



# Impact Assessment Report (Abridged)

IndusInd Bank Limited

May 2026

**Price Waterhouse Chartered Accountants LLP**

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10. Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders. The recommendations provided may not be exhaustive from the perspective of bringing about improvements in the CSR Project(s) and additional steps/efforts may be required on the part of the management to address the same.

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## Executive Summary

Impact assessment under CSR rules is mandatory for companies with an average CSR obligation of INR 10 crore or more in the three preceding financial years, as per Rule 8(3)(a) of the Companies (CSR Policy) Rules, 2014. Such companies must conduct impact assessments through an independent agency for CSR projects with outlays of INR 1 crore or more, completed at least one year prior to the study. The assessment report must be placed before the Board and annexed to the annual CSR report.

Pursuant to this requirement by MCA, **IndusInd Bank Limited (IBL)**, commissioned **Price Waterhouse Chartered Accountants LLP (PWCALLP)** as an independent agency to evaluate the impact of its 5 CSR Projects under the theme of Environment Sustainability (Water Stewardship), namely:

- Spring Water Conservation and Management programme | Odisha
- Watershed Management Programme for Building Adaptive Capacities and Resilience to Climate Change of Marginalized Communities | Jharkhand
- SARAL through River Water Harvesting | West Bengal
- BIWAL-Combating Agricultural Stress through Reviving Traditional water bodies, efficient water use, Technology and Community Governance | Madhya Pradesh
- Watershed Development and Agricultural Productivity Enhancement through Promoting Need Inputs | Madhya Pradesh

The assessment measured outputs, outcomes, and impact using Key Performance Indicators (KPIs) established by IBL's management, aligned with the Organisation for Economic Co-operation and Development – Development Assistance Committee (OECD-DAC) framework.

### Summary of Impact Created:

IBL's CSR initiatives under Environment Sustainability theme for Water Stewardship aimed to build resilient, self-reliant rural communities and ensure sustainable water availability. Through multiple Water Stewardship interventions, the programmes facilitated notable improvements in income, agricultural productivity, crop diversification, and sustainable farming.

Key achievements included **creating and restoring reliable water sources** via water and soil conservation structures such as check dams, ponds, bunds, trenches, gabions, diversion-based irrigation, and solar lift systems. These efforts reduced farmers' vulnerability to erratic rainfall, enhanced groundwater recharge, and reduced dependence on monsoons. Community institutions like Water User Groups enabled collective management and sustainability of these water assets.

**Income gains** across interventions resulted from better water access, improved irrigation, higher yields, and diversified cropping. Crop yields rose significantly for paddy pulses, vegetables, and horticultural crops, supported by organic inputs that reduce costs and external dependencies. Women farmers benefit through innovative practices like nutrition gardens, multilayer farming and were involved in managing local seed banks.

**Crop diversification** shifted many farmers from mono-cropping to multi-cropping systems across seasons of Rabi, Kharif and Zaid, enhancing food and income security. Expanded

cropping intensity and multi-season cultivation improved land use and created steady income flows, strengthening resilience against climatic fluctuations.

The programmes also focused on enabling better nutrition and **reducing drudgery**. Kitchen gardens supported household level food production, while access to safe drinking water saved time from fetching water especially for women.

In totality, IBL's Water Stewardship efforts increased yields and thereby incomes, diversified agriculture, and promoted sustainable multi-season farming, enabling stronger livelihoods, and resilient communities.

## 1. About IndusInd Bank Limited

**IndusInd Bank Limited (IBL)** is a financial institution committed to sustainable growth, driving community empowerment, environmental stewardship, and stakeholder value creation through its extensive CSR initiatives.

The Bank's CSR framework adopts a long-term, impactful strategy divided into Flagship Programmes and Strategic Programmes. **Flagship Programmes** emphasise holistic rural development and align with national priorities such as the NITI Aayog's Aspirational Districts initiative, aiming to enhance economic empowerment and resource efficiency over a 5 to 10-year period. **Strategic Programmes**, lasting 3 to 5 years, focus on addressing key issues related to the environment, education, and sports inclusiveness in urban and semi-urban areas. These efforts are further strengthened through partnerships with government agencies, NGOs, and public-private collaborations.<sup>1</sup>

Figure 1: IBL's Key CSR Focus Areas



<sup>1</sup> Source: <https://www.indusind.com/in/en/csr-home/our-approach/csr-policy.html>

## 2. Overview of CSR Projects

IBL's Water Stewardship portfolio adopted an integrated, multi-state approach to **enhance water security and sustainable agriculture**. The interventions were deployed in rural communities across states of Odisha, Jharkhand, West Bengal, Madhya Pradesh, Jharkhand.

Key interventions included **constructing water harvesting structures** (check dams, farm ponds, river lift irrigation systems), promoting **efficient irrigation technologies** (drip, sprinkler, diversion and solar lift irrigation), and **strengthening local institutions** such as Water User Groups and Village Development Committees. These measures were designed to ensure reliable, year-round water access, reduce dependence on erratic rainfall, and improve irrigation efficiency. **Capacity-building** efforts empowered farmers with improved agricultural practices, composting, and irrigation maintenance, and promoting **adoption of climate-smart practices**. The portfolio also prioritised improving **access to safe drinking water**, thereby reducing time and drudgery, especially for women and **community ownership and governance** of water resources. Together, these integrated interventions aimed to foster stronger, more self-reliant rural livelihoods adapted to local ecological and socio-economic contexts.

### Project Profiles

- **Spring Water Conservation and Management programme | Odisha**
  - The tribal communities in the programme area experienced water scarcity for both drinking and irrigation, which limited cropping primarily to the monsoon season and contributed to food insecurity. The absence of sufficient water infrastructure hindered equitable water access.
  - To address these challenges, the programme installed Diversion Based Irrigation systems that use pipelines to transport water from springs and streams to fields, enhancing irrigation availability during dry seasons. Solar Lift Irrigation systems were also deployed to pump water from lower elevations enabling year-round cultivation. The project promoted horticulture by distributing saplings of mango and cashew trees. Solar-powered water filters were introduced to ensure safe drinking water and reduce the burden of water collection on women.
- **Watershed Management Programme for Building Adaptive Capacities and Resilience to Climate Change of Marginalized Communities | Jharkhand**
  - The marginalised tribal communities in the programme locations faced challenges regarding soil erosion, water scarcity, restricted cropped area, and mono-cropping practices. Inequitable distribution of water resources and lack of local governance mechanisms further compounded the challenges.
  - The intervention constructed integrated watershed infrastructure such as farm bunds, gabions, trenches, gully plugs, and ponds to reduce runoff and conserve soil moisture, enhancing water retention and land productivity. To increase cropping intensity and water use efficiency, drip and sprinkler irrigation systems were provided. Capacity building covered advanced practices including System of Rice Intensification, lac cultivation, and vermicomposting, along with irrigation system maintenance. Village Development

Committees and Gram Sabhas were enabled to oversee water resource management, fostering transparency and community ownership.

- **SARAL through River Water Harvesting | West Bengal**

- The villages in programme area faced issues such as poor access to irrigation, limited cropping intensity, widespread soil erosion along riverbanks, inadequate safe drinking water, and reliance on mono-cropping due to lack of proper water infrastructure
- To tackle these issues, the project installed River Lift Irrigation systems to utilise surface water effectively and increase irrigation coverage. It constructed check dams and sluice gates to enhance groundwater recharge, and renovated ponds to enhance water storage capacity. Solar water filtration systems were deployed to provide safe drinking water and reduce the incidence of waterborne illnesses. Crop improvement initiatives were undertaken, and Water User Groups and Village Development Committees were formed and strengthened to facilitate collective management and maintenance of irrigation assets.

- **BIWAL-Combating Agricultural Stress through Reviving Traditional water bodies, efficient water use, Technology and Community Governance | Madhya Pradesh**

- The programme was implemented to address challenges such as declining groundwater levels, limited irrigation duration, and lack of awareness regarding sustainable farming across 135 villages.
- Water conservation and management measures were implemented aimed at increasing irrigation availability through sustainable groundwater use. Climate-smart and organic farming techniques such as composting and vermicomposting were imparted to the farmers. Multilayer farming methods were introduced to boost vegetable production and provide alternative income sources, especially to women farmers.

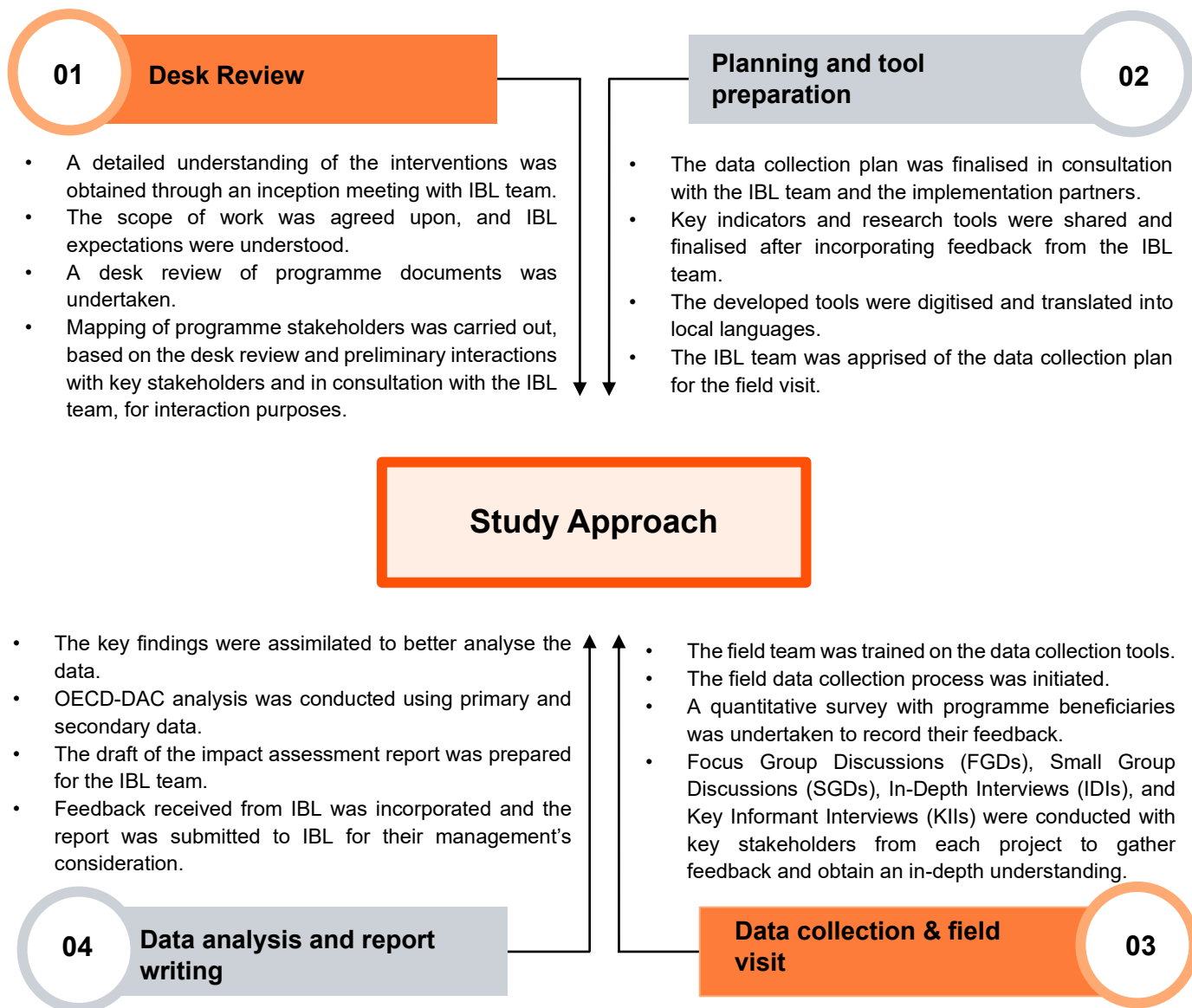
- **Watershed Development and Agricultural Productivity Enhancement through Promoting Need Inputs | Madhya Pradesh**

- The villages in the programme area had degraded lands with poor water retention, and heavy reliance on rainfed agriculture, with high vulnerability to climatic variability.
- The project developed watershed structures including contour trenches, farm ponds, and check dams to enhance soil and water conservation. Irrigation technologies such as drip and sprinkler systems were introduced to improve water efficiency. Farmers received capacity building on sustainable agronomic practices covering organic input application and integrated nutrient management. The project also strengthened community institutions to improve water governance and collective decision-making.

### 3. Method of Impact Assessment

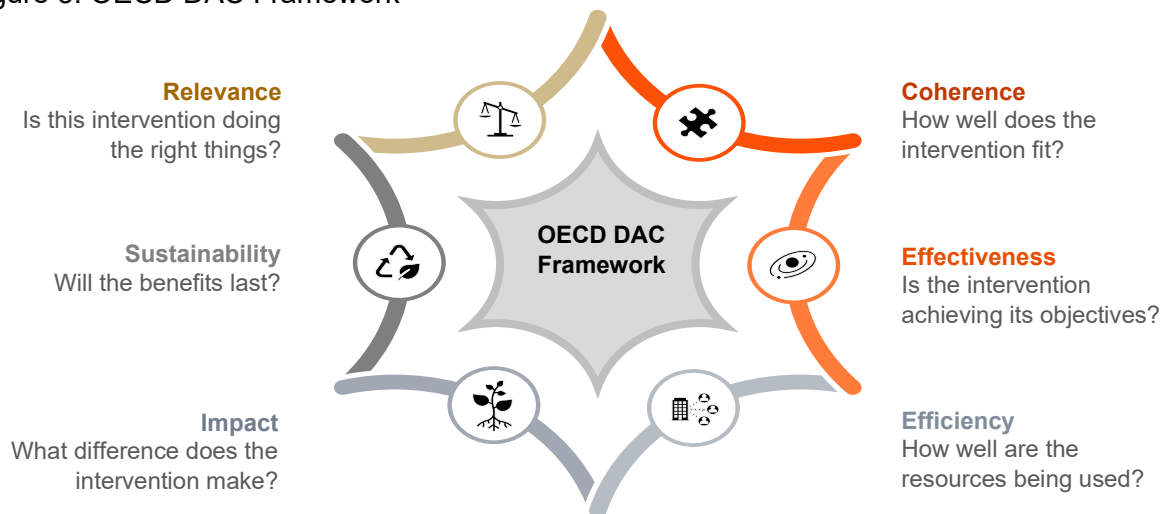
IBL engaged PWCALLP to conduct an impact assessment of its 5 Water Stewardship CSR programmes. The assessment aimed to evaluate the impact achieved during the specified programme period. The scope of work included reviewing the Key Performance Indicators (KPIs) established by IBL’s management within the programme implementation framework, focusing on the programme’s outputs, outcomes, and overall impact. This is an abridged report created based on the impact assessments undertaken for 5 projects and detailed reports have been submitted to IBL management as a part of this scope.

Figure 2: Method of assessment



The impact assessment of all five CSR projects was conducted using the **OECD DAC framework**, which measured project performance across six parameters: **Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability**. An overview of the key areas assessed under each parameter is provided below.

Figure 3: OECD DAC Framework



A **mixed-method approach** was adopted for the impact assessment of each project, combining both qualitative and quantitative techniques to gain comprehensive insights. For the quantitative component, a structured sampling plan was used, with the **sample size determined at a 90% confidence level and a 5% margin of error**. Additionally, the qualitative assessment involved diverse interactions with stakeholders through IDIs, FGDs, SDGs and KIIs to gather detailed feedback. The specifics of the quantitative and qualitative samples as agreed with IBL are provided in the table below.

Table 1: Sampling Plan

#	Project details	Beneficiaries Impacted	Quantitative sample size	Qualitative sample size
1	Spring Water Conservation and Management programme (LivoLink Foundation)   Odisha	2,200	242	14
2	Watershed Management Programme for Building Adaptive Capacities and Resilience to Climate Change of Marginalized Communities (Watershed Organisation Trust)  Jharkhand	2,946	255	14
3	SARAL through River Water Harvesting (Ambuja Cement Foundation),   West Bengal	20,827	277	12
4	BIWAL-Combating Agricultural Stress through Reviving Traditional water bodies, efficient water use, Technology and Community Governance (SRIJAN)   Madhya Pradesh	23,096	270	14
5	Watershed Development and Agricultural Productivity Enhancement through Promoting Need Inputs (Watershed Organisation Trust)   Madhya Pradesh	9,218	267	14

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- The report prepared by the PWCALLP is based upon the (a) information/ documents provided by IndusInd Bank Limited and its implementation partner and (b) data collected virtually by the PWCALLP team. PWCALLP performed and prepared the Information at the client's direction and exclusively for the client's sole benefit and use pursuant to its client agreement. Our report is based on the completeness and accuracy of the above-stated facts and assumptions, which if not entirely complete or accurate, should be communicated to us immediately, as the inaccuracy or incompleteness could have a material impact on our conclusions.
- PWCALLP's work was limited to the samples/ specific procedures described in this report and were based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the project, selected as respondents. Accordingly, changes in circumstances/samples/procedures or information available could affect the findings outlined in this report.

