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SPRINGS of STRENGTH

Water and Livelihoods in Odisha's Tribal Heartlands

Credits

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Foreword

For generations, tribal communities in Rayagada and Gajapati have relied on rain-fed farming to sustain their lives. But erratic monsoons, poor soil conditions, and declining yields have forced many to abandon their land in search of work elsewhere. Migration has become a necessity rather than a choice, leaving families divided and livelihoods uncertain.

Since 2021, WOTR, with the support of Andheri Hilfe, has been working to change this. By restoring degraded land, improving water access, and introducing climate-resilient agriculture and alternative livelihoods, the project has helped families reclaim their farms and their futures.

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Restoring Land and Water

2,758 metres of field bunding and **3,415** metres of stone bunding have helped control soil erosion.

36 hectares of land has been levelled and terraced for better cultivation.

2,477 metres of continuous contour trenches and **4,175** metres of water absorption trenches have improved water retention.

19 farm ponds, **3** check dams, and **2** other water harvesting structures now provide much-needed irrigation.

Reviving Agriculture

322 acres have been brought under the System of Rice Intensification (SRI), increasing yields with less water.

300 acres are now under climate-resilient farming techniques.

49 acres of agro-horticulture have diversified crops, reducing dependence on a single harvest.

45 acres have been equipped with micro-irrigation systems, ensuring efficient water use.

Strengthening Livelihoods

53 families have taken up goat rearing as an additional income source.

27 units of pulverisers, **5** grocery stores, and **12** carpentry workshops have created new livelihood opportunities.

116 families now maintain kitchen gardens for better nutrition.

Empowering Communities

98 nutrition awareness events and **10** anaemia detection camps have improved health among women and children.

49 Self-Help Groups (SHGs) have received training to strengthen financial independence.

These are some of the impact figures, but the real story lies in the communities' voices. This booklet is not just about what has been done—it's about their hopes, resilience, and the way they are shaping their own futures. In their words, you'll hear their struggles, dreams, and determination to build a better tomorrow.

CRAFTING A NEW LIFE:

The Story of Abhadiya Raita, a Self-Taught Carpenter

As we walk through the village of Munising in search of **Abhadiya Raita**'s home, the sun shines brightly overhead, while a soft breeze gently stirs the air. The village, at the edge of a dense green forest on a hill, feels calm and peaceful. A clean gravel path runs through the village, lined on either side by small homes with doors shut tight to avoid the harsh afternoon sun. As we trudge along the path, we pass a group of villagers building a house, its structure slowly taking shape. Many houses are under construction here, giving Munising a quiet yet purposeful energy. "Everyone lends a hand when a house is being built," says Pramila Sahu, Social Officer with WOTR's (Watershed Organisation Trust) Odisha team.

Munising, located in the Gumma block of Gajapati district in Odisha, is home to the Lanjia Saora tribe, one of Odisha's 13 Particularly Vulnerable Tribal Groups (PVTGs). Across India's diverse tribal landscape, 75 out of nearly 700 tribal groups are designated as PVTGs, each facing its own challenges. Living in small, scattered settlements in remote and often inaccessible regions, their journeys through social, economic, and educational development are hindered by limited access to basic resources and infrastructure. The Lanjia Saora residing in the forested hills of Gajapati and Rayagada districts of Odisha are deeply connected to the land that sustains them.

"Unity is everything here," Pramila continues. "The villagers keep their surroundings clean, no one drinks or smokes, and they all help each other, whether it's for building a house or arranging a wedding."

Following the villagers' directions, we arrive at a small workshop where loads of timber are neatly stacked outside. Inside, the air is thick with the scent of freshly cut wood. Abhadiya greets us with a smile, his clothes dusted with fine sawdust.

"Unity is everything here. The villagers keep their surroundings clean, no one drinks or smokes, and they all help each other, whether it's for building a house or arranging a wedding."

Sitting on the ground, he steadies a doorframe beside him. In one hand he holds a driller, pressing its rotating bit into the wood. The sound of the drill punctuates the quiet workshop as he works, shaping the doorframe with each careful movement. Tools lie scattered around him, each a vital companion in his craft.

He pauses to inspect his progress, fingers tracing the intricate patterns beginning to take shape. The workshop hums with the sounds of creation— the steady whirr of the driller, the soft scrape of wood taking form. Around him, unfinished pieces rest. The 49-year-old's work mirrors his journey- just as each piece of wood sheds its original shape to take on a new form, his life has been reshaped by the struggles he has endured.

Early Struggles and the Path to Carpentry

Abhadiya, 49, was born into a family of five, landless and struggling to make ends meet. His father passed away when he was very young, leaving a void he never fully understood. "I don't remember seeing him," he reflects quietly.

His elder brother also succumbed to illness at just 20, compounding the family's hardships. Abhadiya's mother had to single-handedly raise her children. "*Bahot mushkil se ghar chalaaya hai* (She managed the house with great difficulty)," he says, his voice tinged with the weight of those memories. His mother worked tirelessly as a daily wage labourer, taking whatever small jobs she could find in the village.

