PROLOGUE

The brief case stories in this book are the result of a desire to highlight the work being done on the ground by communities mobilised through the ‘Watershed Management Programme’ project. The project, a collaboration between IndusInd Bank Limited and WOTR, is active in twenty villages and six Gram Panchayats in the Chikiti and Digapahandi blocks of the Ganjam district of Odisha. These blocks are located in the district’s extreme south.

87% of the households in these villages fall into the BPL (Below the Poverty Line) category. 90 percent of the local households depend on agriculture, livestock, and NTFP collection. This region’s farmers are small and subsistence-level, with average land holdings of only 1.36 acres. The land is sloping and rocky, making cultivation difficult, and monsoon rain is the only source of irrigation.

Even though the average rainfall has been satisfactory at 1330 millimetres, heavy runoff occurred due to the terrain’s undulations. This reduced the amount of water available to farmers who cultivated paddy during the Kharif season, and then migrated to large cities and towns in search of work during the other seasons. Erratic precipitation and other climate variations made it even more difficult for families to survive.

In this context, IndusInd Bank and WOTR collaborated to increase household incomes through community-led watershed management and increase farmers’ capacity to adapt to the effects of climate change through Climate Resilient Agriculture.

The objectives under the project are twofold: Increase the irrigated area under cultivation through various community-driven watershed measures and equip and train farmers in Climate-Resilient Agricultural practises and the use of renewable energy.

The project that began in April 2019 and will continue through March 2023 has made steady progress, and the following case studies will give you a glimpse of the tireless efforts that project officials and the local communities have made to bring about development in their homes and villages. We sincerely hope that these stories inspire many others to realise the dream of a rural India without poverty.
MAKING CLEAN WATER AVAILABLE FOR ANANG KRUPAMAYAPUR

The water is available to all households through three stand posts in the village which is devoid of any contamination, the village community has also got rid of the water borne diseases.
The village of Anang Krupamayapur in the Ganjam district of Odisha is a testament to people’s efforts to improve their lives and preserve natural ecosystems. As part of the Drudgery Reduction Initiative, the Watershed Management Programme, supported by IndusInd Bank Limited, addressed drinking water concerns in the Chikiti block, benefiting approximately 44 households. These families in the Lalment Lakshmi Narayanpur Gram Panchayat struggled to obtain potable water and suffered from water-borne diseases.

Initially, villagers fetched water for drinking and household use from the Bahuda river, which was two kilometres away from the village. This was an exhausting task for the villagers, particularly the women. They were required to collect water twice a day, in the morning and evening. In addition to the monotony of the task itself, they were also plagued by numerous health and safety concerns. Later, groundwater sources were investigated, and for the past three decades, villagers have relied on three borewells dug in three corners of the village to ensure that everyone has access to water. However, problems soon arose when the water from the borewells began to smell like iron.

High metal content rendered the water unfit for consumption and corroded kitchenware. The water quality issue in the village became so severe that relatives stopped attending social events. Water could not be offered, even at weddings in the village. The health problems, combined with the economic and social damages, had rendered the lives of the local
families intolerable. The village elder Rangabati Chanda explains, “After the borewells were dug, we were completely reliant on that water, but we experienced health problems as a result.”

The problem of drinking water was first discussed by the Village Development Committee (VDC). The water from the borewells was then given for testing where it was proven to be very unsafe for drinking.

It was decided to dig another borewell in another part of the village to find water devoid of any contamination. Such was the desperation of the villagers to find clean, potable water that they were willing to spend up to 50% of the drilling expenses in case a feasible source was not found.

However, the effort bore fruit and water was found at a depth of 160 feet. The water was tested and found to be clean and safe.

Water from the new borewell is breathing life into the village. Health issues arising from the contaminated water have disappeared and so has the social stigma.

Water is now available to all households through three stand posts and solar powered dispensing units. Each household contributed Rs. 1000 towards excavation and the pipeline laid. They also worked on the construction of the units. The VDC is responsible for the upkeep and maintenance of the whole water system and manages it through mandatory contributions from the community.
IN ADDITION TO SERVING AS A NATURAL SOURCE OF IRRIGATION, CHECK DAMS ALSO REPLENISH NEARBY GROUNDWATER RESERVES AND WELLS. WHILE SURFACE AND SUBSURFACE WATER IS PRIMARILY INTENDED FOR IRRIGATION, IT IS A BOON FOR THE ENTIRE VILLAGE, WHICH USES IT FOR LIVESTOCK AND OTHER DOMESTIC PURPOSES
Building sustainable livelihoods require nurturing the ability of households to meet their basic needs in a manner that is dignified and sustainable— in accordance with the natural resources available in the region.