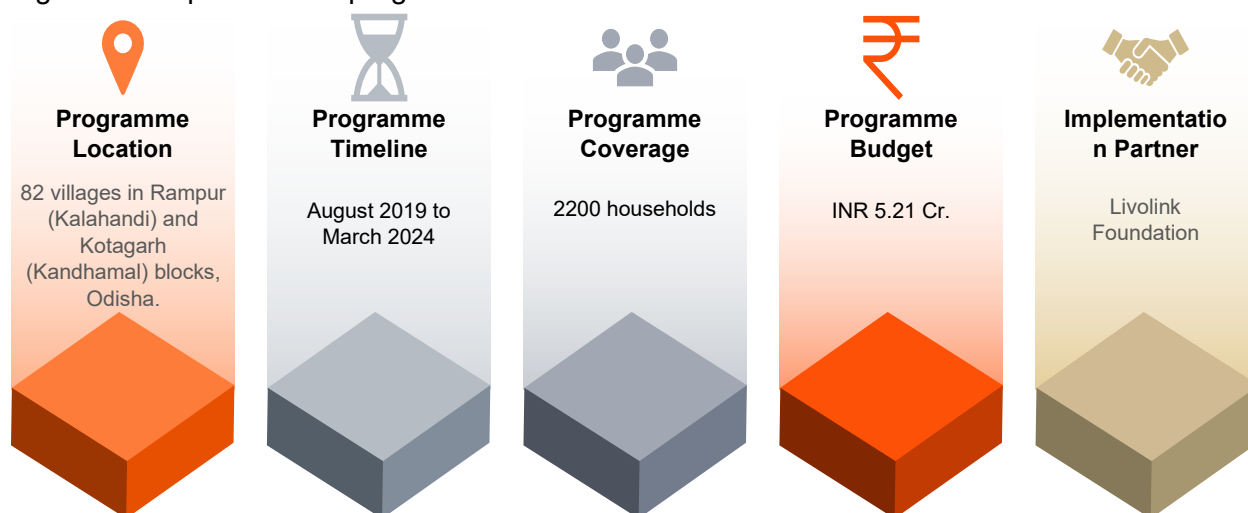
## 4. Project-wise Summaries

### Project 1: Spring Water Conservation and Management programme | Odisha

#### About the Project

The **Spring Water Conservation and Management (SWCM) Programme** was implemented by IBL in collaboration with the Livolink Foundation with the aim of conserving and managing spring water to ensure its availability in the programme area for both drinking and irrigation purposes. This initiative sought to improve crop yields and increase the income of farmers.

Figure 4: Snapshot of the programme under assessment<sup>2</sup>



#### Key Findings and Analysis (basis OECD-DAC parameters)

##### Relevance:

- The programme **addresses critical challenges** faced by predominantly Scheduled Tribe communities in Kalahandi and Kandhamal districts, notably **severe water scarcity for both drinking and irrigation**. The implementation of Diversion Based Irrigation (DBI) and Solar Lift Irrigation systems has significantly **improved water availability for irrigation, while the installation of water filters in DBI villages has ensured access to safe drinking water**.
- 84% of respondents belong to Scheduled Tribes, and **100% of surveyed beneficiaries reported positive impacts from the water conservation activities**.
- Women, who traditionally faced **hardships traveling up to 1 km to collect unsafe drinking water**, have benefited markedly; **68% of respondents confirmed the installation of drinking water filters in their villages**, reflecting substantial progress in improving safe water access.
- By focusing on **water conservation and irrigation, the programme directly responds to pressing community needs**, demonstrating strong relevance to the target population.

<sup>2</sup> Source: Programme Completion Report (PCR) shared by IndusInd Bank Limited for the period of August 2019 to March 2024

- Additionally, low water availability combined with limited awareness of improved agricultural techniques **contributed to low productivity**. This has been addressed through the promotion of better farming practices such as the **application of farmyard manure, line transplantation, and summer plowing**, further enhancing the programme’s relevance in improving livelihoods.

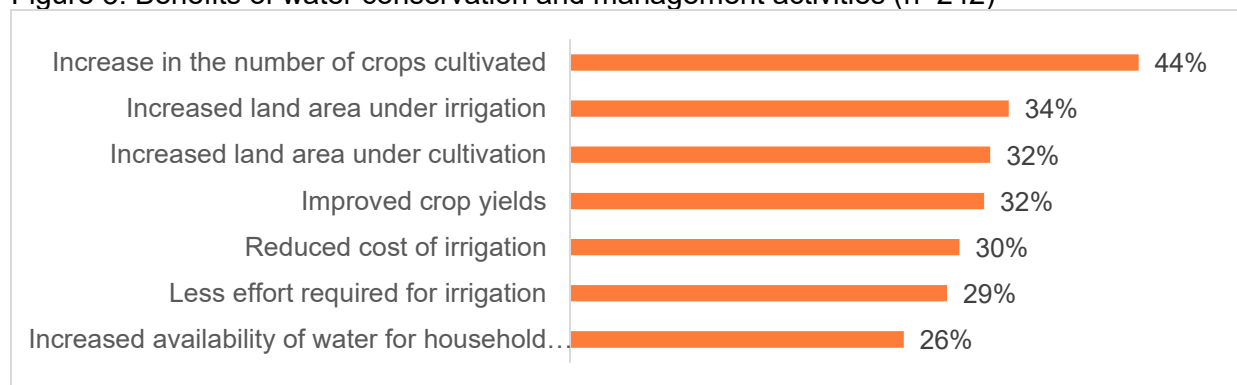
**Coherence:**

- The programme demonstrates **strong coherence by aligning closely with key government initiatives such as the Odisha Livelihood Mission and local horticultural development programmes**, thereby complementing and reinforcing public sector efforts at the community level. This convergence facilitates the integration of Integrated **Natural Resource Management (INRM) activities with existing government schemes** in the programme villages, promoting harmonised development outcomes.
- Programme aligns well with **IndusInd Bank’s Corporate Social Responsibility (CSR) goals** focused on **environmental sustainability**, ensuring corporate commitments are effectively translated into impactful community interventions.
- Furthermore, the initiative contributes directly to multiple **Sustainable Development Goals (SDGs), notably SDG 1 (No Poverty), SDG 6 (Clean Water and Sanitation), and SDG 13 (Climate Action)** reflecting its alignment with global development priorities and enhancing the strategic coherence of its interventions within broader national and international frameworks.

**Effectiveness & Efficiency:**

- The programme has demonstrated **strong effectiveness in improving water accessibility, agricultural productivity, and livelihoods for beneficiaries**. Approximately **65% of participants benefited from the Diversion Based Irrigation (DBI) system**, while the remaining **35% gained from Solar Lift Irrigation (SLI) systems**, ensuring broad coverage of irrigation needs.
- Among those benefiting from water conservation and management activities, 44% of respondents (n=242) reported an increase in the number of crops grown, 34% saw expanded land under irrigation, 32% experienced higher crop yields, and 30% noted a reduction in irrigation costs.

Figure 5: Benefits of water conservation and management activities (n=242)



Multiple coding question, responses may add up to more than 100%.

- As a result of improved water availability, the total **cultivated land increased by 3%**, with a notable **7% expansion during the Kharif season**.
- The time required for irrigation per acre decreased significantly from **5.48 hours to 3.16 hours**, while **irrigation costs reduced by 30%**, **cutting expenses from INR 2,148 to INR 1,511 per acre**. The financial efficiency was further enhanced as solar pumps replaced diesel-powered pumps, eliminating fuel costs and lowering operational expenses.
- Targeted training and awareness initiatives **encouraged the adoption of organic manure and other sustainable agricultural practices**, contributing to a shift away from unsustainable shifting cultivation toward environmentally friendly farming methods. While cultivation costs saw a slight increase, these were outweighed by yield improvements and higher incomes.

## Impact:

### Improved Water Accessibility through Conservation and Management Initiatives

Beneficiaries highlighted water scarcity for drinking and irrigation as a major challenge prior to the programme. Following the intervention, notable improvements were observed in access to water for both agriculture and household use.

- All respondents (**100%, n=242**) reported benefiting from the water conservation and management interventions implemented under the programme.
- Improved water availability enabled farmers to access irrigation across seasons, reducing dependence on erratic rainfall and supporting more reliable crop planning.
- A clear shift in irrigation sources was observed, with farmers increasingly relying on structured irrigation systems **such as DBI (55%) and SLI (31%) (n=242), indicating improved access to more reliable and diversified water sources**.
- Improved water access led to better utilisation of agricultural land, with total cultivated area increasing from 2.61 to 2.68 acres, alongside expansion in seasonal cultivation (n=242).
- **Time required for irrigation reduced from 5.48 to 3.16 hours per acre, indicating improved efficiency and reduced labour burden** for farming households.
- The programme also improved access to safe drinking water through installation of water filters, with 68% of respondents (n=242) confirming availability in their villages.
- Time spent fetching water reduced substantially, with most respondents reporting less than one hour per day compared to several hours earlier (n=164).

### Boosting Agricultural Productivity

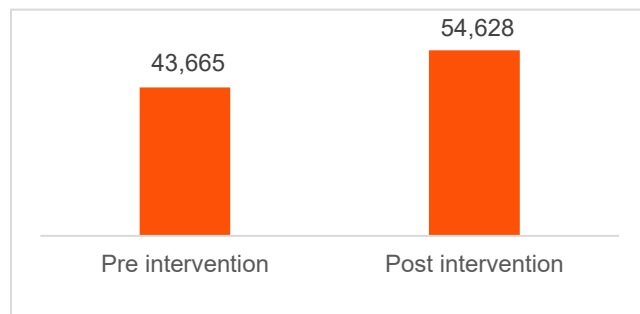
Farmers increasingly adopted vegetable cultivation, growing crops such as cabbage, cauliflower, tomato, brinjal, cowpea, and bitter gourd, which were previously not widely cultivated due to lack of water.

- In villages such as Sandimaha and Madaguda, **farmers reported annual incomes ranging between INR 1,00,000 to 1,50,000 from vegetable cultivation**, reflecting improved livelihood opportunities.
- Farm productivity improved across major crops, supported by better irrigation and adoption of improved practices. **Yield increases were recorded for paddy (+13%), millets (+10%),**

**cotton (+12%), and turmeric (+31%), while Rabi crops such as pulses (+16%) and vegetables (+46%) also showed significant improvements.**

- Farmers adopted improved agricultural practices such as use of organic manure, optimal spacing, and better crop management techniques, contributing to enhanced yields and soil health.
- Cost of cultivation increased marginally for certain crops due to higher input investments; however, farmers reported greater willingness to invest due to improved returns and reduced production risks.
- Horticulture interventions, including distribution of fruit tree saplings (mango and cashew), provided additional income opportunities, with some farmers earning INR 60,000–70,000 annually.
- The **average annual income of farmers from agriculture and allied activities increased from INR 43,665 to INR 54,625, representing a 25% growth.**
- Improved irrigation infrastructure enabled year-round vegetable cultivation, leading to greater crop diversification and intensified farming; the proportion of **farmers practicing cultivation in all three seasons increased from 3.3% to 9.5%.**

Figure 6: Average annual income from agriculture and allied activities (Pre & Post Intervention)



### Strengthening Community Awareness and Knowledge on Water Conservation

The programme strengthened community participation and ownership through the formation and active functioning of Water User Groups.

- Water User Groups were established among beneficiaries and trained in collective management, operation, and maintenance of irrigation and water systems.
- 82% of respondents (n=242) reported that these groups are responsible for maintaining water infrastructure, while 50% confirmed that systems are functioning in good condition.
- Community members demonstrated ownership through active participation in maintenance activities such as cleaning solar panels, managing water distribution schedules, and contributing funds for repairs.
- In villages such as Pandaripi, beneficiaries collectively contributed approximately INR 25,000 toward maintenance, indicating strong commitment to sustaining project benefits.
- These practices reflect strengthened community governance, improved accountability, and a willingness to sustain and manage shared resources over the long term.

### Sustainability:

- Community-led **Water User Groups (WUGs) play a central role in sustaining the programme's impact** by efficiently managing the maintenance and repair of irrigation infrastructure.

- A strong majority (**82%**) of respondents confirmed active **WUG involvement in infrastructure upkeep, including regular financial contributions.**
- In Pandaripi village, **WUG collectively saved around INR 25,000** to fund repairs and ongoing system maintenance, reducing reliance on external support.
- As a result, **50% of respondents reported that the water systems remain in good condition** following implementation, reflecting the effectiveness of local management in ensuring long-term sustainability.

### Alignment with IBL CSR Policy and SDGs

The programme supports IBL's CSR focus on Environmental Sustainability and contributes to key SDGs:

The programme aligns with IBL's **CSR policy, which prioritises Environment Sustainability<sup>3</sup>** as a key thematic area. It also supports the achievement of **Sustainable Development Goals<sup>4</sup>**, specifically SDG 6 (Clean water and Sanitation), SDG 13 (Climate Action) and SDG 1 (No Poverty).

**SDG 1: No Poverty-** The programme supports No Poverty by increasing agricultural productivity and household incomes through improved irrigation. It promotes sustainable livelihoods with horticulture crops and enhances food security via year-round cultivation.



**SDG 6: Clean Water and Sanitation-** The programme improves water availability by implementing Diversion Based Irrigation (DBI) systems that capture and distribute natural spring water for year-round irrigation. Installation of water filters ensures access to safe drinking water, significantly reducing waterborne diseases. Together, these efforts enhance water quality, accessibility, and governance, directly supporting SDG 6 targets.



**SDG 13: Climate Action-** The programme strengthens climate resilience by adopting water conservation and management initiatives such as DBI and SLI. Solar-powered irrigation reduces reliance on fossil fuels, lowering carbon emissions. By discouraging shifting cultivation, the programme helps conserve forests, supporting carbon sequestration and biodiversity. These measures collectively enable communities to adapt to climate variability while contributing to climate change mitigation, aligning with SDG 13 goals.



### Recommendations

#### 1. Broadening Programme Reach to Foster Inclusive Growth and Sustainability

Although Diversion Based Irrigation (DBI) and Solar Lift Irrigation (SLI) systems have been successfully implemented, their benefits currently reach only a limited number of farmers and residents. Many in the community are yet to experience these advantages. To enable more inclusive and equitable development, future programme planning should aim to expand coverage

<sup>3</sup> Source: <https://www.indusind.com/content/dam/indusind-corporate/generic/CSR-Policy.pdf>

<sup>4</sup> Source: <https://sdgs.un.org/goals>

so that a greater number of farmers can participate and benefit. Wider accessibility will improve agricultural productivity, increase water availability, reduce disparities among households, and strengthen social cohesion, which are key factors for the long-term sustainability and collective management of natural resources.

## **2. Strengthening Community Ownership and Fair Use of Solar Lift Irrigation Systems**

Among the five villages visited for the qualitative survey, all villages where Solar Lift Irrigation (SLI) systems were supported have adopted collective use of the system by beneficiary groups, although some challenges persist. In one particular village, while six households initially shared the system, only two currently have access, which limits fair benefit-sharing and undermines the principles of collective management. To ensure equitable and fair usage of the SLI systems, the implementing partner should closely monitor all 33 Solar Lift Irrigation locations. Additionally, beneficiary selection processes should be made more transparent to prevent domination by a few individuals. It is recommended that a formal agreement or memorandum of understanding be signed by all beneficiaries in the presence of Gram Panchayat members. This agreement should explicitly state that the system is for collective use and discourage exclusive claims. Furthermore, the agreement should include a dispute resolution mechanism, enabling group members to raise concerns with the Gram Panchayat for timely intervention and resolution.

## **3. Promoting Ridge-to-Valley Approaches for Sustainable Water Resource Management**

The programme's focus on DBI and SLI systems has met immediate water needs, and some soil and water conservation efforts have been implemented through government convergence. However, these interventions are not yet available across all programme areas. Since current systems meet only immediate demands, any major disruption could halt benefits altogether. To ensure long term water sustainability, the programme should emphasise ridge-to-valley watershed management practices such as contour trenches, gully plugs, gabions, check dams, and farm ponds that stabilise soil and enhance groundwater recharge. This approach will help maintain and gradually improve water availability in the community over time.

