WOTR
Rejuvenating Communities & Ecosystems

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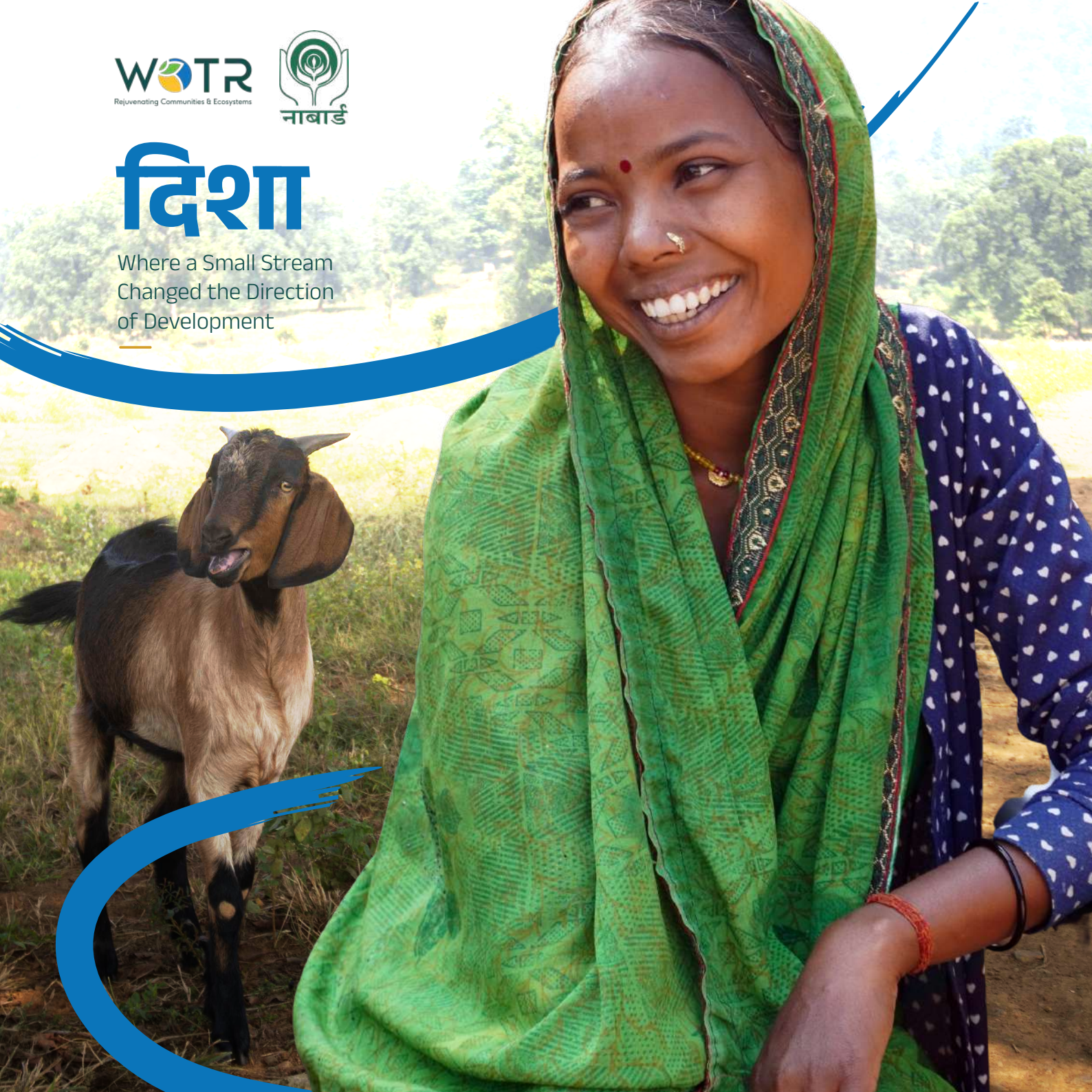
Where a Small Stream
Changed the Direction
of Development



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Preface

What does it mean to watch a perennial stream rush down the hills each year and still lack the means to hold on to it? To live amid tall, green sal forests through every season, yet see fields fall silent once the monsoon withdraws?

This was what the 121 families of Ramgarh, Surajpur district, Chhattisgarh, had to experience for a major part of their lifetime.

Set amid the hills near the Guru Ghasidas National Park, Ramgarh is home to Baiga and Gond communities that have historically remained on the margins of development. Though blessed with natural resources in the form of lush green forests which cover nearly 58% of Surajpur district, nutrient-rich soil, and perennial streams, this tribal population in Chhattisgarh could not harness these resources efficiently due to scarce financial resources. About 80% of Ramgarh households earn Rs 40,000–50,000 annually, with small and fragmented landholdings lacking access to irrigation. Income from rainfed agriculture was insufficient to sustain households, pushing at least one family member to seek work in nearby coal mines. This widespread sand and stone mining, including illegal extraction, has disrupted the hydrological cycle of the region and also damaged the forest cover, intensifying human-animal conflict. Livestock such as goats and cattle, along with forest produce, provided additional but limited income.

The communities' financial vulnerability is also closely linked to displacement. Most families now living in Ramgarh were relocated after their original village was submerged by the reservoir formed by the Rihand Dam. Built during India's First Five-Year Plan — part of the country's centrally planned national economic programmes — the dam created one of the largest reservoirs in the country, altering the lives of the communities that once lived along its banks. For those who had lived for generations along the Rihand River, the move to an unfamiliar hilly landscape, earlier accessed mainly for hunting and grazing, brought enduring challenges, compounded by poverty and limited knowledge of the terrain, the effects of which continue to be felt today.

