



TITAN
COMPANY



IMPLEMENTED BY
HIMMOTTHAN SOCIETY



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INDIAN INSTITUTE OF FOREST MANAGEMENT

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LIST OF ABBREVIATIONS

Abbreviation	Full Form
CRP	Community Resource Person
CSR	Corporate Social Responsibility
CUM	Cubic Meter
DBI	Diversion-Based Irrigation
DPR	Detailed Project Report
DTR	Detailed Technical Report
EASIER	Effectiveness, Awareness, Sustainability, Impact, Efficiency, Relevance
FCI	Food Corporation of India
FGD	Focus Group Discussion
FPO	Farmer Producer Organization
FTK	Field Testing Kit
HEAD	Holistic Environmental and Agriculture Development
IIFM	Indian Institute of Forest Management
IVDP	Integrated Village Development Program
KII	Key Informant Interview
KIIs	Key Informant Interviews
LFA	Revolving Fund Assistance
LPM	Litre per Minute
LRCDD	Loose Rock Check Dam
MCD	Masonry Check Dam
NAF	National Agro Foundation
NEIDA	North East Initiative Development Agency
NGO	Non-Governmental Organization
O&M	Operation and Maintenance
PIA	Project Implementation Agency
PRA	Participatory Rural Appraisal
SCT	Staggered Contour Trench
SDG	Sustainable Development Goal
SHG	Self Help Group
SMC	Soil and Moisture Conservation
TDS	Total Dissolved Solids
ToC	Theory of Change
UGs	User Groups
UWG	User Water Group
VDB	Village Development Board
VDC	Village Development Committee
VLI	Village Level Institution
VLM	Village Level Meeting
WRD	Water Resources Development

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EXECUTIVE SUMMARY - IVDP UTTARAKHAND

The Integrated Village Development Programme (IVDP), supported by Titan Company Limited under its Corporate Social Responsibility (CSR) initiatives and implemented by Himmatan Society, adopts an integrated approach to rural development in the ecologically fragile hill regions of Uttarakhand. The programme addresses interconnected livelihood and well-being challenges through coordinated interventions in water security, agriculture and horticulture, livestock development, education, natural resource management, and community institution strengthening.

An independent impact assessment of IVDP Phase III (2024–2025) was conducted by the Indian Institute of Forest Management (IIFM), Bhopal, in selected villages of Tehri Garhwal district. Using a mixed-methods approach and the EASIER framework (Effectiveness, Awareness, Sustainability, Impact, Efficiency, and Relevance), the assessment examined programme outcomes, implementation quality, and contextual relevance.

The findings indicate strong positive outcomes across programme components. Water security interventions improved household access to reliable water and reduced the time burden on women. Agriculture and horticulture interventions supported crop diversification, improved productivity, and increased confidence in cultivation, while plantation activities strengthened fodder availability and long-term income potential. Livestock interventions reinforced livestock as a key livelihood stabiliser, improving animal health, reducing labour burden, and enhancing income security, with goats emerging as an important liquid asset for vulnerable households. Education, library, and sports interventions improved learning environments and student participation, with some schools achieving state- and national-level exposure. Self-Help Groups (SHGs) emerged as the institutional backbone of the programme, strengthening savings, credit access, and women's participation in financial and livelihood decision-making, particularly in migration-affected villages.

Overall, programme performance under the EASIER framework was strong, reflecting effective delivery, high relevance to local needs, community ownership, and meaningful livelihood and social outcomes.

Recommendations emerging from the assessment include strengthening risk management in agriculture through improved pest and disease control, wildlife-related crop protection, and regular soil health monitoring; enhancing livestock support through systematic follow-up on animal insurance and preventive health services; expanding SHG-led livelihood diversification and enterprise development; integrating digital and financial literacy for women and youth; and continuing convergence with government schemes. Infrastructure investments and delivery mechanisms should be tailored to Uttarakhand's diverse and rugged hill geography, where terrain-related complexity necessitates higher resource intensity for sustainable outcomes.

Objectives of the Impact Assessment

To support evidence-based decision making, learning and accountability within Titan's CSR portfolio, Titan Company Limited, in partnership with the Himmotthan society, implemented the IVDP in selected villages of Uttarakhand. As part of this process, the Indian Institute of Forest Management (IIFM), Bhopal, was engaged to undertake an independent impact assessment of the IVDP during 2024– 2025 in selected villages of Tehri Garhwal district.

The objective of the present assessment is to examine project performance and outcomes across key thematic areas, including natural resource management, water security, agriculture and livestock-based livelihoods, education and community institution strengthening. The assessment systematically reviewed implementation processes and institutional arrangements and assesses progress against stated program objectives and intended outcomes.

A key focus of the assessment is to evaluate the relevance and appropriateness of project interventions in relation to the local agroclimatic, topographical and socioeconomic conditions of Uttarakhand's hill context, as well as the extent to which interventions respond to community-identified needs and priorities. It further seeks to document observed changes at the household and community levels, including shifts in socioeconomic conditions, agricultural and livestock productivity, water availability and the condition and management of natural resources in project villages. In addition, the sustainability of outcomes is assessed, with specific attention to the continued functioning of water and natural resource management systems, adoption and continuity of improved livelihood practices, strengthening of community institutions and the capacity of local systems to sustain and extend benefits beyond the project period.

Scope of the Present Impact Assessment

The present impact assessment covered the implementation period from April 2024 to March 2025 and evaluated the Integrated Village Development Program (IVDP) implemented by the Himmotthan society with funding support from Titan in selected villages of Uttarakhand.

The assessment examined the effectiveness, efficiency, outputs and outcomes of project implementation following Theory of Change (ToC)

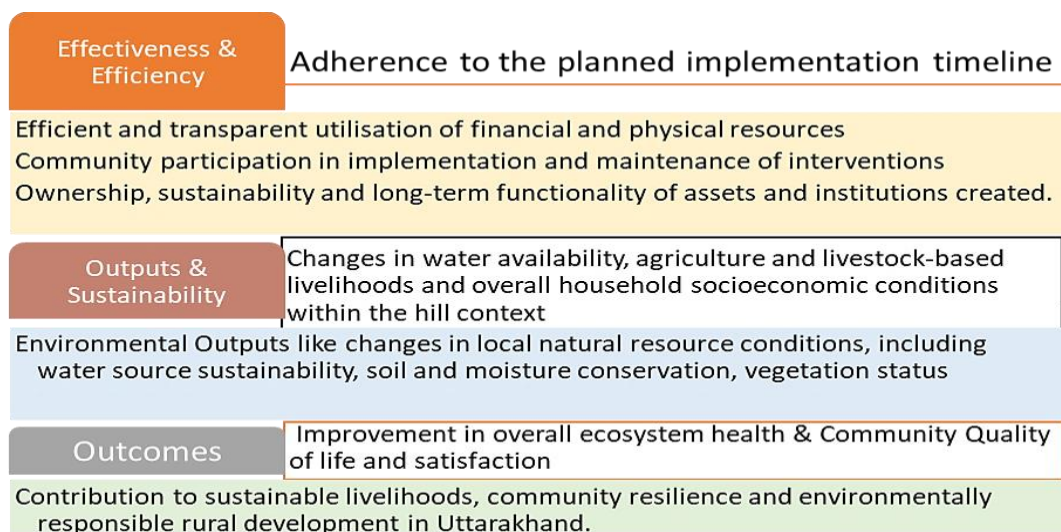


Figure 1: Scope of the Work under Theory of Change

Collectively, these dimensions provided a consolidated understanding of program performance, outcomes and contribution to sustainable livelihoods, community resilience and environmentally responsible rural development in Uttarakhand.

Field Assessment for Impact Evaluation & Implementation Challenges



Figure 2: Team IIFM conducting the Impact Assessment

The field visit to Uttarakhand started with a visit to Himmotthan Society at Dehradun on 14th November 2025. A meeting was held with the Executive Director of Himmotthan Society and their team to understand the background of IVDP implementation processes. It was stated that the primary objective of IVDP was to ensure Post disaster livelihood reclamation of affected communities through the provision of NRM and Nature based solutions. Himmotthan society followed multi-input area development approach. Titan was reported to be very passionately monitoring this programme with regular quarterly visits from Titan officials and online review meetings every month. The phase I and Phase II of the project has been completed, with assets transferred to beneficiaries and phase III has been started which will continue till 2028.

Some of the challenges which were reported by key informants from implementing partners were

- Frequent climatic disasters like cloud bursts and erratic rainfall in the area are causing loss of 60+ project working days, which makes it challenging to meet the strict project deadlines.
- As the project requires community-based implementation, meeting community aspirations and mobilizing them for various activities becomes challenging.
- Seasonal and overall migration of youth and adult males
- Human wildlife conflicts and costly remedies like chain fencing, challenging agricultural interventions of project.
- Increasing floating short-term tourism and associated activities putting pressure on fragile hilly ecosystems through excessive vehicular movements.
- Limited fodder availability for livestock due to changing Govt. policies
- Road accessibility and infrastructure issues.

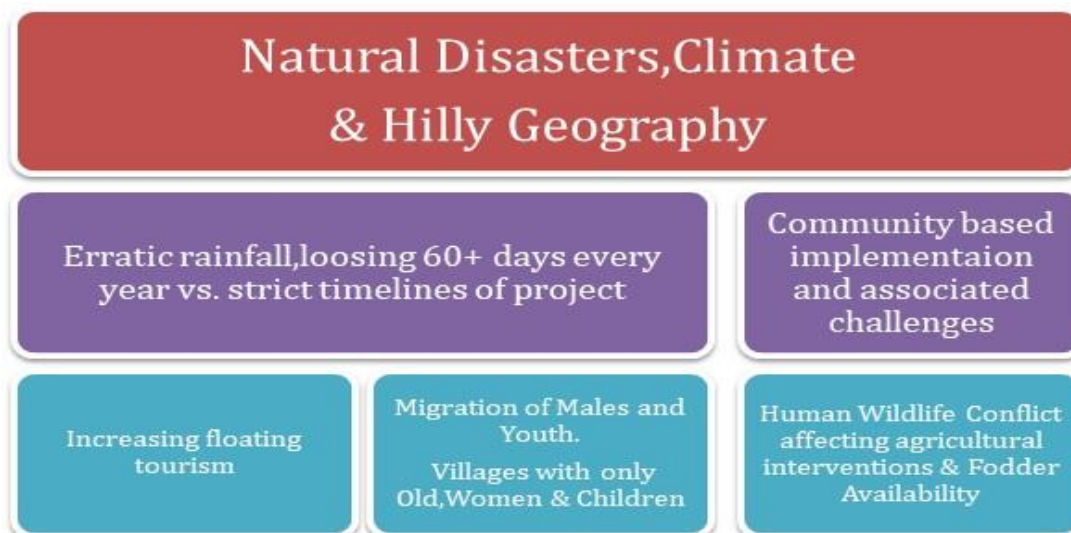


Figure 3: Challenges faced in the Impact Assessment

In spite of all these challenges, project got successfully completed and project outcomes were disseminated through puppet shows to promote continued behavioural change. Further, exit strategy was successfully implemented through training and handholding support. Out of the total villages in which project was implemented, only 20-30% of villages are not responding well in terms of project outcomes, while rest of the villages showing very good response, as perceived by implementation partners. IVDP Phase III is being built up on existing activities with limited innovation. Programme activities in Tehri Garhwal district are organised across three clusters spanning three development blocks. For impact evaluation, field visits were conducted in six villages across these clusters namely Syalsi, Naughar, Banda, Idiyan, Kanthar Gaon and Gunogi/Udaikot. The field assessment involved interactions with beneficiaries, community institutions and implementing staff to understand programme implementation processes, asset utilisation, community participation and contextual outcomes across water, livelihoods, education and institutional strengthening components.

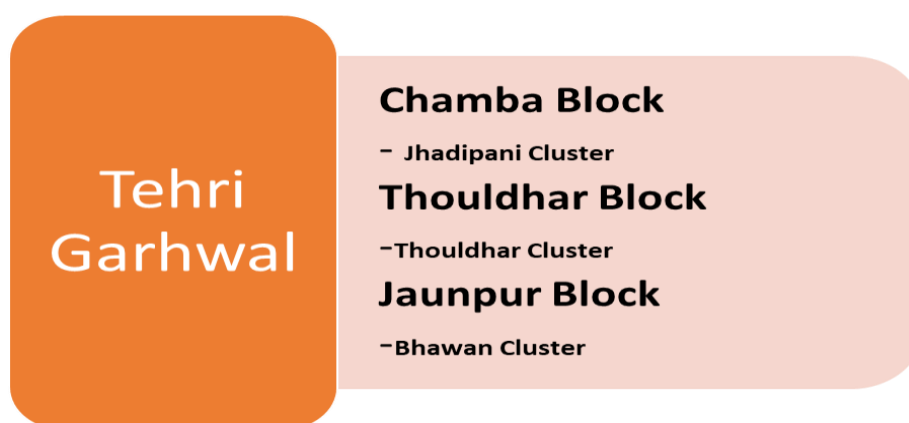


Figure 4: Blocks Studied under the Project

Project Area

The study focuses exclusively on Titan CSR's IVDP interventions in selected villages of Uttarakhand. Given the hill specific ecological, hydrological and livelihood context, the evaluation places particular emphasis on springshed management, water security, agriculture and livestock systems, natural resource management, Self Help Groups and educational and sports interventions. Households often participate in multiple IVDP components; therefore, the study design allows for multicomponent attribution at the respondent level rather than treating interventions as mutually exclusive.