## **4. Improvement and Maintenance of Drinking Water Filter Facilities**

During the visit, it was observed that several drinking water filters were either unused or in poor condition, and the existing structures were not maintained in a clean and hygienic state. This poses potential health risks to the community. Therefore, it is recommended to undertake necessary repairs and maintenance of the water filter systems and ensure regular cleaning to safeguard the health and well-being of community members.

### **Study Limitations**

- **IP's Limited Team and Data Availability:** The Livolink Foundation team had transitioned out from the programme location before the impact assessment study, limiting access to detailed programmatic information and a complete beneficiary list, which affected precision of the sampling plan.
- **Geographical Coverage:** Due to unavailability of IP team and limited field support, the study was conducted only in Kandhamal, excluding Kalahandi as initially planned, reducing the geographic scope.

- **Field Access Constraints:** Some key sites, including a hilltop DBI location, were inaccessible during the data collection phase, limiting direct observation and detailed data from those areas

## Success Stories

### Empowering Livelihoods: Rabindra's Journey to Year-Round Farming Success

Rabindra (Name changed) is a resident of Madaguda village in Kotagarh block of Kandhamal district, Odisha. His family consists of four members, his wife and two children. They own three acres of agricultural land, traditionally cultivating paddy and black gram during the Kharif season. However, due to a **lack of adequate water resources, they were unable to cultivate any crops during the Rabi and summer seasons**. Although there was a community pond nearby, the absence of irrigation infrastructure prevented them from utilizing this water for farming. This seasonal dependence on the Kharif crop was insufficient to meet the family's needs, limiting Rabindra's ability to support his children's education.

Between 2019 and 2024, IBL, in collaboration with the Livolink Foundation, implemented the **Spring Water Conservation and Management Programme across 82 villages in Kandhamal and Kalahandi districts, including Madaguda**. The programme introduced multiple water conservation and livelihood initiatives, with the installation of Solar Lift Irrigation (SLI) systems being a key activity in Madaguda.

Rabindra was one of the **beneficiaries of the SLI system and received support through vegetable seeds and training on effective vegetable** cultivation, including crops like cauliflower and cabbage. After the installation of the solar lift irrigation system, **Rabindra's one acre of farmland is now fully irrigated, enabling him to cultivate a variety of vegetables such as tomatoes, brinjals, cabbage, and cauliflower throughout the year**. This shift has allowed him to farm across all three seasons, Kharif, Rabi, and summer.

In addition to improved irrigation, Rabindra adopted organic manure practices, having learned about its benefits during the programme's training sessions. This not only enhanced soil fertility but also contributed to better crop yields.

Today, Rabindra earns an annual income of **INR 1 to 1.5 lakh from vegetable cultivation**. This increased income has significantly improved his family's living standards and allowed him to provide **quality education for his children**. Rabindra expresses his heartfelt gratitude to IBL and the Livolink Foundation, acknowledging their support as a transformative force that has uplifted the economic status of his family.

### A Fruitful Future: Cashew Orchard Brings New Income and Opportunity:

Ramesh (name changed) is a farmer residing in Pandaripi village, located in the Kotagarh block of Kandhamal district, Odisha. Like many in his community, Ramesh depends on agriculture for his livelihood, **traditionally cultivating seasonal crops that often-yielded limited income due to water scarcity and lack of infrastructure**.

As part of the Spring Water Conservation and Management programme implemented by IBL in partnership with the Livolink Foundation, Ramesh received **40 cashew saplings to plant on his farmland**. This support was **complemented by technical guidance and encouragement** from

the programme team, enabling him to establish a horticulture orchard alongside his existing agriculture.

Today, Ramesh's cashew orchard is flourishing. The trees began bearing fruit, **providing him with a new and steady source of income**. He earns approximately **INR 70,000 annually from the sale of cashew nuts**, which has significantly improved his family's economic condition.

This additional income has empowered Ramesh to **invest more confidently in his household's well-being, including better nutrition, health care, and education for his children**. He acknowledges that the opportunity to cultivate cashew trees, made possible through the programme's support, has been transformative.

Ramesh expresses sincere gratitude to IBL and the Livolink Foundation for their sustained support and for enabling him to build a more secure and prosperous future for his family through horticulture.

## Project 2: Watershed Management Programme for Building Adaptive Capacities and Resilience to Climate Change of Marginalised Communities | Jharkhand

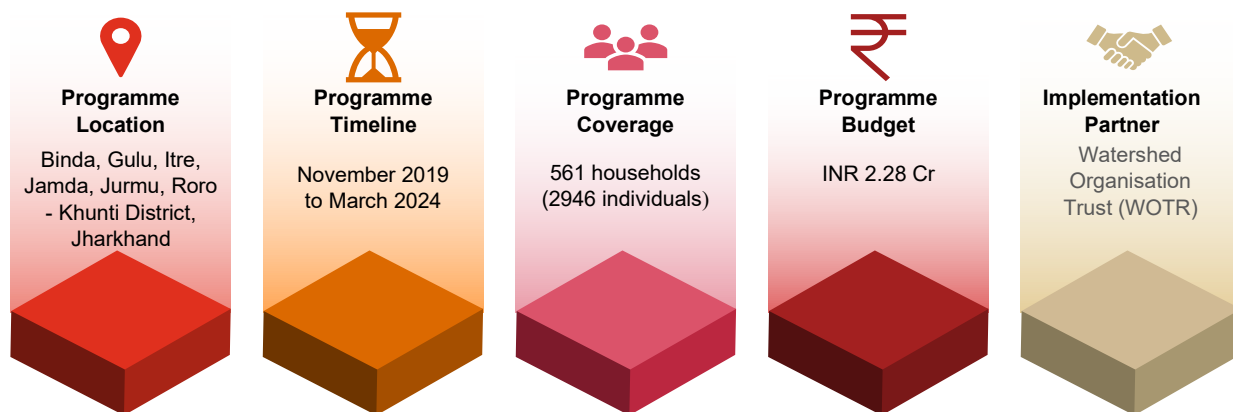
### About the Project

The 'Watershed Management Programme for Building Adaptive Capacities and Resilience to Climate Change of Marginalised Communities,' was a collaborative initiative between IndusInd Bank Ltd. (IBL) and the Watershed Organisation Trust (WOTR), implemented across six villages in the Murhu block of Khunti district, Jharkhand. Running over a five-year period (2019–2024), the project sought to strengthen the adaptive capacities and resilience of marginalised communities against climate change by advancing natural resource management and sustainable soil and water conservation practices.

The programme aimed to reduce farmer vulnerabilities through the development of response capacities, livelihood assets, and physical infrastructure, while promoting climate-resilient agriculture and diversified income opportunities.

Key objectives included expanding water harvesting measures to combat soil erosion and conserve resources, crop diversification to enhance agricultural resilience, supporting income diversification through lac cultivation and non-farm activities and facilitating access to government schemes to improve community income and security.

Figure 7: Snapshot of Programme under Assessment



### Key Findings and Analysis (basis OECD-DAC parameters)

#### Relevance:

- The programme strategically targeted key local environmental challenges such as chronic water scarcity, soil erosion, and low agricultural productivity, which directly impact 62% of farmers in the region.
- It prioritised vulnerable groups, especially Scheduled Tribes, who represent 97% of beneficiaries, aligning well with IBL's Corporate Social Responsibility (CSR) goals to **empower marginalised communities** economically and support natural resource management. The initiative addressed the paradox of Jharkhand's high rainfall yet severe

water shortages through sustainable watershed interventions, ensuring the program was contextually aligned with local needs.

**Coherence:**

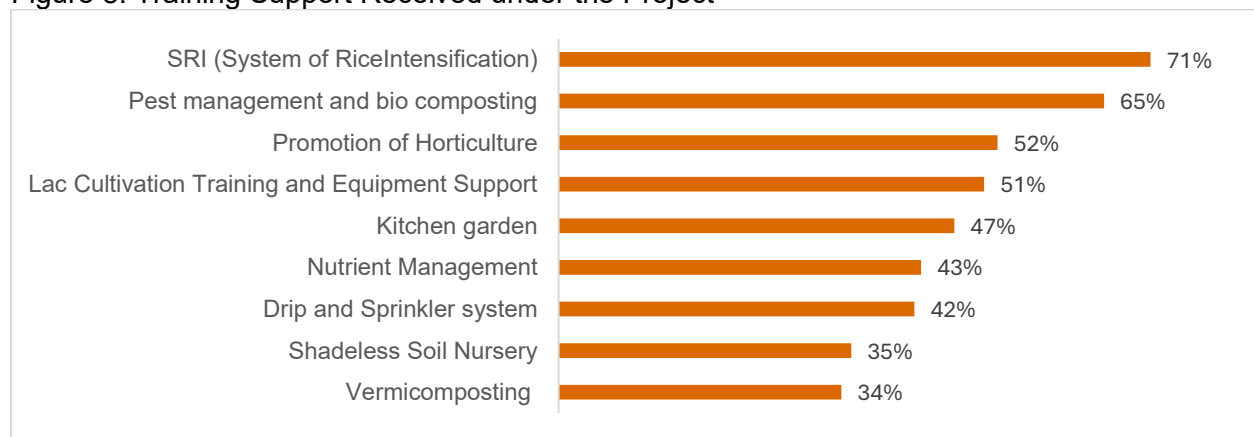
- The programme adopted a **comprehensive, integrated watershed management approach** encompassing water conservation (check dams, ponds), soil stabilisation (farm bunds, gabions), and climate-resilient agriculture (System of Rice Intensification, organic inputs).
- Institutionalised community participation was ensured via Village Development Committees and Gram Sabhas, fostering local ownership, decision-making, and sustainable maintenance of watershed assets. Activities were well-coordinated across environmental conservation and livelihood improvement sectors, ensuring the programme goals were mutually supportive rather than fragmented.

**Effectiveness:**

The programme promoted climate-smart agricultural interventions that significantly boosted productivity, income, and farmer capacity among the beneficiaries:

- Through interventions such as the System of Rice Intensification (SRI) couple with enhanced water availability due to the project intervention, rice yields saw a significant increase between 25% and 50%, and cropping intensity doubled, reflecting improved water retention and soil conditions.
- Adoption of sustainable practices including drip irrigation, organic manuring, and climate-smart cropping expanded widely among beneficiary farmers.
- Net farmer income from paddy cultivation increased by 170% after applying SRI, leading to an average 130% increase in annual household income from agriculture and allied activities.
- Capacity-building efforts through training and hands-on support enhanced farmers’ skills, enabling effective uptake and long-term application of improved practices.

Figure 8: Training Support Received under the Project



*Multiple coding question, responses may add up to more than 100%.*

- Farmer hesitancy initially existed around water resource management practices like farm bunding due to concerns over land reduction and productivity; however, 58% of respondents attending Wasundhara training adopted new techniques with significant productivity gains, and 67% reported enhanced knowledge and consistent use of climate-smart practices.

Increased awareness led to widespread adoption of drip irrigation, organic inputs, and reduced chemical fertilizer use, improving soil health and crop yields.

- The programme fostered peer-to-peer learning, boosting farmer confidence to experiment with improved methods and diversify income through horticulture and livestock rearing. This diversification enhanced livelihood resilience to climate and economic challenges, demonstrating the project's broad positive impact on agricultural productivity and rural economic stability.
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#### Efficiency:

- Use of locally prepared organic inputs minimised dependence on costly external inputs, keeping production costs low. Systematic training programmes facilitated efficient knowledge transfer and adoption of improved technologies, further enhancing resource utilisation.
- The integration of indigenous knowledge with modern scientific techniques optimised implementation efficiency and contextual fit.
- Capacity building and training equipped farmers with the skills and knowledge needed to maintain sustainable agricultural practices independently, supporting long-term resilience. Additionally, local community empowerment was focused as watershed management became community-owned and driven, building social capital and fostering collective responsibility through Village Development Committees and Gram Sabhas.

#### Impact:

##### Natural Resource Management – Water Stewardship

- Around 62% of farmers reported experiencing crop loss and poor crop quality due to soil erosion caused by rapid surface runoff prior to the intervention. The programme addressed water scarcity and soil degradation through structural interventions such as farm bunding (medhbandi), trenches, farm ponds (dobha), wells, loose boulder structures, gully plugs, and gabions.
- These integrated systems improved water retention, restored soil health, and strengthened agricultural sustainability. By controlling surface runoff and preventing soil erosion, the programme linked natural resource management with livelihood resilience and economic stability of marginalised households.
- Findings indicate strong awareness of water conservation activities among respondents. **These interventions reduced runoff, improved groundwater recharge, and enhanced water retention within fields, with groundwater levels maintained at 5–10 feet even**

**during summer.** As a result, 64% of respondents reported a significant increase in year-round water availability. Restoration of water infrastructure further improved access and sustainability.

- A total of 81% of respondents reported bringing more land under cultivation, while 79% reported increased cropping intensity. Additionally, 60% reported crop diversification, including horticultural and rabi crops, supported by improved water availability and soil conditions.
- Water availability extended into the Rabi season, enabling cultivation of crops such as wheat, mustard, and vegetables.

### Adoption of Climate Smart Agricultural Practices

- The programme generated positive impacts across agricultural productivity, environmental sustainability, and socio-economic well-being for the beneficiary communities:
- The programme led to a marked enhancement in agricultural productivity, particularly with rice yields increasing by 25-50%, and cropping intensity doubling, which directly contributed to improved food security in the region.
- Income diversification was achieved through the introduction of new, high-value crops such as tomato, chilli, and lac, enabling farmers to reduce dependence on a single crop and stabilise their income streams.

Table 2: Crop Economics of Horticultural Crops

Crop	Cost of Cultivation (₹/acre)	Yield (quintals/acre)	Market Price (₹/quintal, 2024–25)	Gross Income (₹/acre)	Net Profit (₹/acre)
Tomato	INR 50,000	112	INR 4000	INR 4,48,000	INR 3,50,000
Chilli	INR 38,000	55	INR 18,000	INR 4,40,000	INR 3,50,000

Table 3: Crop Economics of Lac Cultivation

Crop Type	Cost of Cultivation (₹/acre)	Yield (kg/acre of stiklac)	Market Price (₹/kg, 2024–25)	Gross Income (₹/acre)	Net Profit (₹/acre)
Lac (Traditional method)	INR 12,000–15,000	80–100	INR 250–300	INR 20,000–30,000	INR 8,000–15,000
Lac (Improved method with broodlac & scientific pruning)	INR 18,000–20,000	120–150	INR 250–300	INR 30,000–45,000	INR 12,000–25,000

- The project promoted organic inputs such as Jeevamrit, Amrit Pani, Dasparni, Mahua-based solutions, and vermicomposting. **These changes reduced chemical input costs (₹10,000–15,000 per acre annually), improved soil health, lowered pest incidence, and enhanced crop quality.** The use of low-cost, locally prepared inputs improved affordability and sustainability of farming systems.
- The programme **positively influenced socio-economic conditions** by increasing household agricultural income by 130%, which led to improved living standards and reduced poverty for tribal farmer communities.
- **Livelihood security was enhanced** not only through direct income gains but also via strengthened natural resource management, ensuring sustainability of productive assets for future generations.
- **Enhanced food security** contributed to improved nutrition and well-being among beneficiary households.

### Sustainability:

Durable water and soil conservation structures, including farm bunds, gabions, check dams, and ponds, have significantly enhanced water retention and soil health, laying a strong foundation for long-term agricultural sustainability. Beneficiaries have reported increased groundwater levels, enabled year-round irrigation and thereby reducing vulnerability to seasonal droughts. The sustained management of watershed resources is further supported by robust institutional mechanisms such as Village Development Committees, Gram Sabhas, and Wasundhra Sewaks, which continue to facilitate effective community governance. Additionally, ongoing capacity-building initiatives for farmers have ensured the retention of essential knowledge and skills, fostering the continued adoption of climate-smart agricultural practices well beyond the project's tenure.

### Alignment with IBL CSR Policy and SDGs

The programme supports IBL's CSR focus on Environmental Sustainability and contributes to key SDGs:

The programme aligns with IBL's **CSR policy, which prioritises Environment Sustainability<sup>5</sup>** as a key thematic area. It also supports the achievement of **Sustainable Development Goals<sup>6</sup>**, specifically SDG 6 (Clean water and Sanitation), SDG 13 (Climate Action) and SDG 1 (No Poverty).

**SDG 1- No Poverty:** Increased agricultural productivity and income diversification, reducing poverty and boosting resilience among marginalised tribal households.



<sup>5</sup> Source: <https://www.indusind.com/content/dam/indusind-corporate/generic/CSR-Policy.pdf>

<sup>6</sup> Source: <https://sdgs.un.org/goals>

**SDG 6- Clean Water and Sanitation:** Enhanced water availability and quality through diversion-based irrigation, water filters, farm ponds, and drip irrigation, ensuring year-round irrigation and safe drinking water.