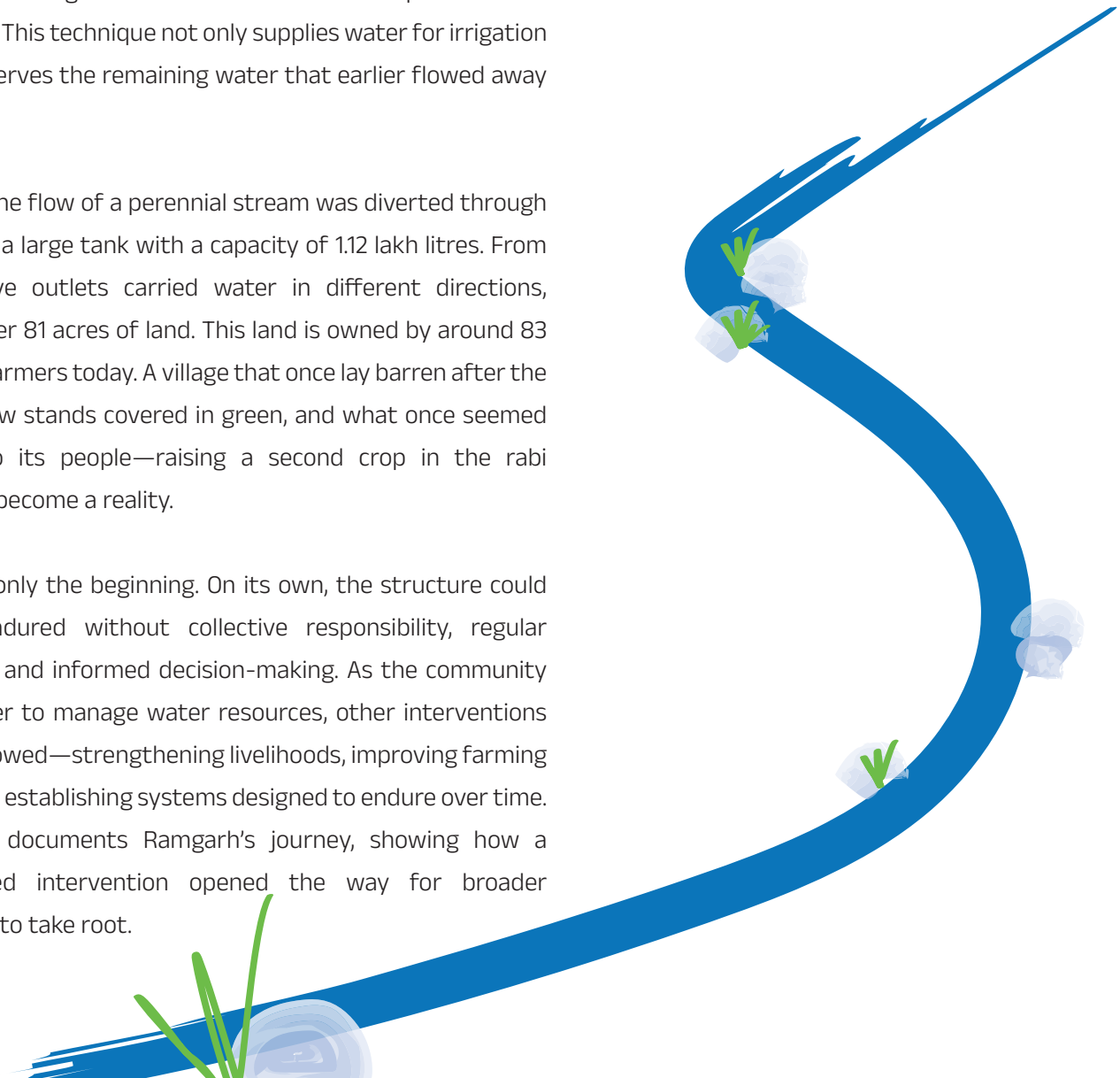
WOTR (Watershed Organisation Trust) began its work in Ramgarh in 2024, with support of NABARD, under the project 'Ensuring Farm Livelihood through Assured Irrigation of Tribal Communities in Surajpur district, Chhattisgarh'. Undulating terrain, poor rainwater retention, and forest degradation limited farmers to a single Kharif crop and declining productivity. The project was started with an aim to build resilience through assured irrigation, resource management, and strengthened livelihoods for tribal communities.

After a detailed assessment of the terrain, its geology, and hydrology, the most viable option, requiring minimal investment and causing little ecological disturbance while offering significant gains for agriculture, was identified as a Diversion Based Irrigation (DBI) system.

DBI is a simple and economical method that uses slopes and gravity to guide the flow of water from rivers and streams to adjacent cropping areas. It is especially beneficial for hilly or mountainous terrains. With the help of this system, the optimum water supply for irrigation is ensured while the rest percolates as groundwater. This technique not only supplies water for irrigation but also conserves the remaining water that earlier flowed away as runoff.

In Ramgarh, the flow of a perennial stream was diverted through a PVC pipe to a large tank with a capacity of 1.12 lakh litres. From this tank, five outlets carried water in different directions, benefiting over 81 acres of land. This land is owned by around 83 smallholder farmers today. A village that once lay barren after the monsoons now stands covered in green, and what once seemed impossible to its people—raising a second crop in the rabi season—has become a reality.

But DBI was only the beginning. On its own, the structure could not have endured without collective responsibility, regular maintenance, and informed decision-making. As the community came together to manage water resources, other interventions gradually followed—strengthening livelihoods, improving farming practices, and establishing systems designed to endure over time. This booklet documents Ramgarh's journey, showing how a community-led intervention opened the way for broader development to take root.



