Third Party Monitoring & Evaluation and Project Closure Assessment of OSDI

Intervention in District Mardan, Pakistan

May 2025

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Abbreviations

ADP	Agriculture Development Program
BoS	Bureau of Statistics
BISP	Benazir Income Support Program
CBOs	Community Based Organizations
HH	Household
KC	Kidding Cycle
Kcal	Kilo Calorie
Kgs	Kilograms
KM	Kilometer
KPK	Khyber Pakhtunkhwa
KP-BOIT	Khyber Pakhtunkhwa Board of Investment and Trade
LDP	Livestock Development Program
LFA	Logical Framework Analysis
M&E	Monitoring & Evaluation
n. a.	Not Applicable
OSDI	Organization for Social Development Initiatives
PBS	Pakistan Bureau of Statistics
PKR	Pak Rupees
SMEDA	Small and Medium Enterprises Development Authority
SREP	Small Rural Enterprises Project

Summary

The Organization for Social Development Initiatives (OSDI) delivers a suite of poverty-alleviation programs in rural Pakistan's District Mardan (KPK) and District Lasbella (Balochistan). Its work spans agriculture support, livestock provision, small enterprise promotion, and education strengthening. To ensure transparency and measure real impact, OSDI engaged Manzil Pakistan in February 2025 as an independent third-party evaluator. Under this arrangement, Manzil Pakistan tracks each program's progress against pre-defined Logical Framework Analysis (LFA) indicators, conducts mid-term and end-term assessments, and verifies outcomes at project closure. OSDI's interventions follow a rolling, phased approach: after a baseline survey identifies eligible households, each phase—whether just starting, at mid-term, or closing—runs concurrently with others. This continuous cycle means multiple phases may overlap in different locations. Manzil Pakistan's role is to monitor each phase as it unfolds, evaluate results against LFA benchmarks, and produce final closure reports. This structure ensures ongoing oversight, strengthens accountability, and builds credibility for OSDI's development model through consistent, independent evaluation.

By the end of Phase IV, the Livestock Development Program had met all its key outputs: every sampled household received goats, vaccinated their animals, and completed livestock-management training. Herd sizes almost doubled—far exceeding the 50 per cent growth target—and livestock asset values rose over 50 per cent, surpassing the 30 per cent benchmark. Daily milk production per household increased by more than a third, boosting family nutrition in challenging conditions. Kid mortality and stillbirth rates fell below standard thresholds, though adult mortality remains an area for attention. At closure, households shifted from a significant monthly deficit to a meaningful surplus. Mid-term results from Phase V reinforce these trends, with continued herd growth, high vaccination coverage, full training uptake, and further income gains, indicating LDP is on track to meet its LFA targets and strengthen economic resilience for vulnerable families.

By the end of Phase V, Small Rural Enterprise Program had equipped all four sampled beneficiaries with shop assets and delivered financial-literacy training to everyone. Profits jumped nearly 110.6 per cent (against LFA target of 50 per cent), asset values rose 58.8 per cent, and income-expenditure deficits turned into a 50.9 per cent surplus—well above the 20 per cent targets. In Phase VI (mid-term), five new enterprises received grants and training, achieving a 120 per cent profit increase, 22.3 per cent asset growth, and a 38.6 per cent surplus. Every beneficiary now maintains daily sales and purchase records. Case studies illustrate these gains: in Mora Banda, a disabled grocer saved PKR 100 daily in a "gulluck" box, amassing over PKR 38,000 in ten months; "From Fields to Front Shop" highlights disciplined cash-flow management; "Empowering from Within" follows a woman-led cosmetics and clothing enterprise; and "Empowering Youth Through Entrepreneurship" tells how vocational training launched new tailoring and motorcycle-repair businesses. Together, these stories confirm SREP's success in exceeding its LFA targets and building financial resilience.

Orchard farming is a long-term investment, with orange trees productive for 25–30 years, but the first six to eight years—from planting through first harvest—are most critical. OSDI began its pilot sweet-orange (Malta) orchards in 2021 (Phase I) and 2022 (Phase II). Phase I trees are now flowering in year 4, and Phase II trees will follow soon. Plant survival rates exceed 94 per cent—well above the 60 per cent benchmark—and all ten farmers maintain their groves. Early yields are modest (around 10 kg per tree in year 4), ramping up to 30 kg in years 5–7 and 80 kg at full maturity. With seedling costs of PKR 150–200 each and one-acre planting requiring 100 trees (PKR 15,000–20,000), ongoing

maintenance is low. At a conservative farm-gate price of PKR 150/kg, year 6–9 yields translate to monthly profits of PKR 19,700–52,500 per household, rising to PKR 33,750–90,000 after year 10—surpassing the 40 per cent income-increase target by three to twelve-fold. Reduced labor demands after year 4 and potential intercrops further boost livelihoods, confirming citrus orchards as a high-return alternative to traditional wheat farming in Mardan.

OSDI's first M&E report highlights several key lessons and recommendations to strengthen future interventions. Coverage rates have been low—averaging just 48 new beneficiaries per year—so field teams should complete each program cycle within 12–18 months. Vocational SREP activities perform best near urban centers, while LDP efforts yield greater impact in remote rural areas. Training must evolve from a single kickoff session to three phased modules—at grant award, mid-term refreshers, and closure—to improve retention and application of new skills. Social networks among beneficiaries should be fostered for peer support on livestock health and resource sharing. OSDI's medical unit should provide health screening assistance (CBC, thyroid, urine tests, and substance-use assessments) at baseline, mid-term, and end-line to all eligible selected beneficiaries. Data quality must improve by separating baseline collection from M&E verification, aligning tools to LFA indicators, and using dedicated observation checklists. A revised selection framework—selection of beneficiaries also requires a revisit using a national poverty scorecard together with dependency and unemployment measures. Finally, future M&E reports will adopt a two-volume format—Volume I for mid-term and Volume II for end-term—for each intervention (ADP / Orchard Farming, LDP, and SREP), enhancing clarity, accountability, and stakeholder decision-making.

Livestock Development Program: Fact Based Summary of Findings					
Indicator	**Target / Standard**	**Phase IV (End)**		**Phase V (Mid)**	
		Baseline	**Achievement**	**Baseline**	**Achievement**
Output(s)					
Delivery of Goats (# of Beneficiaries)	**100 %**	-	**23**	-	**34**
Provision of Animal Vaccines	**100 %**	55.5 %	**100 %**	-	**97 %**
Livestock Management Trainings	**100 %**	0 %	**100 %**	-	**100 %**
Outcome(s)					
Increase in Herd Size	**50 %**	0 %	**83.3 %**	-	**85.3 %**
Kidding Rate	**1.75 – 2.0** [a]	-	**1.09 – 1.30**	-	**1.06**
Herd Size Nos (Sample HH)	**-**	54	**99**	95	**176**
Increase in value of Livestock Assets (Per HH Increase)	**30 %**	-	**50.1 %**	-	**12.0 %**
Total Value in PKR (Sample HH)	**-**	1,825,900	**2,740,650**	3,185,811	**3,566,500**
Improved Household Nutrition via Daily Milk Consumption	**50 %**	-	**36.9 %**	-	**87.7 %**
Per Household Milk Consumption Daily (liters)	**1.38** [b]	-	**1.89**	-	**2.59**
Per Household Calorie Intake Daily (Kcal)	**897**	-	**1,227.8**	-	**1,681**
Higher Rates of Livestock Vaccination	**100 %**	-	**100 %**	-	**97 %**
Adult Mortality Rate	**1 -2 %** [c]	-	**7.4 %**	-	**0.0 %**
Kid Mortality Rate	**14 %** [d]	-	**10.17 %**	-	**1.22 %**
Still Birth	**10 – 14 %** [e]	-	**6.38 %**	-	**10.87 %**
Enhanced Shelter Management Practices	**100 %**	50 %	**100 %**	-	**100 %**
Households thinking: Livelihood Condition improved	**50 %**	-	**94 %**	-	**n. a.**
Per HH In-kind Value & Financial Gain	**-**	-	**13,256.63**	-	**11,047.45**
Income – Expenditure Surplus / (Deficit) Per HH	**-**	(7,921.89)	**5,334.74**	(2,754.93)	**8,292.52**

[a] usually 1.0 in first and second pregnancies (Haldar et al., 2014) |
[b] Based on Per Capita (x 7 average HH size) in KPK province
[c] Standard 1-2% per annum **(**SMEDA, Balochistan, 2023; SMEDA, Punjab, 2021**),** a maximum of 13% (Prenatal mortality, Hussein et al., 2009) & a maximum of 28% (Disease outbreak, Khan et al., 2012)
[d] 14% in certain regions (Fernandez, 2014)
[e] Fernandez, 2014; 10%–30% seen in uncontrolled environments (Hussein et al., 2009)

Data Source: M&E Visit, March 2025

Small Rural Enterprise Program: Fact Based Summary of Findings					
Indicator	Target / Standard	Phase V (End)		Phase VI (Mid)	
		Baseline	Achievement	Baseline	Achievement
Output(s)					
Provision of Shop Related Assets to Beneficiaries (# of Beneficiaries)	100 %	-	4	-	5
Provision of Financial Literacy Training	100 %	-	100 %	-	100 %
Rise in beneficiary income from business profits	50 %	-	110.6 %	-	120.6 %
Increase in enterprise asset value	20 %	-	58.8 %	-	22.3 %
Income-expense surplus / (deficits)	20 %	-	50.9 %	-	38.6 %
Universal uptake of financial literacy skills (Beneficiary maintaining business record)	50 %	-	100 %	-	100 %
Data Source: M&E Visit, March 2025					

Orchard Farming: Fact Based Summary of Findings					
Indicator	**Target / Standard**	**Phase I**		**Phase II**	
		Baseline	**Achievement**	**Baseline**	**Achievement**
Outcome(s): Improved livelihood and economic resilience of small farmers through sustainable orange orchard farming and efficient irrigation systems					
Increase in HH income of beneficiary farmers.	**40 %**	-	**n. a.**	-	**n. a.**
Increase in Agricultural productivity	**60 %**	-	**n. a.**	-	**n. a.**
Increase in market linkages and profitable sale	**60 %**	-	**n. a.**	-	**n. a.**
Outcome(s): Increased agricultural productivity and sustainable income generation for farmers					
Farmers successfully cultivating and maintain the orchards	**40 %**	-	**100 %**	-	**100 %**
Farmers earning income from orchard produce after 4 years	**60 %**	-	**n. a.**	-	**n. a.**
Estimated Monthly Income Per HH (6-9 years) [a]	**-**	6,857	19,687.0	6,857	52,500.0
Estimated Monthly Income Per HH (after 10 Years) [a]	**-**	7,666	33,750.0	7,666	90,000.0
Outcome(s): Improved irrigation access through solar powered water wells					
Solar Well Installation	**01**	-	**01**	-	**n. a.**
Number of farmers trained in orchard management and pest control	**7 & 3**	-	**7**	-	**3**
Outcome(s): Enhanced Capacity of farmers in Orchard Management and plant survival					
Plants survived	**60 %**	-	**93.6 %**	-	**95 %**
Number of farmers trained in orchard management and pest control	**7 & 3**	-	**7**	-	**3**
Number of trained farmers applying learned techniques in orchard maintenance	**7 & 3**	-	**7**	-	**3**

[a] Additional Income from Orchard Farming

Data Source: M&E Visit, March 2025

1.0 Introduction and Background

The Organization for Social Development Initiatives (OSDI) is implementing a range of welfare and development interventions in District Mardan, Khyber Pakhtunkhwa, and District Lasbella, Balochistan, aimed at improving the livelihoods and living conditions of underprivileged communities. These interventions include support in agriculture development, livestock provision, promotion of small rural enterprises, and education services in selected communities.

To ensure transparency, accountability, and effective assessment of its ongoing and completed activities, OSDI has engaged the services of Manzil Pakistan as a third-party partner for monitoring and evaluation. This assignment, effective from February 2025, covers OSDI's interventions in both District Mardan and District Lasbella. Under this partnership, Manzil Pakistan is responsible for independently monitoring the progress of OSDI's programs, as well as evaluating their outcomes in line with the Logical Framework Analysis (LFA) developed prior to each intervention.

OSDI's intervention mechanism follows a phased approach. Each phase targets a specific group of beneficiaries identified during the baseline assessment. As one phase comes to a close, another phase begins—either in its initial stage or at mid-term—creating a continuous implementation cycle. As a result, multiple phases may be active at any given time, each at a different stage of progress.

Manzil Pakistan's role includes regular monitoring of the program's implementation, outcome evaluation at the end of each phase, and final assessments at project closure. This approach enables OSDI to maintain consistent oversight of its development model while ensuring transparency and credibility through third-party evaluation.

1.1 About OSDI

The Organization for Social Development Initiatives is a non-profit organization dedicated to improving the socio-economic conditions of poor and underprivileged families living in rural areas of Pakistan. The organization works with a mission to reduce poverty and empower communities through sustainable development programs that are tailored to the specific needs of each community. OSDI adopts a people-centered approach by engaging directly with local populations before launching any intervention. Projects are designed based on consultations with community members to ensure long-term benefits, accountability, and local ownership.

OSDI operates in some of the most backward and underserved regions of the country, providing support in agriculture development, livestock development, small rural enterprise promotion, and education. In the agriculture sector, OSDI has shifted its focus in some areas from traditional crop support—such as wheat or cotton seed distribution—to more sustainable options like orchard plantation. This change is aimed at enhancing income opportunities, improving land productivity, and promoting long-term climate resilience. In livestock development, the organization runs the Livestock Development Program (LDP) which provides families with animals and veterinary support, helping them to generate a steady source of income. Under its Small Rural Enterprises Project (SREP), OSDI supports rural entrepreneurs by offering guidance, training, and sometimes financial support to set up and run small businesses.

OSDI also plays an active role in community development by addressing gaps in basic services. One of its key areas of intervention is education, where it takes ownership of schools, trains teachers, improves learning environments, and ultimately hands over the schools to local communities, NGOs,

or government education departments. This approach strengthens the education system at the grassroots level and ensures continuity after OSDI exits. In addition to education, OSDI provides support in healthcare, clean drinking water, sanitation, natural resource management, energy, and local infrastructure.

The organization has developed three core strategies to fight poverty and promote development: livelihood assistance, community development, and food security. Each strategy focuses on addressing immediate needs while building long-term resilience. Food security programs aim to ensure that the most vulnerable families have access to sufficient and nutritious food, helping them to overcome chronic hunger.