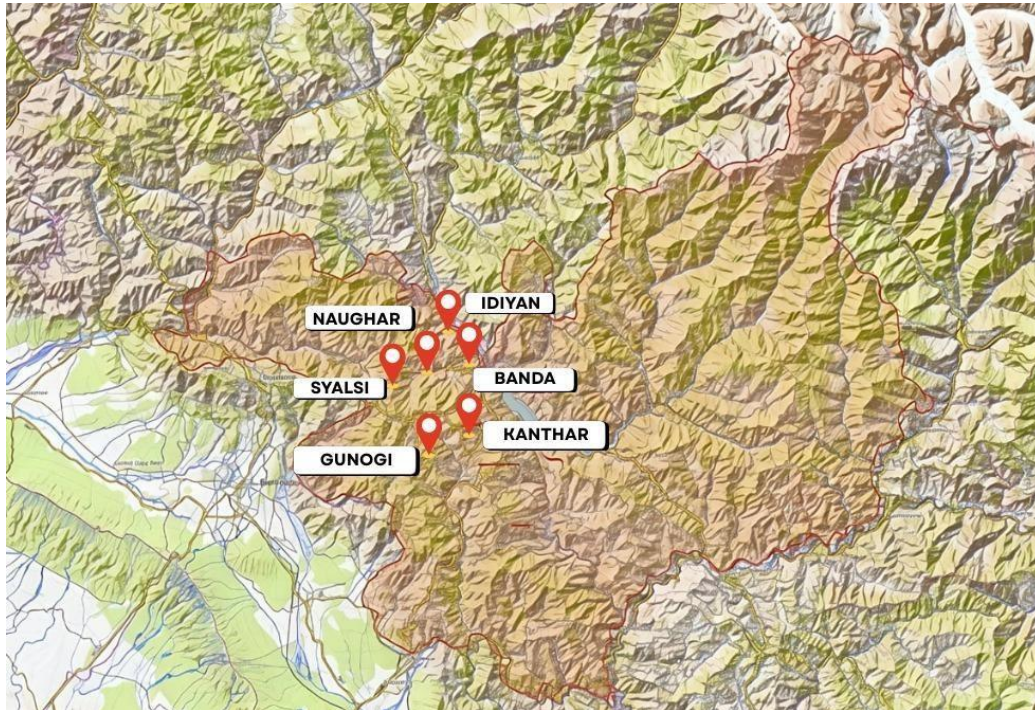


Figure 5: Topographic map of Sampled Villages in Uttarakhand

Sampling

A proportionate purposive sampling approach was adopted across the Uttarakhand (UK) study villages to ensure balanced and meaningful representation of programme beneficiaries while remaining sensitive to field realities in remote hill contexts in Chamba and Thauldar block. The sampling technique limited the statistical generalizability beyond the study villages, but findings were triangulated across household surveys, focus group discussions and key informant interviews to overcome this limitation. Sampling was structured to achieve the following:

- Representation across all active IVDP components, including water, livelihoods, livestock, education and community institutions
- Inclusion of diverse socioeconomic and livelihood profiles, reflecting variations in landholding size, income sources and migration status.
- Coverage of both core beneficiaries and peripheral households, capturing direct as well as indirect programme effects

Table 1: Sampling table

S. No.	Village	Household surveys (N)	Focus Group Discussions (Participants)	Key Informant Interviews (KII) Interviewees.	Total
1	Syalsi	8	12 per FGD	3	23
2	Naughar	5	5	2	12
3	Banda	6	13	3	22
4	Idiyan	8	18	3	29
5	Kanthar Gaon	5	19	2	26
6	Gunogi Udaikot	3	7	2	12
Grand Total					124

The number of household surveys, focus group discussions (FGDs) and key informant interviews (KIIs) in each village was determined based on village size, intervention intensity and the availability of active beneficiary groups. Overall, the sampling strategy was designed to generate reliable, context-sensitive insights that reflect ground realities and support a credible assessment of programme outcomes under the Titan IVDP. Beneficiaries were selected from the Project report provided by the implementation partner and all available beneficiaries were involved in sample size and FGD's. Higher participation of women respondents reflects prevailing migration patterns and was addressed by cross verifying household level insights through community and institutional perspectives. The combination of quantitative and qualitative methods strengthened confidence in the observed trends despite modest sample sizes.

Field Observations

I. Water Security

Water security interventions under the IVDP combined physical infrastructure creation, source sustainability measures and community managed institutional arrangements to address both immediate access constraints and longer-term reliability challenges in the hill context of Uttarakhand, where seasonal scarcity is a defining feature.



Figure 6: Water Related Interventions in Himmothan

Across the study villages, water related interventions undertaken by TITAN include household level piped water supply systems, storage tanks, rainwater harvesting tanks, spring shed recharge structures, ponds, check dams and plantation-based catchment treatment. Physical verification was done to confirm the creation and operationalization of multiple water assets during the assessment period, supported by structured handover processes to local user groups and community institutions.

In the financial year 2024–25, additional source strengthening measures were undertaken to reinforce water security outcomes. Notably, two check dams were constructed in Banda village, complementing existing water supply and rainwater harvesting systems for improving surface water retention and supporting downstream recharge. Together, these interventions have strengthened seasonal water availability and reduced runoff losses, enhancing overall system resilience.



Figure 7: Tilwal Gaon Site

Beyond infrastructure creation, water safety and source performance were actively monitored. Periodic water quality testing is conducted to ensure the safety of drinking water from spring sources and flow monitoring “blue boxes” are used to record data such as spring discharge and seasonal variation. These simple and innovative monitoring systems enable communities and implementing partners to track the flow rate of the source over time and respond proactively to emerging risks.

Households consistently reported elimination of time spent on water collection, improvements in drinking water quality and greater confidence in year-round availability. Improved water access has had important secondary livelihood effects. With reliable water from rainwater harvesting tanks and strengthened sources, farming has become a more viable and less risky option, enabling households to expand vegetable cultivation, maintain orchards and support livestock rearing. Improved availability of water has also reduced seasonal uncertainty for cattle and buffalo care, contributing to better animal health and productivity.

The benefits of improved water security are particularly significant for women, who bear primary responsibility for water collection, agriculture and livestock management in a context of high male outmigration. Reduced water collection times has freed women’s time for productive activities, while improved water availability has directly supported their expanded role in farming, dairy management and household decision making.

In Banda, the household water supply system comprising a 7.5 KL storage tank, GI pipeline network, intake and bypass chambers, rainwater harvesting structures and household connections serves 13 households and is actively managed by a User Water Group (UWG). The addition of check dams during FY 2024–25, along with routine water testing and system maintenance has further strengthened reliability for domestic use as well as agriculture and livestock activities. The tank also has a chlorination chamber which is replaced every 10 to 15 days to ensure safe drinking water and a charge of Rs.50 per month is being charged to the members of the User Water Group (UWG) for maintenance and other activities.

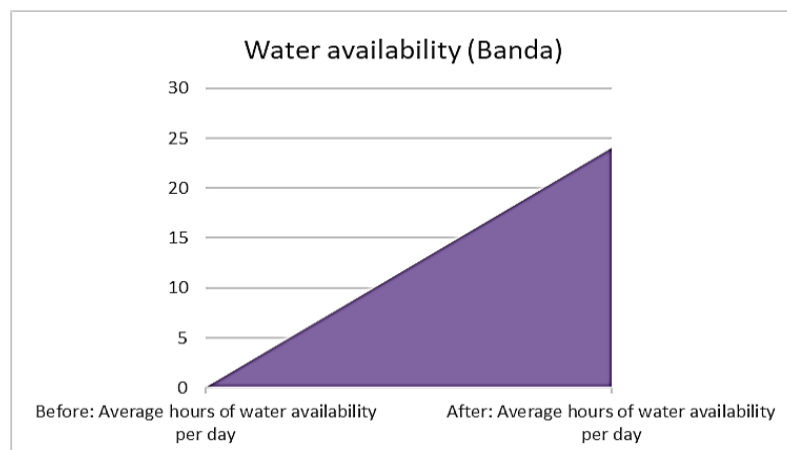


Figure 8: Water Availability in Banda

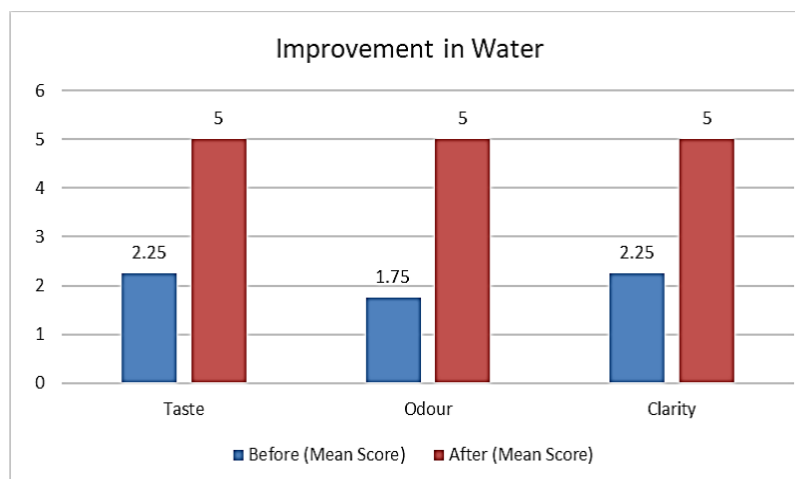


Figure 9: Improvement in Water in Banda

In spring dependent villages such as Gunogi Udaikot, Implementation Agency data documents the construction of 640 recharge trenches and three recharge ponds, supported by plantation of native species in the catchment area. Combined with rainwater harvesting and systematic flow monitoring through blue box records, these interventions have contributed to improved lean season spring discharge and greater confidence in water availability for both household and livelihood use.

Overall, the water security component demonstrates strong Effectiveness, Efficiency and Sustainability under the EASIER framework. By integrating infrastructure, ecological restoration, monitoring systems and community ownership, the programme has transformed water from a daily constraint into a viable means of livelihoods and resilience in the hill villages of Uttarakhand.



Figure 10: Beneficiaries in Wanda, Uttarakhand

2.1 Field Cases Observed during FGD and Interviews

FIELD CASES OBSERVED DURING FGD AND INTERVIEWS

Case 1

Khajani Devi, a 65-year-old resident of Banda village, previously depended on a gadera located approximately 1.5 km from her home as the only nearby water source. The distance and uncertainty of supply made cattle rearing and plantation activities unviable.

Following the installation of the household water tank and piped water access under IVDP, water availability became stable and reliable. This enabled her to acquire a buffalo (bhais) for dairy purposes and undertake plantation of forty fruit-bearing trees, including orange and apricot, activities that were not possible earlier.



Case 2

Madhubala ji, a resident of Banda village, earlier spent a significant part of each day fetching water for her household and cattle, making around 10 trips of approximately 45 minutes each. This heavy time burden constrained both household care and agricultural activity.

Following the IVDP water interventions, water availability at the household level has improved substantially. Madhubala ji reported a clear improvement in water quality, particularly in terms of taste and cleanliness, increasing her confidence in using the water for both domestic and livestock purposes. With reliable water access, she has been able to cultivate pea in her field, an activity that was not feasible earlier due to water scarcity.

2.2 EASIER – Water Component

E

Effectiveness: Water interventions improved household access and reliability by reducing distance to sources and addressing seasonal availability constraints. Beneficiaries also reported noticeable improvements in drinking water quality.

A

Awareness: Community members demonstrated increased awareness of safe water practices, basic system maintenance and water quality monitoring.

S

Sustainability: Community managed systems, routine maintenance arrangements, water quality checks and source protection measures indicate strong potential for continued functioning beyond the project period.

I

Impact: Reduced time spent on water collection and improved year round availability eased daily workload—particularly for women—and supported household needs as well as agriculture and livestock activities.

E

Efficiency: This intervention is highly efficient when it comes to delivering water to households. Water from spring to tank to household is being transported by pipes which are durable and can handle adverse conditions in hilly terrains.

R

Relevance: The intervention directly responded to the realities of hill villages where spring dependence, seasonal scarcity and women’s disproportionate water collection burden are persistent challenges, making water security a foundational and enabling input across livelihoods.

2.3 Recommendations:

1. Extend Household Water Coverage:

In Banda, household-level water supply systems have shown strong performance and clear benefits. Where water source capacity and technical feasibility permit, extending connections to remaining households within the same village would improve equity of access and maximise the impact of existing infrastructure.