**SDG 13- Climate Action:** Strengthened climate resilience via water conservation, solar irrigation, reduced shifting cultivation, and climate-smart agriculture, supporting mitigation and adaptation efforts.



### Recommendations:

- **Decentralised Seed Banks via SHGs:** Establish seed banks managed by SHGs to provide timely access to climate-resilient varieties such as drought-tolerant millets and pulses. These banks will reduce reliance on external supply chains, align seed choices with watershed conditions, and strengthen community ownership, ensuring more dependable climate-smart farming.
- **Strengthening Farmer Producer Organisations (FPOs) for Market Linkages:** Support and expand FPOs to connect tribal farmers with urban and organic markets. Linking farmers to niche markets for crops like ragi, lac, and pulses will boost incomes while promoting climate-smart agriculture.
- **Refresher Training & Irrigation Support:** Provide refresher training for villagers to reinforce methods taught earlier, preferably semi-annually to ensure long-term adoption of climate-smart practices. IBL can provide support beyond the programme tenure in collaboration with the implementation partner and community level bodies such as VDCs. Address irrigation challenges by introducing solar-powered pumps to reduce fuel costs and overcome frequent power cuts. This will improve water availability for farming and strengthen watershed-based agriculture.

### Study Limitations:

- **Low Female Representation:** Although the project successfully reached 561 households, encompassing both male and female beneficiaries, this inclusivity was not adequately reflected in the quantitative study sample. The respondent profile was markedly imbalanced, with 92% male and only 8% female participants. Additionally, female involvement in key roles was minimal, with no women serving as Wasundhra Sewaks as a part of the study sample. This limited the inclusion of women's perspectives in the study.

## Success Stories

### **Transformation of Rain-Dependent Farming into a Thriving, Climate-Resilient Livelihood Through Innovation**

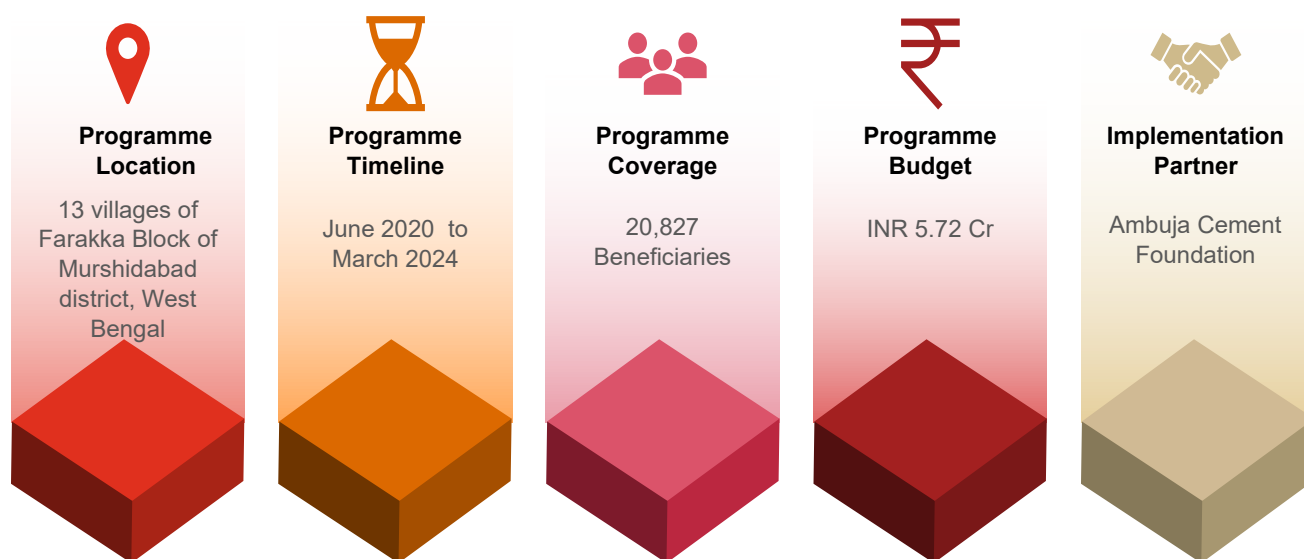
P. Orey (name changed) faced financial hardship due to rain-dependent, seasonal farming limited to paddy and vegetables. After joining the programme, he received 5 kg of lac and training, enabling him to increase production to 20–25 kg and earn nearly ₹1.5 lakh, with lac becoming a reliable income source. A 30x30 ft farm pond allowed year-round cultivation through drip irrigation, benefiting the wider community. Inspired by an exposure visit to Madhya Pradesh, he adopted solar-powered irrigation with underground pipelines supported by the community. Increased income enabled him to expand his farm pond and install a bore well, enhancing his farm's capacity and resilience. His children now attend a good school, household expenses are comfortably managed, and he saves ₹16,000 annually. Beyond financial gains, he developed confidence, leadership, and a forward-looking mindset, transforming subsistence farming into a stable, diversified, and sustainable livelihood.

## Project 3: SARAL through River Water Harvesting | West Bengal

### About the Project

The SARAL Project, funded by IndusInd Bank and implemented by Ambuja Cement Foundation in Farakka, Murshidabad, addressed water inaccessibility despite proximity to the Ganges. It targeted dependence on rain-fed agriculture by improving reliable water access through integrated interventions in irrigation, water harvesting, and livelihood support. Built on four pillars—irrigation infrastructure, community institutions (WUGs), watershed alignment, and market linkages—the project promoted agriculture, livestock, and women’s empowerment. Key activities included check dams, river lift irrigation, pond renovation, and solar water systems.

Figure 9: Snapshot of the project under assessment



### Key Findings and Analysis (basis OECD-DAC parameters)

#### Relevance:

- The SARAL project addressed a clear local need in 13 villages of Farakka Block, Murshidabad, where small and marginal farmers and landless families faced recurring irrigation constraints and livelihood vulnerability. Despite the presence of major water bodies within a short distance, the villages remained dependent on rain-fed agriculture due to the absence of accessible, reliable, and year-round water infrastructure at the community level
- The project's focus on increasing water availability through water harvesting and improving access through river lifting and distribution systems responded directly to the need for more reliable and equitable water use in the area. Its design also reflected broader household and livelihood needs by combining irrigation support with crop improvement, horticulture, forestry promotion, awareness training, and safe drinking water access, while strengthening farmer groups and water user associations to support local participation

- Prior to the project, 78% of the households (n=277) most frequently cited the lack of safe drinking water, and 60% of the households (n=277) reported high time spent fetching water as the primary challenges regarding drinking water. By focusing on water conservation, irrigation, and improvement, the project directly responds to pressing community needs, demonstrating strong relevance to the target population.

#### Coherence:

- The project demonstrates strong coherence through its integrated project design, combining water systems, irrigation efficiency, agriculture improvement, natural resource-based livelihoods, and capacity building within one project structure. This created a clear link between water access, productive use, and livelihood improvement.
- Physical interventions such as river lift irrigation, check dams/sluice gates, sprinkler sets, pond excavation/renovation, and riverbank protection works were complemented by training, input support, crop improvement, horticulture, and forestry promotion indicating that infrastructure creation was paired with measures to improve adoption and use.
- The project also linked asset creation with local management systems through farmer groups and water user associations, with the explicit intention that communities would be able to manage, operate, and sustain the interventions over time.
- The project aligns well with IndusInd Bank's Corporate Social Responsibility (CSR) goals focused on environmental sustainability, ensuring corporate commitments are effectively translated into impactful community interventions.
- Furthermore, the initiative contributes directly to multiple Sustainable Development Goals (SDGs), notably SDG 1 (No Poverty), SDG 6 (Clean Water and Sanitation), and SDG 13 (Climate Action) reflecting its alignment with global development priorities and enhancing the strategic coherence of its interventions within broader national and international frameworks.

#### Effectiveness & Efficiency:

- The project has demonstrated strong effectiveness in improving water accessibility, agricultural productivity, and livelihoods for beneficiaries. Over the period June 2020 to March 2024, the project **reached 20,827** beneficiaries with a budget of **INR 5.72 crore**. Key outputs included 8 river lift irrigation systems, 3 check dam/sluice gate structures, 8 sprinkler irrigation sets, 2 pond excavation/renovation works, 4 solar water filter systems, 6 guard wall/riverbank pitching works, 200 hectares under crop improvement, 60 acres under horticulture, 40 acres under forestry promotion, and 102 awareness/input support activities.<sup>7</sup>
- As a result of improved water availability, average irrigated land increased by 48% and cultivated land by 41%, with the strongest expansion in the Zaid season (67%). The time required to irrigate one acre was reduced by 23%, and annual irrigation cost per acre reduced by 26%, indicating improved efficiency in irrigation access and use.
- **84% reported with (n=277)** receiving support for agricultural practices and allied livelihood interventions under the project. Among those respondents (n=231), the most reported support was **training on pest management and bio-composting**, received 63%, followed by **training on nutrient management (52%)**, thereby focusing on strengthening farmers' knowledge of sustainable input use, soil health management, and better agricultural practices.

<sup>7</sup> Project Completion Report

Additional benefits such as, **promotion of horticulture including vegetable crops (48%)**, **kitchen garden support (47%)**, and training and support to adopt **deep ploughing (45%)** indicated that the project contributed meaningfully to income diversification, household-level food production and nutritional support.

- Farmers reported **higher yields (74%) with (n=277)**, lower **cost of cultivation (68%)**, **better produce quality (52%)**, and greater crop diversification (49%). Crop data also reflected 19% growth in paddy production with an 8% cost reduction.
- The safe drinking water component also showed results at household level. Adoption of solar water filter systems increased from 6 to 56 households, and 80% of respondents reported improved daily life, especially through **reduced time spent fetching water (58%)**, better access to **safe drinking water (54%)**, and fewer water-borne diseases (45%).
- Efficiency gains are evident in reduced irrigation time and lower irrigation costs. The adoption of solar-based sprinkler irrigation and river lift irrigation systems reduced operational expenses. Although cultivation costs may have increased slightly due to the adoption of improved techniques, these costs were outweighed by higher yields and increased incomes, reflecting efficient resource use and financial sustainability.
- The time required to irrigate one acre reduced by 23% (from 15.07 hours to 11.56 hours), indicating significant labour and time savings in agricultural operations. Annual irrigation cost per acre reduced by 26.3% (from INR 6,727 to INR 4,959) (n=277), reflecting improved efficiency in irrigation access and use.
- The financial efficiency was further enhanced as solar-based sprinkler irrigation and river lift irrigation systems reduced operational expenses, lowering recurring costs for beneficiaries. Paddy production grew by 19% (n=277) while simultaneously achieving an 8% cost reduction, demonstrating efficient conversion of project inputs into higher productivity at lower unit costs.
- The shift to solar-powered systems (both for irrigation and water filtration) reduced dependency on conventional energy sources, lowering long-term operational costs and enhancing the sustainability of project investments.

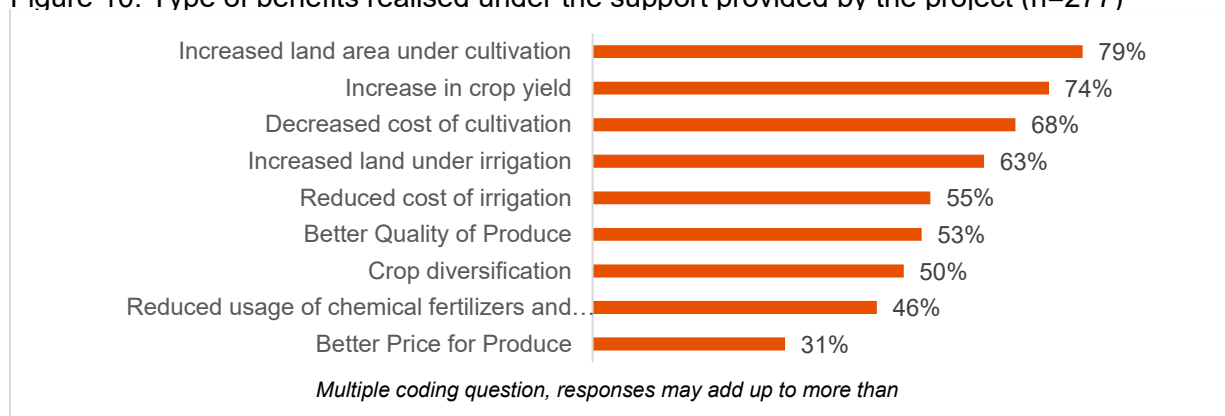
## Impact:

### Strengthened Water and Soil Systems:

The project made a meaningful contribution to strengthening local water infrastructure, improving irrigation access, and enhancing agricultural productivity across intervention villages. Farming households in these areas have historically faced constraints in water availability, irrigation coverage, and community-led resource management. Against this backdrop, the development of River Lift Irrigation (RLI) systems, check dams, sprinkler systems, and a solar-based drinking water system strengthened the resource base, improved water access, and enabled more resilient livelihood opportunities.

- Farm ponds were the most widely adopted intervention, reported by 84% of respondents (n=277), followed by River Lift Irrigation (28%), highlighting strong coverage of water storage and irrigation access.
- In Nichu-bhairavdanga (Tulshipukur, Lakhipur), RLI systems, a check dam, and sprinkler systems significantly enhanced irrigation access, covering around 350 hectares across cropping seasons and reducing dependence on erratic rainfall.

Figure 10: Type of benefits realised under the support provided by the project (n=277)



- Reported benefits aligned with intended outcomes, with 79% reporting increased land under cultivation, 73% higher crop yield, and 68% reduced cost of cultivation. Increased irrigated area (63%) and reduced irrigation costs (55%) further reflect improved water access and efficiency. Additional benefits included improved produce quality, crop diversification, reduced chemical input use, and better prices.
- Average land under cultivation increased from **1.33 to 1.87 acres (41%) (n=277), indicating improved land utilisation driven by enhanced irrigation access.**
- A shift in cropping patterns was observed, **with three-season cultivation increasing from 12% to 42%, while Kharif–Rabi-only cultivation declined from 62% to 39%.** This indicates improved utilisation of water resources and expansion into Zaid cultivation.
- Average irrigated land increased from 1.20 to 1.78 acres (48%), reported by 63% of respondents (n=277), reflecting improved irrigation coverage and capacity.
- Irrigation efficiency improved significantly, with time required to irrigate one acre reducing from 15.07 to 11.56 hours (23% reduction, n=277), indicating reduced labour burden and improved operational efficiency.
- Irrigation costs declined by 26.3%, from INR 6,727 to INR 4,959, reported by 55% of respondents (n=277). Solar-based sprinkler systems further reduced dependence on conventional energy sources, improving affordability and efficiency of irrigation.

Figure 11: Total Average Land Area Under Cultivation (in acres) (n=277)

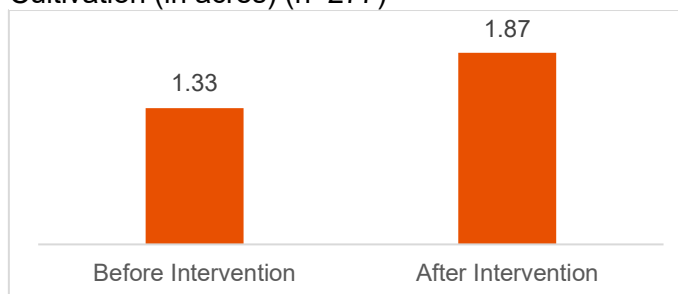


Table 4: Impact of the project on land-related parameters (n=277)

Parameter	Pre intervention	Post intervention	% Change
Total land area under cultivation (in acre)	1.33	1.87	41%
Time required to irrigate one acre land (in hours)	15.07	11.56	-23%

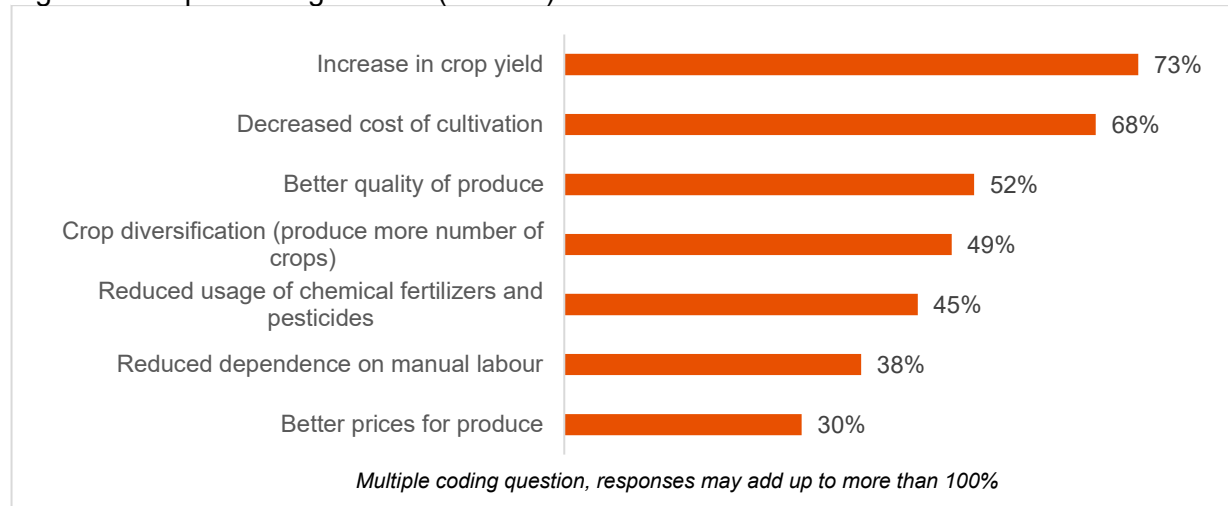
Land under irrigation (in acre)	1.2	1.78	48%
Cost of irrigation one acre land (in INR)	6727	4959	-26%

### Improved Farm Practices and Cost Efficiency

The project contributed to improvements in agricultural practices, productivity, and income through capacity building, input support, and promotion of diversified farming systems.