To ensure that its programs are context-specific and locally accepted, OSDI employs project officers from within the communities it serves. These officers act as intermediaries, conducting feasibility studies, building trust, coordinating skills development, and forming relationships with community-based organizations (CBOs). These CBOs eventually take over project management, raise local funds, and ensure sustainability. OSDI's overall development philosophy is holistic and designed to empower communities, giving them the tools, confidence, and support needed to break the cycle of poverty and lead more stable, self-reliant lives.

1.2 About Manzil Pakistan

Manzil Pakistan is a non-profit think tank based in Karachi, dedicated to formulating and promoting public policies that support Pakistan's long-term growth and development. The organization envisions a progressive, stable, and modern Pakistan where every citizen has the opportunity to prosper.

Committed to fostering economic enterprise, responsible governance, and strong institutions, Manzil Pakistan advocates for policies that ensure sustainable economic development and overall wellbeing of Pakistani citizens. Through rigorous, non-partisan research, it analyses critical policy areas and reviews existing studies to provide data-driven recommendations. Maintaining complete political neutrality, the organization operates independently, devoid of any political affiliations.

Beyond research, Manzil Pakistan serves as a dynamic forum for public policy discourse, bringing together key stakeholders, including policymakers, civil society, academics, and the general public. By encouraging open dialogue and collaboration, it strives to shape policies that are inclusive, evidence-based, and geared toward the collective well-being of the nation.

1.3 Scope and Purpose of the Report

This report presents the third-party monitoring and evaluation findings, along with the project closure assessment, specifically for OSDI's interventions in District Mardan. It aims to provide an objective analysis of the progress, outcomes, and impact of the various program components implemented in the district, while also identifying key lessons and areas for improvement. Under the scope of the current reporting period, monitoring and evaluation activities were conducted in the first quarter of 2025, concluding at the end of March. During this period, mid-term assessments were carried out for the Livestock Development Program (LDP) Phase V and the Small Rural Enterprise Program (SREP) Phase VI. Additionally, end-term evaluations were conducted for LDP Phase IV and SREP Phase V to assess their closure outcomes.

Besides these standard interventions, a special case assessment was undertaken for the newly introduced initiative of commercial orchid farming under the traditional Agriculture Development Program (ADP) of OSDI in District Mardan. This pilot effort was considered significant due to the region's environmental suitability for orchid cultivation. The initiative holds promise in enhancing biodiversity, supporting nutrient cycling, and serving as a bio-indicator for ecosystem health. The inclusion of orchid farming marks a shift from traditional agricultural support toward more sustainable and ecologically beneficial practices. The findings from this special case have been separately highlighted in the report as part of OSDI's evolving approach to rural development.

2.0 OSDI Intervention Model(s) & Modalities

The intervention approach adopted by the OSDI is based on a structured process that begins with identifying the most underprivileged communities and understanding their specific needs. Once the communities are selected, baseline data is collected to assess existing conditions and guide the planning of suitable development programs.

The overall objective is to improve livelihoods through carefully designed interventions that support agriculture, livestock, small rural enterprises, and, in some cases, innovative solutions like orchard farming. Each step of the process—from community selection to beneficiary identification and program design—is carried out with a focus on transparency, sustainability, and long-term impact. The following sections explain the key components of this intervention model in detail.

2.1 Loan Based Model versus Grant Based Model

Until 2016, OSDI followed a loan-based model to support income-generating activities. However, due to regulatory restrictions imposed by the State Bank of Pakistan on microfinance operations, and the practical challenges related to loan recovery in low-income rural communities, the model was revised. Since then, OSDI has adopted a grant-based approach. Under this model, beneficiaries are not required to repay the support received but are expected to make a minimum contribution to promote a sense of ownership and commitment. This contribution may be in cash or kind—monetary contributions are more common under the SREP, while in-kind contributions, such as labor, are typically expected in the LDP and ADP.

2.2 Intervention Approach: Working and Delivery Modalities

OSDI follows a structured, data-driven approach to deliver targeted interventions in vulnerable communities. The working modality involves identifying communities, collecting baseline data, and selecting beneficiaries based on predefined criteria. Each step ensures transparency, inclusion, and phased program implementation.

2.2.1 Identification of Communities

OSDI identifies target communities through a structured and inclusive approach. In District Mardan, the process began with engagement of local social activists, key informant interviews (KIIs), and input from local experts. OSDI's project office in Tehsil Rustam played a central role in coordinating these efforts and ensuring that the selected villages reflected areas with high levels of poverty and vulnerability.

2.2.2 Baseline Data Collection

After identifying the communities, a comprehensive baseline survey was conducted to assess their socio-economic conditions. The baseline survey covered key aspects such as sources of livelihood, income and expenditure patterns, family structure (dependents and independents), education status of household members, health conditions, and access to essential needs such as clean water. This data provided a clear understanding of community needs and helped in designing targeted intervention programs.

2.2.3 Criterion for Beneficiaries Selection

Based on the baseline findings, around 150 to 200 potential beneficiaries were identified using specific vulnerability criteria. These included:

- Per household member income is not more than PKR 5,142.
- High dependency ratio, with one breadwinner supporting eight or more dependents.
- Female-headed households, where the head is a widow or divorced woman.
- Lack of productive assets, such as no ownership of land, livestock, or savings.

From this pool of potential beneficiaries, individuals were further selected for specific programs. In each phase, about 20 plus beneficiaries are included in the LDP, around 5 in the SREP, and another 20 plus in the ADP. The remaining beneficiaries are scheduled for support in future phases, ensuring that all identified individuals are eventually covered. Importantly, each beneficiary is eligible for only one program to maximize outreach and avoid duplication of benefits.

2.3 Community Intervention Program(s)

OSDI's development approach in rural communities focuses on improving livelihoods through three core intervention programs: Agriculture Development Program (ADP), Livestock Development Program (LDP), and Small Rural Enterprise Program (SREP). These programs are designed to address the specific socio-economic needs of vulnerable households by providing them with practical means to increase income, improve food security, and build long-term resilience. In addition to these, a special initiative—Orchard Farming—has been introduced in District Mardan due to the region's favorable environmental conditions. Each intervention targets a unique aspect of rural poverty, ensuring that support is tailored, phased, and sustainable.

2.3.1 Agriculture Development Program

The ADP aims to enhance agricultural productivity and promote sustainable farming practices. Its objectives include increasing crop output, particularly through wheat cultivation, while improving the socio-economic conditions of farmers. The program focuses on upgrading beneficiaries' skills in land preparation and the use of modern farming techniques. It also promotes financial literacy, enabling farmers to effectively manage their savings for future agricultural needs and create productive assets to escape cycles of debt.

2.3.2 Livestock Development Program

The LDP supports households through goat distribution to promote small-scale livestock farming. The program seeks to improve livestock management skills and strengthen economic resilience by enabling families to diversify their income sources. Through this support, households are better positioned to cope with financial shocks and secure a more stable livelihood.

2.3.3 Small Rural Enterprise Program

The SREP focuses on improving household livelihoods by encouraging small-scale business activities. It provides beneficiaries with the opportunity to generate income while also reducing dependency on external assistance. The program integrates financial literacy training to ensure that enterprises are managed effectively and can continue beyond the period of direct support.

2.3.4 Orchard Farming: A Special Case

This special intervention in District Mardan applies the same core objectives as the ADP but is adapted to the region's suitability for orchard and peach farming. The initiative promotes biodiversity, supports nutrient cycling, and acts as an indicator of ecological health. Among the two, orchid farming offers higher yield potential per unit area, making it a more viable option for long-term agricultural sustainability in the district.

3.0 OSDI Intervention in Mardan: A Brief History

3.1 District Mardan: A Short Profile

Mardan is the second most populous district in Khyber Pakhtunkhwa (Awan et al., 2022) and is overwhelmingly rural in character. The district sits on gently rolling plains in the southwest and foothills in the northeast. Its fertile soil and one of the world's oldest irrigation systems—built during British rule—make it ideal for agriculture and horticulture. Sugarcane and tobacco thrive here, earning Mardan its nickname "the land of sugarcane and tobacco." Other important Kharif crops include maize, rice, jowar, and groundnut, while Rabi staples are wheat, barley, and mustard. Fruit cultivation is also expanding: plums, pears, persimmons, peaches, and oranges are grown alongside apples, apricots, mangoes, litchis, and lemons (SMEDA, 2009).

According to the 2023 census, KPK's total population is 40.9 million, of which 85 percent—34.7 million—live in rural areas. Mardan district itself has 2.74 million people, with 83.5 percent (2.29 million) in rural communities and the remaining 453,000 in urban centers. Out of KPK's 35 districts, Mardan stands out for its large rural share, second only to those with entirely rural populations (BoS, 2024; PBS, 2023).

Mardan is divided into five tehsils: Ghari Kapura, Katlang, Mardan, Rustam, and Takht Bhai. Three tehsils are 100 percent rural; Rustam tehsil alone accounts for 279,527 fully rural residents. This rural dominance shapes the district's economic and social landscape.

Poverty rates in Pakistan are higher in rural areas. Nationally, rural poverty was 39.3 percent in 2018–19 compared to 32.1 percent in urban areas. In KPK, the pattern is slightly different: rural poverty was 35.3 percent versus 40.1 percent in cities (Jamal, 2021). Given Rustam's entirely rural makeup, its poverty level is likely at or above the provincial rural average.

3.2 Identification of Communities

In 2022, OSDI identified target communities for intervention in Tehsil Rustam, District Mardan. The selection process involved engagement with social activists, local experts, and key informants, along with inputs from the OSDI project office in the region. Six villages—Umar Dhair, Saleem Khan, Hassan-abad, Morra Banda, Natyan, and Shanay Zangal—were selected under Union Councils Machi and Bazar. These villages are located between 5 to 22 kilometers from Rustam and represent some of the most underserved areas in the region.

Figure 1. : **Community Mapping of Tehsil Rustam, District Mardan, Khyber Pakhtunkhwa, Pakistan**

3.3 Baseline Data Collection

Following the identification of villages, a detailed baseline survey was conducted to assess the socio-economic conditions of the households in the selected areas. As per the estimates, the household's population range between 370 to 450 households in the selected communities. The survey covered 306 households, representing a total household population of approximately 2,390 individuals across six villages. The data collected focused on key aspects such as livelihood practices, income and expenditure levels, family structure including dependents and independents, educational background, health conditions, and access to water and other daily necessities. This provided a clear picture of the existing challenges and needs in each village. Following table (**Table 1 :)** exhibits the baseline survey in identified villages of Rustam Tehsil, district Mardan.

Table 1 : Baseline Survey Details (2022) in Selected Villages / Communities of Tehsil Rustam, District Mardan, KPK

Name of village	Total HH (Main and nearby)	Total Population	Phase Wise Surveyed Households [a]			
			Baseline	HH - I	HH - II	Total
Umar Dhair	80-100	600	40	3	1	44
Saleem Khan Banda	80-100	600	41	21	10	72
Hassan-abad	90-100	420	40	19	24	83
Morra Banda	50-60	350	38	5	11	54
Natyan	30-40	210	17	0	0	17
Shanay Zangal	40-50	210	17	14	5	36
	Total ➔	**2,390**	**193**	**62**	**51**	**306**

[a] as of M&E March 2025

Data Source: OSDI Baseline Data, 2022

Following the initial baseline survey of 193 households in 2022, OSDI discovered that many respondents did not meet the programme's eligibility criteria. This required two additional field visits—labelled HH-I and HH-II—that added 62 and 51 households respectively, bringing the total surveyed households to 306 across six villages of Tehsil Rustam. Each return to the field raised data-collection costs and delayed programme start-up. To avoid such overruns, future baselines should adopt probability-based sampling. A practical rule would be to survey at least 50 per cent of all households in the target villages on a random basis; this would give a reliable pool of eligible beneficiaries without repeated, costly enumeration rounds.

3.4 Household Identification and Pooling

From the total surveyed population of approximately 380 households, 193 households—about 51% of the total 370 to 450 households—were shortlisted as potential beneficiaries based on the baseline data. Following table (**Table 2 :**) exhibits the community wise eligible households and pooling for phase-wise grant disbursement.

Table 2 : Community Wise Eligible Household & Pooling under the Baseline 2022

Name of village	Total Surveyed Population [a]	**Households Eligible under the OSDI Selection Criteria [b]**	**Percentage of Surveyed Population (%)**
Umar Dhair	44	17	38.6
Saleem Khan Banda	72	31	43.1
Hassan-abad	83	24	28.9
Morra Banda	54	30	55.6
Natyan	17	0	0
Shanay Zangal	36	16	44.4
Total ➔	**306**	**118**	**38.6**

[a] as of M&E March 2025

[b] does not include the beneficiaries - OSDI staff (numbers in 03), falling in the eligibility criteria.

Data Source: OSDI Baseline Data, 2022

These households were assessed using specific vulnerability indicators such as low per-capita income, high dependency ratios, absence of productive assets, and the presence of female-headed households. This pool was then used to select participants for each phase of the intervention programs.

3.5 Program-wise Overview of Beneficiaries

Based on the baseline survey conducted in 2022, a total of 118 eligible households were identified across six villages in Tehsil Rustam, District Mardan. All of these households were included in one of the three intervention programs. Around 72 per cent of the beneficiaries were supported under the Livestock Development Program (LDP), 20 per cent under the Agriculture Development Program (ADP), and nearly 8% under the Small Rural Enterprise Program (SREP). The selection process ensured that no household received support from more than one program, and all eligible households would eventually be included through successive implementation phases. Given this, each selected household received support in only one program, and the coverage reached 100 per cent of the eligible population identified through the baseline. Following table (**Table 3 :**) exhibits the community wise beneficiaries for grant disbursement under intervention programs.

