community-driven solutions.

Supported by



YOUTH FOR SOCIAL DEVELOPMENT (YSD)
9 Govind Vihar, Near Ruby Eye Hospital,
Lochapada, BERHAMPUR-760 001, Ganjam, Odisha, INDIA
Tel : +91-81143 97760, E-mail : info@ysdindia.org
Web : www.ysdindia.org