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Location: Durio, Pakur, Jharkhand

Project: "Empowering lives of Mal Paharia tribe through multi-dimensional interventions"
Title: Revitalizing Water Resources: A Case Study of Pond in Durio Village, Littipara, Pakur, Jharkhand

Anecdote: "This pond showcases the essence of amalgamation – visionary & people's participation at first place and again between villagers and 4S to rejuvenate the water resource for the greater good of the people." - Bandra Pahariya.

Background
Durio village is situated amidst the hilly terrain of the Littipara block, Pakur district, Jharkhand. The village is predominantly inhabited by the Mal Pahariyas, an indigenous tribal group native to the region. According to the villagers, there are currently around 33 households in the village. However, the community has long been grappling with water scarcity issues due to significantly low groundwater levels in the hilly area. The villagers heavily rely on rainfall for their survival, agricultural activities, and livestock rearing. Unfortunately, the women in the village face the burden of trekking distances up to 5 - 8 kilometers daily to fetch water for cooking and drinking purposes. The lack of access to adequate water resources has resulted in various health problems among the villagers, including vomiting, diarrhea, and excessive sweating. Since the village's survival depends on water availability, the community has been forced to rely solely on forest resources as their means of livelihood, for agriculture and livestock rearing require sufficient water availability.

Rationale

In response to the water scarcity challenges faced by the villagers in Durio village, investigation and its documentation were conducted to thoroughly understand the history and current condition of the existing pond. This comprehensive study aims to provide a solid foundation for future planning and decision-making regarding the sustainable utilization and management of the pond as a valuable water resource. Overall, the meticulous exploration of the pond's history and current condition serves as a crucial step towards addressing the water scarcity challenges in Durio village. By utilizing this information as a foundation, the village

can make informed decisions and implement effective solutions that will benefit the community both in the present and for future generations.

Objectives:

1. Conduct a comprehensive investigation to uncover the complete history and background of the pond in Durio village, including its initial construction, maintenance, and subsequent deterioration.
2. Explore the real problem and mitigate through initiatives/suggestions.

Before Intervention

Like any other Pahariya village, Durio also relies on seasonal rainwater for agriculture. Due to poverty and water scarcity, their diet mainly consists of leafy vegetables collected from forest, potatoes, onion, rice, and puffed rice. This stereotype and limited variety of vegetables adversely affected their health, as other vegetables couldn't grow in the area due to poor soil quality and lack of water. However, the soil is suitable for growing millet crops like bajra and arhar, which are known as drought-resistant crops. To fulfill their drinking water needs, they dug the soil 6 to 7 feet deep in the path of a nearby hilly river. During the rainy season, water would flow into these dug-out patches, which served as a temporary water source. The entire village depended on these makeshift arrangements. However, the amount of water collected was very little, taking one to two hours to fill a single bucket.

Intervention Process

It is crucial to highlight the individual who initiated this transformative endeavor for the entire community. Bandra Pahariya, the current owner of the Pokhar (pond), is now 63 years old. He narrates that this pond was initially constructed by his great grandfather (Chandu Pahariya), who was known as Buddhoban, meaning "clever" among the community. In honor of his great grandfather's wisdom and leadership, the pond came to be known as *Buddhoban Pond*. Remarkably, this pond has stood the test of time for over 150 years.

Bandra graciously shared the tale of how they discovered the ideal location for constructing the pond. The village is primarily surrounded by hills, and during the rainy season, water flows downstream. Additionally, water gets absorbed by the stones and slowly seeps into the soil, forming what is known as a seepage point. Recognizing this natural phenomenon, the people of the village, led by Bandra's great grandfather, began their search for a suitable site.

The first step they took was to communicate and discuss their idea with the entire community. They emphasized the importance of gathering people together to accomplish this significant undertaking. Teams were formed, and the community members were given instructions on how to locate a suitable spot. They dug the soil, going about 2 to 3 feet deep, and eventually discovered an area with moist soil near the foothills. After some time, they found a location where the stones released water into the soil at a slow pace. This spot served as the perfect capture point for rainwater runoff during the monsoon season. With determination, they continued digging and shaping the soil, ultimately creating the pond, which now sits 1.5 kilometers away from the habitation area of the village.