2. Strengthen Transfer of Spring Management Knowledge

Spring rejuvenation interventions have improved seasonal water availability; however, long-term sustainability depends on continued local knowledge. Traditional practices related to spring maintenance, combined with newer technical methods, should be systematically passed on to younger community members to ensure reliable functioning of water sources over time.

3. Agriculture Interventions Implemented

Across the study villages, agriculture interventions under IVDP Phase III focused on practical support that farmers could easily adopt. The emphasis was on providing quality inputs, basic training and market support so that smallholder households, particularly women, could improve cultivation without taking financial risks. This approach was especially relevant in villages affected by high male outmigration, where women manage most farming activities.

Even in households where women technically have access to larger landholdings, cultivation is often limited by time and labour constraints resulting from male migration. Women are typically able to cultivate only 2–3 Nali (1 Nali = 0.02 Hectare approx.) of land, primarily on plots located close to their homes. Fields situated farther away are difficult to manage due to lack of time, safety concerns and challenges related to crop damage by animals, which require constant monitoring. As a result, agriculture interventions that focus on manageable, home adjacent plots and low risk inputs are better aligned with the women farmers in these villages.



Figure 11: Site Photos of Chamba, Uttarakhand

II. Crop Support and Seed Distribution

In Syalsi, agriculture has shifted from subsistence to limited market-oriented cultivation with the introduction of improved seeds, demonstration plots and targeted training under IVDP. Farmers prioritize expanding vegetable cultivation, particularly potato, cauliflower, pea, capsicum, chilli and

garlic that perform well in the mid Himalayan climate and have steady demand in nearby markets, including tourism linked outlets such as hotels.

Potato cultivation was promoted as a suitable and dependable crop. Each beneficiary household received 50 potato seed units, covering 68 households in total. This ensured uniform access to quality planting material. Farmers primarily used these seeds on small plots close to their homes, making cultivation manageable for women who balance agricultural work with household and livestock responsibilities.

In Naughar, agriculture support focused on pea cultivation, selected for its suitability to local weather conditions and its ability to generate quick seasonal returns. Ten households received pea seeds, with quantities ranging from 5 kg to 20 kg per household, depending on field size. This flexible distribution allowed households to participate according to their capacity without overburdening land or labour. Pea cultivation added a seasonal income stream alongside orchard-based activities already present in the village.

In Banda, ten households were supported with pea seeds ranging from 3 kg to 5 kg per household. While agricultural outcomes in Banda are closely linked to improved water availability, targeted seed support helped households make productive use of available water and initiate or expand seasonal vegetable cultivation.

Table 2: Seed Assistance in 2024-25

Seed Assistance in 2024-25			
Row Labels	Procurement of Potato seeds in units	Procurement of Potato seeds in kgs	
Banda	-	40	40
Naughar	-	105	105
Syalsi	3400	-	3400
Grand Total	3400	145	3545

2.1 Plantations (Fodder and Fruit Bearing Species)

Plantation interventions under IVDP Phase III were implemented as a targeted agricultural support measure to strengthen fodder availability, long-term land productivity and ecological stability, particularly in villages affected by male outmigration where women manage both livestock and agriculture. Beneficiary level records and household survey data confirm that plantation activities were undertaken across Syalsi, Naughar and Banda, with a clear emphasis on women beneficiaries and manageable, household aligned interventions.

Plantation species were selected based on local ecological suitability, livelihood relevance and low maintenance requirements, with a clear preference for indigenous and locally adapted varieties. Across villages, plantations broadly fell into two categories: fodder species to support livestock-based livelihoods and fruit bearing species to create future income assets.

2.2 Fodder Plantations in Syalsi

In Syalsi village (Bhawan Cluster, Jaunpur Block), plantation support focused specifically on fodder plantations, directly linked to livestock management needs. Beneficiary records indicate that eight womenheaded households—Guddi Devi, Minaxi Devi, Sangeeta Devi, Bamu Devi, Ramkorn Devi, Vishila Devi, Gayetri Devi and Bharti Devi—received support for fodder plantation activities. These plantations are present in community land, around 2 hectares of land was covered to ease the access of fodder for all women in the community.

Fodder plantations included indigenous species such as *bhimal*, *sehtut* (mulberry), oak and *kachnar*, which are traditionally valued in the region for high quality leaf fodder, resilience to hill conditions and the ability to regenerate biomass annually. These species also contribute to slope stabilisation and soil health.

The selection of fodder species was guided by the need to reduce women’s daily effort in collecting fodder from forests, lower grazing pressure on nearby forest areas and improve the reliability of feed for cattle and goats. Household survey responses from Syalsi indicate high involvement of women in livestock care and positive perceptions regarding improvements in animal health and fodder availability. The proximity of fodder plantations to beneficiaries will make daily livestock management more manageable and reduced dependence on external sources.



Figure 12: Fodder Plantation in Bolasi, Uttarakhand

2.3 Plant Distribution in Naughar



Figure 13: Women conducting Plant Distribution in Naughar

In Naughar village (Bhawan Cluster, Jaunpur Block), plantation support was provided through plant distribution, primarily oriented toward fruit bearing and mixed-use species. Beneficiary level records show that Chandrma Semwal (100 plants), Minika (50 plants) and Rajani Devi (30 plants) received planting material.

Fruit bearing plantations included horticultural species such as apple, peach, apricot and citrus varieties, selected for their suitability to the climate, relatively low input requirements once established and potential to generate income over the medium to long term. Support of 100rs/pit was provided to the beneficiaries so that the input cost of the digging, fertilizer and maintenance activities can be offset. These plantations were intentionally positioned as supplementary livelihood assets, allowing households to continue seasonal vegetable cultivation while building future income streams without significantly increasing labour or financial risk.

Household survey responses from Naughar indicate high survival rates and strong confidence in the long-term benefits of plantation and NRM activities, supporting the view that plant distribution was appropriate, well absorbed and aligned with household expectations.

2.4 Plant Distribution in Banda

In Banda village (Thauldhar Cluster), plantation activities were implemented during FY 2024–25 and closely linked with improved water availability and catchment treatment measures. Beneficiary records indicate plant distribution support to Aishwarya G (20 plants), Babli Devi (220 plants), Khajani Devi (40 plants), Anita Devi (40 plants) and Sunita Devi (35 plants).

Plantations in Banda were implemented alongside water storage, rainwater harvesting and catchment treatment interventions, creating favourable conditions for plant survival and early establishment. Species selection combined fruit bearing plants with indigenous species suited to boundary and mixed plantations. Household level survey responses from Banda reported high satisfaction with plantation growth and strong perceived increases in vegetation cover, suggesting positive convergence between water security and plantation interventions.



Figure 14: Plant Cropping in Banda

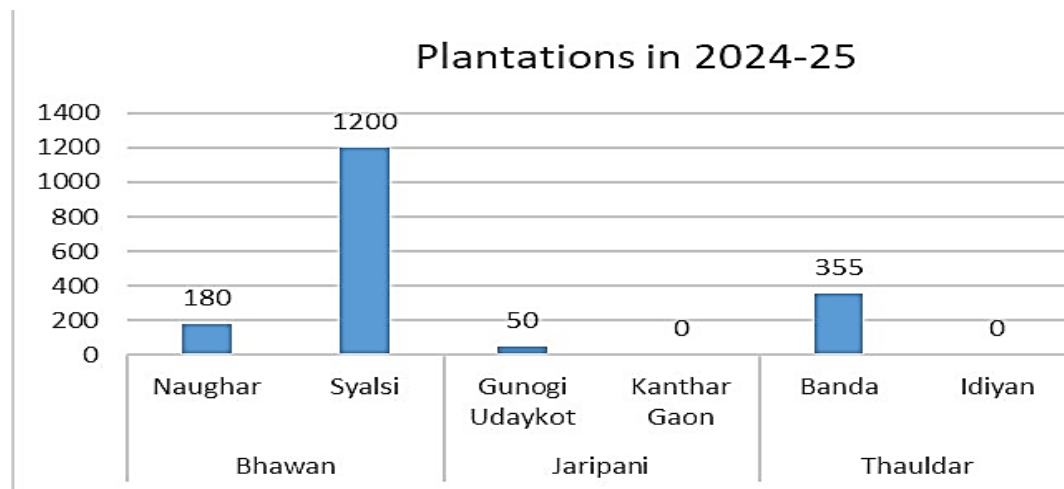


Figure 15: Plantation in 2024-25

2.5 Early Outcomes and Household Level Evidence

Across villages, plantation records and survey responses together indicate that plantation interventions were implemented at small plots close to their home, tailored to household capacity and land availability. Survey variables capturing number of plants planted, survival rates and growth performance consistently point to strong early outcomes, with survival often reported above 90 percent (Average) and growth performance rated positively (4.75/5).

Women were identified as the primary managers of plantation care and maintenance in most beneficiary households. This reflects strong alignment between plantation activities and women’s daily routines in migration affected villages, reducing labour risk and supporting sustainability. Although plantation

interventions are inherently long, early evidence suggests tangible benefits in terms of improved fodder access, reduced pressure on forest resources, increased vegetation cover and strengthened confidence in long-term land productivity. Fruit bearing plantations are expected to contribute to income diversification in future years, while fodder plantations will be supporting livestock-based livelihoods in 3 to 4 years.

By integrating plantation activities within agriculture and livestock systems, rather than treating them as standalone NRM efforts, the IVDP has strengthened both current livelihood stability and future resilience, using evidence led, low risk interventions well aligned with household realities in the hill villages of Uttarakhand.

2.6 Training, Institutional Linkages and Cultivation Practices

Across all agriculture intervention villages, seed distribution was supported by demonstration plots, basic soil and crop management training and regular field guidance. Training focused on simple and practical topics such as sowing methods, crop spacing and low-cost soil care practices.

In addition, farmers across villages now have improved access to good quality seeds and remain in regular contact with Krishi Vigyan Kendra (KVK) and the Common Facility Centre (CFC). These institutional linkages have helped farmers source reliable planting material and gain exposure to improved and modern cultivation techniques, including better crop varieties, improved agronomic practices and basic pest and disease management.

Together, improved inputs, training and institutional support have contributed to a gradual shift from traditional low value crops to vegetables and other cash crops. This transition has diversified income sources, reduced dependence on subsistence farming alone and strengthened overall livelihood security, particularly for women managed households.

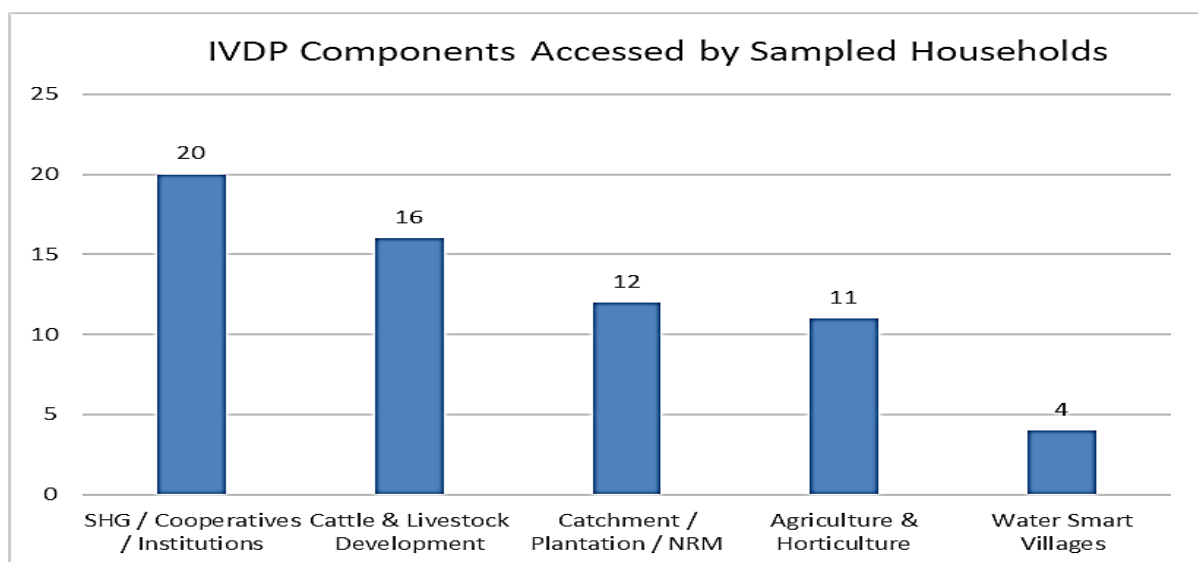


Figure 16: IVDP Components Accessed by Sampled Households

2.7 Market Access and the Role of Himvikas Cooperative Society

In Kanthar Gaon, agriculture outcomes were further strengthened by the Himvikas Cooperative Society, which supports farmers, especially women, in selling their produce. The cooperative collects vegetables from the village and provides vehicle transport to nearby markets. This support is particularly important in hill areas, where individual farmers usually produce small quantities and lack access to private transport. For women managed households, travelling alone to markets is often difficult due to distance, time constraints and profitability concerns. The cooperative's transport service enables women to sell their produce collectively and on a regular basis. Several collection points have been made for the beneficiaries to deposit their produce and generate slips documenting their produce and quantities.