- 84% of respondents (n=277) reported receiving agricultural support. Among these (n=231), pest management and bio-composting training (63%) and nutrient management (52%) were the most common, strengthening knowledge of sustainable practices.
- Additional support included horticulture promotion (48%), kitchen gardens (47%), and deep ploughing (45%), contributing to diversification, improved land use, and household nutrition.

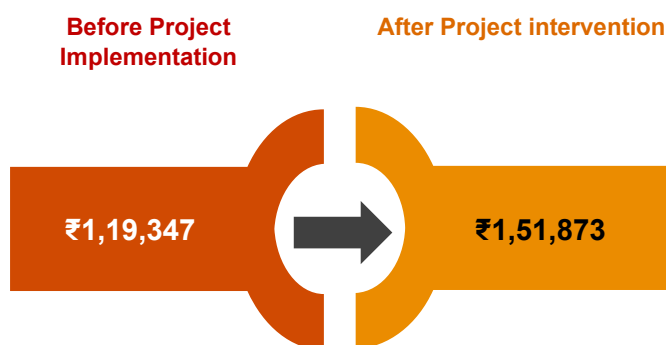
Figure 12: Impact on Agriculture (n = 277)



- Farm-level outcomes included increased crop yield (73%) and reduced cost of cultivation (68%). Additionally, 52% reported improved produce quality, 30% better prices, and 49% crop diversification, indicating improved productivity and market outcomes.
- In Kharif, paddy remained the dominant crop (99%, n=277), followed by onion (54%) and vegetables (29%), indicating diversification alongside staple crops.

- In Rabi, wheat remained dominant (89%, n=277), with diversification into onion and oilseeds (38% each), and smaller shares in jute and tomato, reflecting more market-oriented cultivation.
- Cropping diversification increased significantly, with land under Kharif and Rabi increasing by 47% each, and Zaid by 67%, reflecting a transition toward multi-season and diversified farming systems.
- The intervention contributed to improved livelihoods, with **annual household income increasing by 27%, from INR 1.19 lakh to INR 1.52 lakh, driven by improved water availability, reduced risks, and diversification.**

Figure 13: Annual Household Income Growth

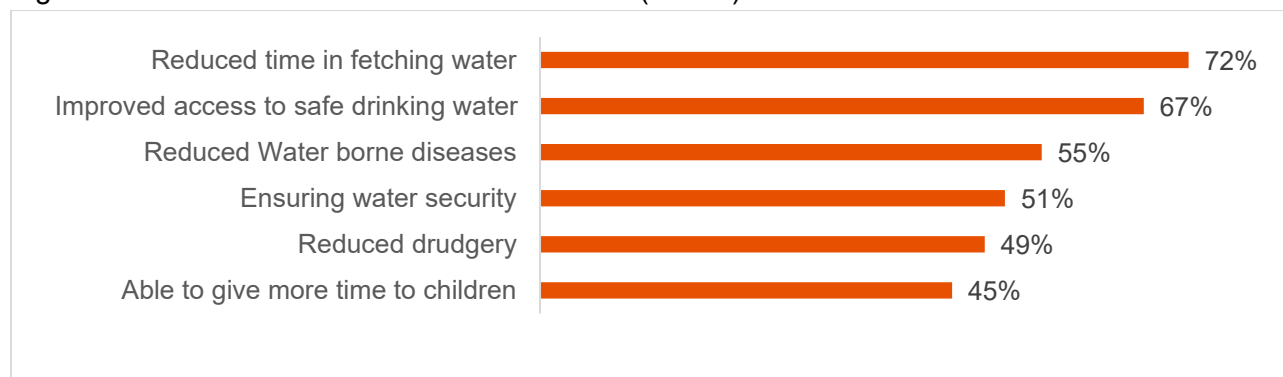


### Access to Safe Drinking Water

The installation of solar-based drinking water systems significantly improved access to safe drinking water, with important social and health benefits.

- Prior to the intervention, key challenges (n=277) included lack of safe drinking water (78%), high time spent fetching water (60%), limited availability (45%), and long distances to access water (44%). Additionally, 43% reported limited-duration access and 24% reported disruption to household chores.
- Among beneficiaries receiving water filters, 72% reported reduced time spent fetching water and 67% improved access to safe drinking water. Additionally, 55% reported reduced waterborne diseases, 51% improved water security, 49% reduced drudgery, and 45% more time for family care.
- Post-intervention, 73% of respondents reported continuous access to safe drinking water, while 25% reported occasional interruptions and only 1% reported lack of access, indicating strong effectiveness of the intervention.
- In villages such as Avla, water filters ensured reliable access to safe drinking water for beneficiaries.

Figure 14: Benefits Realised due to Intervention (n=277)

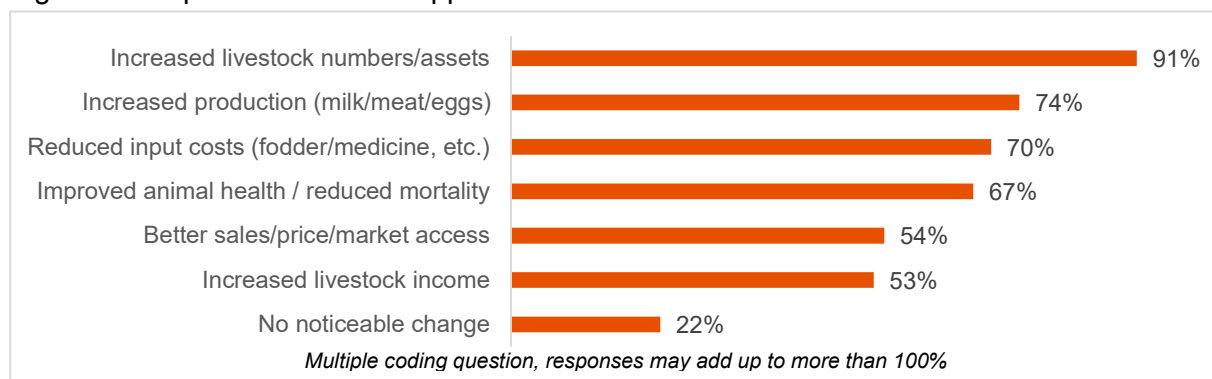


### Impact of Livestock based Livelihood Interventions

Livestock interventions strengthened income diversification and improved productivity among farming households.

- 70% of respondents reported receiving livestock-related support (n=277), indicating substantial outreach.
- Key interventions included fodder/feed support (93%), veterinary services (74%), breed improvement (70%), and training/advisory services (59%), reflecting a comprehensive approach.
- Reported outcomes included increased livestock assets (91%), improved production of milk, meat, and eggs (74%), reduced input costs (70%), improved animal health (67%), better market access (54%), and increased livestock income (53%), indicating improved productivity and economic returns.

Figure 15: Impact of livestock support



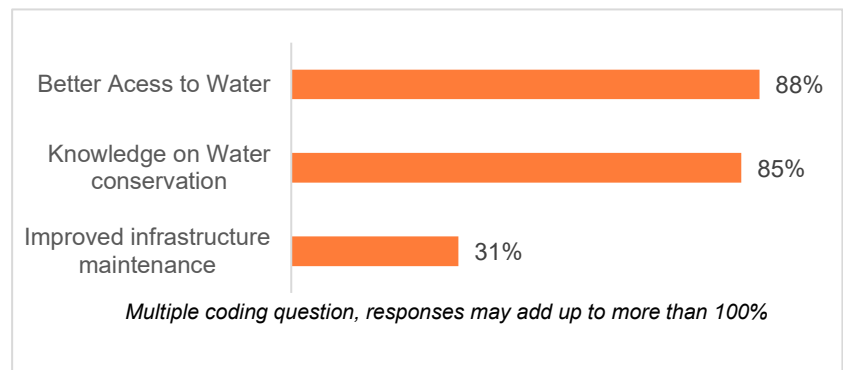
### Strengthening Community Awareness and Knowledge of Water Conservation

The project strengthened community participation and institutional mechanisms for sustainable resource management.

- Water User Groups (WUGs) and Village Development Committees (VDCs) were established and met regularly, playing a key role in managing irrigation assets and ensuring equitable access to water.

- Reported benefits included improved access to water, enhanced knowledge sharing, and better infrastructure maintenance (n=175), indicating strengthened local governance systems.
- Community willingness to pay for irrigation services (approximately INR 180 per hour) reflects acceptance of the model and its perceived value.

Figure 16: Benefits received from VDC / WUG participation (n=175)



- Common maintenance challenges such as structural damage, siltation, leakage, and blockage were reported, indicating the need for continued upkeep. However, the intervention has strengthened local accountability, collective action, and community ownership, demonstrating potential for scale-up

### Sustainability:

The project demonstrates sustainability potential through knowledge-based practice adoption. **Training-led changes** such as **intercropping/crop rotation, horticulture, and kitchen gardens** are likely to continue beyond the project, and reported diversification and reduced chemical use suggest that these practices are being embedded in routine farming decisions

- Sustainability is also supported by improved efficiency at farm level. **Reduced irrigation time and cost, along with lower cultivation costs**, improve farm cash flow, enabling households to contribute to operation, maintenance, and small repairs.
- A core design feature of the project was decentralised resource management with strengthening of farmer groups and water user associations, so that communities could manage, operate, and sustain interventions locally. This provides an institutional basis for continuity of benefits. The development of **Water User Groups (WUGs)** has emerged as an important institutional outcome, these groups are playing a central role in managing irrigation assets and ensuring collective access to water, as evidenced in villages such as Sudna where the intervention has fostered local management systems that are financially linked and socially accepted.
- Continued benefits from drinking water component are also likely where basic upkeep and replacement pathways are in place. At the same time, long-term sustainability of solar water filters and irrigation systems will depend on strengthening local upkeep mechanisms, replacement support, and sound management of irrigation sources.

## Alignment with IBL CSR Policy and SDGs

The programme aligns with IBL's **CSR policy, which prioritises Environment Sustainability**<sup>8</sup> as a key thematic area. It also supports the achievement of **Sustainable Development Goals**<sup>9</sup>, specifically SDGs as detailed below.

**SDG 1: No Poverty** -By reducing crop risk, improving water security, and diversifying farm-based income opportunities, the programme supports more stable livelihoods for poor and vulnerable households, strengthening resilience to climate shocks.



**SDG 6: Clean Water and Sanitation**- The programme enhances water availability and quality by strengthening water-harvesting and recharge structures and improving local water governance. By supporting protective irrigation and restoring water-related ecosystems (e.g., ponds and traditional water bodies), it improves access to water for agriculture and households, advancing SDG 6 targets related to IWRM and ecosystem protection.



**SDG 13: Climate Action** - The programme strengthens climate resilience through drought-proofing measures, watershed treatment, and climate-smart agriculture that reduce rainfall-related production risks and build adaptive capacity. By improving soil-moisture retention, stabilising irrigation access, and promoting sustainable land and water management, it directly supports SDG 13 goals on strengthening resilience and adaptive capacity to climate hazards.



## Recommendations

- **Broadening the Benefits of River Lift Irrigation** - Although the River Lift Irrigation system was successfully implemented, its benefits currently reached only a limited number of farmers and households. To promote more inclusive and equitable development, future project planning should focus on expanding its coverage so that more farmers can participate and benefit. Broader access would enhance agricultural productivity, improve water availability, reduce inequalities among households, and strengthen social cohesion, all of which are essential for long-term sustainability and collective management of natural resources.
- **Improve irrigation-source sustainability** - Where tube wells and lift systems are rising, promote energy-efficient operations, shared scheduling, and groundwater-safe abstraction norms, alongside recharge measures, to avoid long-term over-dependence on extractive sources.
- **Institutionalise soil testing and nutrient planning** - Introduce regular soil health monitoring and plot-specific nutrient advisories to reduce unnecessary fertilizer use, support the shift toward lower chemical dependence, and improve input efficiency
- **Sustain safe drinking water outcomes** – Establish local upkeep and replacement mechanisms for solar filters (service providers, spares, community funds), and track health/time-saved outcomes to ensure benefits persist.

<sup>8</sup> Source: <https://www.indusind.com/content/dam/indusind-corporate/generic/CSR-Policy.pdf>

<sup>9</sup> Source: <https://sdgs.un.org/goals>

## Study Limitations

- Although the project successfully reached 20,827 beneficiaries, encompassing both male and female beneficiaries, this inclusivity was not adequately reflected in the quantitative study sample. The respondent profile was markedly imbalanced, with 99% male and only 1% female participants. Additionally, female involvement in key roles was minimal, as a part of the study sample. This limited the inclusion of women's perspectives in the study.
- Challenges were faced in engaging with government personnel on the ground, which has been duly acknowledged as a limitation with implementation partner, owing to on-site circumstances.

## Success Stories

### Scaffolding Success: Off-Season Vegetable Cultivation Improves Farm Income<sup>10</sup>

A farming household in Lakhipur village, Farakka Block, Murshidabad District, owned approximately 0.30 acres of upland where they cultivated paddy. However, the returns from paddy cultivation were insufficient to meet the household's income requirements, and the family sought to explore alternative cultivation options to make better use of their land.

During a farmers' club meeting facilitated under the SARAL project, the household shared the challenges of growing vegetables during the monsoon season, when excessive rainfall often causes rotting, pest attacks, and crop damage. Based on advisory support provided through the project, the household was guided to adopt a scaffolding system for creeper vegetable cultivation. The scaffolding structure enables creeper vegetables to grow above the ground, protected from wet soil and heavy rainfall conditions. Acting on this guidance, the family constructed scaffolding on their land and started cultivating snake gourd, bottle gourd, bitter melon, cucumber, and other creeper vegetables.

The results were positive. The vegetables grew well, with better size and shape, pest attack was reduced, and there was no rotting even during heavy rainfall. The household harvested the vegetables and sold them in the local market, where prices are usually higher during the monsoon season. As a result, the family began earning an additional profit of approximately INR200 per day from scaffolding-based cultivation. Since the scaffolding is a permanent structure, it will continue to support vegetable cultivation in future seasons, providing a sustainable and recurring source of income for the household.

### Improving Livelihood through Assured Quality Drinking Water<sup>11</sup>

Lakhimpur village in Bahadurpur Panchayat, Farakka Block, Murshidabad District, is one of the remotest and most underserved villages in the area, with nearly 212 households. For many years, the village had no reliable source of safe drinking water. The residents depended on only two old hand pumps, both more than 15 years old, for drinking and cooking water. The water from these tube wells had high levels of iron, fluoride, and Total Dissolved Solids (TDS), which caused water-borne diseases among the villagers. During the summer season, the tube wells often dried up,

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<sup>10</sup> As shared by Implementation Partner

<sup>11</sup> As shared by Implementation Partner

making the situation more difficult. Women and children had to spend a considerable amount of time fetching water, which affected household work, livelihood activities, and school attendance.

To address this challenge, Ambuja Cement Foundation (ACF) conducted a groundwater survey with the help of experts and engineers and proposed a solar-powered drinking water filtration system for the village. The system has a storage capacity of 5,000 litres and a filtration capacity of 2,000 litres per hour, supplying safe drinking water that is iron-free, fluoride-free, and within the permissible TDS limit. The system is capable of serving nearly 200 households and includes four tap outlets, allowing four people to collect water at the same time, thereby reducing waiting time.