As the family crisis deepened, Abhadiya had to drop out of school after 5th grade. “It was hard to get food on the plate. I saw people around me living a better life and always wondered what more I could do to improve things for my family,” he reflects. While many villagers were migrating to cities for work, he initially stayed behind, working as a cowherd for others in the village. *“Unke gaaye bhains charaate the* (I used to graze their cattle),” he says, describing the menial jobs that filled his early years.

Driven by the hope of better prospects, Abhadiya migrated to Mumbai, where he lived from 1999 to 2001, working in construction for Rs 1200 a month. “I realised that masons and carpenters earned more, so I wanted to learn those skills,” he says.

In Odisha’s Rayagada and Gajapati districts, migration has long been a survival strategy due to limited employment opportunities. In Rayagada, nearly 45% of households have had at least one member migrate in the past decade, with migrant workers making up 9% of the total population. Seasonal migration is widespread—84% of households reported at least one seasonal migrant during the lockdown. The trend is especially pronounced among Other Backward Communities (23.6%), followed by Scheduled Castes (18.8%) and Scheduled Tribes (16.5%).

Gajapati, historically known for high out-migration, faces similar challenges. In its Rayagada block, seasonal migration affects 28.6% of households, particularly among Other Backward Communities. The reasons are clear—forest degradation, erratic rainfall, soil erosion, and drying water sources have shrunk local employment opportunities. This migration, however, comes at a cost: reduced access to healthcare, emotional distress, and a decline in agricultural engagement as families grow increasingly dependent on earnings from outside.

Abhadiya’s fate pulled him back home when his mother’s health worsened, and she became bedridden. After returning to Munising, he resumed work as a labourer, earning a daily wage of Rs 30 to 35, and at times, just Rs 25. In 2003, when Abhadiya got married, it brought its own set of challenges. His wife suffered from health issues at the time, and it took three long years of

treatment before she fully recovered. “Expenses were high,” he recalls, the strain still evident in his voice. During this time, Abhadiya shouldered the responsibility of being the sole provider, supporting his younger brother, who was still in school, and covering the costs of his mother’s and wife’s medical care. Life was tough but deep in his heart, he carried a yearning- a desire to achieve more.

From Aspirations to Achievements

It was not until 2005 that he seriously turned to carpentry, a skill he taught himself out of necessity. Within a few years, he got fully immersed in the craft, making cots by hand and working tirelessly with simple tools. It wasn’t easy, but gradually, he improved, and by 2015, he was making door frames, earning Rs 300 per frame. His carpentry became his primary source of income, and in 2016-17, he was earning around Rs 3,500 a month, he says.

In January 2024, Abhadiya received a set of new carpentry tools through WOTR’s ‘Poverty Reduction of Tribal Communities through Water Conservation, promotion of agriculture and Collection marketing of forest products in Rayagada and Gajpati Dist of Odisha’ project, supported by Andheri Hilfe. Launched in August 2021, the project aimed to help tribal communities by improving water security, and agricultural productivity, addressing drinking water scarcity, and improving health and nutrition. One of its crucial components was providing alternate livelihoods for the extremely poor, and Abhadiya is one of its beneficiaries.

He received a complete set of essential tools—chisels, saws, a wood-cutting machine, a scale, measurement tapes, an electric drill, a level machine, drill bits, and more—valued at Rs 14,770, with his contribution of Rs 1,200. Equipped with these, his craft took a significant leap forward. “The work has become easier and faster,” Abhadiya says, smiling as he recalls how tasks that used to take three days can now be completed in one. His efficiency has improved, and with it, his income. Since January, his earnings have doubled. Where once he could

With his contribution of Rs 1,200, Abhadiya received a complete set of essential tools valued at Rs 14,770.

only manage around Rs 3,500 a month, he now earns more than Rs 15,000, with the potential for even more as his workload increases.

Thanks to these tools, Abhadiya is now able to take on larger projects. For example, for a 4x6 bed, he charges Rs 12,000— half of which goes towards the wood, and the rest is for his labour. In addition to beds, he makes doors, windows, tables, and other furniture, ensuring a steady stream of work.

His elder son has chosen a different path as a mason, while his younger son, still in school, has taken an interest in carpentry, often helping his father. Abhadiya has even trained others in the village, passing on the skills he's learned, so they too can find new ways to sustain themselves. He now also owns an acre of land in the forest where he grows cashews, which adds to his income.

Abhadiya appreciates the support he received through the project, which gave him not only the tools but also the resources to build a thriving business. With this new momentum, he looks forward to a future where he can continue to improve his craft and provide for his family with greater ease and stability.

The project's initiatives in the Gajapati and Rayagada districts have offered alternative livelihood opportunities to 213 individuals across 26 villages, ranging from carpentry and goat farming to operating pulverisers and Kirana stores. These efforts are part of a broader strategy to combat poverty and promote self-reliance within tribal communities.

From **Rs 3,500** a month, he now earns more than **Rs 15,000,** with the potential for even more as his workload increases.

PLOUGHING HER OWN PATH

How One Woman's Will Transformed Her Family's Future

Tuburuda is a small village with 37 households located 30 kilometres from Rayagada's sub-district headquarters. It sits in a valley surrounded by the hills of the Eastern Ghats, with a stream running beside it. The village covers 450 hectares, but only 24.4 hectares can be farmed. Even with the stream nearby, many villagers can't afford pumps to draw water, making it hard to use their land fully.