By managing collection and transport, the cooperative reduces postharvest losses and improves price realisation for farmers. Payments are made at the end of each month in an organised and predictable manner, helping households plan expenses and future cultivation. Beyond transport, the cooperative provides assurance that produce will reach the market. This confidence has encouraged households to grow vegetables for sale rather than limiting production to home consumption. As a result, increases in cultivated area and yield have translated into real income gains, rather than remaining limited to subsistence benefits.

2.8 Field Cases Observed during FGD and Interviews

FIELD CASES OBSERVED DURING FGD AND INTERVIEWS

Case 1

Shankuntala Devi from Kanthar Gaon was able to strengthen her household income through vegetable cultivation supported by market linkage under IVDP. With the facilitation of the Himvikas Cooperative Society, she accessed organised collection and transport of produce, enabling regular participation in local markets despite constraints related to land size and individual mobility. During the agricultural season, she sold vegetables worth INR 55,291. Her achievement was acknowledged through an award on 14 September 2025, reflecting the positive role of cooperative-supported marketing in enhancing women's farm incomes.



Case 2

Sheela Devi, a woman farmer from Silkoti village, manages cultivation largely on her own due to male migration and limited labour and time availability. With support under the Integrated Village Development Programme (IVDP), including access to improved seeds and basic training, she was able to strengthen vegetable cultivation on small plots near her home. During the season, she sold vegetables worth INR 90,655, contributing significantly to household income. Her experience illustrates how targeted agriculture support can enable women farmers to achieve meaningful livelihood gains despite constraints of time, labour, and land access

2.9 EASIER – Agriculture, Horticulture and Plantation Component

E	Effectiveness: Agriculture interventions led to observable improvements in cultivation practices, crop diversity and productivity through improved seeds, demonstration plots, training, plantation support and market facilitation. Households reported better utilisation of small, homeadjacent plots and improved confidence in vegetable and orchard based cultivation.
A	Awareness: Beneficiaries demonstrated increased awareness of improved seed varieties, basic agronomic practices, soil care and plantation management. Linkages with Krishi Vigyan Kendra (KVK), Common Facility Centres (CFCs) and field demonstrations strengthened understanding of crop selection, spacing and low cost cultivation methods
S	Sustainability: Perennial plantations (fodder and fruitbearing), knowledgebased inputs and convergence with SHGs and cooperatives support long-term continuation of benefits. Indigenous species selection, high survival rates and integration with water and catchment interventions enhance ecological and livelihood sustainability.
I	Impact: The intervention contributed to incremental expansion of cultivated area, diversification into vegetables and horticultural crops, improved food security and supplementary income. Plantation activities reduced fodder stress, supported livestock rearing and strengthened long-term land productivity.
E	Efficiency: Relatively low cost inputs—such as seed distribution, limited planting material and basic training—generated livelihood gains without increasing household risk. Collective market access through cooperatives further improved returns without requiring individual investment in transport or infrastructure.
R	Relevance: Interventions were well aligned with local agroclimatic conditions, small and fragmented landholdings and women-managed farming systems in migration-affected villages, particularly the focus on low-risk crops and manageable plots close to the homestead.

2.10 Recommendations – Agriculture, Horticulture and Plantation Interventions

Based on field observations, household feedback, and performance of agriculture and plantation interventions under IVDP, the following recommendations are proposed to strengthen and sustain agricultural outcomes, particularly in women-managed, migration-affected hill villages.

Strengthen Pest and Disease Management as Cultivation Expands

Across villages such as Syalsi, Naugar, and Banda, farmers have expanded vegetable cultivation following access to improved seeds, training, and water availability. While this has increased production and confidence, farmers also reported a growing incidence of pests and crop diseases, particularly in vegetables such as potato, pea, cauliflower, and chilli. Introducing focused, practical guidance on pest and disease identification, prevention, and low-cost control measures would help protect recent productivity gains and reduce the risk of sudden crop losses.

Support Regular Soil Testing to Maintain Productivity on Small Plots

Agricultural activities across villages are concentrated on small, home-adjacent plots that are cultivated repeatedly. As intensity of use increases, maintaining soil health becomes critical. Supporting regular and timely soil testing would help farmers understand nutrient status and apply inputs more efficiently, preventing gradual decline in soil productivity and ensuring that increased cultivation remains sustainable over time.

Reduce Crop Losses Caused by Wild Animals

In villages Syalsi, Naugar, Banda and Kanthargaon, farmers reported that crop damage from wild boars and other animals continues to be a major challenge. Supporting protective measures such as chain fencing around vulnerable plots, or community-managed night watch systems during peak cropping periods, could help reduce losses and improve farmer confidence.

III. Livestock (Cattle and Goat) Intervention

Livestock interventions under IVDP Phase III were implemented as a risk buffering and livelihood stabilising strategy in the hill context of Uttarakhand, where agriculture alone is often insufficient due to male outmigration, labour constraints and wildlife pressure. The programme prioritised strengthening existing livestock systems cattle and goats through improvements in shelter, animal health, feeding efficiency and asset ownership, rather than promoting rapid herd expansion or commercial intensification.

Beneficiary level records and household survey data confirm that livestock support was implemented across Syalsi, Naughar, Banda, Idiyan, Kanthar Gaon and Gunogi–Udaykot, with a strong emphasis on women beneficiaries, reflecting the reality that women are the primary managers of livestock in these villages.

3.1. Cattle Shed Construction and Renovation

Improving livestock shelter was a core intervention aimed at reducing animal stress, improving hygiene and lowering women’s daily workload. Cattle shed construction and renovation support was provided at the household level, typically as one unit per beneficiary household.

In Syalsi, cattle shed renovation support was extended to households including Meenakshi Devi, Ramkaur Devi and Sangeeta Devi. In Naughar (FY 2024–25), Meena Devi received similar support, while in Idiyan (FY 2024–25) multiple households including Meena Devi, Soni Devi and Chandra Devi , benefited from shed renovation interventions. These improvements enhanced protection from rain and cold, particularly during the monsoon and winter months and reduced time spent on cleaning and managing animals.

Physical verification and beneficiary feedback indicate that renovated sheds are functional and actively used, contributing to improved animal comfort, better hygiene conditions and reduced incidence of weather related stress and illness.



Figure 17: Cattle Shed in Dandi

3.2. Support to Cattle Purchase and Insurance

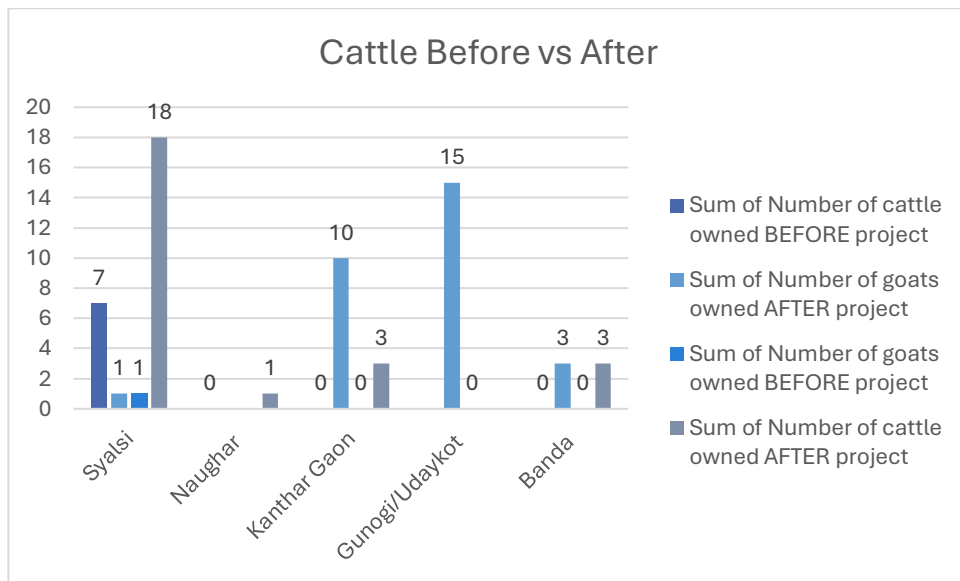


Figure 18: Cattle Before v After Intervention

To strengthen livestock assets while managing risk, support to cattle purchase combined with insurance coverage was provided, particularly to women beneficiaries. Each supported household typically received assistance for one animal, with insurance included to mitigate loss risk.

In Syalsi, beneficiaries included Nirmala Devi, Reena Devi, Shulochna Devi, Rosani Devi, Anuradha Devi, Hamlata and Anahdi Devi. In Naughar (FY 2024–25), Seeta Devi and Mamta Devi received similar support. In Kanthar Gaon (FY 2024–25), beneficiaries included Saukini Devi, Gulabi Devi and Seeta Devi, while in Idiyan (FY 2024–25), Suman Devi and Meena Devi were supported. This includes a sum of Rs. 7000 for cattle purchase, Rs. 5000 is given for cattle purchase and Rs. 2000 for insurance of 60,000 for a year.

Survey responses indicate improved continuity of milk production and greater confidence in sustaining livestock-based income, rather than sharp increases in herd size or income.

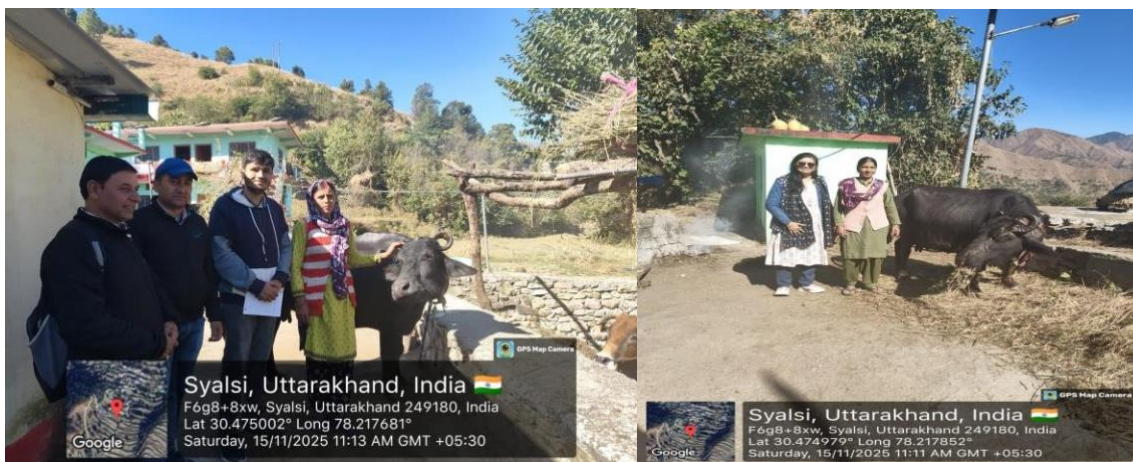


Figure 19: Impact Team in Syalsi, Uttarakhand

3.3. Goat Rearing and Goat Shed Support



Figure 20: Goat Rearing

Goat rearing was promoted as a flexible, low capital livelihood option, particularly suited to households with limited land, labour, or ability to invest in larger livestock.

In Idiyani (FY 2024–25), support to goat purchase was provided to Aarti Devi (five goats), complemented by goat shed improvement support to Sundri Devi. In Gunogi–Udaykot (FY 2024–25), multiple women beneficiaries—including Kareeman, Majeedan, Saira Begam, Saidan Begam, Saula Devi, Alisha Begam, Meena and Sabina Kausar—received support for the purchase of five goats each. Additionally, goat shed construction support was provided to Meena Thapliyal. The goats can be purchased in configurations of 4+1 or 9+1 and a support of Rs. 1000 per goat is given to the beneficiaries.

Goat rearing functioned as a short cycle and relatively liquid asset, enabling households to manage financial stress, meet emergency needs and complement cattle-based livelihoods without high recurring costs. Field interactions and beneficiary recall indicate that smaller goats typically sell for around ₹5,000, while larger animals can fetch ₹8,000 or more in local markets, depending on age and condition. Goats are also used for consumption in the household and also seen as liquid assets that can be diluted easily in cases of need.

3.4. Feeders and Feeding Efficiency

Alongside shed improvements, the provision of cattle feeders emerged as an important enhancement in day-to-day livestock management. Feeders reduced fodder wastage by preventing feed from being scattered on the ground or contaminated with mud and dung, an issue that is particularly acute during the monsoon season.