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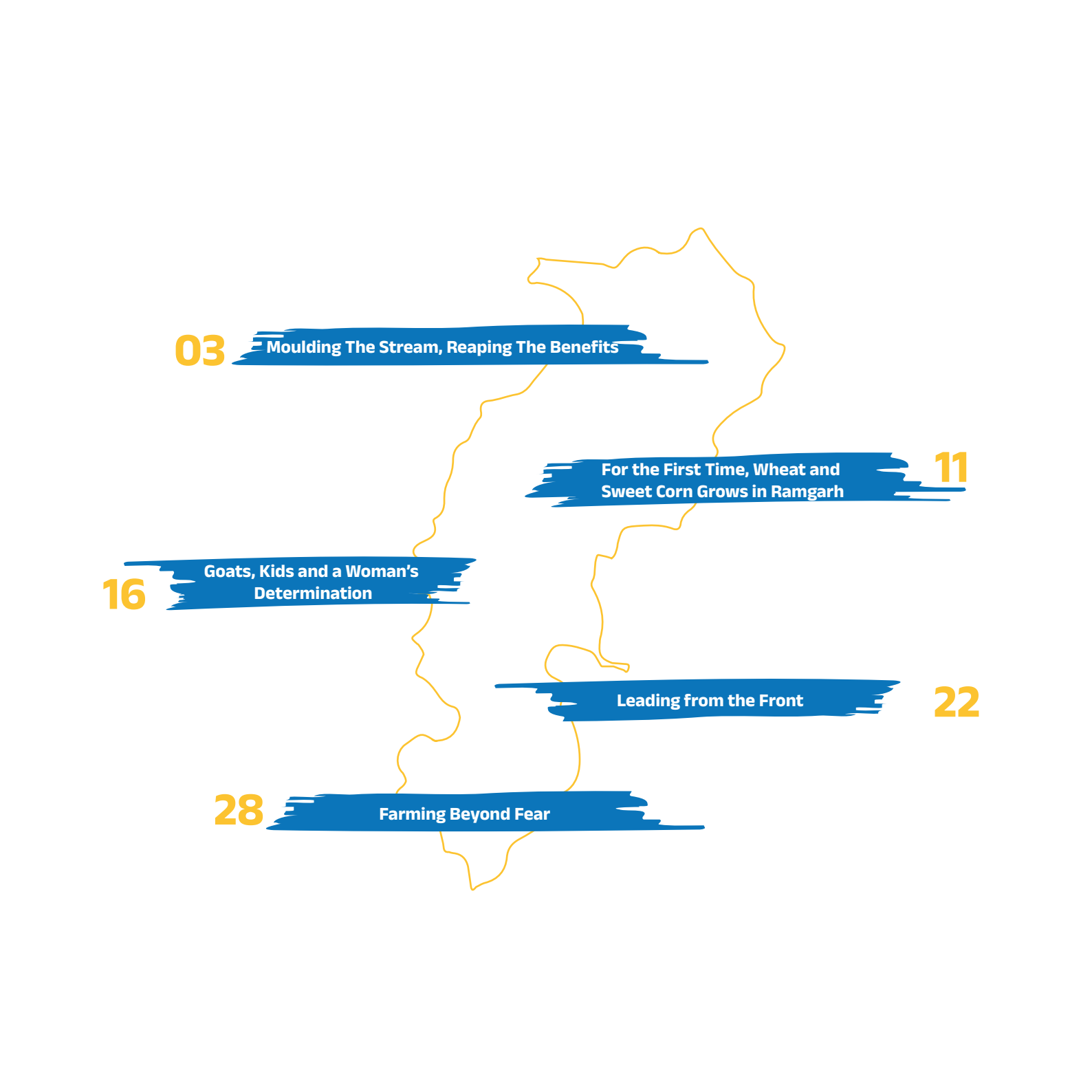


Moulding the Stream, Reaping the Benefits As a Community

“

We saw the stream flow in our fields, day after day, year after year. We always had water, but did not have money to dig wells or bring pumps and use it.”

From a hillside above Ramgarh, Rana Pratap Singh points to a narrow stream cutting through the rocks, easy to miss if you didn’t know where to look.

“Ye paani saal bhar aisa hi rehta hain aur ab poore gaon ko paani deta hain,” he says. The water now flows year-round, supplying the entire village through Diversion-Based Irrigation (DBI).

A little downhill, the water gathers into a small pit, with a cement embankment, forming an intake chamber. Uphill from the pit stands a Loose Boulder Structure (LBS), carefully designed to hold back soil while allowing water to pass through. From this point, water travels through a pipeline further down the slope into a larger cement tank. Five outlets from this tank now carry water directly to farmers’ fields below. The landscape here is lush, with diversity. Aquatic java ferns carpet the ground, clearly marking the natural path water has followed for generations — a visible reminder of the moisture that had long gone untapped.

Water in Sight, But Out of Reach

40-year-old, Rana Pratap Singh, has been farming since he was about 18. For years, his household income depended entirely on the monsoon. On nearly two acres of land, he cultivated paddy just once a year during the kharif season.

Income was never enough. With farming dependent on rainfall, uncertainty loomed large. The village repeatedly raised the issue of water scarcity, with local politicians, the gram panchayat, and government officials. Yet, no sustainable solution emerged.

> "Idhar bhi jungle, udhar bhi jungle. Jungle ki wajah se hum logon ko paani nahi mil paata tha," Rana Pratap explains. Surrounded by forest land under the Forest Department's jurisdiction, the community could not construct any water harvesting structures on nearby slopes.

Although a few farmers built individual wells through MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) support, most smallholders like Rana Pratap continued to struggle. Water availability remained a persistent constraint, especially beyond the monsoon months.

Water scarcity was only one part of the problem. After the Kharif (monsoon) harvest, livestock owned by villagers were released for open grazing during the Rabi (winter) season. For small farmers, this made a second crop nearly impossible. Roaming herds trampled or grazed on whatever little vegetation managed to survive.

Rana Pratap did not own any livestock, leaving him without a fallback option when agriculture failed. He estimates that fewer than half the households in Ramgarh owned animals. In difficult years, he turned to local moneylenders to support his family of five, sinking deeper into debt just to meet the basic needs.

From Possibility to Collective Action

The situation began to shift in 2024, when WOTR started its work in Ramgarh under the project 'Ensuring Farm Livelihood through Assured Irrigation of Tribal Communities in Surajpur district, Chhattisgarh' supported by NABARD.

Building on its earlier experience of building Diversion-Based Irrigation (DBI) systems in Odisha, WOTR organised an exposure visit for nine village representatives.

In Odisha, they saw villages where very small streams were carefully managed to support agriculture through most of the year. Fields remained productive well beyond the monsoon, sustained by simple but effective water-diversion systems. For the visitors from Ramgarh, this was a moment of realisation. If such modest streams could be harnessed there, why couldn't the same approach work back home? This rekindled a sense of possibility and the will to act within the community.

Following the visit, WOTR engaged an engineer to study the local geography of Ramgarh and proposed a DBI structure suited to the terrain and water flow.

The biggest hurdle remained permission from the Forest Department, as the proposed tank location fell within the forest land. Determined to change their circumstances, four village representatives, accompanied by the staff from WOTR, travelled to Mahuli to meet the Director of Guru Ghasidas National Park.

The community members took the lead in presenting the structure's collective benefits to the Director, and permission was granted immediately. Encouraged, 25–26 farmers whose fields lay at the base of the forested slope came together. Through monthly meetings, the nine representatives shared learnings from the exposure visit, building trust and consensus.