It is a development model which incorporates solutions for the needs of people today without compromising the ability of future generations. It necessarily includes the Gandhian concept of creating self-sustaining villages whose economies are driven in harmony with nature. The construction of check dams conforms to this sustainable adaptation approach.

Check dams help regenerate aquifers and increase freshwater resources for agriculture. They are small barriers or dams built across the direction of water flow on shallow rivers and streams for the purpose of water harvesting. Check dams retain excess water flow during the monsoon rains in a small catchment area behind the structure. The pressure created in the catchment area helps force the impounded water into the ground. Apart from acting as a natural irrigation source, a major benefit is the replenishment of nearby groundwater reserves and wells. While the surface and the subsurface water is primarily intended for use in irrigation, they also become a boon to the village which uses the water for livestock and other domestic needs.

The Watershed Management Programme in Chikiti block of Ganjam district in Odisha, supported by IndusInd Bank Limited, began in October 2018 and this story narrates the impact a check dam had on the lives of a small community of 16 families in the village of Nakamudia in the Ramchandrapur Gram Panchayat.
The average annual rainfall in the region has been 1450 mm for the last 10-12 years. This high intensity rainfall would lead to high run-off leaving very little water for the village to use in the other seasons.

Consequently, in the dry summers, villagers struggled to get sufficient water to cultivate their paddy lands. They somehow managed sufficient irrigation from the nearby canal during paddy transplantation but faced many difficulties in the harvesting season due to the reduced flow of the canal. Rice is the staple food in Odisha, and it requires a considerable amount of water throughout the sowing harvesting periods.

At the initial meeting of the village community with WOTR experts and the Village Development Committee (VDC)*, the community overwhelmingly sought a solution to this problem.

With inputs from experts and the community, the project team subsequently studied the region and decided the best solution would be to construct a check dam on the canal. The check dam would allow for harvesting and percolation of the run-off water underground and provide life-saving irrigation to 18 acres of paddy land in the village.

The community members readily agreed to proactively contribute four days of labour for the construction.

The difficulty, however, was that the canal had water running throughout the year. Consequently, construction was a tedious process with water flooding the site on multiple occasions.

At one point, the side embankment crumbled due to the muddy soil. Iron shutter plates had to be used to reinforce the side embankment so that the construction could proceed smoothly. A pump set was put into use to pump out the water coming in the way of the construction.

With the concerted effort of the project team and the community, a check dam, 13 metres wide was finally constructed. The check dam has a water potential of 8,183 cubic metres. It checks the flow of rainwater and irrigates the nearby agricultural land throughout the year.

Since construction, the check dam has saved 18 acres of paddy land from the impact of prolonged dry spells. Farmers now have two cropping seasons – Kharif and Rabi, increasing their earning opportunities. In the Rabi season, farmers grow both paddy and vegetables using the check dam water.
To maintain the Check Dam, a user group named ‘Lokanatheswar Krushak Sangha’ was formed with 11 members from the village including 4 women. The group collected an amount of Rs. 250 per member initially for the maintenance of the check dam.

Hadia Mallik, one of the older farmers in the community now grows vegetables such as brinjal, tomato, and radish along with mango and cashew on his three acres of land. This intercropping is possible only because of the available water. Hadia sells his produce at Chikiti and surrounding villages.

“I earned Rs. 15,000 in the Kharif season in 2021 and Rs. 25,000 from November 2021 till March 2022. I am also a VDC member and have been an integral part of all decisions taken during this Watershed Management Programme. I feel proud that I was part of this movement for change and better living,” says Hadia Mallik, beaming with joy.

The benefits to the community from the check dam are enormous and farmers have been trained to use sustainable farming techniques. With water now available in plenty and agriculture having become easier and more beneficial, farmers are now using their free time to learn other livelihood skills to improve their earning capacity.

“I have already earned Rs. 15,000 in the Kharif season in 2021 and Rs 25,000 from November 2021 till March 2022. I feel proud that I was part of this movement for change and better living,”

Hadia Mallik, Lokanatheswar Krushak Sangha
MOBILISING THE POWER OF THE GROUP TO PROCURE FARM MACHINERY

With the formation of user groups and procurement of the latest machinery, it supported more than 500 farmers through farm equipment, reducing 20-25% cost of cultivation and increasing productivity.
Rural poverty in India is fuelled by land degradation and unsustainable agriculture practices resulting in loss of productivity. It is unfortunate but true that agricultural productivity in India is amongst the lowest in the world. Another stark reality of the Indian agricultural scenario is that agriculture in the rainfed parts of the country is far less productive than in the irrigated areas. While farmers in irrigated areas earn 60 percent of their income from agriculture, farmers in rainfed areas earn only 20-30 percent from farm-related activities.