Outcome of intervention

The construction of the Buddhoban Pond not only solved the water scarcity issue for the community but also became a testament to the visionary thinking and resourcefulness of Chandu's great grandfather. The pond continues to serve as a lifeline for the villagers, providing them with water for various needs, ensuring better health, and offering opportunities for agricultural and livestock activities.

Makeshift arrangements of water for summer

Factors contributing to the deterioration of the pond

Even after digging the pokhar (pond), due to negligence and a lack of maintenance led to pond's deterioration. Had the locals been more diligent in their care and maintenance of the pond, they could have prevented or mitigated the effects of erosion caused by rainfall and the accumulation of debris. Deforestation by the locals, driven by the need to use the forest as a source of livelihood, further contributed to the problem. Forests play a crucial role in regulating the water cycle by promoting rainfall and preventing soil erosion. With the loss of trees, the ability of the ecosystem to retain water and control sediment runoff was diminished, leading to increased sedimentation in the pond. As a result, the pond became covered with soil, clay, and stones. The villagers found themselves facing their old problem of water scarcity once again.

Efforts to Address Water Scarcity Challenges

In the year 2022, in response to the water scarcity issue, the villagers held a meeting to address their concerns. During the meeting, they shared their struggles related to water scarcity and discussed the current condition of the Pokhar (pond) with the 4S organization. Serva Seva Samiti Sastha has been actively involved in various aspects of livelihood, women

empowerment, financial inclusion in the area since 2018. Their participation in the meeting and their consent for their commitment to supporting the community in addressing the water scarcity problem led to the process of resurrection of the pond.

Following the meeting, conversations were initiated with various individuals, and the entire village came together and agreed to take turn everyday and monitor the progress and report to the committee. The villagers themselves formed a committee at that place to safeguard the pond for longevity, issued some norms over water usage and labour contribution for bunding the banks of the pond. The pond was thus dug out again by machinery investing a sum of Rs. 1.65 lakh rupees. Currently, the pond is around 12 feet deep and has 4 feet deep water still intact with spring points generating 12 liters per second of water.

Positive Impacts of Pond Rejuvenation on Livelihood and Quality of Life

The rejuvenation of the pond has brought about numerous positive changes, addressing water scarcity faced by the villagers and their livestock. The accessibility of the pokhar (pond's) water has benefited the local population in various ways. People in the area now have a reliable water source for bathing and other daily needs, significantly improving their quality of life. The women have experienced significant advantages as they no longer have to spend considerable time traveling to collect water. This newfound time can now be utilized for engaging in other productive activities, like engagement of women in leaf plate making unit for economic advantage.

The current situation in this village is challenging due to the insufficient water supply provided by only one pokhar (pond) and one chapakal (hand pump). The pokria is located 1.5 km away from the village, and the road leading to it is in poor condition, especially considering the hilly terrain. This poses a significant problem, particularly for women who need to traverse these difficult roads to access water. Moreover, the chapakal water level is decreasing day by day, further exacerbating the issue. The community relies heavily on this limited water source, causing a considerable strain on their access to an adequate water supply. Therefore, it is imperative to take initiatives for ground water recharge, such as staggered trenches, 30-40 model, TCB through MGNREGA to facilitate the slow replenishment of water underground, which would greatly assist in water recharge and alleviate the water scarcity issue in the village. Recently, recently 3 acres of BIRSA HARIT GRAM YOJNA - AAM BAGWANI (FY 23-24) under MGNREGA has been sanctioned under MGNREGA attracting a sum of Rs. 11,250,000 as convergence fund (3.75 lakhs per acre over period of 5 years).

Furthermore, it would be crucial to educate the villagers about efficient water usage and management techniques to reduce wastage and promote sustainability. Implementing rainwater harvesting systems and promoting water-efficient agricultural practices can also contribute to addressing the water scarcity challenges faced by the community.