We arrived at Tuburuda's community hall early in the afternoon, greeted by the villagers' radiant smiles and heartfelt hospitality. The space buzzed with the chatter of women from various self-help groups, a hum of shared aspirations and concerns. Pinky Gamango, a community member, sat among them, her voice rising occasionally to share her thoughts. She would lean forward, her hands folding and unfolding- you could see someone carrying a story waiting to be told.

As the meeting concluded, Pinky warmly invited us to her home to showcase the kitchen garden she had established with WOTR's support. Opting to walk, she moved along the narrow, dusty paths cutting through farms while we trailed behind on a creaking motorcycle. Her modest house stood near a large stretch of farmland shared by many in her extended in-laws' family, with her own family owning two acres. As she reached, she ushered us in with a warm smile, guiding us to a simple charpoy.

What followed was a heartwarming conversation that offered a glimpse into a life shaped by resilience, grit, and an unyielding refusal to give up.

"If the forests didn't provide, we survived on rice and salt."

A Childhood of Loss and Responsibility

Pinky's story begins in Perenda, a village in the Chinasari Gram Panchayat in Odisha's Rayagada district. Straddling the border between Odisha and Andhra Pradesh, it is surrounded by rolling hills and dense greenery. Her early life was marked by profound loss. Pinky's mother passed away when she was just three days old. Unable to care for an infant, her father left her at a Nutrition Rehabilitation Centre (NRC) in Gopalpur. She spent her formative years away from home, first in the NRC and later in an orphanage. "I don't remember those years," she says softly, her voice tinged with sadness.

Pinky returned home at five, only to be thrust into the role of a caregiver for her younger siblings. Her father's three marriages had created a complex family dynamic, and Pinky, despite her tender age, bore the brunt of household responsibilities. The financial situation of the family was concerning. "The forests were generous though," Pinky recalls. "Bamboo shoots, tubers, mushrooms- we had enough to satisfy our needs." Yet, the shadow of poverty loomed large. "If the forests didn't provide, we survived on rice and salt," she says. A relative, noticing her plight, sent her to Padmapur to continue her education.

She attended school until the fifth grade but was forced to drop out due to financial constraints. Even as a child, she harboured aspirations of becoming a nurse. At 14, she joined a nursing course and worked as a nurse for three and a half years, earning Rs 600 monthly. Much of her income went to support her elder brother's education. "I wanted to continue nursing," she says, "but family pressure to marry cut my dreams short".

Starting from Scratch: Pinky's Farming Journey

In 2008, at just 20 years old, Pinky moved to Tuburuda after marriage. But her struggles and hardships persisted.

"When I first came here, life was miserable," she recalls. Her new family of six- her husband, his parents, and two brothers- lived in a cramped house with barely enough space. The family's survival depended solely on her father-in-law, who migrated to Arunachal Pradesh for work. Though the family-owned two acres of ancestral farmland, it lay barren. Her mother-in-law was preoccupied with managing the household and had never ventured into farming, while her husband's fragile health kept him from contributing.

When Pinky became a mother to a son and a daughter, the weight of responsibility grew heavier. Realising that waiting for change wasn't an option, she resolved to take matters into her own hands.

In 2011-12, without any experience, guidance, or support, Pinky began farming the family's land. She took on the challenge alone- ploughing the fields, planting seeds, harvesting crops, and selling her produce in Gumma's local market. Starting with vegetables like cabbage, cauliflower, and beans, she gradually earned around Rs 15,000 during the cultivation months, managing to save Rs 5,000–6,000. However, the dry off-season brought relentless hardships.

Pinky's determination didn't stop at farming. She applied for the Pradhan Mantri Awas Yojana scheme to improve her family's living conditions. She built a new house for her family with the grant and savings. Not only this but during her weekly trips to Gumma's market, Pinky discovered a tailoring course being offered. Despite her packed schedule, she enrolled. Her routine became a whirlwind of farm work, vegetable sales, tailoring classes, and stall management. By 2019, she had saved Rs 9,000 from her earnings to invest in a sewing machine, adding a modest yet crucial source of income.

The journey wasn't without obstacles. The dry months tested her resilience, as the lack of rainfall and irrigation forced her to pause farming until the monsoons arrived. Though her farmland was near a stream, the absence of a pump made irrigation impossible. Summers were especially harsh, with the parched soil limiting her ability to grow crops.

Scaling Up with Support from WOTR

In 2020, Pinky's life took a pivotal turn when she learned about WOTR's initiatives in Tuburuda. Inspired by WOTR's work, she reached out to the Village Development Committee (VDC) for support. Recognising her unwavering determination, WOTR provided her with a 3-horsepower irrigation pump in 2021, for which Pinky contributed Rs 5,000 toward the Rs 30,000 costs. This pump was a game-changer, enabling Pinky to cultivate vegetables year-round. Empowered by this resource, she expanded her farming activities with newfound confidence.