WOTR works in remote rural areas of India to enhance farm productivity and profitability. It aims to make farming practices climate resilient, and it works with communities to arrest land degradation. Its climate resilient agriculture practices have helped farmers, particularly small and marginal ones, to mitigate the risks of climate change, reduce the cost of cultivation, increase productivity, and enhance their adaptive capacities.

Due to financial constraints, small and marginal farmers cultivate their crops primarily through manual labour. In general, these farmers cultivate their land using bullocks and labour, which requires more time and human resources and results in lower yields. Most agricultural activities in the villages are performed...
manually using simple and conventional tools and implements such as wooden ploughs, sickles, etc. Ploughing, sowing, weeding, and threshing the crops thus become labor-intensive agricultural practices.

There is an immediate need for the introduction of machinery into agricultural operations to prevent the wastage of labour and make farming more convenient and accurate.

In the Village Development Committee (VDC) meetings held in the Ganjam district of Odisha as part of the Watershed Management Programme supported by the IndusInd Bank Limited, the issue of a lack of agricultural machinery was thoroughly discussed. The villagers unanimously supported the purchase of paddy threshers, paddy winnowers, bush cutters, power sprayers, etc., to assist in resolving their farming issues after multiple rounds of consultations. Small and marginal farmers previously had no access to machinery because it was too expensive.

The Watershed Management Programme project team along with the villagers laid down the plan for the procurement and use of farm equipment. It was decided to create 6 user groups in the 6 Gram Panchayats under which all the 20 villages of the project catchment area would fall. Each user group was to contribute Rs. 10,000 each towards procurement and a fixed rental charge at Rs. 50 was fixed for use of the machinery. There was also a fund kept apart for any future repair and maintenance of the machinery.

The farm equipment procured by the user groups included a power thresher, a mandawa weeder, a paddy thresher, a two-in-one power sprayer, a manual sprayer and bush cutters.

Since the formation of the user groups and procurement of the latest machinery, more than 500 farmers have been supported with the equipment, reducing cost of cultivation by between 20-25% and increasing productivity by up to 20%. It has not just strengthened the rural farmer institutions but also helped create awareness among the rural community about modern technology and equipment.

Bijay Malik from Malakuta village of the Chikiti block owns around 3 acres of land and cultivates paddy in the Kharif season and vegetables like sweet corn in Rabi season. “I have found the use of farm equipment from user groups very easy and affordable. It has saved me my precious time and has also helped me improve my crop yield,” boasts Malik with glee.
IF WOMEN ARE TO BECOME EMPOWERED, THEY NEED TO BE FREEDOM FROM ROUTINE DRUDGERY THAT TAKES AWAY A GOOD PART OF THEIR DAY. PRESSURE COOKERS REDUCE COOKING TIME BY AS MUCH AS 70%, WHICH IS A GREAT REDUCTION IN TERMS OF TIME, MAKING IT A HANDY TOOL TO QUICKLY GET THE MEAL IN TIME.
Most rural women in India are tasked with managing the home, the farm, and the family’s livestock. The majority of their time is spent preparing food, washing clothes, gathering fuelwood from the forest, bringing water, storing food grains, cleaning and maintaining the house, and caring for their children and elderly family members. They are also expected to participate regularly in social and religious ceremonies and to assist in agriculture and other outdoor tasks.

With such hectic schedules, the best gift a project can give is a respite from the monotony of household chores. In the Ganjam district of Odisha, the Watershed Management Programme supported by IndusInd Bank Limited attempted the same, and the results have been more than satisfactory.

If women are to be empowered, they must be liberated from time-consuming, repetitive tasks. It is typical for marginal rural households to rely on firewood for cooking and heating. The burden of gathering firewood never ends for women. While the activity is demanding in and of itself, it has also contributed to forest loss and degradation over the past few decades. The burden of gathering fuel for the family kitchen,

It is a scientifically accepted fact that eating foods that are pressure cooked offers more nutritional boost than those cooked for longer periods using traditional cookware.
coupled with other traditional notions of women's roles, effectively confines women to their homes for the majority of the time, preventing them from participating in the social life of the community.

One of the objectives of the Watershed Management Programme was to reduce rural women's labour and improve their nutritional status. Twenty villages in the Chikiti and Digapahandi blocks of the Ganjam district in the state of Odisha attest to the life-altering impact of a few simple initiatives on the lives of women.