The community contributed voluntary labour (shramdaan) to construct the tank, pipeline, and the Loose Boulder Structure with the project support and WOTR's guidance. Within three months, the DBI system was complete. But building just one structure was not enough. How could it be ensured that the community took charge of this structure and development lasted beyond longevity of any external aid? This was by forming a crucial group - a Water User Group.
A Water User Group (WUG) was formed with all beneficiary farmers. The group opened a joint bank account, with each member contributing Rs 1,000 initially. Every beneficiary farmer contributed initially Rs 100, then Rs 200 and now contributes Rs 500 after every harvest

These funds are used exclusively for operation and maintenance, making the system financially self-reliant. The WUG meets monthly now to review maintenance needs and manage water distribution. Days of the week have been allocated for water access, ensuring equitable and efficient use.

The impact was visible from the very first monsoon. Water began collecting in the tank immediately after construction, and monsoon rains amplified the flow. For the first time, water travelled seamlessly — from the hills, to the tank, through pipelines, and into the fields.

Water nourishes both fields and hopes

"A village where Rabi cultivation was once unthinkable is now farming twice a year," Rana Pratap says with pride. Paddy remains his main crop, but he has diversified into sesame (til) and mustard (sarson). Vegetables such as okra,

tomato, and brinjal now supplement household nutrition and income. Wheat is also grown during the Rabi season.

Earlier, loans were taken just to secure food. Today, produce is sold to local traders and nearby markets, strengthening household finances. With improved water security, Rana Pratap has begun adopting Climate-Resilient Agriculture (CRA) practices promoted by WOTR. He now practices the SRI (System of Rice Intensification) method, prepares vermicompost, and uses bio-inputs like Neemastra and Dashparni Ark. Earlier, he relied on the Bharahi plant collected from deep forests to control pests, an unreliable practice

dependent on the plant's growth in the forest. Neemastra has proven safer, more effective, and time-saving. He has also shifted to hybrid crop varieties. Where he once used 20 kg of seeds, he now needs only 6 kg for the same area — reducing costs and improving productivity.

These are F1 hybrid seeds—first-generation offspring produced by crossing two distinct, purebred parent lines. They are known for uniformity and enhanced performance, including higher yields and disease resistance in crops. However, successful outcomes from using these seeds depend on proper sowing practices, regular application of manure to maintain soil health, and adherence to other technical

parameters. WOTR provides regular training to farmers in Ramgarh to ensure these best practices are effectively implemented. The DBI's success has drawn attention beyond the village. Visitors from Korea district have come to Ramgarh to see the structure.

Asked about future plans, he adds,

"Paani ko poora rokna humara uddeshya nahi hai. Jitni zarurat hai, utna hi istemal karenge."

Their aim is not to block all water,
but to use only what is needed.

For Rana Pratap, the focus remains on sustaining what has been achieved. **"Hum logon ko rasta pakda diya hai. Isi raaste se chalte rahenge,"** he says (We have been shown the path, and we will now continue walking on it).

For the First Time, Wheat and Sweet Corn Grows in Ramgarh

“

The DBI has done something we never thought possible in Ramgarh. It has allowed us to take a Rabi harvest.”

Fulsai Pandu, a farmer from Ramgarh village, said. On his two acres of land, he has just completed harvesting nearly 275 kgs of wheat and 75 kgs of sweet corn — a sight that would have been unimaginable here just a few years ago.

We sit under a tree beside his harvested field as Fulsai recounts the long path that brought him here. He lives with his wife and two children — one is nineteen and helps him with farming and a seven-year old attends the local school in Ramgarh. His third son is seventeen and is enrolled in Class 11 in Biharpur.

Barren Fields and Borrowed Earnings

His own childhood, however, was unlike those experienced by his children. Without an assured water source, his family worked as labourers on the fields of farmers who owned wells, in spite of having their own farmland. Their own land remained barren.

“We worked on others’ land,” he recalls. “Half the produce went to the landowner. The rest barely kept our household running.”

Fulsai continued along the same path as an adult. With no reliable irrigation, his land lay largely unproductive until 2023. In 2023, under MGNREGA, Fulsai’s land was levelled for the first time. The undulating terrain had earlier prevented even distribution of water and nutrients; levelling opened up the possibility of cultivation across the field.

Yet, without irrigation, farming remained completely dependent on rainfall. Farming was limited to a single rainfed paddy crop each year, earning him about Rs 30,000 annually. The off-season months were especially difficult. With no crops to tend, Fulsai had little work beyond occasional MGNREGA employment, and long gaps without work left the family financially vulnerable.

“Kabhi barsaat achhi hoti thi toh fasal mil jaati thi,” he says. “Par agar barsaat theek na ho toh sab bigad jaata tha.” (If the rains were good, the crop survived. If not, everything failed).

Water Brings the Second Harvest

The turning point came with the construction of the Diversion-Based Irrigation (DBI) structure built by WOTR under the project 'Ensuring Farm Livelihood through Assured Irrigation of Tribal Communities in Surajpur district, Chhattisgarh' supported by NABARD. Fulsai was actively involved in its construction and is now one of the 83 farmers benefiting from the system, tilling approximately 81.2 acres of farmland.

In the very first year of having year-round access to water, he cultivated wheat during the Rabi season — something Ramgarh had never seen before. His farming cycle stabilised: paddy in Kharif, wheat in Rabi. But one decision further transformed his fortunes.

Beyond Irrigation: Diversification and Dignity

Through a Farmer Field School (FFS) organised by WOTR, with the support of NABARD, Fulsai was introduced to sweet corn along with 25 other farmers. The soil and climate of Ramgarh were ideal for the crop, but lack of knowledge and confidence had kept farmers from experimenting.

Sweet corn, a high-value crop with a short growing cycle, could be grown alongside wheat during the Rabi season. “Isko ugane mein koi dikkat nahi hui,” Fulsai says confidently. “Ulta sirf fayda hua.” (There were no difficulties — only benefits).

This shift from single-season paddy to multi-season, diversified cropping marked a major breakthrough for productivity and income. Alongside crop diversification, Fulsai adopted climate-resilient practices promoted by WOTR. A vermibed was installed on his farm, and he received training in preparing and using Jeevamrut, Dashparni Ark, and other bio-inputs.