Food insecurity and malnutrition remain serious challenges in the region. Over half of households struggle to secure three meals a day year-round, and 40% of children under five suffer from inadequate nutrition, with 11% experiencing severe malnourishment. To address this, WOTR introduced kitchen gardens, helping families grow nutrient-rich vegetables at home to improve dietary diversity and food availability

In 2022, WOTR selected Pinky as a kitchen garden beneficiary and trained her in climate-resilient farming practices. As part of the CRA initiative, she received seeds for 12 vegetable varieties, onion and sweet corn seeds, and a drip irrigation system worth Rs 8,000.

Sweet corn became a breakthrough crop, valued for its water efficiency and high market demand. Cultivating it on 0.35 acres, Pinky earned Rs 30,000 from the harvest. With bio-inputs like Neemastra for pest control and Dashparni Ark, a natural mixture of leaves and cow dung, she further reduced costs and increased productivity, boosting her total earnings to Rs 50,000.

WOTR provided her with a 3-horsepower irrigation pump in 2021, for which Pinky contributed **Rs 5,000** toward the **Rs 30,000** costs.

WOTR's broader efforts in Tuburuda under the project "Poverty Reduction of Tribal Communities through Water Conservation, Promotion of Agriculture, and Collection and Marketing of Forest Products in Rayagada and Gajapati Districts of Odisha", supported by Andheri Hilfe, have strengthened water conservation and irrigation access for the farmers. 100 running metres (RMT) of stone bunding and 130 Water Absorption Trenches (WATs) have improved soil moisture retention, while sprinkler systems and pump sets have enhanced irrigation. Many farmers, including Pinky, have been trained in Climate Resilient Agriculture and supported in setting up kitchen gardens. Beyond farming, WOTR has helped villagers diversify their income, supporting small businesses, goat rearing, and mushroom cultivation. The project has empowered 1,662 women like Pinky to achieve financial independence while enhancing their families' well-being.

Through WOTR's training, Pinky adopted agricultural techniques like line transplantation and proper spacing, leading to higher yields in paddy cultivation- one to two quintals more per harvest. In September 2024, she expanded her efforts by starting mushroom cultivation with WOTR's support, receiving essential inputs such as straws, shade net, polythene, spawn, and technical guidance. She prepared 10 mushroom beds using 60 spawn bottles, yielding 18–20 kg per cycle. Harvesting twice per cycle, she earned Rs 12,000 per cycle. In this journey, she has also engaged other women in her village, creating new opportunities within her community.

The project has empowered 1,662 women like pinky to achieve financial independence.

Her pride is unmistakable when she talks about her daughter. "She recently passed her matriculation exams and wants to study science", Pinky shares, her face lighting up. "I will do everything to support her". When asked about her daughter's future, Pinky's smile softened. "Whatever she chooses, I'll be happy. But if she becomes a nurse like I once dreamed of, it would mean the world to me".

Pinky's journey is one of resilience, hope, and transformation- proof that with the right support and determination, even the most daunting challenges can lead to a brighter tomorrow.

FINDING BELONGING

In A Distant Land

At the crossroads leading to Tuburuda, a small grocery shop welcomes every passerby. The shop, though modest, holds an air of warmth, with its shelves neatly stocked with essentials: rows of colourful biscuit packets, bottles of oil, bags of rice, jars of snacks, sachets of shampoo, and small racks filled with stationery. A few crates of cold drinks stand on one side, and near the entrance, there are bottles of petrol neatly arranged for those travelling to or from the village.

Behind the counter, an elderly couple sits, their faces weathered by years of hard work and the weight of countless struggles. Leela and Deepak Gamango, now in their early sixties, greet customers with a quiet smile. Deepak, his silver hair combed back neatly, speaks to villagers in broken Odia, a language he has tried hard to learn. Beside him, Leela, with her saree meticulously draped, manages the shop's transactions with a precision born out of necessity.

The Gamangos weren't always from this village, nor even from this state. Their story begins in the distant hills of Meghalaya, where they were once known as the Bahadurs. Deepak explains, "It was Bahadur earlier. We changed it to Gamango after moving here."

Their two daughters grew up in Meghalaya, but the elder one married a man from Odisha after falling in love.

When their younger daughter also moved to Odisha, drawn by promises of education and a better future, Deepak and Leela found themselves alone. For a while, they managed, Deepak working as a labourer on road construction sites and Leela tending to their small home. But loneliness, coupled with the insistence of their daughters, made them take a leap of faith. In 2007, they left everything behind- their family, their land, and their identity in Meghalaya- and moved to Odisha.

Settling into the village was no easy task. "Sab kuch naya tha (Everything was new for us)," Deepak recalls. The language was unfamiliar, the people were different, and they had no work to support themselves. The only solace came from their daughters' families, with whom they lived. Deepak discovered, to his dismay, that his younger daughter, who had moved to Odisha with the promise of education, had been burdened with household chores instead. "Yeh dekh kar bahut dukh hua (I was heartbroken after seeing this)," he says quietly.

In search of independence and livelihood, Deepak began migrating to other states for work. From 2008 to 2020, he toiled in Tamil Nadu and Gujarat, first on construction sites and later at a power plant. His earnings, though meager at Rs 4,500 a month, were the family's only lifeline. Each month, he sent most of his wages home, saving just enough to scrape by in the city. But the years took their toll. In 2020, his gate pass at the power plant wasn't renewed by the company, and Deepak, now ageing and worn, returned home.