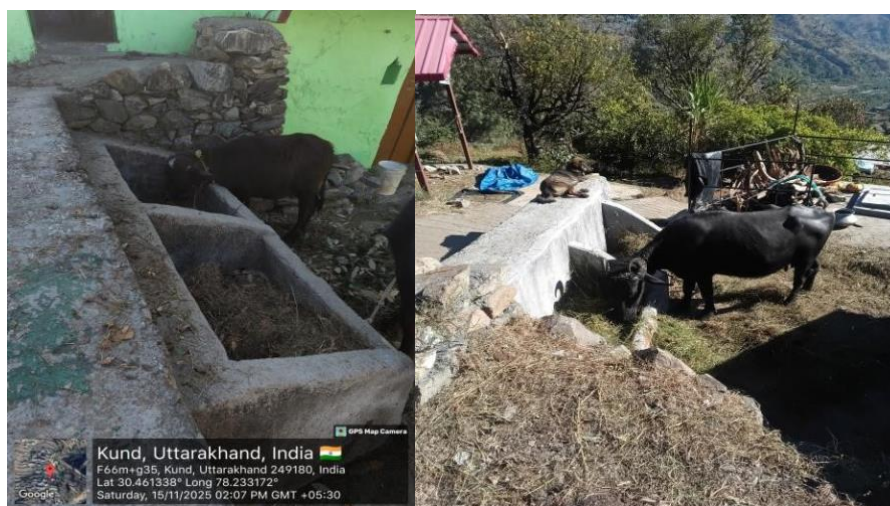


Figure 21: Cattle Feeder

Households reported that improved feeding arrangements allowed better utilisation of available fodder, including fodder from plantations and crop residues. From a gender perspective, cattle feeders significantly improved convenience for women by simplifying feeding routines, reducing repeated handling of fodder and making cleaning easier. These benefits lowered daily drudgery and complemented shed improvements by making livestock care more efficient and predictable.

3.5. Animal Health Camps and Veterinary Support

Animal health support formed a large-scale preventive intervention under the livestock component. Regular Animal Health Camps were organised across villages, with inputs including calcium supplements, mineral mixtures, Batisha and Butox.

In Thauldhar block, repeated camps reached a large number of households across Banda and Idiyan. In Idiyan (FY 2024–25) alone, dozens of women beneficiaries received calcium and mineral supplementation, indicating both scale and depth of outreach. Similar coverage was observed in Kanthar Gaon and Gunogi–Udaykot, where animal health camps reached a wide and socially diverse beneficiary base. Household survey data corroborates these records, showing high perceived improvement in animal health and improved ease of access to veterinary services, typically rated 4–5 on a 5-point scale.

3.6. Artificial Insemination and Breed Improvement

Artificial insemination (AI) formed part of the broader livestock productivity support, alongside vaccination, insurance and veterinary services. AI was introduced to enable gradual genetic improvement of cattle without requiring households to invest in high cost improved breeds.

Survey data indicates that artificial insemination services were accessed by beneficiary households and were generally perceived as useful and accessible. AI support is aimed to improve milk yield potential over time while remaining aligned with management capacity. Women beneficiaries reported increased awareness and confidence in accessing breeding and veterinary services, indicating a gradual strengthening of women’s agency in livestock-related decision making.

3.7. Integration with Agriculture, Water and Plantation Systems

Livestock outcomes were strongest where interventions converged with fodder plantations, improved water availability and agriculture support. Fodder plantations reduced dependence on forest grazing, water access reduced stress on animals and improved sheds, feeders, health services and breeding support ensured sustainability of livestock assets.

By strengthening cattle and goat systems through shelter, feeding efficiency, animal health and risk protection, rather than promoting rapid expansion, the IVDP reinforced livestock as a resilient livelihood pillar within the integrated village development framework.

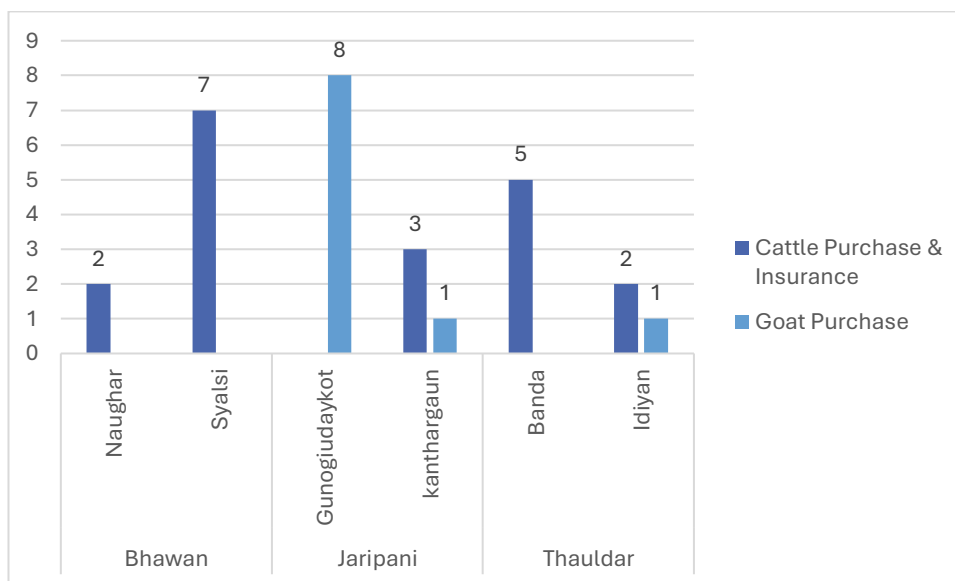


Figure 22: Cattle and Goat Purchase

Table 3: Cattle Shed Construction in 2024-25

Cattle shed construction/improvement and cattle feeder in 2024-25	
Naughar	1
Syalsi(Dolsi)	3
Idiyen	3

3.8. Field Cases Observed during FGD and Interviews

FIELD CASES OBSERVED DURING FGD AND INTERVIEWS

Case 1:

Anandi Devi purchased a cow valued at approximately ₹60,000 with support from the IVDP livestock intervention. Himmothan provided ₹7,000 in assistance out of which ₹5,000 went towards cattle purchase and ₹2,000 for insurance, while the remaining amount was arranged through her Self-Help Group. Anandi Devi reported that she would not have been able to purchase a cow without this support, highlighting the catalytic role of partial financial assistance combined with SHG credit. She further noted improved access to veterinary services following the intervention, which has increased her confidence in managing livestock and reduced anxiety related to animal health risks.



Case 2:



Sangeeta Devi upgraded her livestock infrastructure through the construction of a cattle shed, with a total investment of approximately ₹36,000. Of this, ₹21,000 was supported by Titan under the IVDP, while ₹15,000 was contributed by the household. The shed has enabled hygienic housing of cattle, protection from weather, and easier daily management, contributing to visibly improved animal health. Leveraging this improved infrastructure, Sangeeta Devi now processes and sells 6-7 kg of paneer monthly at ₹300 per kg, in addition to selling milk at ₹40 per litre, creating a steady and diversified income stream. She reported that improved access to veterinary services and the ability to house cattle properly have reduced disease incidence and workload, strengthening both productivity and confidence in livestock-based livelihoods.

3.9. EASIER – Livestock Interventions

E

Effectiveness: Livestock interventions effectively addressed constraints related to animal health, shelter and productivity. Households reported improved milk yield, reduced disease incidence and more reliable livestock management following shed construction, veterinary camps, vaccination, insurance coverage and artificial insemination services.

A

Awareness: Beneficiaries demonstrated improved awareness of animal health practices, vaccination schedules, insurance benefits and the use of veterinary and artificial insemination services. Participation in health camps and regular interaction with veterinary staff supported informed livestock care and timely service uptake.

S

Sustainability: Improved housing, cattle feeders that reduce fodder wastage, strengthened veterinary access and insurance coverage support the long-term viability of livestock assets. Goat rearing functions as a low maintenance and liquid asset that households can sustain with minimal recurring costs.

I

Impact: The intervention contributed to incremental expansion of cultivated area, diversification into vegetables and horticultural crops, improved food security and supplementary income. Plantation activities reduced fodder stress, supported livestock rearing and strengthened long-term land productivity.

E

Efficiency: Targeted inputs and partial financial support, combined with SHGbased financing and community-level service delivery, enabled cost-effective asset creation without imposing high financial risk on households.

R

Relevance: Livestock interventions were well aligned with migration affected village contexts where women manage animal care. The focus on manageable assets, improved shelters, accessible veterinary services and shortcycle goats directly matched household capacity, labour availability and income needs.

3.10. Recommendation:

1. Strengthen Insurance Awareness and Renewal Support

While cattle insurance has reduced risk, beneficiaries may require clearer guidance on insurance renewal and claim processes. Simple awareness sessions or reminders through SHGs could help ensure continued coverage and prevent households from becoming vulnerable after the first insurance period ends.

2. High cost of cattle

Field experience indicates that the current support of ₹7,000 for cattle purchase may be insufficient, particularly for first-time cattle owners, for whom the initial investment remains high. Titan may consider introducing a bundled support option combining cattle purchase with essential infrastructure such as a cattle shed and feeder at a consolidated cost. This approach could lower entry barriers, encourage first-time adoption, and ensure that animals are supported with appropriate housing and feeding arrangements from the outset.

IV. Education, Library and Sports

4.1. Education

Education interventions under IVDP focused on improving the day to day learning environment in government schools, especially where schools face challenges such as limited infrastructure, small student strength and multigrade classrooms. The approach emphasised practical support that could be easily integrated into existing school systems. **Syalsi**

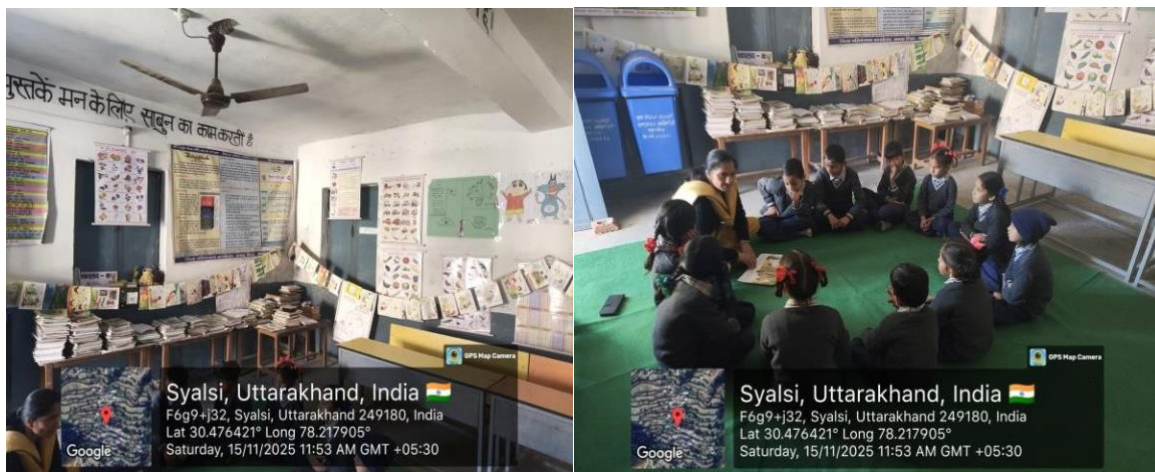


Figure 23: School in Svalsi

Government Primary School, Syalsi provides a supportive learning environment where students are actively engaged in academics, reading and sports. During the field visit, Students participated in classroom discussions and group activities with minimal hesitation during the visit. Due to limited indoor space, TITAN has created a multipurpose learning room that serves as a shared space for teaching and learning. This room is used for:

- Storytelling sessions,
- Read aloud exercises,
- Pronunciation and speech development,
- Group-based creative learning, and
- Guided reading for early grade students.

The room plays a central role in maintaining regular learning activities despite space constraints and has become an important shared resource for the school.

Naughar



Figure 24: School in Naughar

The Government school in Naughar places strong emphasis on activity based and play based learning, particularly for younger students. During the visit, teachers were observed using interactive learning games such as shapematching and basic numeracy activities. These methods support early cognitive development, motor skills and foundational learning .

Titan CSR supported the school by providing books, takhti, a book rack and book stands, which improved classroom organisation and made teaching smoother. Teachers reported that these inputs helped manage classroom activities more effectively.

Idiyan



Figure 25: Students in Idiyan

A structured creative workshop was conducted for students from Classes III to V, with a focus on participatory and experiential learning methods. The workshop included role play, creative reading and writing exercises, poem writing, drawing and guided expression based activities. These methods were specifically designed to encourage children to articulate ideas, express emotions and engage confidently in group settings. Students were selected through a clustered model, with four students chosen from each of six participating schools. This approach ensured focused engagement while also allowing comparative learning exposure across schools. Students from Idiyan participated actively and responded positively to the interactive format of the sessions.

Observations during and after the workshop indicate clear improvements in student engagement, particularly among children who initially exhibited hesitation in speaking or participating in group activities. Teachers and facilitators noted increased willingness among students to volunteer responses, participate in role play and engage in creative writing and drawing tasks.