Today, he relies entirely on these practices. Soil fertility has improved, moisture retention has increased, and crop health is visibly better. Produce is sold to local traders, reducing dependence on external inputs and markets. His annual income has risen from around Rs 30,000 to Rs 51,250, with greater stability than before. For him, DBI has meant more than just water.

Looking ahead, Fulsai plans to expand cultivation of vegetables like tomato, okra, and sweet corn, short-duration crops that provide quicker returns and reduce risk. “Dekh-dekh ke seekh jaate hain,” he says (We learn by observing). If someone grows tomatoes successfully, I will try it too.

Earlier, farmers in Ramgarh were united socially but rarely shared farming knowledge. Today, regular monthly meetings encourage discussion — on yields, expansion, and fair benefit-sharing for those without land. Village Development Committee (VDC) meetings help resolve issues collectively.

> **“With three harvests a year — paddy, wheat, and sweet corn — life feels different now,”** Fulsai reflects.

What has changed most, he says, is dignity: the pride of farming his own land, freedom from moneylenders, and hope for the future. With a final stir, he mixes jaggery into a batch of Jeevamrut, ready to share with a fellow farmer.

Goats, Kids and a Woman's Determination

A neatly raised goat shed on wooden stilts is the first thing that catches the eye at Suman Singh's home in Ramgarh village. Built with care, the platform is spotless — no litter, no odour — a clear sign of a healthy herd. Behind it lies a courtyard, dotted with flowering plants and a few hens clucking about, with a pucca mud house standing firmly at the centre.

25-year old Suman is busy sweeping the goat shed when we arrive. Her goats are out grazing, and she invites us to sit in the courtyard as she begins to share her story.

Originally from Bartikala village in Surguja district, Chhattisgarh, Suman was married at a young age of 18 and moved to Ramgarh in 2020 to live with her husband Dharam Singh and his large family. She finished her matriculation before marriage and, with her husband's support, continued her education. She is currently pursuing a Bachelor of Arts degree in Biharpur.

Livestock had always been a big part of Suman's life. Growing up, her family kept hens, goats, cows, and bullocks. She regularly helped care for animals — taking them out to graze, keeping their surroundings clean, and ensuring timely vaccination.

"Whenever I got time, I liked being with the animals," she says. "I enjoy caring for them."

When Income Came with Hidden Costs

After marriage, Suman was very happy as she had her own little herd of four goats to take care of. But there was no designated space for them. For safety from predators, the goats were kept inside the house, which soon created serious hygiene problems.

The animals were forced to live amidst their own waste, leading to frequent infections such as khurpakka and muhpakka (foot and mouth disease). Their diet consisted mainly of dry grass, hay, and maize. Whenever a goat fell ill, a veterinarian had to be called from Biharpur, incurring high costs. Medicines and treatment expenses consumed nearly 20% of the household's monthly income.

A healthy goat fetched around Rs 6,000 when sold, and some additional income came from milk during lactation. However, frequent illness reduced

productivity and kept earnings unpredictable. This changed with training and a simple solution to her problems- modifying the goat shed.

From Traditional Rearing to Scientific Enterprise

An exposure visit under WOTR's 'Ensuring Farm Livelihood through Assured Irrigation of Tribal Communities in Surajpur district, Chhattisgarh' project supported by NABARD, introduced her to scientific goat-rearing practices, including proper nutrition, disease prevention, and the importance of raised goat sheds for hygiene and safety.

In June 2024, with WOTR's support, Suman constructed a raised goat shed on stilts. Four additional goats were introduced, increasing her herd to nine. Today, she owns twelve goats, including improved Sirohi breed animals.

The elevated shed ensures cleanliness, protects goats from predators, and prevents diseases. Goat droppings are now collected and used as manure in the fields, creating a circular, low-cost farming system. 13 women like Suman have set up their goat sheds under this project and are reaping its benefits.

Health expenses have dropped sharply, productivity has improved, and goat rearing has become a reliable source of income.

Goat Rearer to Community Leader

Alongside managing her livestock, Suman actively works as a Mahila Pravartak. Mahila Pravartaks are the Women Community Resource Persons(CRPs) who form the backbone of WOTR's community health efforts.

She regularly visits 121 households, supports pregnant women, monitors their weight, advises on nutrition, and ensures iron supplementation and medical check-ups. She also encourages childbirths in nearby hospitals, helping families access ambulance services from nearby Onjhar or Biharpur and the Primary Health Centre just a kilometre away.

She conducts monthly growth-monitoring sessions for children, helping parents understand ideal height-weight indicators — something few were aware of earlier.

Suman has also played a key role in promoting kitchen gardens. Where vegetables were once grown sporadically, families now follow improved planting techniques to maximise both nutrition and yield. Excess produce is sold at the weekly Monday market in Onjhar, adding to household incomes.

For Suman, the change has been deeply personal. "Pehle public mein baat karne se darr lagta tha," she admits. Regular meetings with other Mahila Pravartaks and ongoing training gradually built her confidence.

Today, she moves from house to house with ease, speaking openly about health, nutrition, and livelihoods.

> **"Gharwale support nahi karte toh kaise karte," she says (without the support of my family, this journey would not have been possible).**

Suman has witnessed visible change in Ramgarh. DBI has helped agriculture prosper in the region, increasing mean income levels, providing higher nutrition and food security to residents while also creating more employment opportunities apart from coal mines. Women who once hesitated to step outside their homes now actively participate

in meetings, ask questions, and explore livelihoods. With support from SHGs, several women have started small enterprises — tailoring units, carpentry work, and other income-generating activities.

"I want to complete my Master's degree," Suman says, looking ahead. "I want to continue working in my village, helping women and children grow."

"Gaon mein sikhaungi aur khud bhi seekhungi," she adds. She wants to teach others — and continue learning along the way.

Leading from the Front: Manbasiya Singh's Journey as VDC Chairman in Ramgarh

24-year-old Manbasiya Singh gets off a motorbike and walks briskly toward us, brushing the dust off her blue sweater, straightening the pleats of her saree, and adjusting the bindi on her forehead. She has just returned from the construction site of her new pucca house.