"Even a few extra rupees help us get by," Leela says, her voice calm but resolute. Their goal isn't wealth—it's dignity.

With no steady income and the physical demands of labour growing too much to bear, the couple faced a grim reality. That's when WOTR and Andheri Hilfe stepped in. Under their project aimed at poverty reduction and tribal development, Leela was selected as a beneficiary for financial support. In December 2023, the couple opened their grocery shop, a small but significant step toward rebuilding their lives. WOTR further supported his venture by providing essential grocery items and a weighing machine.

In the absence of a home of his own, Deepak initially set up the grocery shop in his daughter-in-law's house. He later applied for a government scheme to build a house on a small plot owned by his daughter. Just a few months ago, visitors to his shop would have seen a pile of crushed stones waiting to be used for construction. "Patthar tod ke yeh sab khud banaya hai (I broke these stones and built this home myself)," Deepak says, gesturing toward the heap. By dedicating part of their house to the business, the couple now earns an annual income of Rs 1,44,000.

The shop is strategically located at a junction that sees a steady trickle of villagers and travelers. "Yahan koi bhi aaye, shop ke paas se zaroor guzarta hai," Leela says.

It's a prime spot, ensuring they never miss a potential customer. The shelves might not be overflowing, but they offer enough variety to meet the community's needs. The bestsellers? Cold drinks, snacks, and petrol. In this remote area, where the nearest petrol pump is far away, selling petrol in bottles has become a unique source of income.

Deepak proudly shares how he travels to the nearby market once a week to restock the shop. “Jitne mein laate hain, usse thoda zyada mein bechte hain (We keep a very small profit margin)” he says. They keep the profit margins minimal to ensure affordability for the villagers. On a good day, they earn Rs. 500 to Rs. 600, making a modest monthly profit of Rs. 3,000. For the Gamangos, it’s enough.

“Humko ek do rupaye ka zyada bhi mil jaaye, toh chal jaata hai (even a few extra rupees help us get by),” Leela says, her voice calm but resolute. Their goal isn’t wealth—it’s dignity. They want to live independently, without being a burden on their daughters.

The shop is their anchor now, but they’re planning for the future. Despite the hardships, the couple has found a sense of belonging in this village. “Yahan ke log ab apne lagte hain (We feel a sense of belonging here now),” Leela says. When asked if they would ever return to Meghalaya, Deepak shakes his head. “Wahan kon hai kon nahi, ab kuch bhi nahi pata (We have no way of knowing who remains there, or if anyone does at all).

For Leela and Deepak, the shop is more than a source of income—it’s a symbol of resilience. They dream of expanding it someday, adding more products to better serve the community. Life hasn’t been easy, but as they sit together in their little shop, they exude a quiet determination to make the most of what they have.

By dedicating part of their house to the business, the couple now earns an annual income of **Rs 1,44,000**

On a good day, they earn **Rs. 500 to Rs. 600,** making a modest monthly profit of Rs. 3000. For the Gamangos, it's enough.

WHILE THE VILLAGE CHANGED,

He Held On to Organic

Abedan Badaraita sits cross-legged on his farmland, carefully slicing a ripe pineapple he has just plucked from a tree near his field. He offers a piece with a quiet smile, and the sweetness of the fruit is a testament to his commitment to natural farming. Sitting beside him, his wife nods in agreement as he talks about the changes he has seen in Madaul village over the years.

Farming Amid Changing Times

Madaul village, located in the Gumma block of Gajapati district in Odisha, is home to 65 households. This small community has long relied on paddy cultivation as its primary source of livelihood. Despite receiving an average annual rainfall of 1,200 mm, the village's higher elevation has led to rapid soil and water runoff, leaving the soil dry and unable to retain sufficient moisture for agriculture. This persistent water scarcity has deeply affected the lives of Madaul's residents, including Abedan Badaraita and his wife, who have witnessed the transformations in their village over the decades.

"The village has changed. Now it is very hot in summer, intolerable heat!" says 70-year-old Abedan, sitting on his one-acre farmland with his 60-year-old wife. Despite the widespread adoption of chemical fertilisers and pesticides in Madaul over the last decade, Abedan has remained steadfast in his commitment to organic farming.

"My father and forefathers never used chemicals, and that is what we have stuck to," he proudly shares. While others in the village turn to chemicals for higher market yields, Abedan's farm stands out for its uncompromising quality. "People like my produce because I don't compromise with quality. It's healthier, and they say it tastes sweeter."

Yet, Abedan's steadfast approach comes with its challenges. Chemical farming, while costly, often yields around 40 quintals of produce per acre, compared to 30-35 quintals. Abedan finds reassurance in the lower input costs and healthier organic farming produce. He also cultivates cashews on the forest land he owns, though he notes with a tinge of nostalgia that he once grew diverse crops like red gram and millet there.

A Village in Crisis

Unpredictable rainfall patterns have further strained Madaul's agriculture. "Earlier, rainfall was timely and consistent. Now, it's irregular," Abedan says. Many villagers have resorted to using more chemical fertilisers and pesticides. Some, like Abedan who had no water source on their farmland, have had to invest in pump sets to draw water for irrigation—a costly yet necessary adaptation.