Table 3 : Intervention-Wise Disbursement Details under the Baseline 2022						
Name of village	Eligible Population [a]	LDP	SREP	ADP	Total	Percentage of the Surveyed Population
Umar Dhair	17	14	0	3	17	100%
Saleem Khan Banda	31	23	1	7	31	100%
Hassan-abad	24	15	7	2	24	100%
Morra Banda	30	25	1	4	30	100%
Natyan	0	0	0	0	0	-
Shanay Zangal	16	8	0	8	16	100%
Total ➔	**118**	**85**	**9**	**24**	**118**	100%
	% Share ➔	**72.0%**	**7.6%**	**20.3%**	**➔ 100%**	

[a] as of M&E March 2025

Data Source: OSDI Baseline Data, 2022

3.5 Livestock Development Program: Phase wise selection of Beneficiaries

Under the LDP, 85 out of 118 eligible households were selected across three different phases. Each phase covered approximately 20 per cent to 30 per cent of the total beneficiary pool. The highest number of beneficiaries were selected in Phase V (34 households), followed by Phase VI (28 households) and Phase IV (23 households). Villages like Morra Banda and Umar Dhair had the highest coverage rates, while Shanay Zangal had the lowest. Overall, 72% of the surveyed eligible households received support under the LDP. Following table (**Table 4 :**) exhibits the Phase-wise intervention under LDP:

Table 4 : Phase-wise Disbursement Details Under LDP in Selected Villages under the Baseline 2022						
Name of village	Eligible Population [a]	Phase IV	Phase V	Phase VI	Total	Percentage of the Surveyed Population
Umar Dhair	17	0	7	7	14	**82.4%**
Saleem Khan Banda	31	9	6	8	23	**74.2%**
Hassan-abad	24	11	1	3	15	**62.5%**
Morra Banda	30	0	16	9	25	**83.3%**
Natyan	0	0	0	0	0	**0.0%**
Shanay Zangal	16	3	4	1	8	**50.0%**
Total ➔	**118**	**23**	**34**	**28**	**85**	**72.0%**

[a] as of M&E March 2025

Data Source: OSDI Baseline Data, 2022

3.6 Small Rural Enterprise Program: Phase wise selection of Beneficiaries

Under the SREP, only 9 out of 118 eligible households were selected across Phase V and Phase VI, representing 7.6 per cent of the total surveyed population. Most of the beneficiaries came from Hassan-abad, where 7 households received support. Hassan-abad, being a semi-urban area located just 5 kilometers from Rustam city, offers better access to markets and commercial activity. Due to this proximity, the potential for small rural enterprises is more pronounced in this village compared to others. Limited participation from Saleem Khan Banda and Morra Banda, and no selection from the remaining villages, reflects the program's targeted nature and the need for specific conditions that support enterprise development. Following table (**Table 5 :**) exhibits the Phase-wise intervention under SREP:

Table 5 : Phase-wise Disbursement Details Under SREP in Selected Villages under the Baseline 2022

Name of village	Eligible Population [a]	Phase V	Phase VI	Total	Percentage of the Surveyed Population
Umar Dhair	17	0	0	0	**0.0%**
Saleem Khan Banda	31	0	1	1	**3.2%**
Hassan-abad	24	3	4	7	**29.2%**
Morra Banda	30	1	0	1	**3.3%**
Natyan	0	0	0	0	**0.0%**
Shanay Zangal	16	0	0	0	**0.0%**
Total ➔	**118**	**4**	**5**	**9**	**7.6%**

[a] as of M&E March 2025

Data Source: OSDI Baseline Data, 2022

3.7 Orchard Farming: Selection of Beneficiaries

Under the Agriculture Development Program (ADP), OSDI's field office and local stakeholders first piloted an orange-orchard initiative in Tehsil Rustam (Phase I), selecting seven households in Akhundara. The decision was also based on the region's environmental suitability for orchard crops, particularly in enhancing biodiversity and offering long-term economic gains. However, the M&E team raised strong reservations and concerns: one the project is not feasible, second is the smallholder families might struggle to wait several years before seeing any returns. In response, the program shifted briefly to its traditional wheat support model, enrolling 24 households across five villages. After observing limited agronomic and economic benefits, that approach was also deemed ineffective. As a result, OSDI decided to discontinue further phases of the wheat program and continued orchard farming as a special case under ADP.

Finally, OSDI returned to the orchard concept with Phase II—adding three more beneficiary households in Beroach—confident that the district's soil and climate offer strong long-term prospects for citrus cultivation. Moving forward, orchard farming replaces further wheat interventions in this

area, combining environmental suitability with the goal of sustainable income growth. The orchard initiative now replaces future phases of the wheat program in this region.

Following (**Table 6 :**Error! Reference source not found.) are the details of phase wise intervention for Orchid farming in the selected communities as discussed above:

Table 6 : Orchard Farming Beneficiary Details

Phase(s)	# of Beneficiaries	Total Population	Total Income [a]	Total Expenditure [a]	Land Ownership (Acres)
Phase – I	7	39	48,000	71,670	5.25
Phase – II	3	15	23,000	30,450	9
Total ➔	10	**54**	**71,000**	**102,120**	14.25

[a] before OSDI Intervention

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*
Data Source: OSDI Baseline Data

3.8 Agriculture Development Program: Phase wise selection of Beneficiaries

Under the Agriculture Development Program (ADP), the first intervention of traditional ADP in Tehsil Rustam of District Mardan focused on supporting wheat cultivation. In the initial phase, 24 households were selected from five villages: Umar Dhair (3), Saleem Khan (7), Hassan-abad (2), Morra Banda (4), and Shanay Zangal (8). However, after implementation, the wheat support initiative was found to be less beneficial due to various agronomic and economic limitations. Following table (**Table 7 :**) exhibits the Phase -I intervention as ADP for wheat crop:

Table 7 : Phase-wise Disbursement Details Under ADP in Selected Villages under the Baseline 2022

Name of village	Eligible Population [a]	Phase I	Percentage of the Surveyed Population
Umar Dhair	17	3	**17.6%**
Saleem Khan Banda	31	7	**22.6%**
Hassan-abad	24	2	**8.3%**
Morra Banda	30	4	**13.3%**
Natyan	0	0	**0.0%**
Shanay Zangal	16	8	**50.0%**
Total ➔	**118**	**24**	**20.3%**

[a] as of M&E March 2025

Data Source: OSDI Baseline Data, 2022

4.0 Monitoring & Evaluations & Project Closure: A brief

The Monitoring and Evaluation (M&E) and Project Closure exercise was conducted in the last week of March 2025 across all intervention villages in Tehsil Rustam, District Mardan. The focus was on assessing both mid-term and end-term progress of the Livestock Development Program (LDP), the Small Rural Enterprise Program (SREP), and the Orchard Farming initiative. Visits were carried out to meet beneficiaries, verify implementation status, and collect primary data using structured tools (see annexures for assessment formats).

4.1 Monitoring & Evaluations & Project Closure: LDP brief

For LDP, almost all active beneficiaries were covered. Field visits included direct observation of livestock shelters on a random basis to verify infrastructure quality and adoption of training guidelines. Monitoring tools differentiated between mid-term (Phase VI) and end-term (Phase V) assessments.



Out of 57 actual beneficiaries under Phase V and VI, 47 were successfully assessed, resulting in an overall coverage of nearly 89 per cent. For Phase V (project closure), 78 per cent of beneficiaries were evaluated, while for Phase VI (mid-term), 85 per cent were monitored. The highest coverage was recorded in Saleem Khan Banda and Shanay Zangal, while Natyan had no LDP beneficiaries. This strong coverage provides a reliable overview of implementation progress and beneficiary outcomes. The table (**Table 8 :**) provides an overview of actual versus evaluated beneficiaries across villages.

Table 8 : Monitoring Visit Overview Under LDP in Selected Villages

Name of village	Project Closure - Phase IV			Mid-term - Phase V			Total		
	AB	BE	% of Actual	AB	BM	% of Actual	AB	BE / BM	% of Actual
Umar Dhair	0	0	0 %	7	6	85.7 %	7	6	85.7 %
Saleem Khan Banda	9	8	88.9 %	6	6	100 %	15	14	93.3 %
Hassan-abad	11	8	72.7 %	1	1	100 %	12	9	75.0 %
Morra Banda	0	0	0 %	16	12	75 %	16	12	75.0 %
Natyan	0	0	0 %	0	0	0 %	0	0	0 %
Shanay Zangal	3	2	66.7 %	4	4	100 %	7	6	85.7 %
Total ➔	23	18	78.3 %	34	29	85.3 %	57	47	88.9 %

AB: *Actual Beneficiaries* | **BE:** *Beneficiaries Evaluated* | **BM:** *Beneficiaries Monitored*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

As mentioned, all beneficiaries under the Livestock Development Program (LDP) could not be visited during the monitoring exercise mainly because they were not informed in advance. This was done deliberately to maintain transparency and preserve the purpose of an unbiased monitoring visit. As a

result, a few beneficiaries were found to be away from home, particularly those involved in livestock rearing who had taken their animals to nearby areas for grazing. Additionally, in one case, a beneficiary could not be assessed because he was seriously ill. As informed by the local villagers, he is suffering from cancer and was away for medical treatment during the visit.

4.2 Monitoring & Evaluations & Project Closure: SREP brief

For SREP, fixed and mobile outlets were visited. In cases of mobile businesses (e.g., bike-based shops), beneficiaries arrived with their setups for evaluation. Grocery stores in Saleem Khan Banda and Morra Banda were physically visited, where daily sales records and stock inventory were reviewed. A special visit was also made to the motorcycle mechanic's workshop in Hassan-abad, where tools and accessories were inspected. Monitoring tools were again applied separately for mid-term and end-term evaluations.





The visit under SREP covered 8 out of 9 total beneficiaries, achieving an overall assessment rate of nearly 89%. All five mid-term beneficiaries from Phase VI were successfully monitored, while three

out of four project closure evaluations were completed for Phase V. The highest number of assessments took place in Hassan-abad, reflecting its greater concentration of SREP beneficiaries. No SREP interventions were recorded in Umar Dhair, Natyan, or Shanay Zangal. Details are presented in Table (**Table 9 :**) below.

Table 9 : Monitoring Visit Overview Under SREP in Selected Villages

Name of village	Project Closure - Phase V			Mid-term - Phase VI			Total		
	AB	BE	% of Actual	AB	BM	% of Actual	AB	BE / BM	% of Actual
Umar Dhair	0	0	0 %	0	0	0 %	0	0	0 %
Saleem Khan Banda	0	0	0 %	1	1	100 %	1	1	100 %
Hassan-abad	3	2	66.7 %	4	4	100 %	7	6	85.7 %
Morra Banda	1	1	100 %	0	0	0 %	1	1	0 %
Natyan	0	0	0 %	0	0	0 %	0	0	0 %
Shanay Zangal	0	0	0 %	0	0	0 %	0	0	0 %
Total ➔	4	3	75.0 %	5	5	100 %	9	8	88.9 %

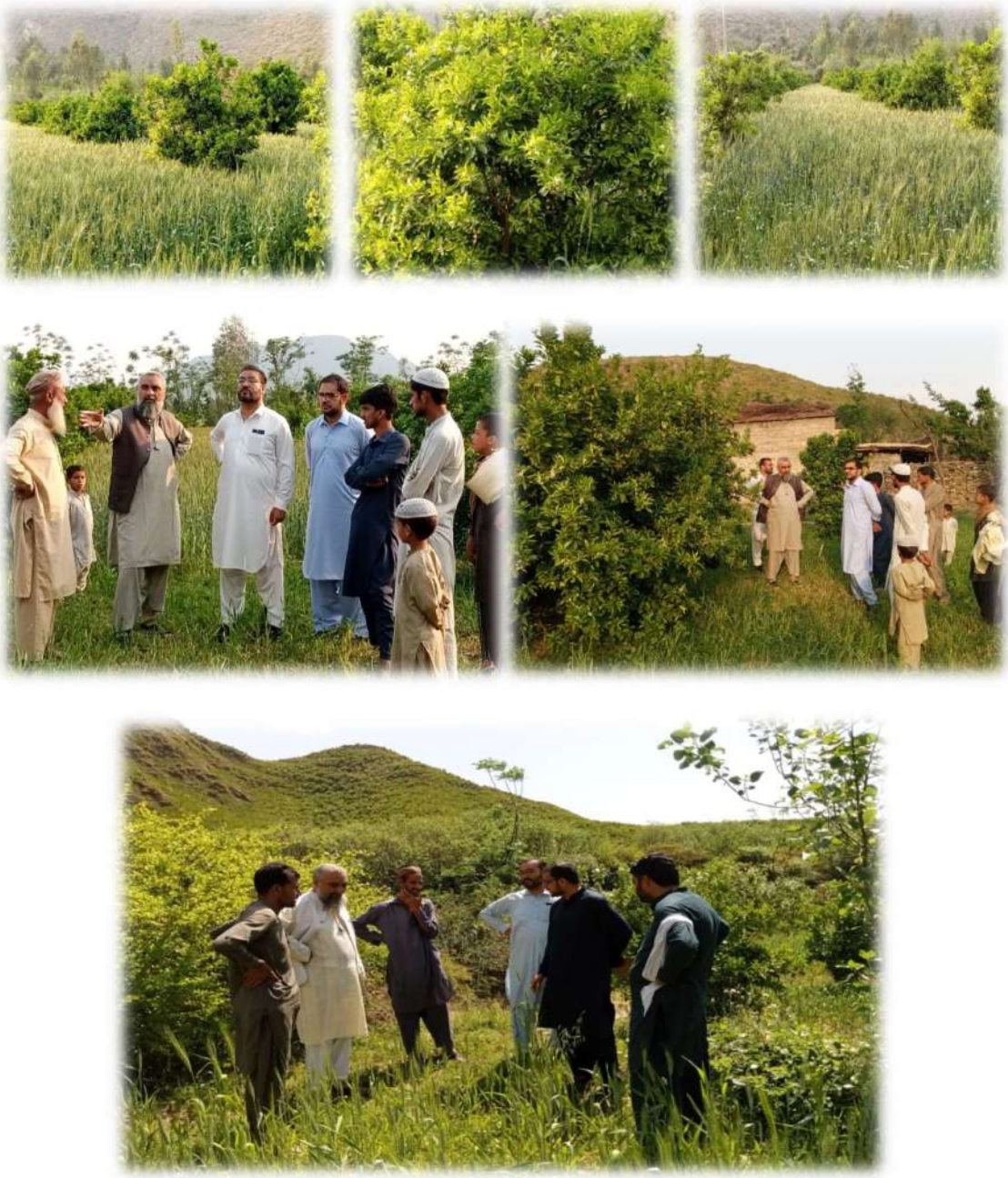
AB: *Actual Beneficiaries* | **BE:** *Beneficiaries Evaluated* | **BM:** *Beneficiaries Monitored*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

An important observation from the project closure assessment is that one SREP beneficiary could not be evaluated. This individual had received a grant to establish a clay oven (locally called a *tandoor*) for making flatbread. According to the field team, the business had initially performed well and was considered successful. However, due to serious family conflicts and threats to the safety of the entire household, the beneficiary was forced to shut down the business and relocate with his family to another area.