With a glass of water in hand, she smiles and says,

> **"We are finally building a permanent house. Earlier, this was just a kuccha makaan."**

For Manbasiya, this house is a symbol of stability, confidence, and a future she has worked hard to shape.

Married in 2020 into a farming family, Manbasiya arrived in Ramgarh with hope but also uncertainty. A mother of two young children today, aged five and two, she stepped into a life very different from the one she had known.

Before marriage, she lived with her parents and completed a Bachelor's degree in Computer Applications from Manikpur in Singrauli, Madhya Pradesh. Alongside helping her parents cultivate rice, wheat, chickpea, green pea, and pigeon pea, she spent her happiest hours attending computer classes in Baidhan.

She loved studying.
After moving to Ramgarh, access to a computer disappeared, but her desire to learn did not. While managing household responsibilities and farm work, Manbasiya began exploring ways to build something of her own.

Online Tutorials Shape Local Entrepreneur

In March 2024, under a village-level project, she received a sewing machine. Drawing on her comfort with technology, she began learning tailoring through YouTube tutorials.

What started as curiosity soon turned into an enterprise. Today, women from four nearby villages come to her to get blouses, children's frocks, and dresses stitched. Her small business steadily grew, powered by digital learning and determination. Through this work, Manbasiya became well known in the village, especially among women, easing their need to travel to the nearest town for stitching and building strong, trusting relationships within the community.

After establishing her enterprise, Manbasiya wanted to contribute more to her village. Around this time, WOTR, with support from NABARD, began working in Ramgarh under the project 'Ensuring Farm Livelihood through Assured Irrigation of Tribal Communities in Surajpur district, Chhattisgarh'. Initial meetings were held to bring villagers together, and the formation of a Village Development Committee (VDC) was proposed.

Stepping into Leadership

Representatives from all 12 paras (localities) of the village came together to elect office-bearers. To her surprise, and nervous excitement, Manbasiya was elected Chairman of the VDC.

"Mujhe pata nahi tha, kya hoga, kaise hoga (I was unsure how I would shoulder the responsibility)," she admits.

Along with nine other VDC members, Manbasiya visited Baikunthpur to see WOTR-supported villages during an exposure visit where initiatives such as check dams, diversion-based irrigation (DBI), goat-rearing, land levelling, and kitchen gardens had already transformed lives.

Seeing these interventions in action built confidence. When the VDC returned to Ramgarh, the fear of leadership slowly gave way to clarity and purpose.

Village work began step by step. New schemes were discussed in monthly VDC meetings, and beneficiaries were selected collectively, prioritising households that would benefit the most and sustain the intervention over time.

"Pehle lagta tha — kaise baat karenge, kaise kaam hoga" Manbasiya says.

"Abhi seekh hi rahe hain." We are still learning.

Among the many changes Manbasiya has witnessed, one is deeply personal.

Leadership at Home and in the Village

During a height–weight monitoring session, she realised that her younger daughter was at risk of malnutrition. Though the child ate regularly, her growth indicators were concerning.

"Khaati thi, par kam khaati thi," she says (she used to eat everything, but ate in lesser quantities).

Manbasiya immediately took her daughter to the Nutrition Rehabilitation Centre (NRC) in Biharpur, where they stayed for 14 days. With regular nutritious meals, medical care, and nutrition counselling, her daughter's health began to improve. Today, her diet is carefully monitored — leafy vegetables, pulses, and milk are regular.
"Doodh pine ke liye piche padti hoon uske," Manbasiya laughs
(I have to force her to drink milk).

She still looks lean, she says, but is active and energetic now. Manbasiya herself maintains a kitchen garden along with others in the village. Earlier, she grew common vegetables without much thought to nutrition. After training, she now cultivates bitter gourds and beans, understanding their dietary value.

At the village level, she highlights a major transformation: for the first time, 40 farmers are harvesting wheat in Rabi season, thanks to assured water supply through DBI structures and protection from free-grazing cattle using electric fencing (jhatka) supported by WOTR. Earlier Rabi cropping was limited to subsistence farming but now it has expanded and also secures profits for the farmers in the region.

Women's participation has also grown steadily. Earlier, few attended VDC meetings. Today, more women are showing up, planning their daily work around meetings rather than avoiding them.

"Pehle bulate the, tab bhi nahi aati thi," she says. "Ab kaam dekh kar mahilaein aane lagi hain." (Earlier less women turned up at meetings even after calling them repeatedly. After watching the progress made, more women are participating in the initiative).

Manbasiya's priority for the future is clear: education for her daughters. What they choose to become, she says, will be their decision.

Once her house is complete, Manbasiya plans to expand her tailoring business so women from ten villages, not just four, come to her.

"Socha toh bahut bada hai," she smiles, "bas poora hona baaki hai." The dreams are big , only waiting to be realised.

Farming Beyond Fear: How Electric Fencing Enabled Secure Rabi Harvests in Ramgarh

Dabbing the sweat off his forehead with a gamchha (towel), Hari Bhagat Singh settles onto a jute charpoy in the sunlight and gulps down a glass of cool water after spending the morning working in the fields. Nearby, hay is stacked carefully in the yard for his livestock, four bullocks and three goats. Gesturing towards them, he reflects on how these very companions of farmers once created havoc for cultivators in the region, though through no fault of their own.

33-year-old Hari Bhagat Singh lives in Ramgarh with his wife and their 12-year-old son. Farming, he says, has been a part of his life for as long as he can remember.

"Jabse yaad hain, tabse kheti karte hi the," he says (I have been farming since I can remember).Born and raised in Ramgarh, Hari Bhagat grew up in abject poverty.

> "Punji ke abhaav se khud ke jameen par pehle kheti nahi kar pate the," he says (due to a lack of capital, we could not farm our own land).

Although his family owned nearly 2.5 acres of land, they did not have the resources to cultivate it. Instead, they worked on others' fields for a small income. With five siblings, three brothers and two sisters, his father managed the household singlehandedly by tilling others' lands while the children were getting education in a school in Biharpur.

Alongside farming, Hari Bhagat developed another skill—carpentry, particularly the craft of making charpoys. During school vacations, he helped his father in the fields and learned to weave jute threads into sturdy beds. He sold them for Rs 100–200 at the time, earning enough to buy books for himself. Today, the same craft fetches nearly Rs 1,200 per charpoy. Running his fingers along the tightly woven jute pattern of the charpoy he is sitting on, he smiles and says he made this one too. Though it looks ordinary, its strength and durability reveal the labour and care that went into making it.