After installation, all 200 families, with an average of 6-7 members each, started receiving more than 50 litres of safe water per day for drinking and cooking at no cost. The system ensured year-round water supply, even during the peak summer months, and eliminated the need for private tube well installation. Household expenditure on medicines for water-borne diseases reduced by approximately 90%. With access to safe water, women were able to save time previously spent on water collection and engage in income-generating activities through SHGs, while children were able to attend school regularly. The intervention contributed to improved health outcomes, reduced financial burden on households, and enhanced the overall wellbeing of the village community.

### **Improving Livelihood of Farmers through Water Lifting and Irrigated Agriculture Development**

Farakka, one of the remotest blocks of Murshidabad district in West Bengal, receives adequate rainfall during the monsoon. However, the area faces water scarcity in the Rabi and summer seasons. After the monsoon, rivers, ponds, and other water sources become inadequate for irrigation, leaving large areas of agricultural land without water access. As a result, more than 5,000 farmers were unable to use their land productively beyond the Kharif season, and many were forced to migrate in search of work after the monsoon. The challenge became more visible in 2020, when migrant labourers returned to their villages during the COVID-19 pandemic and found themselves without livelihood options despite owning cultivable land. The major constraint was twofold: limited access to water from the nearby river, and the absence of an irrigation system that could cover a command area of 50–60 hectares.

To address this challenge, Ambuja Cement Foundation (ACF) conducted surveys with the support of experts and engineers and introduced the River Lift Irrigation (RLI) system. The system lifts river water to a required elevation and distributes it through an underground pipeline network across a large agricultural area. ACF constructed 8 River Lift Irrigation systems across 7 villages, covering around 400 hectares and benefiting 4,567 farmers. The intervention transformed mono-cropped land into three-crop land, increasing cropping intensity from 100% to 250% and improving irrigation efficiency by 30%, which also reduced irrigation costs.

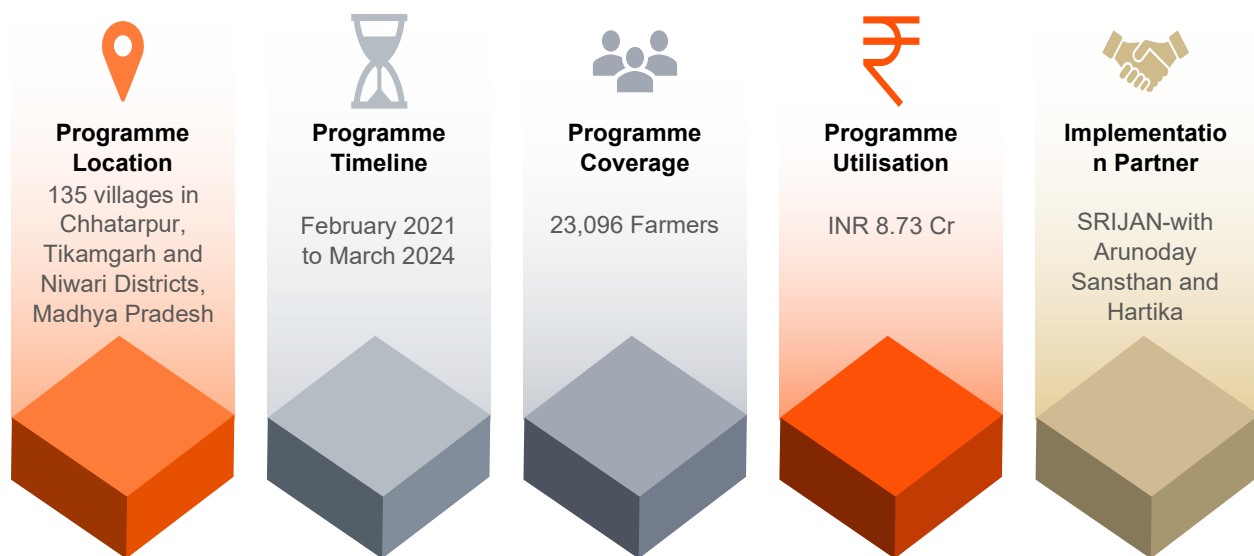
Farmers who earlier depended only on paddy cultivation began growing Rabi crops such as mustard, wheat, and maize, along with vegetables such as cabbage, cauliflower, potato, and tomato after the paddy harvest. This enabled them to cultivate their land two to three times a year. The average annual income per acre, which was previously around INR 25,000–INR 30,000, increased to INR 80,000–INR 1.5 lakh. In addition, the market value of agricultural land increased by 20%. With improved water access and year-round cultivation opportunities, farmers are now earning sustainable incomes within their own villages, reducing distress migration and improving their overall quality of life.

## Project 4: BIWAL-Combating Agricultural Stress through Reviving Traditional water bodies, efficient water use, Technology and Community Governance | Madhya Pradesh

### About the Project

The BIWAL Project, implemented by SRIJAN with partners Arunoday Sansthan and Haritika, and supported by IBL, addressed agricultural stress in Bundelkhand. Covering 135 villages across Chhatarpur, Tikamgarh, and Niwari districts of Madhya Pradesh, it reached over 23,000 farmers, more than half of them women. The project focused on climate-smart agriculture, horticulture, natural resource management, and efficient water use tailored to local soil conditions. It revitalised traditional water bodies and strengthened community institutions for participatory planning and governance. By promoting women’s leadership and linking communities with government schemes, BIWAL improved water security and built a foundation for sustainable, resilient livelihoods.

Figure 17: Programme Snapshot



### Key Findings and Analysis (basis OECD-DAC parameters)

#### Relevance:

The BIWAL project addresses critical issues of water scarcity, agricultural stress, and unsustainable farming practices in the drought-prone Bundelkhand region of northern Madhya Pradesh. By focusing on the restoration of traditional water bodies, promoting efficient water use, and strengthening climate-resilient agriculture alongside community-based governance, the project responded directly to the priorities of rural households whose livelihoods are dependent on farming.

- Its emphasis on water conservation, sustainable natural resource management, and climate-smart cultivation practices is aligned with the region's socio-economic realities, where depleting groundwater reserves and erratic rainfall continue to constrain agricultural productivity, household incomes, and local development outcomes.
- 100% of surveyed respondents (n=270) reported cultivation as their primary source of income, confirming the relevance of the project's focus on agriculture and water.
- The project addressed low agricultural productivity caused by limited awareness of improved farming techniques through the promotion of sustainable practices such as composting, vermicomposting, organic input preparation, and pest management, further reinforcing the relevance of the intervention in improving livelihoods.

#### **Coherence:**

- The BIWAL project applied a coherent and integrated design by linking water resource management with improvements in agricultural productivity, climate-resilient farming practices, and livelihood strengthening.
- The project's watershed and waterbody revival activities are compatible with flagship pathways such as PMKSY Har Khet Ko Pani which promote soil-moisture conservation and livelihood strengthening in rainfed, drought-prone geographies.
- The project demonstrated convergence with government delivery channels, particularly MGNREGS (NRM works) for labor-intensive activities and NRLM for community institution strengthening, improving coordination and leveraging public systems.
- The programme aligns with IndusInd Bank's CSR goals focused on environmental sustainability, ensuring corporate commitments are translated into community-level interventions.
- The initiative contributes to multiple SDGs: SDG 1 (No Poverty), SDG 6 (Clean Water and Sanitation), and SDG 13 (Climate Action).

#### **Effectiveness & Efficiency:**

The project delivered outcomes in expanding climate-resilient agriculture and strengthening farmer capacities across the Bundelkhand region.

- Through Prakritik Krishi Kendras (PKKs) and structured training programmes, 23,096 farmers -including over 50% women and a proportion of small and marginal landholders-were oriented to climate-smart agricultural practices over a four-year period.
- Water infrastructure development, including 811 Doha structures, 27 dam renovations, 80 farm ponds, 62 gabions, and 37 tank desiltation works, generated an estimated water potential of 553,353 cubic metres and irrigation support for 1,416.5 hectares.
- The project exhibited resource efficiency through a collaborative financing model combining IBL support with beneficiary contributions, community participation, and institutional convergence.
- Adoption of sustainable agriculture practices including bio-manure use, multilayer farming, nutrient management, and improved irrigation methods—reduced dependence on chemical inputs while improving resource-use efficiency.

**Impact:**

**Enhanced Water Security and Irrigation Access:**

- The project significantly strengthened water security through the creation and restoration of water-harvesting structures, with farm ponds (44%), farm bunding (34%), and well renovation (25%) emerging as key interventions (n=270).
- A strong shift in irrigation patterns was observed, with the use of farm ponds increasing by 162.5% (n=270), indicating improved on-farm water availability and irrigation reliability.
- Irrigation access improved substantially, as households with only 1–3 months of water availability declined from 85% to 11%, while those with 7–12 months of access increased to 55%, enabling more stable and extended cultivation cycles.
- Irrigation efficiency improved, with the average time required to irrigate one acre reducing from 13.88 hours to 13.40 hours (3.44% reduction), contributing to reduced labour burden and better crop scheduling.
- The intervention also reduced irrigation costs and increased irrigated land from 3.54 to 3.62 acres, improving farm profitability and promoting efficient water use.

Figure 18: Water Availability for Irrigation (n = 189)

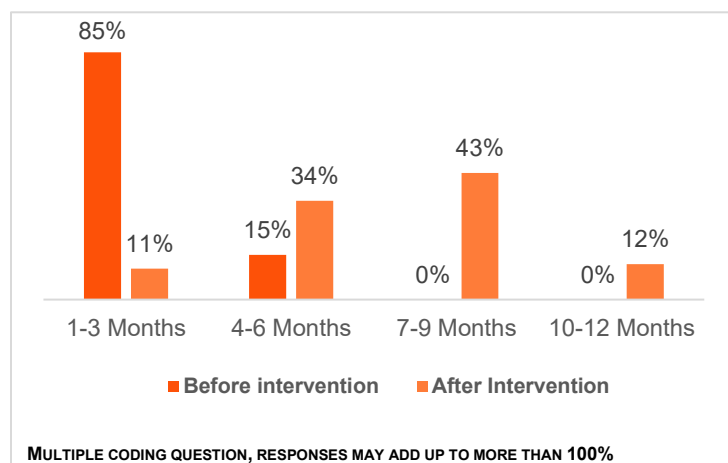


Figure 19: Impact of the project on land related parameters

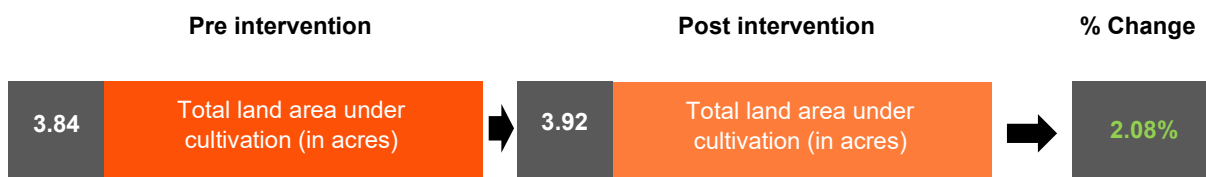
	Pre intervention		Post intervention	% Change	
13.88	Time required to irrigate one acre of land (in hours)	→	13.40	Time required to irrigate one acre of land (In hours)	3.44%
6248	Cost of irrigating one acre of land (in INR)	→	6098	Cost of irrigating one acre of land (in INR)	2.39%

**Improved Agricultural Productivity and Farm Efficiency**

- The programme strengthened technical capacities through training on nutrient management and pest management and bio-composting (23% each), along with vermicomposting (14%) and horticulture promotion (11%) (n=270), promoting sustainable farming practices.

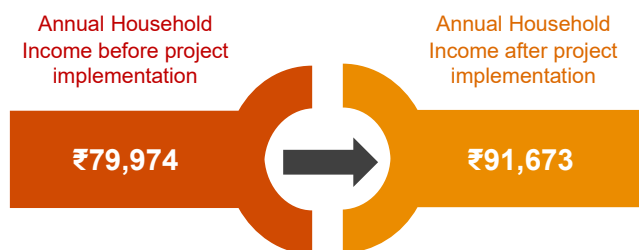
- Increased water availability enabled higher cropping intensity, with the number of households cultivating three and four crops in the Rabi season increasing by 77% and 175% respectively, and Zaid season cultivation expanding significantly.
- Expansion in cultivated land was observed across seasons, with Kharif increasing from 3.19 to 3.31 acres, Rabi from 3.52 to 3.61 acres, and Zaid from 1.81 to 1.93 acres, leading to an overall increase from 3.84 to 3.92 acres.

Figure 20: Impact of the project on land related parameters (n=270)



- Agricultural production increased across crop categories (n=270), including Kharif onion production (+80%), vegetables (+63%), and pulses (+14%), as well as Rabi vegetables (+69%), tomato (+46%), oilseeds (+10%), and wheat (+8%).
- The programme enabled a shift toward high-value and diversified cropping, including pulses, onions, and vegetables, thereby improving income stability and reducing climate-related risks.
- Improved practices resulted in better market outcomes, with 55% of respondents (n=270) reporting better prices and 38% reporting improved produce quality.
- Cost efficiency improved, with 24% reducing chemical input usage, 18% reducing labour dependency, and 13% reporting a decrease in cost of cultivation (n=270).
- The intervention contributed to increased household incomes, with 47% of respondents (n=270) reporting a 15% increase, from ₹79,974 to ₹91,673, strengthening livelihood resilience and reducing seasonal migration

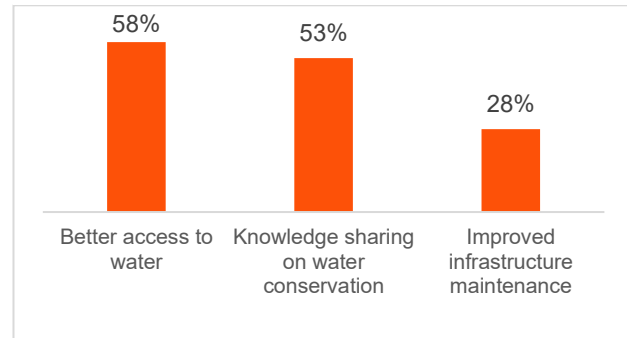
Figure 21: Income Growth through Project



## Strengthened Community Institutions and Participatory Water Governance

- The project strengthened community-based water governance through the formation of Water Management Committees and engagement of Village Development Committees and Water User Groups, enabling collective management of water resources.
- Community-led contributions supported maintenance and repair of water infrastructure, ensuring sustained functionality and strengthening local ownership.
- Participation in these institutions resulted in improved outcomes, with 58% of respondents reporting improved water access, 53% enhanced knowledge sharing, and 28% improved infrastructure maintenance.
- These institutional mechanisms enhanced community capacity, improved service delivery, and contributed to the long-term sustainability of project interventions

Figure 22: Benefits through Water User Group (WUG) (n =270)



Multiple coding question, responses may add up to more than 100%

## Women’s Livelihood Support and Economic Empowerment

- The programme promoted women’s participation in agriculture-linked livelihoods, with 87% adopting nutrition gardens, 61% adopting multi-layer farming, 57% receiving training in organic inputs, and 37% engaged in seed bank management (n=164).
- Women’s economic participation translated into strong socio-economic outcomes, with 96% reporting increased household income, 72% starting or expanding enterprises, and 81% improving access to savings and credit.
- Beyond income gains, 60% of women reported reduced drudgery and time burden, while 49% reported increased participation in household decision-making, indicating enhanced agency and empowerment.

These interventions strengthened women’s role in household livelihoods while contributing to broader economic and social well-being.

### Sustainability:

Community-led institutions play a central role in sustaining the project’s impact through management of water infrastructure and climate-smart agricultural practices.

- 52% of respondents confirmed active Water User Group (WUG) involvement in infrastructure upkeep, including regular financial contributions.
- 53% of respondents reported enhanced knowledge sharing on water conservation through participation in VDCs and WUGs.

- Local institutions such as Tank Management Committees and Water User Groups reinforce community ownership, accountability, and continuity of both water infrastructure and climate-smart agricultural practices.

The project embedded technical knowledge, local governance mechanisms, and convergence linkages within the community, providing a foundation for continuity of outcomes beyond the project period.

### Alignment with IBL CSR Policy and SDGs

The programme aligns with IBL's **CSR policy, which prioritises Environment Sustainability**<sup>12</sup> as a key thematic area. It also supports the achievement of **Sustainable Development Goals**<sup>13</sup>, specifically SDGs as detailed below.

**SDG 1: No Poverty** -By reducing crop risk, improving water security, and diversifying farm-based income opportunities, the programme supports more stable livelihoods for poor and vulnerable households, strengthening resilience to climate shocks.