4.3 Monitoring & Evaluations & Project Closure: Orchard brief

As explained in earlier section, the revised intervention replacing ADP, 10 households were selected for orchard farming—7 from village Akhundara in Phase I and 3 from village Beroach in Phase II. Under the Orchard Farming initiative, all beneficiaries were visited on-site to verify the status of land preparation and plantation. The visits confirmed active cultivation and engagement by each beneficiary.



5.0 Phase-wise M&E and Project Closure: Key Findings

Monitoring and evaluation, along with project closure assessments, followed the Logical Framework Analysis (LFA) indicators for each programme, supplemented by context-specific observations. Progress against planned outputs (asset distribution, training delivery) and anticipated outcomes (asset growth, income improvement) was measured through field visits, beneficiary interviews, and on-site verification. The key findings for LDP, SREP and Orchard farming under ADP are discussed in detail in the current section.

5.1 Livestock Development Program

Monitoring and closure assessments for LDP were guided by the following LFA indicators, though additional local measures were also considered:

- **Outputs:** delivery of goats to beneficiaries, provision of animal vaccines, and livestock-management training to all beneficiaries.
- **Outcomes:** a 50 per cent of HHs thinking that their livelihood condition has been improved; 50 per cent increase in herd size through successful kidding; Mortality rate should not exceed 10 per cent; 30 per cent increase in the value of assets; improved household nutrition via daily milk consumption by 50 per cent; higher rates of livestock vaccination; and enhanced shelter management practices.

Accordingly, the M&E team developed a tailored assessment tool (see annexure for these tools/ instruments - **8.8: M&E Data Collection Instrument / Tools**) to verify these targeted outputs and outcomes. The following sub-section presents the key findings for each output and outcome, separately covering mid-term and project-closure evaluations.

Box 1 : Assumptions Behind M&E Assessments and Evaluations for LDP

The following context helped shape the M&E assessment framework for both mid-term and project-closure reviews, covering key performance areas such as breeding efficiency, mortality and still birth, kidding rates, animal health practices, and milk production and consumption patterns.

Bucks Breeding Efficiency:

Bucks are capable of servicing a large number of does—potentially up to a 1:50 ratio—thanks to their high libido. Efficiency can decline as bucks age or during the off-season, so pairing younger bucks with does during peak breeding times helps maintain strong kidding rates (*Breeding in Goats - Management and Nutrition*, 2024).

Mortality Rate:

Under normal conditions, adult goat mortality in Pakistan is approximately 1–2 per cent per year (SMEDA, Balochistan, 2023; SMEDA, Punjab, 2021). Young goats experience higher losses: perinatal mortality (deaths around birth) averages about 13 per cent (Hussein et al., 2009), and overall kid mortality often exceeds that of adults (Yitagesu & Alemnew, 2022). In disease outbreaks—such as Peste des Petits Ruminants—mortality can spike to as high as 28 per cent (Khan et al., 2012).

Kidding Rates:

Goat breeds common in Pakistan produce an average of 1.75 to 2.2 kids per kidding (Haldar et al., 2014). First-time mothers typically have one or two kids, while mature does may bear triplets or quadruplets, boosting herd growth when combined with effective breeding management.

Still Birth:

Stillbirths and early-life losses represent a significant challenge in goat rearing. Studies show that around 30 per cent of pre-weaning deaths occur either as stillbirths or within the first day of life, and another 15 per cent of kids die during their first week (Wilson, 1986). Does younger than three years or older than nine years are at higher risk of losing their young, with up to 10 per cent of pregnant does losing kids before birth in some populations. Overall, kid mortality before weaning can reach 14 per cent in certain regions (Fernandez, 2014). However, careful management and good nutrition can reduce these losses—one study reported stillbirth rates as low as 1.2 per cent when best practices were followed (Hussein et al., 2009).

Vaccination and Deworming:

Routine vaccination campaigns protect against major diseases, and deworming supports doe and kid health. However, deworming is generally avoided during pregnancy to prevent any risk to the developing fetus, with most practitioners scheduling it immediately after kidding (Ndibazza et al., 2010).

Milk Production and Milking Efficiency:

Daily milk yield in local breeds ranges from 1 to 4 liters, with an average of about 2.5 liters per doe under small-holder conditions. Breed, nutrition, and weather affect output: Kamori goats, for example, average 2.73 liters per day over a 113-day lactation period (Kumbhar et al., 2016). Milk production typically rises with each lactation, peaking around the third or fourth cycle, and does carrying twins usually outperform those with single kids (Zahraddeen et al., 2009). Lactation lengths vary by breed but generally fall between 90 and 120 days in Pakistan (Bughio et al., 2002; Khan et al., 2008; Waheed & Khan, 2013) . Nutrition in goat milk ranges between 620 calories per liter to a 700 calories per liter (*Goat Milk Nutrition Facts and Analysis.*, n.d.).

The lactation length in goats can differ not only depending on the breed but also on the type of management, lasting from 7 to 10 months and peaking between 4 and 8 weeks in most breeds (Castro et al., 2023; Salama et al., 2005), however, declines after 8 weeks (Waheed & Khan, 2013).

Milk Consumption Patterns:

Tea, locally known as chai, plays a central role in daily life across Pakistan. It is more than just a drink—it is a cultural tradition and social practice shared among families and guests (Solangi, 2025). Since milk is a key ingredient in tea, Pakistan is among the highest consumers of milk in the region milk (South Asia Investor Review, 2020). It is reasonable to assume that tea was already being consumed in the target communities before the intervention. However, limited income likely affected the quantity and regularity of milk use. With the increase in milk production from the goats provided under the LDP, households have likely been able to use more milk for tea preparation, in addition to other uses such as direct consumption by children or in cooking.

National Average per capita consumption of milk stood at 231 kg per annum (South Asia Investor Review, 2020). Provincially, annual per capita consumption is highest in Sindh, at 246 kg. In Punjab it is about 132 kg, in KPK about 86 kg, and in Baluchistan about 108 kg (Sattar, 2020).

5.1.1 LDP Project Closure Assessment: Phase IV

Delivery of Goats to beneficiaries

Under the phase IV of LDP, the total beneficiaries i.e. the recipient of goats were 23 households. AS a usual practice and policy, each household in the selected village / community receives 3 goats. All three does are for kidding / breeding purpose. One household amongst each community receives 2 does and 1 buck. The purpose of giving buck to one household is the common buck for the breeding purpose in each village. The female goats are mated naturally by the bucks available in the village.

As per the M&E, exercise, the delivery goats were confirmed by all beneficiaries in the sample. A total of 54 goats (38 does and 16 bucks) had been delivered to 18 beneficiary households across three villages. Here in this case of Phase IV, each household receives 2 does and 1 buck. These distributions ensured that each household had the breeding stock needed for herd growth. Following data (**Table 10 :**) exhibits the delivery of livestock in selected villages sampled households:

Table 10 : Delivery of Livestock in Selected Villages under Phase IV of LDP

Name of village	Phase IV	# of Does	# of Bucks	Total	Mortality [a] (if any)	Total Available [a]
Saleem Khan Banda	8	17	7	24	0	**24**
Hassan-abad	8	17	7	24	3	**21**
Shanay Zangal	2	4	2	6	1	**5**
Total ➔	**18**	**38**	**16**	**54**	**4**	**50**

[a] as of M&E visit (March 2025)

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

The overall mortality rate was reported 7.4 per cent (below the target of 10 per cent in LFA), cause of death remains unknown for two does, and another doe was later found dead after grazing—possibly unreported in official records. Shanay Zangal reported a single mortality. These losses highlight the need for targeted follow-up—such as enhanced shelter checks, more frequent vaccination and deworming reminders, and rapid veterinary response—to further reduce mortality in future phases.

Provision of Animal vaccines

By the time of the final assessment, nearly all beneficiaries had incorporated vaccination into their livestock care routines. Every household reported that veterinary teams visited regularly and provided vaccines before peak risk periods (e.g. before kidding). Deworming also became more widespread, with most farmers treating their animals on schedule—only a handful skipped treatments, usually due to pregnancy safety concerns (Ndibazza et al., 2010).

Illness among the herd was very low. Across bucks, does, and kids, only minor cases of cough, skin issues, or weight loss were recorded in a small number of animals. In each instance, farmers promptly

consulted a vet and followed prescribed treatments, such as syrups or market-sourced vaccines. Home remedies were rarely used.

Overall, the herd health status at project closure was strong: over 90 per cent of animals were rated "Good" or "Very Good." These results confirm that the combination of vaccine provision, deworming support, and ongoing veterinary guidance has effectively controlled disease, minimized losses, and reinforced best practices in animal health management.

Livestock management training

At project closure, all participating households confirmed they received the initial livestock-management training at grant award, however, unable to recall many aspects of training. Key topics covered included fodder management, vaccination timing, animal-drinking-water practices, and overall herd hygiene. Nearly every beneficiary (> 90 per cent) recalled lessons on seasonal vaccination and deworming, and most (> 80 per cent) remembered fodder and water management. Fewer respondents (about 50 per cent) cited shed management or isolating sick animals, while fat-fattening feed techniques were least often recalled. Prior to training, nearly all beneficiaries were unfamiliar with these topics. A small number requested refresher sessions—mainly on advanced vaccination schedules and disease treatment—indicating strong interest in continuing education.

These findings reinforce the recommendation (see sub section **6.2.1 Strengthening Training Approach for Better Retention and Impact**) to split training into three modules—initial briefing, mid-term refresh, and final sustainability session—and to combine these with targeted on-site coaching. This phased approach will help participants better retain critical practices and apply them throughout the project lifecycle.

Shelter Management Practices

Before the intervention, only about 50 per cent of beneficiaries had a covered livestock shed; the rest had no shelter or only a partially covered structure. By project closure, 100 per cent of household report having a fully covered animal shed. This uniform upgrade ensures protection from rain, sun, and harsh weather, and provides a clean, secure environment for the herd. The shift to universally covered sheds reflects strong uptake of shelter-management guidance and underpins healthier, more resilient livestock.

Kidding Status

In Phase IV, beneficiaries experienced two kidding cycles (KC-I and KC-II). The first cycle occurred because most does were pregnant when they were handed over. The second cycle took place during the six- to eight-month intervention period and was recorded at the final M&E visit. Observing these two cycles—combined with continuous field-team support and technical guidance—has given beneficiaries the skills and confidence needed to care for their herds independently and manage future kidding successfully.

In the first cycle, 34 does kidded out of 35, producing a total of 37 kids—an average of 1.09 kids per doe. While this is slightly below the typical 1.75–2.2 range for local breeds (Haldar et al., 2014), it reflects the mix of first-time mothers and does at different stages of maturity. There were no stillbirths recorded, indicating effective prenatal care (best-practice stillbirth rates can be as low as 1.2 per cent under ideal management). Post-birth mortality affected eight kids (21.6 per cent), aligning with reported early-life losses of up to 30 per cent on the day of birth and an additional 15 per cent in the first week (Wilson, 1986). The kidding cycle – I detail can be seen in the following table (**Table 11 :**).

Table 11 : Kidding Cycle - I in Selected Villages under Phase IV of LDP

Name of village	Phase IV	# of Does Kidded	Kidding Cycle -I			Total Kidding	Mortality [a] (if any)	Total Alive Kids [a]
			# Does	# Bucks	Still Birth			
Saleem Khan Banda	8	17	10	4	0	14	0	**14**
Hassan-abad	8	14	9	10	0	19	7	**12**
Shanay Zangal	2	3	4	0	0	4	1	**3**
Total ➔	**18**	**34**	**23**	**14**	**0**	**37**	**8**	**29**

[a] as of M&E visit (March 2025)
Note: Mortality in kids is defined death after having alive birth.
Total alive is adjusted with the mortality as well as still birth

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

In the second cycle, the **20 does** out of 35, produced **26 kids**— an average of 1.3 kids per doe (see **Table 12 :** for details). While the 14 does are currently in the final stages of delivery of a kid, and remining one is neither pregnant nor given a kid in the second cycle as of M&E visit. Four kids (11.8 per cent of total births) were stillborn, a rate above the lowest recorded figures but well below the higher-risk upper bound of 10 per cent –30 per cent seen in uncontrolled environments (Hussein et al., 2009). Two additional kids (5.9 per cent) died after live birth, a mortality rate under the 15 per cent often seen in early-life losses (Fernandez, 2014). The reduced post-birth losses in Cycle II suggest that improvements in shed management, nutrition, and veterinary care contributed to better kid survival.

Table 12 : Kidding Cycle - II in Selected Villages under Phase IV of LDP								
Name of village	Phase IV	# of Does Kidded	Kidding Cycle -II			Total Kidding	Mortality [a] (if any)	Total Alive Kids [a]
			# Does	# Bucks	Still Birth			
Saleem Khan Banda	8	11	2	8	1	11	2	**8**
Hassan-abad	8	6	4	5	2	11	0	**9**
Shanay Zangal	2	3	3	0	1	4	0	**3**
Total ➔	**18**	**20**	**9**	**13**	**4**	**26**	**2**	**20**

[a] as of M&E visit (March 2025)
Note: Mortality in kids is defined death after having alive birth.
Total alive is adjusted with the mortality as well as still birth

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

These findings demonstrate that, with OSDI's ongoing technical support, beneficiaries achieved modest kidding rates and kept stillbirth and early-life mortality within acceptable ranges, laying the foundation for sustainable herd growth.

Herd-size as of M&E activity

The final assessment shows strong herd expansion well beyond the 60 per cent LFA benchmark. At grant handover, beneficiaries received 38 does and 16 bucks (54 animals total). By project closure, after two kidding cycles, the herd grew to **99** surviving animals—an increase of 83.3 per cent.

- **Cycle I kidding (KC-I)** added 19 does and 8 bucks (27 alive offspring).
- **Cycle II kidding (KC-II)** contributed another 8 does and 12 bucks (20 alive offspring).