The intervention demonstrated early outcomes in three key areas:

- Improved verbal expression and communication skills
- Increased confidence in classroom participation
- Enhanced interest in creative and language-based learning activities

4.2. Library Development and Reading Promotion

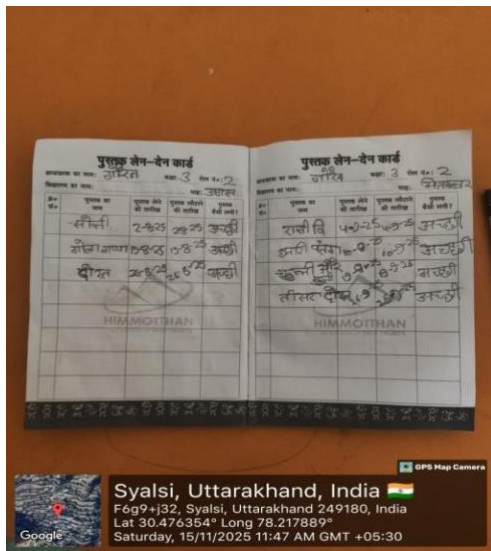
Library interventions were designed as low-cost, scalable inputs to promote reading habits and introduce basic library systems in government schools that lack formal library infrastructure. In the Uttarakhand hill context, the focus was not on creating standalone libraries but on embedding reading practices within everyday school routines. The interventions emphasised simple, manageable systems—such as library cards, book registers, and organised reading corners—that could be easily maintained by teachers and understood by students



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Figure 26: Library in Syalsi and Kund, Uttarakhand

Table 4: Support given by Titan during 2024-25

Village	School Name	Library Register & Cards	Books (Sets)	Rack	Library Corner	Wall Painting	Remarks
Syalsi	Govt. Primary School, Syalsi	Yes	1	1	Yes	Yes	Library operated from multipurpose room; regular borrowing observed
Naughar	Govt. Primary School, Naughar	Yes	1	1	Yes	Yes	Reading activities integrated into classroom routine
Idiyan	Govt. Primary School, Idiyan	Yes	1	1	Yes	Yes	Supports confidence building and reading practices
Kanthar Gaon	Govt. Primary School, Kanthar Gaon	Yes	1	0	Yes	Yes	Reading activities integrated into classroom routine
Gunogi Udaykot	Govt. Primary School, Gunogi Udaykot	Yes	1	1	No	No	Basic library setup completed

4.2. Sports Infrastructure and Co-Curricular Development

Sports interventions under IVDP aimed to encourage regular physical activity, teamwork and confidence building among school going children. The focus was on providing basic sports equipment, structured activity sessions and infrastructure support, especially in schools where student interest in sports was already evident.

Syalsi

Government Primary School, Syalsi, sports form an integral part of daily school life. Students regularly participate in volleyball, kabaddi, kho-kho, and other outdoor games, and teachers described consistent involvement across classes. During the field visit, students appeared confident and comfortable engaging in team activities, reflecting familiarity with sports routines. Teachers reported that several students have progressed to district- and state-level competitions, which is notable given the small size of the school and the limited resources typically available in such settings. This progression reflects sustained student interest and teacher effort rather than one-time exposure.



Figure 27: Sports Infrastructure in Svalsi

During FY 2024–25, the school received one sports item, along with library and teaching-learning materials that also support co-curricular engagement. Sports activities are conducted regularly as part of the school routine rather than being restricted to special events. Teachers noted that while participation levels are already strong, additional structured training support and improved sports resources could help interested students refine their skills and perform more confidently at higher levels.

Naughar

At Government Primary School, Naughar, sports support focused on encouraging basic physical activity and play-based learning, particularly for younger students. During FY 2024–25, the school received one Volleyball and one pump and a Teaching Learning Material (TLM) kit.



Figure 28: Extra-Curricular Activities in Naughar

Teachers reported strong student enthusiasm for outdoor games and group play. However, a key constraint identified during discussions was the absence of boundary fencing, which limits safe use of open spaces. This affects both how often sports activities can be organised and the level of supervision required, particularly for younger children.

Despite this limitation, the availability of sports equipment and structured activity sessions has helped ensure that physical activity remains a visible and valued part of the school routine. Teachers felt that even small inputs have made it easier to keep children engaged and active within existing constraints.

Banda



Figure 29: Sports Activities in Banda

Sports interventions were most intensive at Government Inter College, Banda, reflecting the school's larger student strength and its established focus on competitive sports. The school serves as an important centre for co-curricular development in the area, with students showing strong interest in organised sports. Key sports-related inputs included multipurpose court matting, which significantly improved the safety and usability of the playing area, and sports training support of approximately INR 3 lakh during 2023–24. The upgraded facility is used regularly by around 60 students, enabling more consistent practice schedules and structured training sessions.

Kabaddi has emerged as a key sport at the school. Teachers reported that 18 students have been selected for state-level competitions, and 3 students have progressed to national-level participation. These outcomes suggest that improved infrastructure, combined with focused training, has helped translate student interest into competitive performance. Field observations indicated that sports participation at GIC Banda is inclusive, with active involvement of female students. Improved play conditions have allowed for safer practice, better supervision, and greater confidence among students, contributing to both participation and performance.

4.3. Overall Intervention Level Assessment

Across the study schools, education, library and sports interventions under IVDP addressed basic but important gaps related to classroom furniture, learning materials, reading resources and play spaces. Support was provided through furniture sets, racks, library cards, books, sports items, training sessions and sports infrastructure, along with teacher training and flexible use of available space. Field observations, student numbers, participation records and feedback from teachers and parents indicate better student engagement, improved confidence, increased reading activity and regular participation in sports, especially in schools where physical inputs were combined with activity based teaching methods.

4.4. Field Cases Observed during FGD and Interviews

FIELD CASES OBSERVED DURING FGD AND INTERVIEWS

Case 1

Kusum Bhatt, daughter of Mr. Kiran Bhatt, participated in the creative workshop. According to her guardian, Kusum previously displayed hesitation while speaking and limited confidence in expressing her thoughts. Following the intervention, noticeable improvements were observed in her ability to speak freely, express ideas clearly, and participate more actively in academic and creative tasks. The parent also reported increased interest in creative writing and improved confidence in academic activities.

The guardian emphasized that such interventions help build a strong developmental base in children, particularly in terms of communication and confidence, which are essential for long-term academic progression and future opportunities. The parent strongly recommended increasing the frequency of such sessions and highlighted the need for additional teaching support to sustain these gains..

Case 2

Ms. Urmila, mother of Ansh, reported significant positive changes in her son’s personality and communication abilities following the intervention. She observed that Ansh has become more confident, more aware of the importance of speech and expression, and has overcome his fear of public speaking. According to her, these changes have translated into improved self-presentation and greater participation in school-related activities.

She stressed that such interventions are extremely necessary in rural school settings and noted that the benefits extend beyond students to parents and teachers, as exposure to new learning approaches strengthens the overall educational ecosystem.

4.5. EASIER

E	Effectiveness: The interventions effectively addressed identified gaps in school infrastructure and learning support. Provision of furniture, books, library materials, sports equipment, and training inputs translated into improved classroom functioning, regular reading activities, and increased student participation in sports, as observed during field visits.
A	Awareness: High levels of awareness were evident among teachers and students through active use of provided resources. Library cards, reading registers, sports equipment, and learning materials were being used as intended, indicating that schools clearly understood and engaged with the interventions.
S	Sustainability: Sustainability is supported through the use of durable assets such as furniture, racks, sports infrastructure, and library systems that are embedded within existing school routines. Simple management systems (library cards and registers) further increase the likelihood that benefits will continue beyond the intervention period.
I	Impact: Observed changes include improved student engagement, higher confidence in classroom participation, increased reading habits, and regular involvement in sports. At the secondary school level, sports infrastructure and training support enabled progression to state- and national-level competitions, indicating early signs of longer-term impact.
E	Efficiency: The interventions were delivered through low-cost, targeted inputs that addressed specific school-level needs without creating parallel systems. Adaptive use of space, such as multi-purpose rooms, and integration with regular teaching practices indicate efficient use of resources.
R	Relevance: The interventions were well aligned with local needs, particularly in migration-affected villages where schools play a central role in child development and women bear greater responsibility for education. The focus on basic infrastructure, reading support, and sports reflects priorities identified by teachers, parents, and students

4.6. Recommendations:

1. Strengthen transition pathways for upper primary and secondary students

At the secondary level, particularly in Banda, sports and reading engagement have translated into higher confidence and external exposure. Linking these activities to scholarships, competitions, or skill exposure pathways can help sustain motivation beyond basic schooling.

2. Encourage peer-led reading and sports activities

As student confidence increases, schools can gradually introduce peer reading groups and student-led sports practice, reducing sole dependence on teachers and fostering leadership skills among older students.

3. Introduce basic computer education as confidence-building, not skill training

Computer classes should focus on familiarity and comfort, not formal certification. Simple exposure to computers, educational software, and safe digital practices can reduce hesitation, especially for rural students who otherwise have limited access to technology.

4. Use health camps as platforms for preventive awareness and early detection

Health camps have demonstrated value in reaching communities with limited access to routine healthcare. Future camps should continue to emphasise preventive care, basic screenings, nutrition awareness, and hygiene education, particularly for children and women

5. Strengthen outreach through mobile health vans in remote villages

Mobile health vans are especially relevant in the Uttarakhand hill context, where terrain and distance limit access to fixed facilities. Regular and predictable visits can ensure continuity of care, follow-up consultations, and referrals, reducing dependence on emergency services.

V. Self-Help Groups (SHGs)

5.1. Role of SHGs in Shaping IVDP Implementation

Across the study villages, Self-Help Groups (SHGs) form the institutional backbone of the IVDP, shaping how programme support is accessed, discussed, and sustained at the household level. SHGs are active, regularly functioning groups where women pool savings, access internal loans at low interest rates of 1–2 percent, and collectively manage financial decisions. Across villages, no instances of loan default were reported, reflecting strong peer accountability, careful loan use, and trust within the groups. The pooling of resources through SHGs has reduced dependence on external borrowing and created a locally rooted financial system that supports livelihood-related needs.

In most villages, SHG meetings were the primary spaces where women discussed loan requirements, identified households requiring support, followed up on livestock, agriculture, or plantation activities, and shared day-to-day issues related to programme implementation. For many beneficiaries, engagement with the IVDP occurred through these routine interactions rather than through formal project events, making SHGs the most visible and accessible point of contact with the programme at the village level.

SHGs were particularly important in villages affected by male outmigration, where women manage agriculture, livestock, and household responsibilities alongside programme activities. By working through SHGs, support related to livestock assets, agriculture inputs, orchard development, and training could be aligned with women's time constraints and capacities. Decisions around beneficiary selection,

use of loans, and maintenance of assets were commonly discussed within groups, helping ensure transparency, collective agreement, and local acceptance of interventions.

Table 5: Exposure visits/Capacity Building/Trainings In 2024-25

Exposure visits/Capacity Building/Trainings In 2024-25	
Jaunpur	10
Thauldar	10
Grand Total	20
Bhawan	2
Naughar	2
Thauldar	1
Banda	1
Grand Total	3

Table 6: SHG Skill Training-Capacity building and Group management in 2024-25

Village names	Training	Training of Legal Compliance	Grand Total
Bhawan		7	7
jaripani		11	11
Thauldhar	152	3	155
Grand Total	152	21	173

Table 7: SHG Skill Training-Capacity building and Group management in 2024-2025

Names	Training	Training of Legal Compliance	Grand Total
Chamba Gunogi		1	1
Thauldhar Banda	6		6
Idiyan	15		15
Grand Total	21	1	22

Titan CSR's role was reflected in how these SHG platforms were used to sequence and connect different interventions, rather than delivering support as isolated activities. As a result, households experienced the IVDP not as separate schemes for water, agriculture, or livelihoods, but as a set of connected supports that fit into existing village routines. This approach allowed programme activities to align with existing village routines and financial practices, and strengthened the likelihood that activities and benefits will continue beyond the project period.

5.2. Village-wise SHG Outputs and Observed Outcomes



Figure 30: SHG in Syalsi

In Syalsi, Self-Help Groups function as active and well-established village institutions supporting livelihood coordination and household-level financial management. SHGs meet regularly, and records and accounts are maintained with consistency. Women members reported that SHG meetings are the primary spaces where beneficiaries are identified for programme support and where follow-up with the implementing partner is coordinated.

SHG-linked loans in Syalsi were predominantly utilised for livestock-related purposes, including purchase of buffaloes, fodder inputs, and improvements to cattle sheds. Loan access was described as

timely and accessible, with low interest rates and flexible repayment arrangements. Recovery performance was reported to be strong, supported by peer monitoring and collective accountability.

Women members indicated that participation in SHGs has increased their confidence in handling financial matters, including interactions with banks and use of digital payment platforms. In a village context shaped by male outmigration, SHGs also serve as important spaces for mutual support and collective decision-making, contributing to household stability and women's participation in economic decisions.

Naughar

In Naughar, SHGs play a central role in planning and implementing livelihood-related infrastructure, particularly cattle shed construction and orchard development. Beneficiary selection for cattle sheds was undertaken through group discussions, using criteria such as livestock ownership, economic need, and willingness to contribute the beneficiary share. This process helped ensure transparency and community acceptance of the intervention.