**SDG 6: Clean Water and Sanitation**- The programme enhances water availability and quality by strengthening water-harvesting and recharge structures and improving local water governance. By supporting protective irrigation and restoring water-related ecosystems (e.g., ponds and traditional water bodies), it improves access to water for agriculture and households, advancing SDG 6 targets related to IWRM and ecosystem protection.



**SDG 13: Climate Action** - The programme strengthens climate resilience through drought-proofing measures, watershed treatment, and climate-smart agriculture that reduce rainfall-related production risks and build adaptive capacity. By improving soil-moisture retention, stabilising irrigation access, and promoting sustainable land and water management, it directly supports SDG 13 goals on strengthening resilience and adaptive capacity to climate hazards.



### Recommendations

- **Systematic Monitoring and Upkeep of Water Assets:** During the study, stakeholders reported that while community-based groups such as Water User Groups (WUGs) and Tank Management Committees have been formed for the ownership and management of water assets, regular maintenance of these assets should be facilitated. To systematically monitor storage levels, recharge trends, and duration of water availability across seasons, it is recommended that a simple performance tracking system be established for the project's extensive water infrastructure. A periodic monitoring schedule should be developed for all water assets created or rehabilitated under the project, accompanied by seasonal assessments of storage capacity, structural condition, and recharge performance. A simple

<sup>12</sup> Source: <https://www.indusind.com/content/dam/indusind-corporate/generic/CSR-Policy.pdf>

<sup>13</sup> Source: <https://sdgs.un.org/goals>

village-level asset register should also be maintained with clear institutional responsibilities and Gram Panchayat budget line items for periodic technical checks.

- **Prioritise and Scale Farm Ponds, Tank Restoration and Doha Work as Decentralised Irrigation Solutions:** During interactions with beneficiaries and government officials, increased farm pond use as an irrigation source was reported. Post intervention, farm ponds registered the highest growth among all irrigation sources. However, the limited overall coverage of farm ponds has been identified as a constraint in strengthening water security at the farm level. Accordingly, it is recommended that farm pond creation and rehabilitation be expanded, supported by catchment treatment and integration with field channels and micro-irrigation systems. New farm pond locations should be identified based on topography, water table data, and farmer demand. Technical support should be provided to beneficiary households on maintenance and optimal utilisation of farm ponds. Scaling up farm ponds post assessing technical feasibility as decentralised irrigation solutions would further consolidate the gains achieved by the project and extend protective irrigation access to a larger number of farming households. Additionally, as per requirements, tank restoration and doha work if feasible and scalable in the region.

## Study Limitations

- Some key informants, such as government officials involved during project implementation, were not available for consultation because several of them had been transferred.

## Success Stories

### Well Renovation leads to cultivation of land after 20 years

In one of the project villages in Baldeogarh block of Tikamgarh district in the Bundelkhand region, a beneficiary household belonging to a marginalized community had been facing a prolonged challenge related to water access. The household, comprising a large family, was dependent on a 6-acre landholding for its livelihood. However, the ancestral well owned by the family had been non-functional for over 20 years, which meant that rabi crop cultivation was not possible due to the lack of irrigation facilities. The non-functional well also affected access to drinking water, requiring the women of the household to travel approximately 2 kilometers daily to fetch water for household needs.

The family's livelihood sources included a small parcel of 1.5 acres of cultivable land, two cows, a buffalo used for milk production for self-consumption, and three goats reared for sale. Other family members were engaged in non-farm activities, including employment as daily wage labourers and small enterprise operations. Despite multiple income sources, the earnings were not adequate to meet the household expenditure given the large family size.

SRIJAN, which had been working in the village since the previous year, proposed the renovation of the ancestral well. The intervention was designed as a shared-cost model, where SRIJAN contributed the input materials such as sand, cement, and stone, while the family contributed physical labour toward the renovation. A mason and daily wage labour were hired at a cost of INR

13,000, which was borne by the beneficiary household. The renovation work was completed in 5 months.

Following the renovation, the household was able to cultivate rabi crops for the first time in 20 years. The beneficiary sowed 4 kg of mustard seeds and reported a successful harvest. After retaining a portion of the produce for domestic consumption, the surplus was sold in the market. The renovation of the well has contributed to the following outcomes for the household:

- Restoration of irrigation access, enabling rabi season cultivation on previously uncultivated land.
- Improved access to drinking water for the household, reducing the distance and time spent by women in water collection.
- Reduction in dependence on external water sources and improved water security at the household level.
- Improved economic conditions through additional agricultural income from rabi crop production.

This case illustrates the impact of low-cost water asset renovation in restoring agricultural productivity and improving household-level water security among marginalized communities in the project area.

### **Reviving Village Dams**

Jatara is a block in Tikamgarh district of Bundelkhand region. Located in Madhya Pradesh, the region is historically water stressed. The overreliance on groundwater resources to meet irrigation and drinking water requirements in the region has exacerbated the situation. Acute scarcity of water for livelihoods is being experienced in the region with most wells running dry a few months after the monsoon season. The grim situation of water can however be solved by using the abundant infrastructure already existing in Bundelkhand. The region is home to thousands of Chandela and Bundela Tanks built eons ago by our water wise ancestors, who understood the potential of water storage in overcoming the situation of scarcity.

Apart from these tanks which are mostly in the state of disrepair, there are also many stop dams (small check dams) constructed by various government departments to temporarily store the excess water during the monsoon season so that farmers can use the water for irrigation purposes. These water harvesting structures have gates which are fitted during the monsoon season to allow for storage of excess water flows and then removed post monsoon to allow the stream to flow normally after the monsoon flows recede. Most of such structures, however, have missing or damaged gates, deposition of silt, encroachment by agriculture in streambed, etc. When SRIJAN started its operations in the block under the BIWAL project, one of the main aims of the programme was to repair and restore ancient tanks and such dysfunctional stop dams to allow for revival of the culture of water harvesting and storage among the community. The state of stop dams in the Jatara block was assessed by looking at various parameters such as damaged

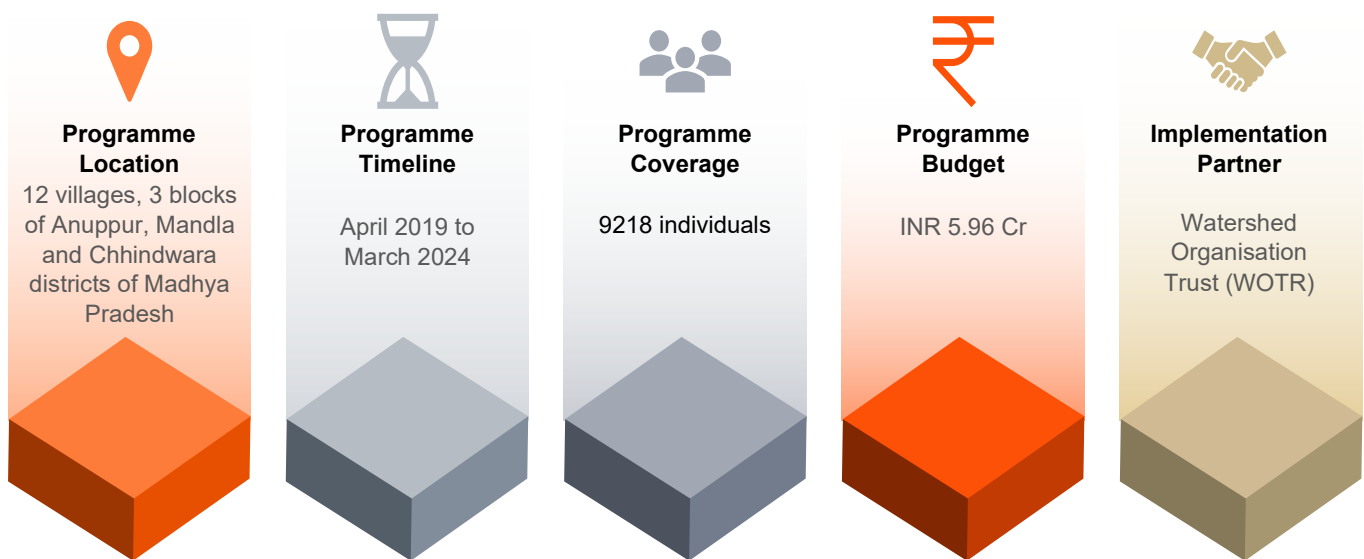
or missing gates, encroachment, silt deposition, water harvesting capacity of the structure, etc. Post the assessment of situation, the repair work is undertaken.

An important consideration towards initiation of work was strong community cohesiveness and explicit willingness among community members to manage and maintain the structure post repairs. A starting point is the submission of application from the gram panchayat to the organization. This ensures active community involvement as the need has been raised by the community themselves. One such application to repair a stop dam constructed on Pateriya stream was received by SRIJAN from Simariya gram panchayat of Jatara block. The stop was found to be well constructed and the placement on the drainage line was also correct. The only problem with the structure was unavailability of gates due to which the structure was unable to store water. In initial meetings with the community after the application was received, the understanding about water sharing amongst nearby farmers was gauged. A water user group was formed from representatives of the entire village community. The committee would be responsible for overall management and maintenance of the stop dam. It would be the responsibility of the committee to ensure that gates are fitted at the initiation of monsoon season and removed after around mid-September or October. Equitable access to water for farmers with fields in vicinity of the stop dam will also be the responsibility of the committee. SRIJAN provided the cost towards the development of gates which was around INR 11,785 opposed to the cost of developing a new structure which is over 5-6 lakhs. The labour towards periodic installation and removal of the gates is to be contributed by community members. The repaired stop dam benefitted 14 farmers in 2021 when the community installed the gates in the month of June. The community members also benefitted from the fish harvested during the removal of gates in October last year.

## Project 5: Watershed Development and Agricultural Productivity Enhancement through Promoting Need Inputs | Madhya Pradesh

This project in Madhya Pradesh was implemented in Mandla, Anuppur, and Chhindwara districts from April 2019 to March 2024, focusing on **natural resource management through watershed development and agricultural productivity enhancement**. It addressed soil erosion, water stress, degraded land, and low productivity through an integrated approach combining watershed development and sustainable agriculture. The project included soil and water conservation, water harvesting, agro-horticulture, women’s empowerment, and child growth monitoring related activities. Key interventions involved extensive bunding, trenching, and groundwater recharge measures.

Figure 23: Snapshot of the project under assessment



### Key Findings and Analysis (basis OECD-DAC parameters)

#### Relevance:

- The project demonstrates strong relevance as it addressed critical issues of water scarcity, weak irrigation access, climate variability, and low agricultural resilience in the intervention areas.
- The focus on decentralized water harvesting, soil and moisture conservation, improved irrigation access, and community-based governance directly responded to the needs of farming households dependent on rainfed and seasonal agriculture.
- The intervention package was well aligned with local livelihood priorities, particularly where erratic rainfall, fluctuating water availability, and limited on-farm water storage constrained productivity, cropping intensity, and income security.

#### Coherence:

- The project was coherent with broader government and development priorities related to watershed development, water conservation, and climate-resilient agriculture. Its emphasis

on farm ponds, bunding, check dam repair, water-use efficiency, and local governance aligns with national and state priorities on water security and sustainable agriculture.

- The intervention design is also compatible with major public project approaches such as Pradhan Mantri Krishi Sinchayee Yojana PMKSY and watershed-based natural resource management models that promote soil-moisture conservation, irrigation expansion, and livelihood strengthening.
- The project's support for community institutions, women's participation, and climate-resilient farming also reflects alignment with broader SDG priorities, especially SDG 1, SDG 6 and SDG 13.

### **Effectiveness & Efficiency:**

- The project demonstrated good effectiveness in improving water access, farm practices, and agricultural outcomes among participating households. The most widely reported water-related interventions included farm ponds (57%), farm bunding (27%), earthen bunds (19%), boulder bunds (7%), and well renovation/maintenance (7%), reflecting a diversified watershed approach.
- Reported benefits indicate that these interventions translated into practical gains: 47% of responses pointed to increased land area under cultivation, 31% to increased land under irrigation, 30% to reduced irrigation cost, and 29% to an increase in the number of crops cultivated.
- Average land area under cultivation increased from 3.62 to 4.24 acres (17%), while average land under irrigation rose from 3.36 to 3.91 acres (16%), showing improved efficiency in land and water use.
- Technical support was also effectively delivered, particularly through vermicomposting (48%), drip/sprinkler systems (23%), pest management and bio-composting training (15%), kitchen gardens (15%), and nutrient management (10%).
- These supports resulted in improved crop yield (59%), reduced cultivation cost (48%), better produce quality (28%), reduced dependence on manual labour (15%), crop diversification (15%), and better prices for produce (11%), indicating that the project improved farm-level efficiency as well as agronomic performance.
- The intervention appears efficient in that both water infrastructure and technical support combined to improve returns from cultivation, increase cropping intensity, and support more reliable seasonal production.

### **Impact:**

#### **Enhanced Water Security and Irrigation Access:**

The project made a meaningful contribution to strengthening local water security, improving irrigation access, and enabling more reliable cultivation across seasons. In the intervention geography, farming households have historically been exposed to climate uncertainty, fluctuating rainfall, and limited irrigation access. Against this backdrop, the project's efforts to decentralise

water harvesting, promote soil and moisture conservation, and improve water-use efficiency have enhanced water availability for agriculture.

- Upon inquiry, 100% of the respondents (n=267) reported benefiting from watershed management activities. The project focused on water conservation through watershed development alongside agricultural productivity enhancement.
- Farm ponds were the most widely accessed intervention (57%, n=267), followed by farm bunding (27%) and earthen bunds (19%), highlighting improvements in water storage and soil moisture retention. Smaller shares reported check dams (6%) and LBD/Gabion structures (5%), which supported runoff control, groundwater recharge, and reduced soil erosion. Check dams particularly benefitted a wider group of farmers through shared irrigation access, as observed in Dhala Khapa village.
- Farm ponds emerged as a major irrigation source, with usage increasing by 43% from 42 to 60 responses (n=266), indicating improved local water storage and irrigation access. Dam-based irrigation also increased by 63%, reflecting greater use of surface water structures.
- The number of respondents using tube wells increased from 6 to 11 (83.3%, n=266), indicating improved access to multiple water sources and greater flexibility in meeting irrigation needs.
- The project adopted a diversified approach to watershed development, improving water storage, irrigation access, soil moisture retention, and reducing land degradation, thereby strengthening the agricultural resource base and resilience of farming households.
- Reported benefits (n=267) included increased land under cultivation (47%), improved irrigated area (31%), reduced irrigation costs (30%), and less labour-intensive irrigation (24%). Additionally, 29% reported cultivating more crops and 17% reported higher yields, reflecting improved cropping intensity and productivity.
- The average land under cultivation (n=266) increased from 3.62 to 4.24 acres (17%), while irrigated land increased from 3.36 to 3.91 acres (16%), indicating improved land use and year-round cultivation supported by better water access.

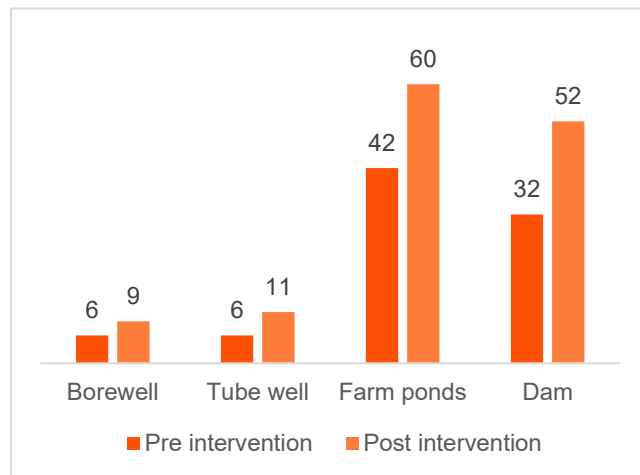
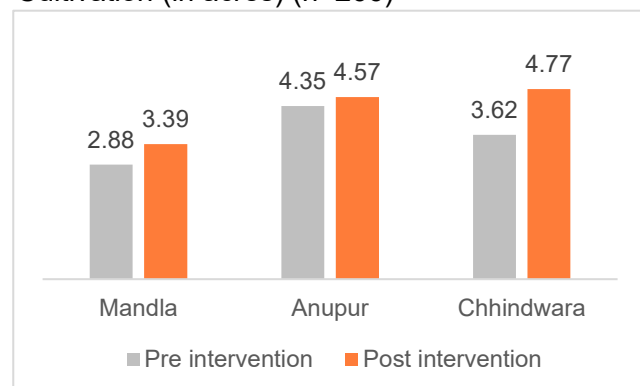


Figure 25: Total Average Land Area Under Cultivation (in acres) (n=266)



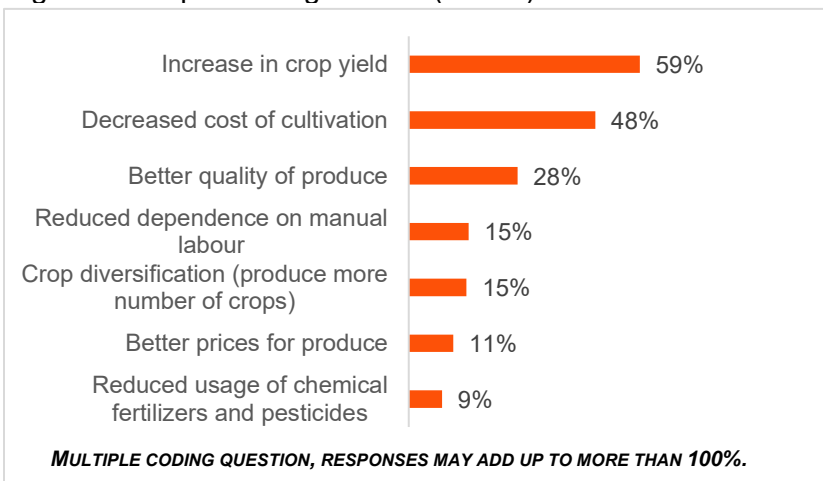
### Improved Farm Practices, Productivity and Cost Efficiency:

The project strengthened farm practices, productivity, and efficiency through technical support, capacity building, and promotion of sustainable agriculture.