From Labourer to Landholder

With some savings of his own, Hari Bhagat decided to cultivate his land and help his father as his father's health started failing him. After completing Class 12, he returned to Ramgarh from

Biharpur, left his education behind, got married, and began farming his own farmland. Dependent entirely on rainfall, he could grow only one crop—paddy—during the Kharif season. The income was insufficient to sustain his family.

Initially, he lacked knowledge of improved farming practices and used the broadcast method, where seeds are scattered over soil, for sowing, which affected both the quality and quantity of produce. Gradually, by observing fellow farmers, he learned about transplanting paddy seedlings at proper intervals and began to see an improvement in yield.

"Ek dusre ko dekh ke kheti seekhte the (We learnt farming by observing each other)."

Things continued this way, with cultivation limited to the Kharif season. This changed in 2005, when a well was finally constructed on his farmland under the MGNREGA scheme, ensuring reliable water availability and allowing him to consider Rabi cultivation. It was then that a challenge familiar to many farmers surfaced—crop damage by animals.

Water Was Not Enough

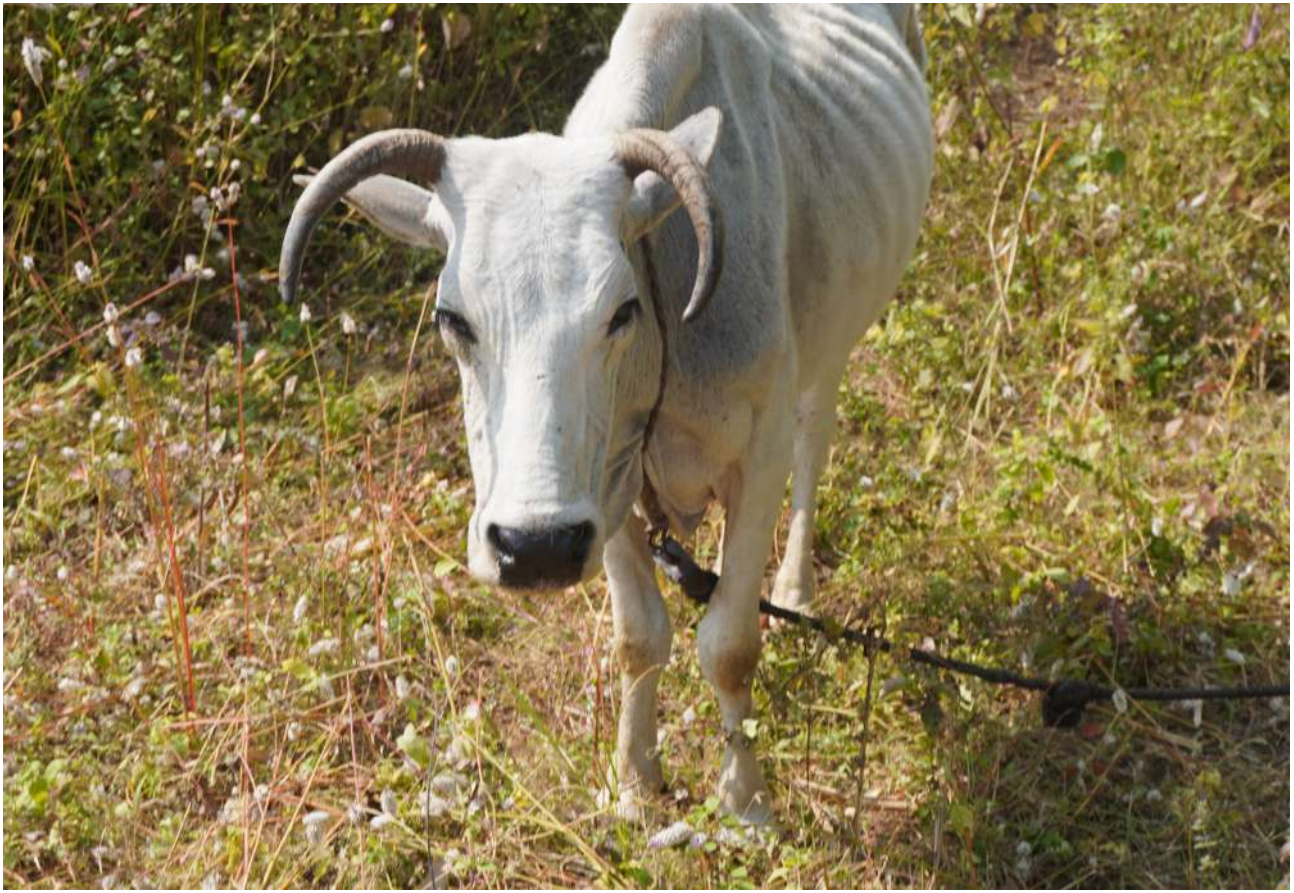
"We used to plant potatoes and tomatoes occasionally on 0.5 acres of our total farmland, but due to fear of cattle, livestock, and wild animals, we could not cultivate the entire land in Rabi despite having water," Hari Bhagat shares.

Whatever small area could be protected with thorny shrubs was cultivated; the rest remained unused. But why was the livestock let out to damage the crops?

After the Kharif harvest, livestock in the village is traditionally let out for open grazing—a common and affordable practice for smallholder farmers to feed them utilising post-harvest stubble and fallow fields for fodder during dry periods. However, this posed a serious threat to Rabi crops. Adding to the problem was Ramgarh's proximity to Guru Ghasidas National Park, which brought frequent visits from wild boars, bears, and monkeys, damaging crops even during Kharif.

The situation stayed the same till 2024, affecting income and productivity of Hari Bhagat Singh's farmland. In 2024, when WOTR began working in the village under the 'Ensuring Farm Livelihood through Assured Irrigation of Tribal Communities in Surajpur district, Chhattisgarh' project supported by NABARD, regular farmer meetings were organised.