WOTR began its work in Madaul in 2021, aiming to address these critical issues through watershed development. After a brief pause due to unforeseen circumstances, the project resumed in 2023, with Abedan serving as the Village Development Committee (VDC) secretary. The interventions focused on soil and water conservation to enhance groundwater recharge and improve agricultural outcomes.

The Hill-to-Valley Approach

WOTR's initiatives in Madaul included land levelling to increase cultivable area, farm bunding, digging Continuous Contour Trenches (CCTs), and constructing Loose Boulder Structures (LBS). These measures helped reduce runoff and allowed the soil to retain moisture, embodying WOTR's "hill-to-valley" approach. Villagers

contributed through voluntary labour ("shramdaan") and were compensated promptly. "We earned about Rs 66,838. We further invested this money as beneficiaries' contribution to buy climate-resilient agricultural tools like seed weeders, sprinklers, and pump sets introduced by the project," says Abedan.

A check dam was also constructed on Abedan's land, addressing water scarcity head-on. Additionally, a newly built water harvesting structure now provides water security to 14 farmers, while the check dam benefits 10. To further enhance agricultural productivity, 9.5 hectares of land has been levelled, benefitting 17 farmers. Other key soil and water conservation measures include:

- 11 Loose Boulder Structures supporting 13 farmers
- 270 Staggered Contour Trenches benefitting 29 farmers
- 702 running metres (RMT) of field bunding assisting 16 farmers
- 645 Water Absorption Trenches benefitting 20 farmers
- 85 RMT of stone bunding supporting 10 beneficiaries

"People like my produce because I don't compromise with quality. It's healthier, and they say it tastes sweeter."

Across the village, these interventions have created an annual water harvesting potential of 7.08 million litres (7,078,250 litres), improving irrigation and livelihoods. Landless villagers were not left behind; they received support to start goat-rearing units, diversifying livelihoods and fostering inclusivity.

"Earlier, due to untimely rainfall, I could cultivate paddy in only one season. Occasionally, if it rained well, I'd grow groundnut," Abedan explains. The check dam has been a game-changer for him. "Now, I don't need to use the pump set. The water can be directly used from the dam. I can cultivate my land year-round." He plans to grow paddy, groundnut, and sweet corn, expanding his agricultural horizons.

Abedan also benefited from WOTR's training on Climate-Resilient Agriculture (CRA) and organic farming. During a workshop, he and other villagers learned to make organic formulations, which they carried home to their farms.

Abedan's annual income has increased by Rs 2,25,000, and he is cultivating groundnuts, sweet corn, and cowpeas. He believes that such initiatives will gradually shift mindsets and encourage more farmers to adopt organic practices, improving the ecosystem as a whole.

Challenges and the Road Ahead

Despite the progress, challenges remain. Abedan highlights the need for more livelihood opportunities and the repair of drinking water units in the village. “There’s still scope for improvement,” he says, emphasising the importance of addressing these issues for Madaul’s future sustainability.

Abedan Badaraita’s journey, interwoven with Madaul’s transformation, is a testament to the resilience and the power of community-driven initiatives. Through WOTR’s interventions, Madaul is addressing its immediate challenges and building a foundation for a more sustainable and self-reliant future.

Flourmill
ENERGY RATING

TURNING CHALLENGES INTO OPPORTUNITIES

The Story of Babulal Gamango

As the sun sets over Munising, the village quiets down. The sound of a pulveriser fills the air inside a small home. Babulal Gamango sits near the pulveriser, his hands deftly scooping rice grains into the grinder. For him, this machine is more than just a tool—it is a step toward a stable future, a way to support his family without leaving home.

Babulal's journey has been far from easy. Born into a family struggling to make ends meet, a childhood ailment—likely polio—left him with a disability that made walking difficult. Growing up in a family of six, with his father working as a migrant labourer in Mumbai and his mother toiling in the fields, Babulal learned early on that survival meant sacrifice. Schooling ended after the 5th grade, as the family prioritised earning over education. When his father passed away seven years ago, the responsibility of providing for the family fell on Babulal's shoulders.

Determined to support his family, Babulal migrated to Bangalore in 2018, training himself in tile-fixing to secure a better income. He managed to earn Rs 8,000 monthly, sending money home to his ageing mother and younger sister. But the physical demands of the job took a toll, and a severe illness forced him to return to Munising.

With little income and few options, life was an uphill battle.

Agriculture and the Challenges of Survival

Like most families in Munising, Babulal's household depended on agriculture and cashew cultivation for sustenance. Their one-acre plot was dedicated to cashew farming, but the returns were meagre. His mother's age prevented her from working, and the family relied on small earnings from labour jobs and government ration schemes. Water scarcity added to the challenges.

"With little income and few options, life was an uphill battle."

The broader agricultural landscape in the region presented similar struggles. Paddy yields ranged between 16.5 to 18.5 quintals per hectare—40% below the state average—while cereal production was just 7.5 quintals per hectare. Food insecurity remained a persistent issue, with only three percent of cultivable land used for a second crop. Farmers, burdened by loans, were often forced to sell half their harvest at lower prices due to the lack of structured market access. Cashew farming, spanning 2,940 hectares, faced declining yields due to soil erosion and inadequate water conservation measures. Outside businesses controlled the trade without farmer associations, leaving local growers with minimal returns.