As part of the project, 100 smokeless chulhas were given to women in each of the 20 villages. Each of the 100 recipients contributed Rs. 300 for a chulha. The chulhas consume less firewood, resulting in fewer carbon dioxide emissions, more trees saved, less pollution, and less labour. It is estimated that chulhas have saved 15 to 20 percent of the trees in the region.

A distribution of pressure cookers was also conducted in all 20 villages, reaching 643 households. Initial research revealed that only 1-2% of households in these villages utilised pressure cookers.

It is a scientific fact that foods cooked under pressure contain more nutrients than those cooked for longer periods with traditional cookware. The longer foods are cooked, the greater the loss of nutrients. Foods prepared in a pressure cooker are ready more quickly. Additionally, pressure cooking is significantly more energy-efficient than using multiple pots on separate chulhas or burners, resulting in substantial energy savings. Since pressure cookers are conducive to one-pot cooking and food requires less cooking time, less energy is necessary to prepare meals. In addition to reducing the cost of fuel consumption, pressure cookers reduce cooking time by up to 70%, making them a useful tool for reducing drudgery.

Wasundhara Sevaks and WOTR volunteers visited each residence to educate residents on the benefits of using pressure cookers to save time, energy, and nutrients in food. Wasundhara Sevaks also demonstrated cooking techniques.

The distributed Pressure Cookers come with a 5-year warranty and are simple to maintain. Additionally, every 10 kilometres there are repair shops in the Chikiti and Digapahandi blocks.

Through the project with IndusInd Bank Limited, WOTR has fostered 42 SHGs in 20 villages to ensure the sustainability of such activities to reduce women's labour, and these SHGs will play a crucial role in the implementation of other such initiatives.

Pressure cookers reduce cooking time by as much as 70%, which is a great reduction in terms of time, making it a handy tool to quickly get the meal in time.
USHERING IN A SOCIAL CHANGE WITH GOAT REARING GROUPS

A COLLECTIVE EFFORT TO GOAT REARING IS OFFERING A VIABLE LIVELIHOOD OPTION TO HOUSEHOLDS IN RURAL ODISHA
Goat rearing was thus prioritised as a means of subsistence in the Chikiti and Digapahandi blocks of the Ganjam district under the ‘Watershed Management Programme’ implemented by WOTR and supported by IndusInd Bank Limited. Initiated in 2018, the activity aimed to reach at least 56 households within the first two years.

The practise of selecting beneficiaries is well-established. WOTR personnel and community representatives identified landless people, migrant returnees, and small and marginal farmers, while excluding those who were already supported by other major livelihood activities. These recipients were then organised into Goat Rearing Groups (GRGs), which eventually evolved into a structured Goat Rearing Federation. The concept of forming such Federations stems from the fact that the stakeholders primarily face issues relating to poverty, illiteracy, lack of skills, and lack of access to formal credit, which cannot be addressed on an individual level but require a collaborative effort. Such organisation facilitates the dissemination of best practises and collective action.

Thus formed, the federation collected Rs. 1000 from each beneficiary as a contribution and was able to support 31 beneficiaries in the first year alone.

In exchange, the beneficiaries were given four female goats valued at Rs. 16,000, one male goat valued at Rs. 7000 and a shed worth
Rs. 17000. At the conclusion of the first year, all 31 recipients repaid Rs. 2,48,000 without interest. This sum allowed the federation to support six additional members through goat breeding. This recurring system initiated a chain reaction leading to prosperity.

Periodically, capacity-building and knowledge dissemination activities are conducted in the areas of shelter, preventative health care, reproduction, feeding, and financial services. In addition, the purchase and sale of goats is restricted to the Federation. The Federation also helps members gain access to credit if they wish to expand their work or are experiencing difficulty. Each member of the federation also contributes Rs. 20 per month to the federation’s administration.

Susama Malik is one of those who benefit from the goat-rearing endeavour. With the implementation of Watershed Management in her village, she received an additional 0.6 acres of cultivable land due to land treatment, which increased her agricultural income. Previously, she and her husband made a living by working for the forest department on a daily wage basis. However, with increased income from agriculture and now goat rearing, she and her family are now food and financially secure. Susama is now confident in her ability to expand her goat business and increase profits.
MOBILISING COMMUNITIES TO REJUVENATE DEGRADED LANDS

Climate resilient agriculture practices have helped farmers, particularly small and marginal ones, to mitigate the risks of climate change, reduce the cost of cultivation, increase productivity, and enhance their adaptive capacities.
The Odisha district of Ganjam is distinguished by its varied topography. Here, one can find everything from the renowned beaches of Gopalpur to the picturesque foothills of the Eastern Ghats. The eastern and northern region’s coastal plain is well-drained due to the flow of rivers and their tributaries, whereas the southern and western portions of the district are hilly and primarily comprise tablelands. The Eastern Ghats run along the district’s western border. In addition to relying on rainfall for agriculture, the western side is largely classified as wasteland.