During one such meeting, Hari Bhagat learned about electric wire fencing as a solution to protect crops from animal damage. The fence delivers a sharp, short, but safe electric shock on contact, causing no physical harm. Once animals experience this shock, they instinctively avoid the area, making the fence an effective psychological barrier that safeguards crops without injuring livestock or wildlife.



“We were worried it might seriously harm animals. But we were told that if an animal touches the fence, it only receives a mild shock and moves away without injury,” he recalls.

Finally Farming Without Fear

With partial contribution from his own savings and support under the project, Hari Bhagat installed an electric fence after the Kharif season of 2024. For the first time, he cultivated nearly his entire land during Rabi, sowing sweet corn, green peas, and wheat.

“When I saw a cow and a dog get scared away without being harmed, all my fears disappeared,” he says.

The fence does not need to be operational throughout the day. It is switched on only when animals are grazing nearby and is kept on at night. The battery is charged during the day and lasts through the night. His own livestock are safely kept within enclosures when the fence is active.

Encouraged by immediate results, in 2025, Hari Bhagat expanded his Rabi cultivation further, growing wheat, green peas, chickpeas, garlic, onion, and tomatoes across his entire plot without fear. Conflicts between livestock and farmers have also reduced comparatively now, he says.

Beyond fencing, he continues to benefit from regular farmer meetings, where he has learned about practices such as the System of Rice Intensification (SRI) and vegetable cultivation to improve household nutrition. He does not miss a single meeting.

Talking about the future, Hari Bhagat points to a forest and tells us about a small plot he owns near it, which he has been unable to cultivate due to water scarcity and fear of animal attacks. “One day, I want to cultivate that land too,” he says.

Taking a Rabi harvest has increased his income and given him the financial cushion to diversify his livelihood. Along with farming, he now runs a small grocery shop with his wife and continues making and selling charpoys whenever time permits.

“Yes, I only think of working harder, making progress, and earning a little more,” he says. “If we earn well, we can educate our children so they get good jobs.”

Hari Bhagat Singh once had to leave education to support his family and farm. But now he is confident to support his family and his son’s aspirations with an increased income where he would not be required to take the same path. When asked about his dreams for his son, he smiles and adds,

“Main chahta hoon baccha aage kheti bhi kare aur padhai bhi kare” (I want my son to be educated and also continue farming).”

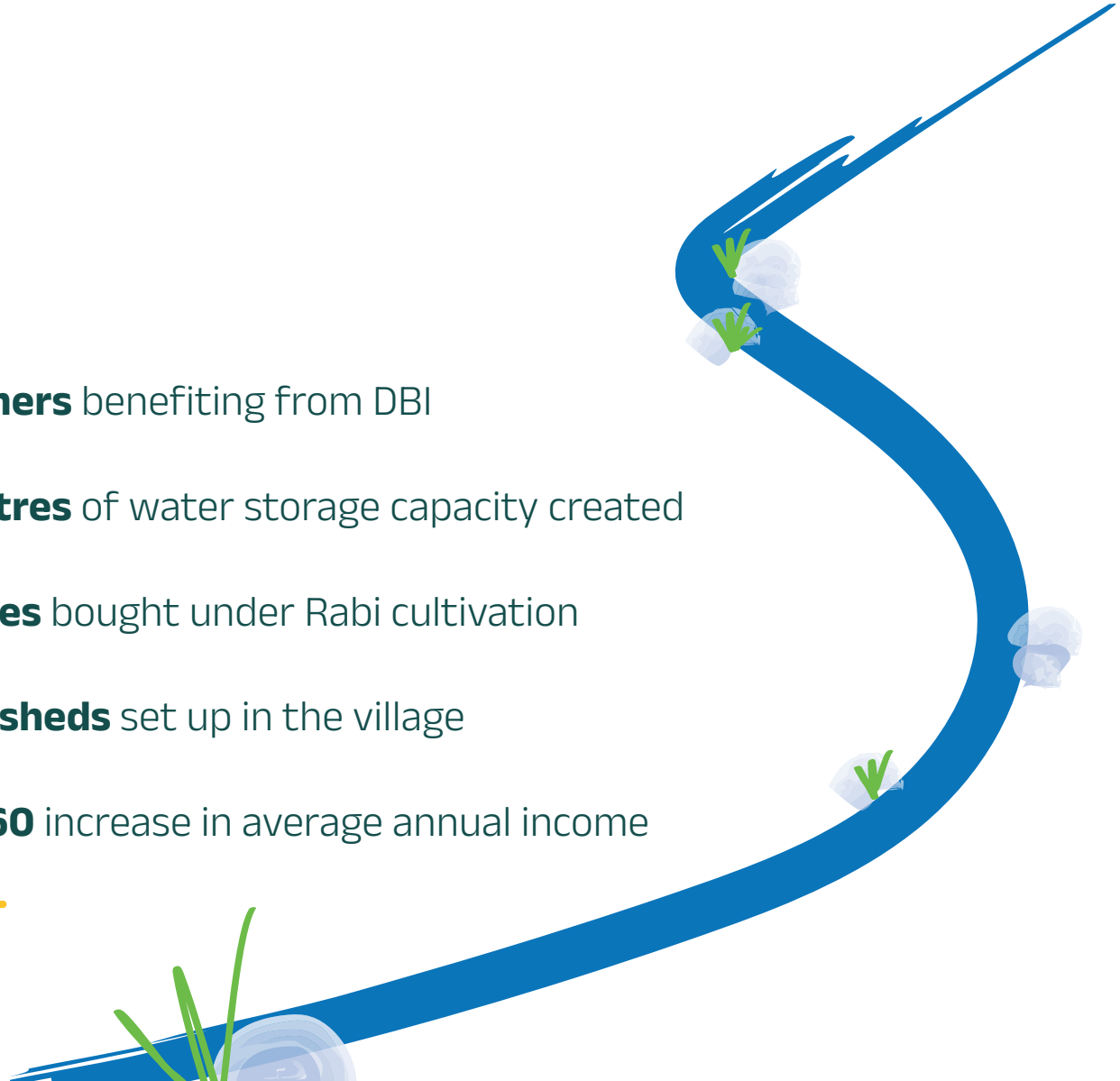
83 Farmers benefiting from DBI

1 lakh litres of water storage capacity created

81.2 acres bought under Rabi cultivation

13 goat sheds set up in the village

Rs 45,160 increase in average annual income



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