Alternative Livelihoods: A Step Toward Stability

In 2021, Babulal noticed how other villagers turned to goat farming as a financial safety net. Inspired by their resilience, he invested in a small herd. "Whenever there was an emergency, I saw people selling goats to manage. I thought I could do the same," he recalls.

His journey took a more promising turn when he attended a Village Development Committee (VDC) meeting, where the need for a local rice and turmeric

pulveriser was discussed. The nearest one was several kilometres away in Udasingi village, making processing difficult for many villagers. Recognising the potential, WOTR, through its project supported by Andheri Hilfe, selected Babulal as a beneficiary.

This initiative was part of a broader effort to promote alternative livelihoods in Gajapati and Rayagada districts. WOTR has provided 27 pulverisers, advanced carpentry training and tools for 14 individuals and provided support for 53 goat-farming units, five grocery stores, and seven mushroom cultivation initiatives across 26 villages.

With the pulveriser installed at his home, Babulal quickly established himself as a reliable service provider in the village. Charging Rs 30 per kg for turmeric grinding and Rs 25 per kg for rice grinding, he now earns an average of Rs 1,550 per week, with peak earnings of Rs 6,000–7,500 during wedding and festival seasons.

"This machine has changed things for me," he says. "I don't have to migrate for work anymore. I can stay home and still provide for my family."

Land and Water Management: Strengthening Agriculture

While the pulveriser gave Babulal a steady income, agriculture remained essential to his household's sustenance. One of the biggest challenges in Munising was water scarcity, which limited crop yields and made farming unpredictable.

To address this, WOTR constructed a check dam in the village, benefitting 12 farmers, including Babulal's family. The increased water availability significantly boosted their cashew yields—from earning just Rs 10,000 last year, their income from cashew sales rose to Rs 30,000 this year. Inspired by the improvement, Babulal now hopes to cultivate vegetables in the coming seasons, ensuring a more stable income.

Beyond the check dam, WOTR has supported Munising village through additional water and soil conservation measures:

- Land Development: 2.8 hectares of land has been levelled, creating cultivable land for six families.
- Water Conservation Structures: 285 running metres (RMT) of continuous contour trenches and 337 RMT of staggered contour trenches have been constructed, benefitting 37 households.
- Soil Retention: Over 200 RMT of stone bunding has been installed, supporting 19 beneficiaries.
- Irrigation Support: Two pump sets and one sprinkler set have been provided, ensuring improved water access for farmers.

These interventions align with WOTR's approach of ensuring that resources serve the broader community rather than being limited to individual landowners.

A Future of Possibilities

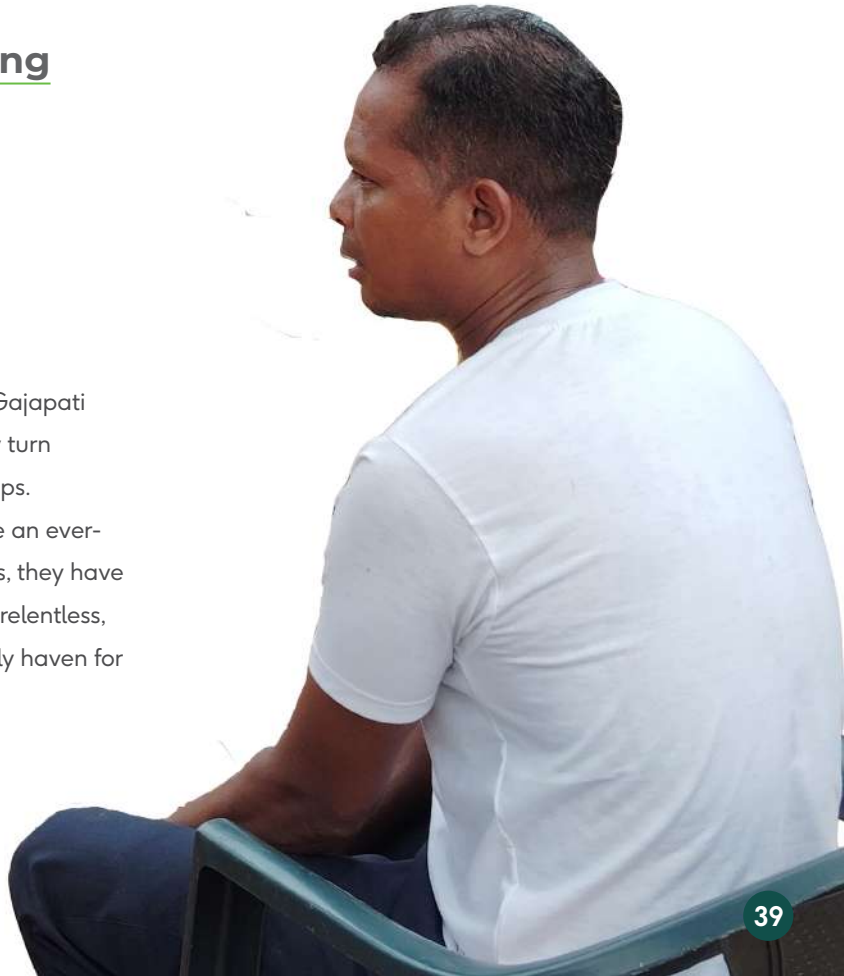
Today, Babulal's life is steadily improving. The pulveriser provides a reliable source of income, and with better access to water, his farmland holds new possibilities. While there are still challenges ahead, he is moving forward with determination, finding stability and hope in the opportunities that have come his way.