Table 13 : Herd Size (alive) in Nos of Livestock in Selected Villages under Phase IV of LDP								
Name of village	Phase IV	Total Available [a]		Kidding Status [a]				Total [a]
		# Does	# Bucks	# Does		# Bucks		
				I	II	I	II	
Saleem Khan Banda	8	17	7	10	1	4	7	**46**
Hassan-abad	8	15	6	6	4	6	5	**42**
Shanay Zangal	2	3	2	3	3	0	0	**11**
Total ➔	**18**	**35**	**15**	**19**	**8**	**10**	**12**	**99**

[a] as of M&E visit (March 2025)
I: Kidding Cycle - I | **II:** Kidding Cycle II

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

In addition, several does (a total 14) were still pregnant at the time of the second cycle assessment. This reflects an expected increase of more than 1x (100 per cent) in the current herd size

This near-doubling of herd size (as of M&E visit March 2025) confirms the effectiveness of OSDI's breeding support, nutrition guidance, and veterinary care. With the expected additional births, herd growth is on track to provide lasting economic benefits, fully meeting and exceeding the LFA target for sustainable asset creation.

Livestock asset values at project closure in Phase IV show clear financial gains for all beneficiaries. In Saleem Khan Banda, average household herd (excluding the livestock given by OSDI) worth rose to PKR 53,688—an increase of 52.9 per cent. In Hassan Abad, values climbed to PKR 33,050, marking a 32.6 per cent gain once kid offspring were included. Shanay Zangal households saw their herd value grow PKR 33,750, a 33.3 per cent rise. Across all sites, the average increase in herd asset valuation was approximately 41.7 per cent, exceeding the 30 per cent growth target set in the LFA. With several does still pregnant at closure, final herd valuations are expected to climb even higher, further strengthening household economic resilience. The detail of herd valuation is exhibited in the table below (**Table 14 :**).

Table 14 : Herd Size in Value of Livestock in Selected Villages under Phase IV of LDP

Name of village	Phase IV	Average Value [a]		Average Value [a]				Total Per HH [f]
		Value Does [b]	Value Bucks [c]	Value Does [d]		Value Bucks [e]		
				KC-I	KC-II	KC-I	KC-II	
Saleem Khan Banda	8	38,000	48,500	22,800	20,000	21,750	13,500	**53,688**
Hassan-abad	8	39,500	37,500	17,000	7,000	17,400	6,000	**33,050**
Shanay Zangal	2	28,750	45,000	18,500	4,000	-	-	**33,750**
Total /Average ➔	**18**	-	-	-	-	-	-	**42,300**

[a] average value as of M&E visit (March 2025)
[b] average value of Does as of M&E visit | [c] average value of Buck as of M&E visit
[d] average value of Doe kid as of M&E visit | [e] average value of Buck kid as of M&E visit
[f] average values are multiplied by number of available livestock in all kid categories (excluding the livestock given by OSDI) to calculate the total asset value as of M&E Visit – further it is divided by no. of beneficiaries to get per household asset increase.
KC-I: Kidding Cycle - I | KC-**II:** Kidding Cycle II

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

Improved Nutrition

At project closure for Phase IV, 34 does (20 already kidded, while the rest 14 are in final stage) are likely to produce a total of 1,020 liters of milk each month. This equates to about 9.71 liters per person per month, or roughly 210 kilocalories per person per day from goat milk alone.

Table 15 : Nutrition Status (Monthly / Daily) in Selected Villages under Phase IV of LDP [a]

Name of village	Phase IV	# Milking Goats [b]	Milk Production [b]	Per Capita Milk Consumption [c]	Per Capita Calorie Intake [d]
Saleem Khan Banda	8	17	510	11.33	**245.48**
Hassan-abad	8	14	420	8.57	**185.68**
Shanay Zangal	2	3	90	8.18	**177.23**
Total / Per Capita➔	**18**	**34**	**1,020**	**9.71**	**210.38**

[a] as of M&E visit (March 205) unit is in liters

[b] All does delivered kids, and the pregnant goats are taken into consideration for the calculation of Milk Production per month.

[c] Monthly | [d] Daily

Note: *Calculations are based Doe producing milk per day (exclusive of milk produced by progeny), converted into monthly production divided by Household population of sample beneficiaries. The per Capita Calories intake is based on average calories of 650 Calorie per Liter (see reference presented earlier).*

These estimates are based on the production in peak milking period.

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

All beneficiaries report an average yield of about one liter per doe each day (excluding what the doe kids consume). Most households use this milk mainly to make tea, while some allow children to drink it directly.

The slightly lower per capita milk intake compared to mid-term figures in Phase V is mainly due to the reduced number of actively milking goats. This is because many goats are currently in the pregnancy stage of their third kidding cycle, while others experienced stillbirths or complications during the second cycle. Despite this, the continued availability of fresh milk remains a valuable source of nutrition for households, particularly benefiting children and vulnerable members.

Livelihood Improvement: Income & Expenditure

The Phase IV closure data (Table 15) shows that combining in-kind milk use (Even using a conservative 50 per cent valuation of milk production) with income from livestock growth nearly erased baseline deficits for most households. At baseline, the average household shortfall was PKR 17,173.60 per month. After valuation:

- Saleem Khan Banda households turned a deficit of PKR 5,853.50 into a net gain of PKR 10,268.52, on account of PKR 6,375 in milk value and PKR 9,747 from livestock offspring.
- Shanay Zangal went from a small surplus of PKR 866 to a monthly gain of PKR 10,402.50, with PKR 4,500 from milk and PKR 5,036.50 from new kids.

- Hassan Abad reduced its large deficit (PKR 12,186.10) to just PKR 865.98, combining PKR 5,250 in milk value with PKR 6,071.27 in livestock gains.

Across all 18 households, the average in-kind milk contribution was PKR 7,758.62, and monthly financial gains from livestock additions averaged PKR 7,589.96. Together, these raised the average household's monthly income equivalent to PKR 13,256.63, cutting the average deficit by PKR 5,334.74. This demonstrates that even a conservative valuation of milk and livestock can dramatically improve household finances and move families out of persistent deficits.

Table 16 : Livelihood Improvement (In-kind and Financial Gain Perspective) in Selected Villages under Phase IV of LDP

Name of village	Phase IV	Baseline Data	Current Data [a]		Total [e]	
		Per HH Surplus / (Deficit) [b]	Per HH In-kind Contribution [c]	Per HH Financial Gain via Livestock [d]	Monthly Income Equivalent [e]	Surplus / (Deficit) Reduction
Saleem Khan Banda	8	(5,853.5)	6,375.00	9,747.02	**16,122.02**	**10,268.52**
Hassan-abad	8	(12,186.1)	5,250.00	6,071.27	**11,321.27**	**(865.98)**
Shanay Zangal	2	866	4,500.00	5,036.500	**9,536.50**	**10,402.50**
Total / Average ➔	**18**	**(17,173.6)**	**7,758.62**	**7,589.96**	**13,256.63**	**5,334.74**

[a] as of M&E visit (March 2025) | [b] Deficit: Per HH Difference of Income & Expenditure
[c] In-kind contribution: calculated on the basis of milking consumed (excluding the consumption of doe kid) multiplied by the market price of PKR 200 per liter and multiplied by 30 days to get monthly consumption.
[c] using conservative approach, assumed at 50 per cent increment from previous consumption, thus the calculation assumed 50 per cent of in-kind contribution divided by the number of households and then multiplied by the Market Price to get the value of monthly in-kind contribution
[d] Financial gain per HH taking Kids valuation & addition in existing livestock value:
[d] Total is calculated per month: Estimated duration of intervention is about 8 months, since this is project-end evaluation, the financial benefited is calculated using 8 months period.
[d] Sum of In-kind Contribution Value Plus Financial Gain via livestock
Note: *These estimates (in-kind contribution) are based on the production in peak milking period.*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

The final assessment of Phase IV shows that the Livestock Development Project (LDP) has contributed significantly toward improving household livelihoods—through in-kind consumption of milk and the financial gains from herd growth. At baseline, households in the target communities faced a high monthly income–expenditure deficit. By the time of project closure, the overall deficit transformed to a considerable surplus, almost equal to a deficit of pre-intervention period.

Additionally, about 7 does are expected to give birth soon in Hassan-abad. Based on previous experience, assuming one kid per doe, this would result in a positive change, moving the community from a deficit to a surplus of around 3,320.15[1] per household in near future.

In summary, the Phase IV project closure data highlights a substantial improvement in household livelihoods, driven primarily by the financial benefits of herd growth, with milk-based in-kind gains providing additional support. These outcomes underline the value of livestock development as a sustainable livelihood strategy in vulnerable rural communities.

Box 2 : From Poverty to Possibility: Sustaining Livelihoods, Fulfilling Responsibilities

In the small rural village of Hassan-abad in Tehsil Rustam, District Mardan, lives Mr. Bakht Zaman—a father of five daughters and the sole breadwinner for a family of seven. With limited education and opportunities, his primary source of income has been a small roadside cart in the nearby city, selling basic grocery and household items. His monthly income ranges from PKR 15,000 to 20,000, which translates into a per capita income of just PKR 2,500—well below the poverty line.

Intervention through Livestock Support

Under the LDP initiative by OSDI, Bakht Zaman was selected as a beneficiary. He received a small livestock package consisting of two female goats (does) and one male goat (buck) with the goal of helping him build a sustainable and productive asset base.

Within eight months of the intervention, the two does gave birth to five kids. Alongside herd growth, he started collecting about one liter of milk daily from the does, which his family uses primarily for tea and drinking. The monetary value of this milk, priced at PKR 200 per liter, adds up to approximately PKR 6,000 per month—an amount that he previously had to spend from his limited income. This increased his effective monthly consumption from PKR 20,000 to PKR 26,000 without raising his financial burden.

Meeting a Father's Responsibility

During the project closure assessment, the OSDI team learned that Mr. Zaman had sold two of the female goat kids for a total of PKR 45,000. This action was technically against program guidelines, which discourage asset sales during the active project phase unless justified by emergency or force majeure. However, in this case, he had informed the field staff in advance and received verbal permission due to the nature of the need.

The funds were used for a critical life event—the marriage of his eldest daughter. In rural areas, marrying off a daughter is seen as a major responsibility and a costly one. Mr. Zaman expressed his gratitude, noting that without this asset support, he would not have been able to fulfill this important duty.

Looking Ahead

This experience shifted his perception of livestock ownership. He now sees the herd not just as a source of milk or income, but as a valuable and renewable asset for meeting long-term family needs. He

[1] Assuming 7 kids, one per doe, and the value per kid is taken as 7,000 (see **Table 14 :**) - divided by # of households adjusted with the current deficit.

Box 2 : From Poverty to Possibility: Sustaining Livelihoods, Fulfilling Responsibilities

expressed a clear plan to further invest in livestock. His goal is to sell the elder goats at the right time and reinvest in younger breeding stock, allowing him to grow his herd over time. With four more daughters to marry, he sees this as a sustainable path to financial preparedness.

Bakht Zaman's story highlights how small livestock assets can bring not only economic relief but also emotional and social empowerment. In communities where financial options are scarce, a goat can become more than just an animal—it can be the key to dignity, responsibility, and hope for the future.

Source: Monitoring and Evaluation Exercise, March 2025

Overall Project Closure Assessment of LDP Phase IV: Beneficiary Perspectives

Feedback from beneficiaries reflects strong overall satisfaction with OSDI's Livestock Development Project (LDP). Overall, 17 out of 18 Phase IV beneficiaries (94 per cent) reported being "Very Satisfied" or "Extremely Satisfied" with the LDP, specifically citing better herd management, healthier animals, and increased income. Only one household (6 per cent) was "Moderately Satisfied," and none were dissatisfied. This far exceeds the LFA benchmark, where at least 50 per cent of households were expected to perceive an improvement in their livelihood condition. The high satisfaction rates demonstrate that the programme has not only met but significantly surpassed its own targets for beneficiary well-being.

The most appreciated aspects of the program were:

- Training and veterinary support
- Timely coordination by OSDI staff
- Provision of quality goats and inputs (e.g., fodder, medicine)

While most beneficiaries offered no suggestions for improvement, a few recommended additional buck provisions**,** support for cows**,** or household-level assets as possible enhancements.

Looking ahead, the majority of respondents plan to increase their herd size, while some also intend to sell livestock as part of income-generation strategies.

These responses demonstrate the positive impact and relevance of the LDP, with strong endorsement from participants. The findings reinforce that well-planned livestock support, combined with training and follow-up, can significantly enhance rural livelihoods and asset resilience.

5.1.2 LDP Midterm M&E: Phase V

Delivery of Goats to beneficiaries

Under the phase VI of LDP, the total beneficiaries i.e. the recipient of goats were 28 households. Each household in the selected village / community receives 3 goats. All three are does for kidding / breeding purpose. One household amongst each community receives 2 does and 1 buck. The purpose of giving buck to one household is the common buck for the breeding purpose in each village. The female goats are mated naturally by the bucks available in the village.

As per the M&E, exercise, the delivery goats were confirmed by all beneficiaries in the sample. A total of 95 goats (87 does and 8 bucks) had been delivered to 29 beneficiary households across five villages. Distribution was fairly even, with Morra Banda receiving the largest share (36 does and 4 bucks) and Hassan-abad the smallest (3 does). The extra bucks noted in the data reflect additional male animals provided to households not covered in on-site visits, ensuring each family had the breeding stock needed for herd growth. Following table (**Table 17 :**) exhibits the details of does and bucks by each village.

Table 17 : Delivery of Livestock in Selected Villages under Phase V of LDP

Name of village	Phase V	# of Does	# of Bucks	Total	Mortality [a] (if any)	Total Available [a]
Umar Dhair	6	18	1	19	0	**19**
Saleem Khan Banda	6	18	3	21	0	**21**
Hassan-abad	1	3	0	3	0	**3**
Morra Banda	12	36	4	40	0	**40**
Shanay Zangal	4	12	0	12	0	**12**
Total ➔	**29**	87	8	**95**	0	**95**

[a] as of M&E visit (March 2025)

Note: *Bucks reported here are may be given to the beneficiaries which could not be covered in the M&E for various reasons explained earlier.*

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

Remarkably, the mortality rate recorded during the March 2025 M&E visit was zero per cent. This outperforms typical adult goat mortality rates in Pakistan, which average 1–2 per cent under normal conditions (SMEDA 2021, 2023). It also compares favorably to perinatal losses—often around 13 per cent —and disease-related spikes of up to 28 per cent in outbreak scenarios. The zero-mortality result suggests that vaccination, shelter improvements, and training.

Provision of Animal vaccines

Provision of vaccines to project livestock proved essential for maintaining herd health. Of the 29 households assessed at mid-term, 12 had vaccinated their animals; the remainder cited pregnancy as the reason for postponement. Regardless of vaccination status, nearly all beneficiaries (97 per cent) reported regular visits by veterinary teams and received guidance on modern rearing practices.