SHGs supported coordination between beneficiary households and the implementing partner during construction and followed up on asset use after completion. The cost-sharing approach reinforced a sense of ownership, and field observations indicated that cattle sheds are actively used and generally well maintained.

Beyond infrastructure, SHGs in Naughar function as local coordination platforms, supporting communication, problem-solving, and follow-up related to orchard plantations and training activities. While overall SHG functioning is stable, discussions with members indicated scope for further strengthening capacities related to record-keeping, enterprise planning, and convergence with relevant government schemes to support longer-term livelihood outcomes.

Banda



Figure 31: SHGs in Wanda, Uttarakhand

In Banda, SHGs are present as functioning community institutions, though their role is more supportive compared to villages with stronger livelihood-linked interventions. SHG members participate in regular meetings, savings activities, and discussions related to household needs and programme awareness.

While water interventions in Banda are primarily managed through the User Water Group (UWG), SHGs contribute indirectly by supporting household participation, information sharing, and engagement with programme activities. Members reported that SHG meetings provide an accessible platform for discussing livelihood opportunities and potential future interventions, particularly related to agriculture

and livestock. SHG in Banda are particularly active in looking for alternative sources of income including handicrafts made from pine and have also asked TITAN for support regarding techniques and training.

In this context, SHGs play a complementary role by reinforcing institutional presence and social organisation in a village where infrastructure-led interventions currently form the focus.



Figure 32: SHGs in Idiyan

SHGs were found to be quite active. In a meeting of IIFM team with SHG members, 5 SHGs were present namely Surkanda Mata, Mahila Shakti, Durga Utpadak, Gauri Utpadak and Nagraj. The age of SHGs ranged from one to three years with the existing available money ranging from 18000 to 40000. The contribution from Titan was made for activities like Goat purchase, Goat shed and cattle shed renovation. The decision to select the beneficiaries is taken through participatory approach in the SHG meetings and no conflicting situation was reported by the members in this process.

The members wanted to have more initiatives in Women self-employment for the activities like stitching knitting and support to open beauty parlour. Some of the SHGs also asked for computer training and training in small trades like soap making.

Case- Udaan Kishori Samuh

A special feature of this village was a group of young girls, eight in number, in the age group of 15-17 years known as Udaan Kishori Samuh. They were also saving Rs 100/month for the last one year and were having the saving of Rs. 11000/-. Although all of them were currently studying but they wanted Titan to facilitate computer center, stitching center and beauty parlours in their village to learn and then

use that learning for their livelihood. They had the aspirations of achieving their dreams in politics, fashion design and some of them even wanted to work for Himmotthan Society.

Kanthar Gaon

Kanthar Gaon demonstrates one of the strongest integrations of SHGs with livelihood outcomes among the study villages. Five active SHGs operate in the village, with members contributing regular monthly savings and participating consistently in meetings and decision-making processes.

SHGs played a central role in supporting livestock-based livelihoods, including buffalo and goat purchases. Financial assistance and insurance coverage were channelled through SHG mechanisms, reducing entry barriers and mitigating risks associated with livestock ownership. Women SHG members emerged as the primary managers of livestock assets, responsible for feeding, care, and income utilisation.

SHGs also function in close coordination with the Himvikas Cooperative Society, linking household level production with organised market access. This institutional convergence has contributed to more predictable income flows, improved market participation, and stronger financial discipline among SHG members. ***Gunogi / Udaikot***

In Gunogi Udaikot, SHGs are present as functioning women's groups, though their role is less directly connected to the water-focused interventions implemented in the village. Members participate in savings activities, meetings, and community discussions, providing an institutional base for collective engagement.

While spring-shed treatment and water interventions are managed mainly through community maintenance arrangements, SHGs contribute indirectly by supporting awareness, participation, and coordination at the household level. SHG also provides loans for cattle and goat purchasing aiding livelihood opportunities as well as providing a source of nutrition for family members. Members noted that SHGs offer a platform to discuss livelihood concerns and future opportunities, particularly related to agriculture and livestock, should interventions expand in subsequent phases.

Table 8: Count of SHGs

Village names	Number of SHG	Sum of No of Members
Banda	3	29
Gunogi	7	63
Idiyan	6	62
Kanthargoun	3	32
Naughar	5	49
Syalsi	7	70
Grand Total	31	305

1.5. EASIER Analysis – Self Help Groups (SHGs)

E A S I E R	Effectiveness: SHGs effectively translated programme inputs into household level outcomes by enabling access to credit, facilitating beneficiary identification and coordinating livelihood interventions, particularly in livestock and agriculture. Consistency between household perceptions, productive loan use and observed livelihood improvements indicates strong functional effectiveness.
	Awareness: Awareness of SHG interventions was high and primarily demonstrated through active participation in meetings, loans and trainings. Awareness was reflected in regular participation in SHG activities, indicating strong institutional integration at the village level.
	Sustainability: SHGs exhibit strong sustainability characteristics, including regular meetings, consistent savings, maintained record and healthy loan recovery. Peer monitoring and internal accountability reduce dependence on external facilitation, supporting long-term continuation, especially in migration-affected contexts.
	Impact: SHGs have contributed to meaningful social and economic change by strengthening women's financial decisionmaking, confidence in the banking system and management of livelihood assets. These incremental shifts reflect broader gains in agency and income stability
	Efficiency: SHGs functioned as efficient delivery platforms by enabling timely access to credit, training and assets with minimal transaction costs. Their use reduced implementation friction and supported convergence of multiple interventions at the household level.
	Relevance: The SHG model shows very high relevance to the Uttarakhand hill context, aligning with women's time constraints, migration realities and risk profiles. SHG facilitated support focused on smallscale, lowrisk investments suited to women-managed livelihoods, confirming contextual appropriateness.

EASIER Framework

Table 9: EASIER Framework

EASIER Dimension	Core Question Answered	Score	What the Score Indicates
Effectiveness	Did the interventions achieve the intended outcomes at the household level?	4.72	Most intended outcomes related to water access, livelihoods, livestock health, institutional support and ecological conditions were achieved, with only minor residual gaps.
Awareness	Are households aware of and actively engaged with IVDP interventions?	4.39	High programme visibility and participation, with households demonstrating strong functional awareness through component selection and activity level engagement.
Sustainability	Are the benefits and systems created likely to continue over time?	4.87	Strong community ownership, functioning maintenance systems and institutional practices indicate high likelihood of continuation beyond the project period.

Impact	Have the interventions led to meaningful structural and livelihood changes?	4.81	Substantial improvements observed in time use, productivity, income stability and women's roles, supported by before–after data and qualitative narratives.
Efficiency	How effectively were programme inputs translated into accessible and usable services?	4.96	Delivery mechanisms functioned smoothly with minimal operational bottlenecks, enabling effective convergence of services at the household level.
Relevance	Do the interventions align with household needs and local priorities?	4.98	Near universal alignment between programme design and beneficiary needs, validating contextual appropriateness of interventions.

To assess the performance and outcomes of the IVDP in Uttarakhand, the study adopted the EASIER analytical framework, which evaluates CSR interventions across six complementary dimensions: Effectiveness, Awareness, Sustainability, Impact, Efficiency and Relevance. The framework enables a holistic assessment by applying multiple analytical lenses to the same beneficiary level data, thereby capturing delivery performance, contextual alignment and longer-term change without duplication of meaning.

All analyses were conducted using primary household survey data collected across selected villages in Tehri Garhwal district, covering interventions related to Water Smart Villages, Agriculture & Horticulture, Cattle & Livestock Development, SHGs/Institutions and Catchment/Plantation/NRM.

Effectiveness (Score: 4.72 / 5)

Effectiveness assesses whether the intended outcomes of the interventions were achieved at the household level. This dimension focuses on observable improvements in service access and livelihood conditions as reported by beneficiaries.

Effectiveness was measured using outcome-oriented indicators, including perceived improvement in water availability and quality, agricultural yield and productivity, animal health, access to veterinary services, access to SHG loans, quality of training received, confidence in financial management and ecological improvements such as vegetation cover and soil erosion reduction. All indicators were measured on a standardized 1–5 Likert scale, where higher values indicate stronger outcomes.

An overall effectiveness score of 4.72 indicates that intended outcomes were largely achieved across components, with beneficiaries reporting substantial improvements in livelihoods, service access and ecological conditions. Minor variation in scores suggests limited residual gaps rather than systemic shortcomings.

Awareness (Score: 4.39 / 5)

Awareness captures the extent to which households are aware of and engaged with IVDP interventions. Rather than relying solely on recall-based questions, awareness was operationalized through actual participation and component selection, reflecting functional awareness.

Indicators included the selection of IVDP components by households and participation in specific activities under water, agriculture, livestock, SHG and NRM interventions. This approach ensures that awareness reflects meaningful engagement rather than passive exposure.

The awareness score of 4.39 reflects high programme visibility and engagement, indicating that most households clearly understood the interventions available to them and actively participated in relevant components. Slightly lower values relative to other dimensions reflect differential exposure across components rather than lack of awareness.

Sustainability (Score: 4.87 / 5)

Sustainability examines whether benefits and systems created under the programme are likely to continue beyond the intervention period. This dimension focuses on institutional arrangements, community ownership and long-term ecological viability.

Key indicators included the presence of maintenance funds, responsibility for maintaining water and NRM structures, survival rates of plantations, regularity of SHG meetings, bookkeeping practices, loan recovery rates and beneficiary perceptions regarding the long-term benefits of NRM activities.

A combination of binary, numeric and perception-based indicators was used to assess sustainability.

The sustainability score of 4.87 indicates very strong prospects for continuity, driven by community ownership, functioning institutional mechanisms and positive ecological trajectories. This suggests that programme benefits are likely to persist with limited external support.

Impact (Score: 4.81 / 5)

Impact assesses broader and more structural changes resulting from the interventions, going beyond immediate outcomes. This includes changes in livelihoods, time use, productivity and social dimensions such as women's roles.

Impact was analysed using before–after comparisons for key variables, including hours of water availability, time spent collecting water, area cultivated, livestock ownership and milk yield. These quantitative changes were triangulated with qualitative narratives on income stability, nutrition and women's participation in household and economic decision making. Impact findings are interpreted cautiously, recognising the nonexperimental design of the study.

An impact score of 4.81 reflects substantial livelihood and social improvements, particularly in time savings, productivity enhancement and women's engagement in economic activities. The score indicates meaningful structural change within the limitations of a non-counterfactual evaluation design.

Efficiency (Score: 4.96 / 5)

Efficiency evaluates how effectively programme inputs were translated into usable services and outcomes at the household level. This dimension reflects the smoothness and functionality of delivery mechanisms rather than cost efficiency.

Efficiency was assessed using household level perception indicators related to access and quality of services, including improvements in water availability and quality, agricultural and livestock support outcomes, ease of access to veterinary services and SHG loans, training quality, women's participation in decision making and perceived ecological improvements. Scores were computed only for components in which the household reported participation, ensuring that nonapplicable components did not influence results.

The efficiency score of 4.96 indicates exceptionally strong service delivery performance, suggesting minimal operational bottlenecks and effective convergence of interventions at the household level.

Relevance (Score: 4.98 / 5)

Relevance examines the alignment of IVDP interventions with household needs, livelihood contexts and local priorities. This dimension addresses whether the *right interventions* were delivered to the *right households*.

Relevance was assessed using a combination of component selection, participation patterns and beneficiary perceptions of usefulness. Key indicators included perceived improvements across water, agriculture, livestock, SHG and NRM components, women's participation in financial decision making, perceived long-term benefits of interventions, overall perception of Titan's presence and willingness to recommend the programme to other villages. Household level relevance scores were calculated as the average of all applicable relevance indicators, excluding non-participated components.

The relevance score of 4.98 demonstrates near universal alignment between programme design and household priorities, strongly validating the contextual appropriateness of IVDP interventions in the Uttarakhand setting.

Recommendations

Promote Alternative and Supplementary Income Activities for SHG Members

Women SHG members expressed interest in diversifying income sources beyond agriculture and livestock, particularly through activities such as sewing, handicrafts, and value-added products using locally available produce. Supporting small pilots or exposure to such activities could help SHG members build additional income streams that fit within their time constraints and reduce dependence on a single livelihood source.

Encourage Inter-SHG Learning and Experience Sharing

Field observations suggest that SHGs learn most effectively from peer experience. Titan may consider facilitating structured interactions between SHGs, such as cluster-level meetings or exposure visits, where groups can share practices related to savings management, loan use, livelihood activities, and problem-solving. This would strengthen communication, confidence, and replication of good practices across villages.

Continue Using SHGs as the Institutional Backbone of the Programme

SHGs have emerged as the primary interface between households and programme interventions, particularly in migration-affected villages where women manage livelihoods and household decisions. Strengthening SHGs as platforms for planning, communication, convergence, and peer learning will improve coordination across water, agriculture, livestock, and education interventions and enhance long-term sustainability.