His story reflects the impact of targeted interventions—how access to alternative livelihoods, water security, and community-driven development can create lasting change.

CLIMBING TOWARD CHANGE

A Farmer's Journey in Kulang

The road to Kulang, a remote village in Odisha's Gajapati district, twists through steep uplands, where every turn reveals the raw beauty of the land and its hardships. Landslides, triggered by heavy monsoon rains, are an ever-present danger. Though they haven't claimed lives, they have shaped how people live here. When the rains are relentless, the village takes refuge in a small school—the only haven for those with nowhere else to go.



When we reached Kulang, Diel Behera, a young farmer and the Wasundhara Sevak of the village, greeted us with a warm smile. His home sat further uphill, surrounded by a patchwork of fields that stretched towards the horizon. The view was breathtaking, but life here was anything but easy.

Diel's family of six—his parents, wife, and two children—relied entirely on their two acres of farmland. Erratic rainfall, dry soils, and the looming threat of crop failure made survival an uphill battle. "There used to be no water for irrigation," he said, pointing to a small jharna (waterfall) nearby. "It dries up by January. After that, we could only pray for rain."

For years, farming was a means of subsistence. The family grew just enough paddy, millet, and arhar (toor dal) to survive. "When there was no cashew, it was hand-to-mouth living," Diel's father recalled. "We knew little about agriculture beyond what had been passed down."

A shift began in 2018 when the family planted cashews on two acres of forested land, which provided a steady but insufficient income. Then, in 2021, WOTR arrived in Kulang.

"When WOTR came, they showed us videos about their work across the country," Diel said. "It gave us hope." Inspired, the villagers formed a Village Development Committee (VDC) and nominated Diel as the Wasundhara Sevak, serving as a bridge between WOTR and the community. His experience as a secretary in another program made him a natural fit.

"The jharna lasts longer now," he explained. "Earlier, it dried up by January. Now, we have water till February or March."

Transforming the Land, One Step at a Time

Diel has since been at the forefront of change. The introduction of stone bunding to control soil erosion and water runoff made an immediate impact. "The jharna lasts longer now," he explained. "Earlier, it dried up by January. Now, we have water till February or March."

But the real breakthrough came with Climate-Resilient Agriculture practices.

WOTR introduced high-quality NS101 onion seeds and trained Diel in climate-resilient farming. “I had seen onions being grown in Gumma but never tried it myself,” he admitted. “It was a new concept for us.”

Diel prepared a 36-decimal plot—just under half an acre—and planted the seeds using organic fertilisers like vermicompost and Amrutpaani. The results were astounding: six quintals of onions in a single season.

He sold one quintal for Rs 3,500 and stored the rest using a hanging storage method taught by WOTR’s Agriculture Officer. “Earlier, when onion prices reached Rs 80-90 per kilo, we couldn’t afford to buy them,” Diel said. “Now, we don’t have to.”

A Future with Possibilities

Earnings from onion cultivation have significantly shifted his family’s financial situation. What was once a hand-to-mouth existence has shifted—now, they can save Rs 60,000- Rs 70,000 annually. Encouraged by his success, he plans to expand onion cultivation next year and experiment with groundnut farming, inspired by neighboring villages. “Onions are less water-intensive and give high returns,” he explained. “They’re easier to store and sell, unlike vegetables.” He showed us the room he has dedicated to this, made completely dark using an improvised setup.

His success has also inspired the community. Farmers who once hesitated to adopt new practices are now following his lead. Two villagers have already invested in vermi beds, seeing firsthand the benefits of organic farming.

In Kulang, WOTR has trained landless individuals in advanced carpentry and goat rearing, providing them with new livelihood opportunities. To support farmers and enhance water conservation, 29 Loose Boulder Structures (LBS) have been built, benefitting 22 farmers by reducing soil erosion. Additionally, 500 running metres (RMT) of stone bunding now support 50 beneficiaries. One farmer has also received a sprinkler system to improve irrigation efficiency, ensuring better water management for agriculture.

Yet, challenges remain. The unpredictable rains, the ever-present risk of landslides, and the lack of roads and facilities weigh heavily on the village. The nearest hospital is 10 kilometres away, and the high school is five kilometres downhill—a treacherous journey during the monsoon.

Still, Diel remains hopeful. As a Wasundhara Sevak, he conducts monthly meetings, encouraging others to adopt sustainable practices. “It’s not easy to convince everyone,” he admitted, “but when they see results, they start believing.”

As he stood in his field, gazing at the land he nurtured, Diel reflected on the journey. “Farming will always be our foundation,” he said, “but I want my children to study and have opportunities beyond this village.”

The path ahead remains steep. But with determination and the community coming together, Diel and Kulang are climbing steadily toward a brighter future.

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