- 66% of respondents (n=267) reported receiving agricultural support. Among these (n=175), vermicomposting (48%) was the most common, indicating a focus on organic soil enrichment and reduced chemical dependency.
- Drip/sprinkler systems were reported by 23%, strengthening water-use efficiency in a water-stressed context. Training on pest management and bio-composting (15%) and nutrient management (10%) improved knowledge of sustainable practices.
- Kitchen gardens (15%) supported household-level food production and nutrition, with some observed to be well maintained. Additional support such as soil testing, deep ploughing, and horticulture promotion contributed to diversification and improved land use.

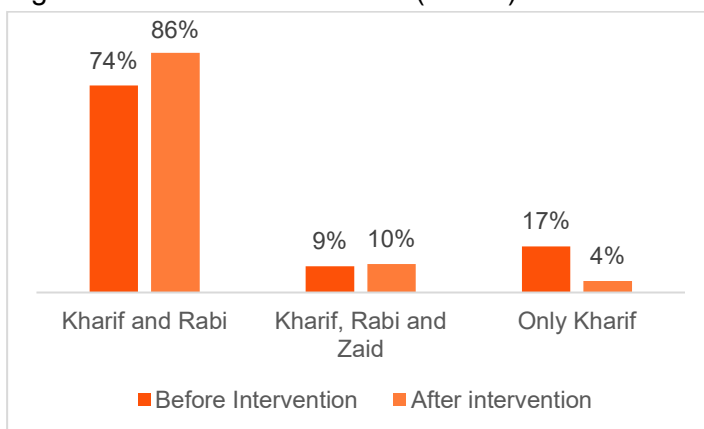
Farm-level outcomes (n=175) included increased crop yield (59%) and reduced cost of cultivation (48%), indicating improved productivity and efficiency. Further, 28% reported better produce quality and 11% better prices. Reduced labour dependency and crop diversification were each reported by 15%, while 6% reported reduced chemical input use.

Figure 26: Impact on Agriculture (n=175)



- Cropping intensity improved, with farmers cultivating Kharif and Rabi crops increasing from 74% to 86%, and those cultivating only Kharif declining from 17% to 4%, indicating a shift toward multi-season farming.

Figure 27: Cultivation Seasons (n=266)



Cropping patterns remained anchored in staples but showed diversification. In Kharif, paddy (96%, n=266) and maize (32%) dominated, while in Rabi, wheat (89%, n=266) remained primary, alongside pulses and oilseeds.

- Profitability improved, with paddy profits increasing from INR 1.42 lakh to INR 1.80 lakh (+27%) and maize profits from INR 0.58 lakh to INR 0.88 lakh (+53%), indicating stronger returns from cultivation.

- Stakeholder interactions indicated a shift toward climate-smart agriculture, including diversification, natural farming practices, and improved irrigation methods, supported by strong community participation

### **Strengthened Community Institutions and Participatory Water Governance:**

The project strengthened community institutions to support sustainable water management and long-term asset maintenance.

- Village Development Committees (VDCs) and Self Help Groups (SHGs) were established to oversee asset use, promote conservation, and coordinate with local institutions, ensuring continued functionality beyond the project period.
- These institutions contributed to improved water governance, with 50% of respondents reporting enhanced knowledge sharing and 43% reporting improved access to water. A smaller proportion (7%) reported better infrastructure maintenance.
- Maintenance challenges remain, with common issues (n=266) including leakage (44%), structural damage (28%), and vegetation overgrowth (18%), along with siltation and blockages. These highlight the need for continued upkeep and active community engagement.

### **Improved Livestock Support and Fodder Access:**

- A small number of respondents reported benefiting from livestock-related interventions. Improved water availability contributed to better fodder availability, reducing dependence on external sources.

### **Strengthened Child Growth Monitoring and Women's Support for Child Development**

- Child growth monitoring was strengthened through Wasundhara Sevikas, who tracked children with nutritional deficiencies and supported early identification and follow-up care.
- These efforts improved awareness among women and caregivers on child health and nutrition, strengthening community-level support systems and contributing to improved child development outcomes.

### **Sustainability:**

- The project demonstrates sustainability potential through community ownership, local institution building, and the strengthening of participatory water governance systems.
- Village Develop Committee (VDCs) and Self-Help Groups (SHGs) were formed or strengthened to support the operation, maintenance, and equitable management of water assets. Monthly and regular meetings reported by respondents suggest that these institutions are active and are seen as useful for better water access and conservation-related knowledge sharing.
- The project also supported sustainability by building local technical capacity through training on vermicomposting, nutrient management, pest management, and water-efficient farming practices, thereby reducing dependence on external support over time.

- At the same time, sustainability of physical assets will depend on stronger maintenance systems. Respondents identified leakage issues (44%), structural damage/cracks (28%), and vegetation overgrowth (18%) as common maintenance challenges affecting water structures.
- These findings suggest that while the project has created a strong foundation for long-term sustainability through institutions and capacity building, continued attention to asset maintenance, monitoring, and local financing mechanisms will be important to preserve benefits over time.

### Alignment with IBL CSR Policy and SDGs

The programme aligns with IBL's **CSR policy, which prioritises Environment Sustainability**<sup>14</sup> as a key thematic area. It also supports the achievement of **Sustainable Development Goals**<sup>15</sup>, specifically SDGs as detailed below.

#### SDG 1: No Poverty

By improving irrigation access, expanding cultivated and irrigated area, and increasing crop profitability, the project has contributed to more stable and improved farm incomes. The findings show gains in profitability across major crops such as paddy, maize, and millets, while women's livelihood interventions and limited livestock support also helped diversify income opportunities. These changes contribute to reducing livelihood vulnerability among rural households and strengthening their resilience to economic and climatic shocks.



#### SDG 6: Sustainable Cities and Communities

The project contributes to SDG 6 by improving local water security through decentralized water harvesting, water storage, soil and moisture conservation, and strengthening irrigation access. Interventions such as farm ponds, farm bunding, earthen bunds, boulder bunds, check dams, and well renovation have improved water availability for irrigation and supported more reliable cultivation across seasons. The project also strengthened local water governance through institutions such as VDCs and SHGs, thereby contributing to more sustainable and community-led water resource management.



#### SDG 13: Climate Action

The project strongly supports SDG 13 by building resilience to climate-related risks through watershed-based interventions and climate-smart farming practices. By improving water availability, soil-moisture retention, diversified irrigation sources, and on-farm water-use efficiency, the project has helped reduce vulnerability to erratic rainfall and seasonal water stress. Technical support on vermicomposting, nutrient management, pest management, micro-irrigation, and crop diversification has further promoted adaptive agricultural practices and strengthened farmers' capacity to cope with climate variability.



<sup>14</sup> Source: <https://www.indusind.com/content/dam/indusind-corporate/generic/CSR-Policy.pdf>

<sup>15</sup> Source: <https://sdgs.un.org/goals>

## Recommendations

- **Systematically Track the Performance of Water Assets** - Track the performance of key water assets by systematically monitoring dams, farm ponds, wells, and desilted tanks, with particular attention to storage levels, recharge trends, and duration of water availability across seasons. Such a system would help assess the long-term functionality of assets, support real-time upkeep of structures, and enable timely corrective action where performance begins to decline. This is especially important given the reported maintenance issues such as leakage, cracks, and vegetation overgrowth affecting water structures.
- **Strengthening Monitoring and Maintenance of Water Structures** - Alongside performance tracking, establish a village-level system for routine inspection and maintenance of water and soil conservation structures such as bunds, check dams, ponds, and wells. Community institutions should be supported to identify minor repairs early, mobilise local resources, and maintain records of asset condition. This would help preserve the productivity gains created by the project and reduce the risk of asset deterioration over time.
- **Strengthening Community Institutions for Water Governance and Asset Stewardship** - Further strengthen **Village Development Committees (VDCs) and Self-Help Groups (SHGs)**, through capacity building on water governance, asset maintenance, record-keeping, and equitable water distribution. These institutions are already seen as useful platforms for water access and conservation-related knowledge sharing; with stronger capacities, they can play a more active role in long-term management and sustainability of water resources.

## Study Limitations

- **Implementation Partner's Limited Team and Data Availability:** The IP team had transitioned out from the project location of Chhindwara before the impact assessment study, limiting access local stakeholders for qualitative interactions.
- Of the 267 respondents in the cohort, one completed only a limited number of questions, resulting in a reduced sample for certain analyses.

## Success Stories

### From Barren Land to Year-Round Cultivation

Sri Ramesh Singh (name changed), a resident of Dubsara village in Pushprajgarh block of Anuppur district, represents how access to the right support, combined with family effort and willingness to learn, can transform both land and livelihoods. Like many small farmers in the region, Ramesh Singh's family faced challenges related to limited irrigation, poor soil quality, and dependence on external inputs. Earlier, cultivation options were very restricted, and the family depended on seasonal farming with low productivity.

Ramesh Singh did not have his own irrigation source. For farming, he had to depend on water from a nearby canal connected to a dam, for which he had to pay an annual fee. In addition, a portion of the land behind his house remained barren and underutilized for a long time because of its poor condition. Before the intervention, this land was rocky and infertile, making cultivation difficult. The family was also spending around INR 800 to INR 1,000 per month on vegetables, which added to their household expenses.

Under the watershed development project, Ramesh Singh received support that helped change this situation. With grant assistance, an electric pump was purchased for the family, which

improved their ability to access water for irrigation. Alongside this, efforts were made to improve the barren patch of land behind their house. With continuous work and family participation, the once unproductive land gradually became fertile and suitable for year-round cultivation. This change created a strong foundation for improving household nutrition as well as farm income.

Ramesh Singh's transformation was also driven by his openness to adopting new and sustainable farming methods. In March 2019, he prepared NADEP compost for the first time and used the organic manure during the Kharif and Rabi seasons of that year. After observing good results, he became more committed to natural farming practices. He now regularly uses household organic waste and dung from his livestock which includes goats, cows, and bulls—to prepare NADEP compost. Over time, he and his family reduced and eventually stopped the use of chemical fertilizers and pesticides, replacing them with organic alternatives such as Amrit Pani and Dashparni. These changes had a visible impact on the family's farming system. Earlier, before land improvement, Ramesh Singh was able to cultivate only limited crops such as mustard and rye, and only in one season. For the rest of the year, cultivation on the land was either difficult or not possible at all. After the land was improved and irrigation access strengthened, he began growing paddy in Kharif and wheat in Rabi. In addition, his kitchen garden developed into a productive multi-cropping space where the family now cultivates a wide range of vegetables including onion, garlic, peas, cabbage, cauliflower, laal bhaji, coriander, okra, bottle gourd, and chilli.

This shift to diversified cultivation significantly improved the family's food and nutrition security. Vegetables that were once purchased from the market are now produced at home, reducing monthly vegetable expenditure to almost nil. This has not only lowered household costs but also ensured regular access to fresh and nutritious food for the family throughout the year. The family's collective effort has been central to this transformation. Their journey also reflects the importance of learning through observation and practice. Inspired by such changes, several other farmers in Dubsara village have also started adopting multi-cropping and kitchen garden cultivation, moving away from the earlier practice of growing only a single type of vegetable.

Ramesh Singh is known in the village as an eager learner who actively participates in project training sessions, demonstrations, and shramdaan activities. His willingness to experiment, combined with support from the project and sustained family labour, helped convert rocky and barren land into productive farmland. Today, his experience stands as a strong example of how watershed development, organic farming, and household-level initiative can together improve land productivity, reduce expenses, and strengthen livelihood security.

Ramesh Singh's story demonstrates that when farmers gain access to practical support, water access, and knowledge on sustainable agriculture, even degraded land can become productive. His journey reflects not only an improvement in cultivation practices, but also a broader transformation in household well-being, self-reliance, and confidence.

### **Reviving Village Dams - A Story of SHG Empowerment and Goatery-Based Livelihoods**

One of the important objectives of the project was to promote convergence with local institutions and government systems, and this was actively pursued across the project districts. During the

COVID-19 period, this became especially important, as rural communities needed timely awareness, guidance, and support to cope with emerging health and livelihood challenges. The project responded by working closely with Gram Panchayats and community-level institutions to spread awareness and strengthen local preparedness.

Village Development Committees, along with Wasundhara Sevaks and Sevikas, were supported to disseminate information among vulnerable households. These community resource persons took on voluntary roles under the guidance of Gram Panchayats and contributed to activities such as wall writing, awareness generation on social distancing, orientation sessions, and follow-up support. Outreach efforts were further strengthened with the involvement of frontline workers such as ASHAs, helping ensure that awareness messages reached households across project villages.

At the same time, the return of migrant workers to their villages created concerns around rising unemployment and limited local wage opportunities. Recognising this, the project focused on strengthening livelihood options through women's self-help groups (SHGs). Project staff made sustained efforts to support SHGs in connecting with banks and accessing relevant livelihood schemes of the state government.

In Jamalpaani village of Chhindwara district, 23 SHGs were formed during the reporting period. These groups were regularly trained and mentored on the fundamentals of SHG functioning, group management, savings practices, and long-term sustainability. In addition to institution building, the project also facilitated their linkage with the Central Bank of India, the local banking institution in the area. SHG members were informed about the loan application process, the requirements for accessing formal credit, and the ways in which bank finance could be used to initiate livelihood activities.

As a result of these efforts, four SHGs from three villages were linked to banks in their respective areas: Ganesh Self Help Group of Jamalpaani, Gayatri Self Help Group and Saraswati Self Help Group of Mundidhana, and Jai Maa Bhawani Self Help Group of Salai. Each of these groups accessed a bank loan of INR 1,00,000, providing them with an important financial base to begin income-generating activities.

Two of these SHGs used the loan to initiate goatery-based livelihoods. With project support, they purchased 12 female goats and 1 male goat, enabling them to start small-scale livestock enterprises. The project staff played an active role not only in facilitating access to quality animals at reasonable rates, but also in building the members' technical knowledge for managing the enterprise effectively. Training covered key aspects such as animal health care, feed and fodder management, vaccination schedules, and understanding the right market timing and price for sale. This practical support helped the SHG members move beyond credit access alone and build confidence in running a viable livelihood activity.

The experience of Mansi Bai (name changed), President of the a Self Help Group, reflects the broader impact of this support. Having been associated with the SHG for two years, she observed that regular handholding by the project helped strengthen the group's functioning and prepared its members to access formal banking services. Through this support, the group was able to secure the INR 1,00,000 loan and invest in goatery as a collective livelihood activity. She also highlighted that the project team helped the group procure healthy goats and trained members

not only in rearing practices but also in understanding how to realise fair returns from goat-related products.

According to her experience, the shift to goatery has significantly improved the economic condition of the group members. Household incomes have risen noticeably, and the SHG is now in a stronger financial position. Beyond improving incomes, the group has also developed enough internal strength to lend money to others in times of need, reflecting growing financial confidence and collective resilience. For the members, the support received under the project did not just create a livelihood opportunity and it helped lay the foundation for self-reliance, mutual support, and longer-term economic empowerment.

This case highlights how convergence with local institutions, financial linkages, and targeted livelihood support can work together to create meaningful change for rural women's groups. By combining awareness building, institution strengthening, access to bank credit, and livelihood training, the project enabled SHGs to move from formation to enterprise, demonstrating a practical pathway toward sustainable community-based development.

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