Strengthen Risk Management Across Livelihood Interventions

As livelihoods stabilise and productivity increases, new risks related to pests, animal health, soil degradation, wildlife damage, and financial exposure also emerge. Future programme design should explicitly integrate risk management measures, including preventive animal health care, pest and disease management, soil testing, crop protection, and insurance support, to protect household gains and reduce vulnerability.

Maintain Focus on Women-Centred, Manageable Interventions

Evidence consistently shows that women are the primary managers of agriculture, livestock, water, and education-related responsibilities due to high male outmigration. Interventions that focus on small, home-adjacent plots, manageable livestock systems, low-risk income activities, and time-saving infrastructure have been most effective. This focus should remain central to programme design and scaling decisions.

Recognise Geographic Complexity in Planning and Resource Allocation

Uttarakhand's highly varied and rugged hill geography introduces additional complexity in programme design, implementation, and maintenance. Differences in altitude, slope, settlement dispersion, access conditions, and source characteristics mean that interventions often need to be tailored village by village rather than standardised. This context increases both technical requirements and implementation costs, particularly for water, infrastructure, and livelihood support. Future planning should explicitly account for this geographic complexity by allowing greater design flexibility and higher per-unit investment compared to less challenging regions, to ensure interventions remain effective, durable, and context appropriate.

Continuity of the Programme and Immediate and Long-Term Impacts:

Institutional Continuity of the Programme

The long-term continuity of the Integrated Village Development Programme (IVDP) in Uttarakhand depends largely on the strength and functioning of the community institutions that have been established and strengthened during the implementation period. In the hill villages of Tehri Garhwal where the programme operates, these grassroots institutions provide the organisational structure through which project activities are maintained and extended beyond the period of direct external support.

Across the study villages, Self-Help Groups (SHGs), User Water Groups (UWG) and village-level community platforms have emerged as key institutional mechanisms that support the functioning of programme interventions. These institutions facilitate coordination between households, implementing partners and government departments, while also enabling collective management of village assets and livelihood activities.

User Water Groups have taken responsibility for managing and maintaining water supply systems, rainwater harvesting tanks and spring-based sources developed under the programme. In villages such as Banda, for example, the household water supply system and storage infrastructure are managed through a community-based mechanism where households contribute small monthly maintenance charges. Such arrangements indicate that water infrastructure is not treated merely as a one-time project asset but as a shared village resource requiring collective upkeep.

Self-Help Groups form the most active and visible institutional platforms across villages. Regular meetings, savings practices and internal lending systems have enabled women to manage financial needs, coordinate livelihood activities and discuss programme-related issues. In migration-affected villages where women manage agriculture, livestock and household responsibilities, SHGs have become central spaces for financial decision-making and collective problem solving.

Village-level coordination also takes place through these institutions when planning agriculture inputs, plantation activities or livestock support. Beneficiary selection, asset management and follow-up discussions are frequently conducted within SHG meetings or community gatherings, ensuring transparency and local acceptance of programme activities.

Together, these institutional arrangements create a strong foundation for sustaining the benefits of the programme. The continued functioning of SHGs, user groups and village committees suggests that many programme outcomes are embedded within local governance systems rather than remaining dependent on external project support.

Immediate and Short-Term Benefits

Field observations and interactions with beneficiaries indicate that several programme benefits are already visible across households and communities.

One of the most noticeable changes relates to improved water availability. The construction of rainwater harvesting structures, household-level piped water systems and spring shed recharge interventions has reduced the time households spend collecting water and improved confidence in year-round water availability. Women, who traditionally bear the primary responsibility for water collection, reported that reduced time spent fetching water has allowed them to allocate more time to agriculture, livestock care and other productive activities.

Improved water access has also strengthened livelihood activities. Farmers reported greater willingness to cultivate vegetables and maintain orchards where reliable water sources are available. In villages such as Syalsi and Naughar, vegetable cultivation using improved seeds has become more common on small plots located close to households.

Livestock-based livelihoods have also strengthened during the programme period. Improvements in cattle sheds, feeders, veterinary camps and access to livestock assets have helped households maintain healthier animals and stabilise milk production. Goat rearing has emerged as an accessible supplementary livelihood activity, particularly for households with limited land or financial resources.

Agriculture interventions such as seed distribution, demonstration plots and farmer training have enabled households to experiment with crops such as potato, pea, cauliflower and other vegetables suited to the mid-Himalayan climate. These activities have provided seasonal income opportunities while strengthening household food security.

Plantation activities have also begun generating early benefits. Fodder plantations in villages like Syalsi are helping reduce the daily effort required for fodder collection, while fruit-bearing plantations in Naughar and Banda are expected to contribute to future household income. Early survival rates and growth performance reported by beneficiaries suggest that plantation interventions have been well aligned with local ecological conditions.

Education interventions have similarly shown immediate outcomes in terms of improved student engagement and learning environments. Library systems, learning materials and sports activities have encouraged reading habits, participation and confidence among schoolchildren. Teachers reported that these inputs have helped create more interactive and engaging classroom environments despite resource constraints in rural schools.

Overall, these early outcomes suggest that programme interventions are already influencing everyday livelihood practices and community institutions in the project villages.

Long-Term Project Impacts

While many benefits are already visible, several programme interventions are expected to generate long-term impacts across environmental, economic and social dimensions.

Environmental and Ecological Impacts

Natural resource management interventions such as spring

shed treatment, recharge trenches, plantation activities and soil conservation measures contribute to long-term ecological improvements in the hill landscape. Increased vegetation cover, particularly through fodder and indigenous tree species, helps stabilise slopes, reduce soil erosion and improve soil moisture retention.

Water harvesting structures and recharge interventions strengthen groundwater availability and spring discharge over time. In spring-dependent villages such as Gunogi–Udaykot, improvements in lean season flow already indicate positive ecological effects of catchment treatment and plantation efforts.

Over the longer term, these measures contribute to improved hydrological stability, supporting both agriculture and domestic water security in hill environments where water availability is often seasonal.

Agricultural and Livelihood Impacts

Improved water access, quality inputs and farmer training have begun encouraging diversification of agricultural activities. Over time, households are expected to continue shifting from subsistence-based cropping towards vegetable cultivation, horticulture and other higher-value crops suited to local agroclimatic conditions.

Livestock systems strengthened through better shelter, feeding arrangements and veterinary services provide an additional layer of livelihood stability. In hill contexts where agriculture is often constrained by terrain, wildlife pressure and labour shortages, livestock functions as an important risk-buffering asset for rural households.

Fruit-bearing plantations introduced under the programme are expected to generate income in the medium to long term once trees mature. These plantations also contribute to soil protection and ecological stability.

Collectively, these changes contribute to greater livelihood diversification and resilience, helping households manage economic uncertainties and seasonal variations in income.

Social and Institutional Impacts

The strengthening of community institutions represents one of the most significant long-term outcomes of the programme. SHGs have created a locally embedded financial system through regular savings and internal lending, reducing dependence on informal credit sources. Participation in SHGs has also increased women's involvement in financial and livelihood decisions. Women reported greater confidence in interacting with banks, accessing loans and managing household finances.

These institutions also provide platforms for discussing village issues, coordinating livelihood activities and maintaining project assets. Over time, such community-based governance mechanisms contribute to stronger social capital and collective capacity within the villages.

Outcome Insights:

The implementation of the IVDP in Uttarakhand demonstrates a gradual progression from infrastructure development to livelihood strengthening and institutional sustainability.

Resource Restoration and Water Security

The initial phase of the programme focused on strengthening the natural resource base through water infrastructure, springshed treatment and plantation activities. These interventions addressed critical constraints related to water availability and land productivity in hill ecosystems.

Over time, improvements in water availability have enabled households to cultivate crops more reliably, support livestock and reduce daily drudgery associated with water collection.

Livelihood Diversification and Agricultural Development

Building on improved natural resources, the programme introduced agriculture, livestock and plantation interventions designed to support small-scale, manageable livelihood activities. Seed distribution, training and demonstration plots helped farmers adopt improved cultivation practices while reducing financial risk.

Livestock interventions further strengthened household resilience by providing income-generating assets that can be managed alongside agriculture.

Community Institutions and Long-Term Sustainability

The strengthening of SHGs and community groups has ensured that programme activities are embedded within local institutional systems. These institutions continue to coordinate livelihood activities, manage village assets and support financial inclusion.

Through these mechanisms, the programme has moved beyond one-time interventions toward a model of community-led development where benefits are sustained through local participation and ownership.

Multi-Dimensional Programme Impacts

Taken together, the interventions under the IVDP are contributing to a range of environmental, economic and social outcomes in the Uttarakhand hill context.

Environmental

- Improved soil health and vegetation cover through plantation and catchment treatment
- Enhanced groundwater recharge and improved spring discharge
- Reduced soil erosion and improved land productivity

Economic

- Diversified livelihood opportunities through agriculture, horticulture and livestock
- Reduced agricultural risk due to improved water availability
- Additional income opportunities through vegetable cultivation and livestock products

Social and Institutional

- Strengthened SHGs and community institutions
- Increased participation of women in livelihood and financial decision-making
- Greater community capacity to maintain assets and sustain development initiative

SDG Linkage

Table 10: SDG Linkage of Intervention

IVDP Component / Intervention Area	Key Activities & Outcomes (Uttarakhand)	Relevant SDGs	SDG Linkage Rationale
Water Security (Water Smart Villages)	Household piped water supply, rainwater harvesting tanks, springshed recharge, check dams, water quality testing, community managed user groups	SDG 6 – Clean Water and Sanitation	Improved access to safe and reliable drinking water, reduced time spent on water collection, community management and water quality monitoring directly support SDG 6 targets on access, sustainability and safe water management.
	Reduced drudgery for women, time savings, improved water reliability supporting livelihoods	SDG 5 – Gender Equality	Reduced water collection burden strengthens women’s time availability, productivity and decision-making role at the household level.
	Improved agricultural viability and livestock productivity through reliable water access	SDG 1 – No Poverty	Water security acts as an enabling input for livelihoods, reducing vulnerability and supporting income-generating activities.
Agriculture & Horticulture	Seed distribution (potato, pea), demonstration plots, training, orchard development, market linkage through cooperatives	SDG 2 – Zero Hunger	Improved crop productivity, diversification and food availability support food security and nutrition outcomes.
	Income diversification through vegetables and fruit crops, improved market access	SDG 1 – No Poverty	Increased and more stable household incomes reduce livelihood vulnerability.
	Adoption of climate appropriate crops and low-risk practices	SDG 13 – Climate Action	Climate-resilient agriculture practices enhance adaptive capacity in hill ecosystems.

Plantation & Natural Resource Management	Fodder and fruit-bearing plantations, catchment treatment, native species plantation, springshed protection	SDG 15 – Life on Land	Restoration of vegetation cover, reduced pressure on forests, and improved land productivity support ecosystem conservation and sustainable land use.
	Reduced fodder stress and soil erosion	SDG 13 – Climate Action	Nature-based solutions strengthen resilience to climate variability and ecological shocks.
Livestock Development (Cattle & Goat)	Cattle shed construction, animal purchase with insurance, goat rearing, feeders, animal health camps, artificial insemination	SDG 1 – No Poverty	Livestock functions as a risk buffering asset, providing steady income, nutrition and financial security.
	Improved milk production, animal health and nutrition	SDG 2 – Zero Hunger	Livestock interventions contribute to household nutrition and food availability.
	Women-managed livestock systems	SDG 5 – Gender Equality	Women’s control over livestock assets strengthens economic agency and decision-making power.

Education (Schools)	Multi-purpose learning rooms, classroom materials, creative learning workshops, activity-based learning	SDG 4 – Quality Education	Improved learning environments, student engagement and confidence support inclusive and quality education outcomes.
	Increased attendance, confidence and participation among children	SDG 10 – Reduced Inequalities	Targeted support to rural schools helps reduce education gaps in remote hill regions.
Library Development & Reading Promotion	Library cards, registers, books, racks, library corners, reading activities	SDG 4 – Quality Education	Strengthened foundational literacy, reading habits and exposure to learning resources.

Sports & Co-Curricular Development	Sports equipment, Games & TLM sessions, multipurpose court, structured training	SDG 3 – Good Health and Well-Being	Regular physical activity supports physical and mental well-being of children and adolescents.
	Inclusive sports participation, including girls	SDG 5 – Gender Equality	Equal access to sports promotes confidence, participation and social inclusion of girls.
Self-Help Groups (SHGs) & Institutions	Savings, credit access, capacity building, governance training, convergence with cooperatives	SDG 5 – Gender Equality	SHGs strengthen women’s financial inclusion, leadership and collective decision making.
	Access to credit, livelihood coordination, risk mitigation	SDG 1 – No Poverty	SHGs enable asset creation, income stability and reduced dependence on informal credit.
	Community ownership and institutional sustainability	SDG 16 – Peace, Justice and Strong Institutions	Strong local institutions improve accountability, participation and long-term governance of development assets.

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