The main goal of the WOTR intervention in Ganjam’s twenty villages, which was supported by IndusInd Bank Limited, was to treat the wasteland prone to erosion and harvest the rainfall.

Although rainfed agriculture has historically been the primary source of income for the local villagers, climate change has had a significant negative impact on the industry, resulting in significant losses for the farmers. Low crop production has made it difficult for most households to meet their domestic needs.
Numerous members of the community have turned to manual labour and the sale of livestock due to their meagre agricultural income. To make a living, many families move over short and long distances. The family’s farms and livestock are left unattended while the adults are away, which results in additional losses. Another issue that most households in these villages have long struggled to solve is their lack of access to government programmes and schemes.

2018 saw the start of the IndusInd Bank Limited-funded Watershed Management Programme here. To ensure the greatest possible impact of the work, the project team concentrated on community mobilisation during the first year. At the time the Village Development Committee (VDC) was established, maintaining a gender balance was important. The project team held numerous training sessions on watershed development for the VDC members. These individuals subsequently contributed significantly to knowledge transfer, instruction of farmers in water harvesting techniques, and direction of the villagers in the construction and maintenance of water harvesting structures. In addition to promoting knowledge of various cultivation techniques and organic farming, the project team and VDC members helped the village during the COVID crisis. In the village, significant capacity-building efforts were made for practises like paddy transplanting, developing organic formulas for crop enhancement, and implementing enablers for soil and water conservation.

Post the initial awareness drive and mobilisation of the community, the team took up land development activities. To make the initiative more participatory and drive ownership, the villagers were included in the manual labour as well as in the contribution towards the expenses. The accounts were managed by the village community in a transparent way and all the ledgers were kept accessible for social scrutiny for the complete participation of the villagers.

“While starting the land development intervention all the VDCs took the decision of contributing 40% of the expenses. The work was done through mechanical excavators hired
on an hourly basis.” said Anshuman Panda, In-charge, WOTR Odisha.

The outcomes have been nothing short of astounding. 273.3 hectares of waste land have been treated, of which 114.39 hectares have been treated by land levelling and 159 hectares have been treated by stone bunding and Loose Boulder Structures (LBS).

266 families have benefited from the land levelling, which has been a boon to the community as a whole. Each family received an average of one acre of land, from which approximately 2,100 kilogrammes of additional paddy and 1,500 kilogrammes of groundnut can be grown during the Kharif season. Anshuman added, “It was a direct and tangible benefit to these families.”

Chandramma Malik of the Uppar Haridabadi village, who previously owned roughly an acre of cultivable land, now has an additional half-acre of land on which she grows paddy, thereby ensuring the food security of her family. Previously, she practised rain-fed agriculture with insufficient water. As a result of the Watershed Management Programme and access to additional land, she anticipates harvesting 16 quintals of paddy during the Kharif season.

“The additional income from our land has enabled my family to meet its food requirements. I want to cultivate organic vegetables and make a living from them so that we never have to work as labourers again. I am excited to make this dream a reality,” she says, describing her future plans.

Kesab Malik of the village of Nakamundia has a similar tale to tell. During the Watershed Management Programme, he received training in sustainable farming techniques and had an additional 0.6 acres of land made cultivable by land levelling. Previously, with no other working family members, he worked at least 50 days per year as a daily wage labourer. Now that he has more land to cultivate, he makes his living by growing vegetables.

The interventions carried out by WOTR in the two blocks of Chikiti and Digapahandi in the district of Ganjam can be categorised as community mobilisation, land and water development, and climate-resilient sustainable agricultural practices. The benefits derived from the intervention have encouraged the villagers’ continued participation in advancing programmes. IndusInd Bank Limited and WOTR’s Watershed Management Programme is a project whose effects will be felt in the communities for years to come. Happier families with local livelihoods and increased agricultural income will not only strengthen the rural ecosystem, but also inspire others to adopt a more sustainable lifestyle.
Mobilising People is the bedrock of any community development project. When people come together and own their progress, change happens. This change is sustainable and puts the people firmly in the driver’s seat of progress.

The Watershed Management Programme being run in partnership between IndusInd Bank Limited and WOTR is about mobilising communities in the far flung rural regions of Ganjam District in Odisha. This booklet of case stories highlights some of the work that has been achieved through this pioneering project that is bringing change into this far flung, tribal dominated region in the extreme south of Odisha.