Incidence of illness was low: only five households noted any sickness (diarrhea, foot-and-mouth disease, cough, or weight loss). In each case, beneficiaries promptly contacted OSDI or a veterinarian and followed prescribed treatments—ranging from veterinary syrups to market-sourced vaccines. Home remedies were rare and only used when no prescription was given.

Deworming practices were uneven. About one third of respondents dewormed their animals regularly, often as recently as March 2025, while the rest delayed treatment—again, mainly due to pregnancy concerns. Despite this, the overall health status reported was overwhelmingly positive: 85 per cent rated their animals as "Good" and 10 per cent as "Very Good."

These findings demonstrate that vaccine provision, coupled with consistent veterinary support, has played a key role in keeping livestock healthy, reducing disease outbreaks, and building beneficiary confidence in improved animal-health practices. The same is also evident from low mortality observed in the given herd (see table 10 for reference)

Livestock management training

During the mid-term assessment, 29 beneficiaries were asked what they had learned from the livestock-management training. Almost all mentioned the importance of providing clean water and maintaining overall hygiene, including regular shed cleaning. Many also highlighted proper feeding and fodder management as key takeaways. A large number recalled guidance on animal health—specifically, when and how to contact a veterinarian or OSDI staff if livestock fall ill. About half of respondents noted lessons on shelter management and safe environments (for example, using limestone or pest spray to protect animals). A smaller group remembered tips on open grazing and coping with harsh weather. Two participants could not recall the training content. Overall, these responses confirm that training on water, cleanliness, feeding, and health protocols was well absorbed by most beneficiaries.

Shelter Management Practices

Almost all LDP beneficiaries have put their training into practice by improving shelter conditions for their goats. Out of more than 25 households visited, over 90 per cent now use a waterer inside a purpose-built livestock shed. Every farmer has constructed or upgraded a covered shelter that protects animals from rain and harsh sun, and more than 95 per cent report good ventilation. Cleanliness standards are high: most sheds were rated "Good" or "Very Good" in terms of hygiene. Only one farmer had a partially covered structure, and a small handful lacked a dedicated waterer—issues that can be addressed through follow-up technical advice. Overall, these results show strong adoption of shed-management practices, reflecting the effectiveness of OSDI's livestock-management training.

Kidding Status

Mid-term assessments are conducted roughly four to six months after the does are delivered to beneficiaries. Because of this timing, only the first kidding cycle can be observed at the mid-term stage.

A total of 87 does kidded during the first cycle of Phase V, producing 92 kids. This equals an average of 1.06 kids per doe, which is below the typical 1.75–2.2 range for local breeds (Haldar et al., 2014). The lower kidding rate may reflect the younger average age of does or seasonal breeding patterns.

Of the 92 births, 10 kids (10.9 per cent) were stillborn. While this rate exceeds the best-practice low of around 1.2 per cent (Hussein et al., 2009), it remains within the higher-risk range of up to 10 per cent often seen among does outside ideal age brackets. Post-birth mortality was very low—just 1 death (1.2 per cent)—well below the 15 per cent first-week loss sometimes reported (Wilson, 1986). These results suggest that, despite some stillbirths, improved shelter, nutrition, and veterinary support helped ensure strong survival of live-born kids. Following table (**Table 18 :**) exhibits the details of kidding cycle-I in phase V.

Table 18 : Kidding Cycle - I in Selected Villages under Phase V of LDP

Name of village	Phase IV	# of Does Kidded	Kidding Cycle -I			Total Kidding	Mortality [a] (if any)	Total Alive Kids [a]
			# Does	# Bucks	Still Birth			
Umar Dhair	6	18	14	4	0	18	0	**18**
Saleem Khan Banda	6	18	12	5	3	20	0	**17**
Hassan-abad	1	3	4	0	0	4	1	**3**
Morra Banda	12	36	14	16	5	35	0	**30**
Shanay Zangal	4	12	6	7	2	15	0	**13**
Total ➔	**29**	**87**	**50**	**32**	**10**	**92**	**1**	**81**

[a] as of M&E visit (March 2025)

Note: Mortality is defined as death after having alive birth.
Total alive is adjusted with the mortality as well as still birth

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

Herd-size & Livestock Asset Valuation

The herd size and livestock valuation are critical indicators for assessing the impact of the Livestock Development Program (LDP). The data shows the herd size at the time of the M&E visit, compared to the baseline herd size, which reflects the progress in livestock rearing. By measuring the number of livestock available and their market value, we can determine the growth in assets and improvements in the livelihoods of beneficiaries. The herd size shows the increase in the number of animals over time, which contributes directly to the economic stability and sustainability of the households. Livestock valuation provides insight into the financial gains resulting from the increase in herd size, including the value of both does and bucks, as well as offspring from the one kidding cycles.

The following table (**Table 19 :**) exhibits the details of herd size (alive) by selected communities / villages:

Table 19 : Herd Size (alive) in Nos of Livestock in Selected Villages under Phase V of LDP

Name of village	Phase V	Total Available [a]		Kidding Status [a]		Total [a]
		# Does	# Bucks	# Does	# Bucks	
Umar Dhair	6	18	1	14	4	**37**
Saleem Khan Banda	6	18	3	12	5	**38**
Hassan-abad	1	3	0	3	0	**6**
Morra Banda	12	36	4	14	16	**70**
Shanay Zangal	4	12	0	6	7	**25**
Total ➔	**29**	**87**	**8**	**49**	**32**	**176**

[a] as of M&E visit (March 2025)

Note: Total Available and kidding status are adjusted with the mortality & still birth, if any reported at the time of M&E.

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

At the time of the mid-term assessment, the total herd size has significantly increased. With a baseline herd size of 87 does and 8 bucks, the herd size at the time of the M&E visit reached 176 animals, including 49 does and 32 bucks. The herd growth rate of 85% (almost 0.85x) so far is well above the expected benchmark of 50 per cent (0.50X).

The total herd size increase is attributed to successful kidding cycles observed during the intervention period. It is important to note that during mid-term, only one kidding cycle can be observed, but we expect that the second cycle will further contribute to herd growth, resulting in an overall herd increase would be well above 100 per cent (>1x) by the project closure.

Livestock valuation in table (**Table 20 :**) shows a clear financial increase for each household based on the current herd size and market prices. Livestock valuation has also demonstrated a positive trend, with household asset values increasing significantly. At the time of the M&E visit (March 2025), the asset valuation for livestock per household reflects the increased herd size.

The total livestock value across the sample households shows a considerable increase when compared to baseline asset values. The average value per household has risen substantially, indicating a positive impact on the beneficiaries' financial status. As herd size continues to grow, the value of these livestock assets will increase, further contributing to household income.

Table 20 : Herd Size in Value of Livestock in Selected Villages under Phase V of LDP

Name of village	Phase V	Average Value [a]		Average Value [a]				Total Per HH [f]
		Value Does [b]	Value Bucks [c]	Value Does [d]		Value Bucks [e]		
				KC-I	KC-II	KC-I	KC-II	
Umar Dhair	6	32,000	32,000	4,000	-	3,000	-	**11,333.33**
Saleem Khan Banda	6	34,000	34,000	4,500	-	8,000	-	**15,666.67**
Hassan-abad	1	35,000	35,000	8,500	-	-	-	**25,500.00**
Morra Banda	12	34,000	34,000	6,000	-	3,500	-	**11,666.67**
Shanay Zangal	4	33,500	34,000	2,500	-	5,000	-	**12,500.00**
Total / Average➔	**29**	-	-	-	-	-	-	**13,017.24**

[a] average value as of M&E visit (March 2025)
[b] average value of Does as of M&E visit | [c] average value of Buck as of M&E visit
[d] average value of Doe kid as of M&E visit | [e] average value of Buck kid as of M&E visit
[f] average values are multiplied by number of available livestock in all kid categories (excluding the livestock given by OSDI) to calculate the total asset value as of M&E Visit – further it is divided by no. of beneficiaries to get per household asset increase.
KC-I: Kidding Cycle - I | **KC-II:** Kidding Cycle II

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

At baseline, household livestock assets ranged from zero up to PKR 46,000 per household, with an overall span of PKR 0–46,000. By mid-term, after successful kidding and herd growth, asset values per household (excluding the livestock given by OSDI) of rose to between approximately PKR 11,333 and PKR 25,500, demonstrating substantial gains. The increase in livestock value reveals a minimum of 10.7 per cent to a maximum of 25.4 per cent, with these significant gains. These higher asset values reflect both the rise in herd size and the improved market worth of the livestock.

Given that Phase V is the mid-term assessment, the asset values observed at this stage are expected to continue growing as herd size increases (surpass the target of 30 per cent as per LFA), particularly in the remaining duration of the intervention phase. This growth in both herd size and asset valuation will likely contribute to higher financial stability for beneficiaries, with a direct impact on their livelihoods.

By the end of the project, the increase in herd size and the resulting livestock valuation will likely surpass the mid-term gains, and the beneficiaries will experience enhanced economic outcomes, especially through income generated from the sale of surplus animals. The LDP intervention, therefore, shows promising results in terms of asset creation and livelihood improvement, with further potential for growth as the project progresses.

Improved Nutrition

Improved household nutrition was tracked at mid-term for Phase V. Across the sample, 75 milking goats produced 2,250 liters of milk in one month—an average of about 1 liter per doe per day, exclusive of what the kids consumed. This equates to roughly 12.1 liters per person per month, or about 262 kilocalories per person per day from goat milk alone. Per capita milk consumption stood around 0.35 liter per day, which is half of the national average per capita consumption of about 0.63 liters per day (South Asia Investor Review, 2020). Following table (**Table 21 :**) exhibits the community wise nutrition status:

Table 21 : Nutrition Status (Monthly / Daily) in Selected Villages under Phase V of LDP

Name of village	Phase V	# Milking Goats [a]	Milk Production [b]	Per Capita Milk Consumption [a]	Per Capita Calorie Intake [c]
Umar Dhair	6	18	540	13.17	**285.37**
Saleem Khan Banda	6	14	420	12.35	**267.65**
Hassan-abad	1	2	60	10.0	**216.67**
Morra Banda	12	32	960	11.57	**250.60**
Shanay Zangal	4	9	270	12.57	**265.91**
Total / Per Capita ➔	**29**	**75**	**2,250**	**12.10**	**262.10**

[a] as of M&E visit (March 2025) unit is in liters

[b] Monthly | [c] Daily

Note: *Calculations are based Doe producing milk per day (exclusive of milk consumed by progeny), converted into monthly production divided by Household population of sample beneficiaries. The per Capita Calories intake is based on average calories of 650 Calorie per Liter (see reference presented earlier).*

These estimates are based on the production in peak milking period.

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

All beneficiaries (where applicable) reported using most of their milk to make tea at home, while a smaller number indicated that children in the household drank fresh milk directly. These consumption patterns, together with goat health and milking training, demonstrate that LDP's focus on doe care and milking practices is already delivering meaningful gains in dietary diversity and overall caloric intake.

Livelihood Improvement: Income & Expenditure

The Phase V mid-term data (**Table 22** :) shows how combining milk use with livestock sales has moved households from deficit to strong monthly gains. At baseline, families faced an average shortfall of PKR 2,754.93 each month. After valuing milk at PKR 200 per liter (50 per cent credit) and adding income from selling young goats, the average in-kind contribution is PKR 7,758.62 and the average livestock sale gain is PKR 3,288.83. Together, these raise the average household's monthly income to PKR 11,047.45, reducing the deficit by PKR 8,292.52.

Individually, surpluses now range from PKR 10,000 in Shanay Zangal to PKR 12,375 in Hassan-abad, compared to deficits of PKR 1,090 and PKR 2,000 at baseline. This demonstrates that even a

conservative valuation of milk plus strategic sales of surplus animals can turn a monthly shortfall into a sizable gain, strengthening the financial resilience of rural households.

Table 22 : Livelihood Improvement (In-kind and Financial Gain Perspective) in Selected Villages under Phase V of LDP

Name of village	Phase V	Baseline Data	Current Data [a]		Total [e]	
		Per HH Surplus / Deficit [b]	Per HH In-kind Contribution [c]	Per HH Financial Gain via Livestock [d]	**Monthly Income Equivalent [e]**	**Surplus / (Deficit) Reduction**
Umar Dhair	6	(1,886.33)	9,000.00	2,833.33	**11,833.33**	**9,947.00**
Saleem Khan Banda	6	(3,748.67)	7,000.00	4,000.17	**11,000.17**	**7,251.00**
Hassan-abad	1	(2,000.00)	6,000.00	6,375.00	**12,375.00**	**10,375.00**
Morra Banda	12	(3,310.25)	8,000.00	2,916.67	**10,916.67**	**7,606.42**
Shanay Zangal	4	(1,090.00)	6,750.00	3,250.00	**10,000.00**	**8,910.00**
Total / Average ➔	**29**	**(2,754.93)**	**7,758.62**	**3,288.83**	**11,047.45**	**8,292.52**

[a] as of M&E visit (March 2025) | [b] Deficit: Per HH Difference of Income & Expenditure
[c] In-kind contribution: calculated on the basis of milking consumed (excluding the consumption of doe kid) multiplied by the market price of PKR 200 per liter and multiplied by 30 days to get monthly consumption.
[c] using conservative approach, assumed at 50 per cent increment from previous consumption, thus the calculation assumed 50 per cent of in-kind contribution divided by the number of households and then multiplied by the Market Price to get the value of monthly in-kind contribution
[d] Financial gain per HH taking Kids valuation & addition in existing livestock value:
[d] Total is calculated per month: Estimated duration of intervention is about 8 months, since this is project-mid evaluation, the financial benefited is calculated using 4 months period.
[d] Sum of In-kind Contribution Value Plus Financial Gain via livestock
Note: *These estimates (in-kind contribution) are based on the production in peak milking period.*

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

Overall, this data demonstrates that OSDI's livestock program not only helped eliminate the deficit but also created a surplus, nearly equal to the amount of the original deficit with in the mid of the intervention. In fact, the LDP intervention has helped double the household income compared to the deficit, showing a remarkable improvement in financial stability for families in Phase V. The surplus is estimated to be quite higher by the end of the project intervention.

5.2 Small Rural Enterprises Project

For SREP, the M&E and closure reviews followed these LFA criteria, alongside context-specific checks:

- **Outputs:** provision of shop-related assets and completion of financial-literacy training.
- **Outcomes:** a 50 per cent of HHs thinking that their livelihood condition has been improved; a 50 per cent rise in beneficiary income from business profits; a 20 per cent increase in enterprise asset value; a 20 per cent reduction in monthly income-expense deficits; and universal uptake of financial-literacy skills (50 per cent of beneficiaries maintaining business record.).

Accordingly, the M&E team developed a tailored assessment tool to verify these targeted outputs and outcomes. The following sub-section presents the key findings for each output and outcome, separately covering mid-term and project-closure evaluations.

5.2.1 SREP Project Closure Assessment: Phase V

Across the three enterprises supported under SREP Phase V (project closure), the total investment reached PKR 482,980. OSDI provided PKR 379,738—about 79 per cent of the total—while beneficiaries contributed PKR 103,242 (21 per cent). This cost-sharing approach ensures participants have meaningful ownership without bearing the full financial load. The table (**Table 23 :**) exhibits the details of beneficiaries' project cost and the contribution shares.

Table 23 : SREP Grant Details in Selected Professions by Villages under Phase V

Name of village	SREP V	Total Project Budget	OSDI Contribution	Beneficiary Contribution	OSDI to Beneficiary Ratio
Mora Banda	Grocery & General Store	102,160	83,890	18,270	**82.1 : 17.9**
Hassan-abad	Cosmetic Shop	141,620	106,148	35,472	**75.0 : 25.0**
	Mobile Chicken Shop	121,800	97,440	24,360	**80 : 20**
	Bread (Naan) Shop 'Tandoor'	117,400	92,260	25,140	**78.6 : 21.4**
	Total ➔	**482,980**	**379,738**	**103,242**	**78.7 : 21.3**

Amount in PKR

Data Source: OSDI Baseline data, 2022 | M&E Data March 2025

Because these businesses—grocery retail, cosmetic sales, tandoor bread, and mobile chicken sales—operate in different markets with unique capital needs and profit margins, their performance cannot be directly compared. Each enterprise must be judged on its own terms, reflecting the varied dynamics of rural small-business environments.

As already explained in earlier section, an SREP of clay oven for making flatbread (Naan Shop 'Tandoor) could not be evaluated as the beneficiary was forced to shut down the business and relocate with his

family to another area due to serious family conflicts and threats to the safety of the entire household. Interestingly, the success of this venture inspired another local individual to start a similar *tandoor* business in the same locality, which is currently running well. This outcome highlights OSDI's role in identifying viable business opportunities and its contribution to fostering a competitive environment that promotes entrepreneurship, even beyond direct project beneficiaries.

Livelihood Improvement: Income

Under SREP Phase V (project closure), the target was for beneficiaries to achieve at least a 50 per cent increase in income from business profits. The data show mixed results:

- The grocery store in Mora Banda saw a 89.2 per cent rise in income (from PKR 28,000 to an extra PKR 25,000), falling well above the 50 per cent goal.
- The cosmetic shop in Hassan-abad more than doubled its income, achieving a 225 per cent increase over the imam's previous honorarium of PKR 12,000.
- The mobile chicken shop attained 88.6 per cent income gain, rising from a combined PKR 35,000 to an additional PKR 31,000 after accounting for forgone earnings.

Together, these enterprises averaged 110.6 per cent increase—well above the 50 per cent benchmark. Following table (**Table 24 :**) exhibits the complete details:

Table 24 : Livelihood Income Details by SREP Phase V

Name of village	SREP V	Baseline Income	Income from SREP (Increment / Addition / Profit Only)	% Income Increase / (Decrease) [a]
Mora Banda	Grocery & General Store	28,000 [b]	25,000	**89.2 %**
Hassan-abad	Cosmetic Shop	12,000	27,000	**225 %**
	Mobile Chicken Shop	35,000 [c]	31,000	**88.6 %**
	Total ➔	**75,000**	**83,000**	**110.6 %**

[a] Change of Income from Baseline to Current Income from SREP (adjusted with income from same business in baseline, if any. Amount in PKR

[b] Baseline income from same business prior SREP was PKR 5,000

[c] Baseline income of beneficiary prior SREP was PKR 15,000

Data Source: OSDI Baseline data, 2022 | M&E Data March 2025

Box 3 : Empowering from Within: A Woman-led Shop Behind the Veil

In the village of Hassan-abad, Tehsil Rustam, District Mardan, a unique example of rural women empowerment has emerged under the Small Rural Enterprise Project (SREP). The beneficiary, Ijaz Ahmed, serves as an Imam at the local mosque. Traditionally, this role is honorary, with little or no fixed income—only small donations or hadya (honararium) offered occasionally by the community. As a result, the family's monthly income was limited to just PKR 12,000 to 15,000, which was hardly sufficient for a household of seven members.

Through support from OSDI under the SREP, Ijaz's household was provided with assistance to start a small clothing and cosmetic shop. While the support was in Ijaz's name, the real entrepreneur behind the shop is his wife, who manages the daily operations. This small cottage shop is located within the village and has helped the family generate an additional PKR 5,000 to 10,000 per month. The income boost has brought a noticeable improvement in the household's financial stability and quality of life.

Encouraged by the success of this initiative, the family decided to invest further in their enterprise. They sold gold jewelry worth around PKR 150,000 and used the proceeds to move the shop to a more visible and central location in the village. A relative generously provided the land, which helped reduce setup costs. The new plan for the shop is innovative and culturally sensitive. The outlet will be designed in two sections: a front area where Ijaz will manage a small general and confectionary store, and a separate section at the back dedicated to women's clothing and cosmetics, which his wife will manage.

This arrangement respects the local cultural and religious norms, particularly parda, which emphasizes privacy for women in public spaces. The shop layout ensures that the wife can work comfortably and with dignity, without compromising community values.

Moreover, Ijaz expressed his interest in further empowering his wife through vocational training. He believes that skills like tailoring and makeup application would enable her to expand the services offered and attract more customers. Such training would also build her confidence and increase the sustainability of the business.

This case highlights how even modest support can lead to meaningful change in rural communities, especially when it encourages women's participation in income-generating activities. It also shows that cultural norms, rather than being barriers, can be accommodated in ways that still allow women to contribute economically and gain recognition for their role.

OSDI may consider expanding vocational training support, particularly for female beneficiaries or women involved in family enterprises. This would enhance the impact and sustainability of women-led microenterprises in rural areas.

Source: Monitoring and Evaluation Exercise, March 2025

The data show strong reductions in income–expenditure gaps, comfortably exceeding the 20 per cent LFA target:

- **Grocery & General Store (Mora Banda):** Baseline surplus of PKR 1,984 rose to PKR 26,984—a net improvement of PKR 25,000. Since there was no deficit to reduce, this represents a move from a small positive balance to a larger one, effectively a 50.9 per cent gain in surplus.
- **Cosmetic Shop (Hassan-abad):** The household moved from an PKR 11,677 deficit to a PKR 15,333 surplus. This is a turnaround of PKR 27,010, equating to a 39.3 per cent of surplus from baseline expenditures.
- **Mobile Chicken Shop:** The surplus of PKR 7,160 was transformed into a enhanced surplus of PKR 38,160 surplus, represents a 57.8 per cent improvement in the surplus.

Overall, the combined deficit of PKR 2,533 at baseline became a combined surplus of PKR 80,477—a net change of PKR 83,010, or a 52.53 per cent reduction in the initial deficits (surplus of 50.93 per cent). All enterprises not only met but greatly surpassed the 20 per cent deficit-reduction goal set by the LFA, showing that SREP support has effectively eliminated shortfalls and created robust surpluses. The details for each beneficiary is exhibited in the table (**Table 25 :**) below.

Table 25 : Income-Expenditure Deficit Details by SREP Phase V

Name of village	SREP V	Baseline Expenditure	Total Income [a]	Baseline Income – Expenditure Surplus / (Deficit)	Current Income – Expenditure Surplus / (Deficit) [a]	% Improvement
Mora Banda	Grocery & General Store	26,016	53,000	1,984	26,984	50.9 %
Hassan-abad	Cosmetic Shop	23,677	39,000	(11,677)	15,333	39.3 %
	Mobile Chicken Shop	27,840	66,000	7,160	38,160	57.8 %
	Total ➔	**77,533**	**158,000**	**(2,533)**	**80,477**	**50.93 %**

[a] based on baseline income plus additional income

Amount in PKR

Data Source: OSDI Baseline data, 2022 | M&E Data March 2025

Enterprise Asset Value

With an average asset increase of 58.8 per cent, SREP Phase V far exceeds the 20 per cent growth target set in the LFA. The grocery store saw its assets grow by nearly 197 per cent, driven by new stock, a showcase, and healthy cash balances. The mobile chicken shop achieved a 33 per cent asset increase, thanks to live-chicken stock and added cash savings used to purchase goats. The cosmetic shop experienced a 22 per cent reduction in net assets, largely because ongoing living expenses and shop setup costs outpaced asset additions during this period. The table below (**Table 26 :**) exhibits the details of assets valuation by SREP:

Table 26 : Enterprise Asset Valuation by SREP in Phase V						
Name of village	SREP V	Baseline Assets [a]	Current Assets [b]	Cash in Hand	Increase / (Decrease) [c]	% Change Over Baseline
Mora Banda	Grocery & General Store	102,160	200,000	103,000	200,840	**196.6 %**
Hassan-abad	Cosmetic Shop	134,920	55,000	50,000	(29,920)	**(22.2 %)**
	Mobile Chicken Shop	121,800	111,800	50,000	40,000	**32.8 %**
	Total ➔	**358,880**	**366,800**	**203,000**	**210,920**	**58.8 %**

Amount in PKR

[a] Based on OSDI grant Plus beneficiary contribution | [b] Current valuation / addition of Assets
[c] Sum of Current Assets Plus Cash in Hand minus Baseline Assets

Data Source: OSDI Baseline data, 2022 **|** M&E Data March 2025

That said, each enterprise follows a different model—stock-heavy retail versus pure service—so direct comparisons should be avoided. Variation in asset dynamics reflects the unique investment and depreciation patterns in each business.

Financial Literacy

All three SREP Phase V beneficiaries confirmed they received training in bookkeeping, financial literacy, and daily sales and purchase record-keeping from OSDI. During field visits, each entrepreneur presented up-to-date ledgers and observable record books, demonstrating consistent use of these skills in their day-to-day operations. This hands-on application underscores the effectiveness of the training and its direct impact on improving business management practices.

Box 4 : GULLUCK Miracle: The Power of Daily Saving

In the quiet rural village of Mora Banda, located in Tehsil Rustam of District Mardan, lives Mir Afzal, a determined individual who has not let physical challenges stand in the way of building a better life. Living with a disability and using an artificial leg, he supports a joint family of nine members. Like many in the region, his family faced significant financial limitations, making even basic economic stability a challenge.

However, Mir Afzal's journey took a turn when he was selected as a beneficiary under the Small Rural Enterprise Program (SREP) initiated by OSDI. The program, aimed at improving livelihood conditions through income-generating activities and financial literacy, provided him with an opportunity to start a small grocery and general store within his village. This intervention not only offered financial support but also came with consistent guidance from the field team to ensure long-term success.

Building a Business Step by Step

Setting up the store took nearly 10 months. From identifying a location to stocking initial inventory and engaging with customers, the journey was gradual but steady. Today, Mir Afzal earns a daily sale of PKR 2,000 to PKR 3,000, with a profit margin of approximately ranging between PKR 500 to PKR 1000 per day (on average). This translates into an average monthly income of around PKR 30,000, which, by rural standards, falls within the moderate-income bracket.

In addition to his store income, his household has another income stream contributing PKR 15,000 per month. This combined income helps the family meet its daily needs, although when divided among nine members, the per capita income still remains relatively low. Nevertheless, the financial situation has seen visible improvement compared to the pre-intervention period.

The GULLUCK: A Small Habit with Big Results

Box 4 : GULLUCK Miracle: The Power of Daily Saving

While income generation was a primary goal, an unexpected highlight of Mir Afzal's success story emerged through a simple yet powerful concept introduced by the OSDI field staff—daily saving. During one of the routine counseling sessions, he was advised to save at least PKR 100 per day. Taking the advice to heart, he began saving this amount religiously in a traditional clay saving box known as a "GULLUCK" in the local language.

Made from clay ('mitti'), the GULLUCK was kept at his home, and every day, he deposited some amount—sometimes PKR 100, and at times even higher denominations like PKR 500 or PKR 1,000. He never counted the total, nor was he overly concerned about how much he had saved. The habit became a routine part of his day.

A Pleasant Surprise

At the time of the project closure and final assessment, OSDI and Manzil Pakistan staff visited his home to evaluate the outcomes of the intervention. During the visit, the discussion turned to his saving habits. When asked how much he thought he had saved, he modestly said he had no idea. The GULLUCK looked quite small, and even the OSDI Head estimated it could not hold more than PKR 5,000 to PKR 10,000. However, Manzil Pakistan's Head, using observational insight and reasoning, guessed that it might hold up to PKR 35,000 or even more.

With Mir Afzal's consent, the GULLUCK was carefully broken in the presence of the OSDI and Manzil Pakistan teams. What followed was nothing short of remarkable. Folded currency notes poured out—denominations ranging from PKR 50 to PKR 1,000. After sorting and counting, the total savings amounted to an impressive PKR 38,500. The sight of so much money from such a humble saving effort surprised everyone, including Mir Afzal himself.

Future Aspirations and Reflections

When asked what he planned to do with the savings, Mir Afzal said he would use part of it to improve his well-being and invest the rest back into his business to expand it further. His commitment and discipline turned a simple daily habit into a meaningful financial cushion.

The experience not only highlighted the effectiveness of financial literacy and behavioral change, but also revealed how small daily actions can lead to significant outcomes when supported by community-based programs like SREP.

Key Takeaways and Recommendations

This case offers valuable lessons. One of the most powerful insights is the role that financial counseling can play in transforming the mindset of beneficiaries. The daily saving strategy, simple and practical, proved to be a sustainable model for building financial resilience.

Box 4 : GULLUCK Miracle: The Power of Daily Saving
Based on this case, it is strongly recommended that OSDI institutionalize the concept of daily savings among all SREP beneficiaries. A small initiative such as providing a GULLUCK to each participant at the time of program induction could help reinforce this habit. Encouraging participants to track their savings and even organize community-level savings contests or events could enhance motivation and peer learning. Furthermore, this case underscores the importance of third-party monitoring in uncovering real stories of change, validating the program design, and identifying best practices that can be scaled. ***Mir Afzal's story is a testimony to how a well-structured program, paired with personalized support and simple behavioral nudges, can bring dignity, confidence, and self-reliance to individuals—even those facing physical and financial challenges. His GULLUCK may have been broken, but the financial habit it symbolizes has laid a strong foundation for his future and serves as an example for others to follow.***
Source: Monitoring and Evaluation Exercise, March 2025

5.2.2 SREP Midterm M&E: Phase VI

Across all five enterprises supported under the SREP Phase VI mid-term, the total project budget amounted to PKR 664,864. OSDI provided PKR 524,434 of this funding—roughly 79 per cent —while the beneficiaries themselves contributed PKR 140,430, or about 21 per cent. This co-investment model ensures that participants have a meaningful stake in their own businesses, without placing the full financial burden on them. The following table (**Table 27** :) exhibits the details of each beneficiary business establishing budget and the contribution shares.

Table 27 : SREP Grant Details in Selected Professions by Villages under Phase VI

Name of village	SREP VI	Total Project Budget	OSDI Contribution	Beneficiary Contribution	OSDI to Beneficiary Ratio
Saleem Khan Banda	Grocery & General Store	154,664	123,034	31,630	**77.8 : 22.2**
Hassan-abad	Loading Vehicle (Rikshaw)	133,800	107,800	26,000	**80.6 : 19.4**
	Mobile (Bike) Scrap Collection	122,000	101,860	20,140	**80.2 : 19.8**
	Tailor Shop	132,800	101,140	31,660	**76.2 : 23.8**
	Bike Mechanic Shop	141,900	110,900	31,000	**78.2 : 21.8**
	Total ➔	**664,864**	**524,434**	**140,430**	**78.9 : 21.1**

Amount in PKR

Data Source: OSDI Baseline data, 2022 | M&E Data March 2025

Because each beneficiary is running a different type of enterprise—from grocery retail to vehicle loading, scrap collection, tailoring, and bike mechanics—direct comparisons of performance (for example, sales or profits) are not meaningful. Business dynamics, capital needs, and market conditions vary widely across these sectors, so each venture must be assessed on its own terms.

Livelihood Improvement: Income

The LFA set a benchmark of a 50 per cent rise in beneficiary income from business profits. Although household perceptions were not captured at mid-term, income data are available for comparison.

At baseline, the five beneficiaries together earned a total of PKR 180,000 per month from their respective businesses. After SREP inputs, combined additional profit—net of any forgone earnings in the same trade—reached PKR 117,000. This represents a 120.6 per cent average increase in income (117,000 ÷ 97,000 × 100), well above the 50 per cent target.

Individually, percentage gains ranged from 30.4 per cent (grocery and general store) to 166.6 per cent (loading vehicle), reflecting differences in business models and starting points. On average, every beneficiary achieved nearly a doubling of their income.

Because each enterprise operates under its own market conditions, direct comparisons between businesses are not meaningful. However, the overall income growth clearly exceeds the LFA's mid-term outcome target, confirming that SREP support is driving strong profit gains across diverse rural enterprises. Following table (**Table 28 :)** exhibits the details of income at baseline and the additions in household income post SREP intervention for each beneficiary:

Table 28 : Livelihood & Income Details by SREP in Phase VI

Name of village	SREP VI	Baseline Income	Income from SREP (Increment / Addition / Profit Only)	% Income Increase / (Decrease) [a]
Saleem Khan Banda	Grocery & General Store	23,000	7,000	**30.4 %**
Hassan-abad	Loading Vehicle (Rikshaw)	15,000	25,000	**166.6 %**
	Mobile (Bike) Scrap Collection	16,000	14,000	**87.5 %**
	Tailor Shop	25,000	35,000	**140.0 %**
	Bike Mechanic Shop	18,000	36,000	**200.0 %**
	Total ➔	**97,000**	**117,000**	**120.6 %**

[a] Change of Income from Baseline to Current Income from SREP (adjusted with income from same business in baseline, if any.

Amount in PKR

Data Source: OSDI Baseline data, 2022 | M&E Data March 2025

All five businesses exceeded the LFA target of a 20 per cent reduction in monthly income–expenditure deficits, with per centage reductions ranging from 125 per cent up to 720 per cent, and an average improvement of 340.1 per cent. This clearly demonstrates that SREP support has far outpaced the

modest goal in the mid of the project, completely reversing deficits into substantial surpluses across all beneficiaries. Following table (**Table 29 :)** exhibits the details of income-expenditure differences both pre and post intervention.

Table 29 : Income-Expenditure Deficit Details by SREP Phase VI

Name of village	SREP VI	Baseline Expenditure	Total Income [a]	Baseline Income – Expenditure Surplus / (Deficit)	Current Income – Expenditure Surplus / (Deficit) [a]	% Improvement
Saleem Khan Banda	Grocery & General Store	23,000	30,000	-	7,000	**23.3 %**
Hassan-abad	Loading Vehicle (Rikshaw)	21,000	40,000	**(6,000)**	19,000	**47.5%**
	Mobile (Bike) Scrap Collection	29,383	30,000	**(13,383)**	617	**2.1 %**
	Tailor Shop	33,000	55,000	**(8,000)**	22,000	40.0 %
	Bike Mechanic Shop	28,025	64,000	**(10,025)**	35,975	56.2 %
Total ➔	5	**134,408**	**219,000**	**-37,408**	**84,592**	**38.6 %**

[a] based on baseline income plus additional income

Amount in PKR

Data Source: OSDI Baseline data, 2022 **|** M&E Data March 2025

Box 5 : Empowering Youth Through Entrepreneurship: Stories of Bahar Ali and Salman

In rural and semi-urban areas of Mardan, where employment opportunities are limited and access to vocational training is often restricted, youth entrepreneurship is showing strong potential for change. Through the support provided by OSDI under the Small Rural Enterprise Project (SREP), two young individuals—Bahar Ali and Salman—have emerged as promising examples of how targeted support can uplift not just individuals but entire families.

Bahar Ali – Tailoring His Own Future

Bahar Ali, a 20-year-old from Village Hassan-abad, had been working as an employee at a tailor shop in the city. His monthly earnings were limited to around PKR 10,000, contributing to a total household income of about PKR 25,000. Recognizing his skill and ambition, OSDI supported him in establishing his own tailoring shop in his home village.

With a single sewing machine and a strong work ethic, Bahar Ali now earns approximately PKR 30,000 per month. This brings the total monthly income of his household to PKR 45,000, marking a significant improvement in their living conditions. His work is consistent throughout the year, and during seasonal peaks—such as school openings or festive seasons—his earnings are even higher.

Importantly, Bahar Ali has the capacity to stitch school uniforms for both boys and girls. He has expressed a strong interest in obtaining contracts for school uniforms, which would allow him to expand operations and even employ

Box 5 : Empowering Youth Through Entrepreneurship: Stories of Bahar Ali and Salman

others from his village. His suggestion opens a new avenue for youth-led local production that could meet community needs while creating employment.

Salman – A Bike Mechanic Gearing Up for Growth

Another inspiring example is Salman from village Bazar, an 18-year-old who has established a motorcycle repair workshop in the nearby city area. Prior to this, his family earned about PKR 28,000 monthly from various sources. With the support of OSDI, Salman opened his workshop and is now earning around PKR 40,000 per month. This brings the combined household income to around PKR 60,000—more than double what it was before.

In addition to repair and maintenance services, Salman has diversified his business. He is actively involved in buying and selling motorcycles on a commission basis, providing advisory services to new buyers, especially those unfamiliar with market conditions. This has helped him build a strong network of customers and gain community trust.

Given his skills and knowledge, it is suggested that OSDI consider utilizing Salman's services for future bike purchases under the SREP program. His involvement can ensure better quality decisions and also serve as recognition for his growing entrepreneurial capacity.

Both Bahar Ali and Salman demonstrate the untapped potential of rural youth when given the right support and opportunity. Their journeys not only improved their personal livelihoods but also raised the economic standard of their families.

To further enhance the impact of such interventions, it is recommended that:

- ✓ OSDI link skilled entrepreneurs like Bahar Ali to institutional contracts (e.g., school uniforms).
- ✓ Entrepreneurs supported under SREP be encouraged to employ others from their own villages to foster local job creation.
- ✓ Talented youth like Salman be engaged as service providers in relevant procurement processes, such as advisory on bike purchases for OSDI.

These steps will not only strengthen the sustainability of youth enterprises but also expand their role in local economic development.

Source: Monitoring and Evaluation Exercise, March 2025

Enterprise Asset Value

Asset changes vary sharply by business type. Retail and repair shops added value, while pure service enterprises saw no asset growth—or even depreciation—over the six-month period.

At baseline, the grocery store in Saleem Khan Banda held assets worth PKR 150,768. By mid-term, its fixed assets plus cash on hand totaled PKR 190,000, for a net increase of PKR 39,532 (26.2 per cent).

The bike mechanic shop grew from PKR 135,000 to PKR 160,000 in combined assets and cash, a PKR 25,000 gain (18.5 per cent). The details can be seen in the table (**Table 30 :)** exhibited below:

Table 30 : Enterprise Asset Valuation by SREP in Phase VI

Name of village	SREP VI	Baseline Assets [a]	Current Assets [b]	Cash in Hand	Increase / (Decrease) [c]	% Change Over Baseline
Saleem Khan Banda	Grocery & General Store	150,768	180,000	10,000	39,532	**26.2 %**
Hassan-abad	Loading Vehicle (Rikshaw)	125,000	n. a.	n. a	n. a	**n. a**
	Mobile (Bike) Scrap Collection	122,000	n. a.	65,000	n. a.	**n. a.**
	Tailor Shop	129,500	n. a.	5,000	n. a.	**n. a.**
	Bike Mechanic Shop	135,000	150,000	10,000	25,000	**18.5 %**
	Total ➔	**662,268**	-	-	-	-

Amount in PKR

[a] Based on OSDI grant Plus beneficiary contribution | [b] Current valuation / addition of Assets
[c] Sum of Current Assets Plus Cash in Hand minus Baseline Assets

Data Source: OSDI Baseline data, 2022 **|** M&E Data March 2025

Service-only enterprises—such as the rickshaw loading service and mobile scrap collector—did not acquire new equipment. Their primary tools (rickshaw or collection bucket) were already counted at baseline, and ongoing use led to normal wear without additional investment; hence, no meaningful asset increase could be recorded. Similarly, the tailor shop's sewing machine, iron, and furniture likely depreciated in value over six months, with no new assets added, so its net asset position remained static or declined slightly.

These results highlight that asset accumulation is most feasible where businesses regularly reinvest profits into new stock or equipment. Pure service providers, by contrast, depend more on cash flow improvements than on asset growth—a dynamic that should shape future support and training in SREP.

Financial Literacy

All five SREP beneficiaries received financial-literacy training and demonstrated full understanding of the concepts. Each one was able to maintain daily sales and purchase records, and all five had up-to-date observable ledgers when visited. This 100 per cent uptake over meets the LFA's target (per cent) for financial-literacy coverage and shows that training translated directly into improved business practices. Maintaining accurate records will help these entrepreneurs manage cash flow, plan purchases, and make informed decisions—reinforcing the sustainability of their enterprises.

Box 6 : From Fields to Front Shop: Realizing the value of Daily Cash

In the remote hilly village of Saleem Khan Banda, located in Tehsil Rustam, District Mardan, accessing basic services and markets is a major challenge. The village lacks a proper road, and although a kaccha road is under construction with the joint efforts of OSDI and local community members, transportation remains difficult.

Mr. Bahri Zaman, a resident of this village, previously relied on agriculture and livestock for income. However, both sources are seasonal in nature and require long waiting periods—often up to six months—for returns. This made it difficult for him to manage daily household needs.

With support from OSDI under the Small Rural Enterprise Project (SREP), Mr. Zaman was able to shift to a more reliable livelihood—a small grocery and general store in his village. This shop has become a valuable asset for the community, providing daily essentials without the need to travel long distances.

What Mr. Zaman values most about this shift is the availability of daily cash. Unlike farming or livestock, which provide lump sum returns after long periods, the shop offers regular income. He now earns around PKR 15,000 per month from the store. Combined with income from other sources, his total household income stands at around PKR 30,000 per month. While this is still modest, the daily flow of cash gives him a sense of financial stability and control over routine expenses.

Encouraged by this progress, Mr. Zaman has started expanding his shop by adding household items like cutlery, brooms, and plastic accessories alongside food and confectionery. He has plans to further extend his offerings by including cold storage items such as dairy products and beverages. However, energy constraints remain a significant barrier, as the village lacks a consistent electricity supply.

Despite these limitations, Mr. Zaman remains committed to growing his business. The shop has not only improved his own household income but has also filled a vital gap in the community by making essential items more accessible.

Considering the challenges of energy in remote areas, OSDI could explore providing small solar-powered cold storage units to beneficiaries under the SREP model. This would allow entrepreneurs like Mr. Zaman to diversify their offerings and increase their income sustainably.

Mr. Zaman's story reflects a successful transition from traditional, seasonal livelihoods to a more secure, daily income source. His example highlights the importance of supporting rural enterprises with not only startup capital but also infrastructure and energy solutions to ensure long-term sustainability.

Source: Monitoring and Evaluation Exercise, March 2025

5.3 Orchard Farming: Ongoing M&E

Orchard farming is a long-term investment, with most trees remaining productive for 25 to 30 years (*Best Fertilizer for Orange Tree*, 2024; frucosol, 2018; lena, 2019). From an M&E standpoint, however, the first eight years—from planting through the onset of fruiting—are the most critical. During this period, we can assess planting quality, tree health, and early growth before harvest. Year four and sometime year five typically offers the first small yields, while full productive capacity generally arrives after ten years of maturation (Project, 2019)..

OSDI launched its first Citrus sinensis (sweet orange - malta) orchard in 2021 (Phase I), followed by a second planting in 2022 (Phase II). As Phase I trees enter their fourth year, flowering is now evident. Phase II trees, still too young to bloom, will require further observation before bearing fruit.

This report marks the first formal M&E of OSDI's orchard initiative in District Mardan. The following sections will examine the site selection and planting methods, projected production volumes, and a preliminary cost–income analysis. Drawing on both local experience and international best practices, this evaluation will gauge whether orchard farming can sustainably replace OSDI's traditional Agriculture Development Program in the region.

5.3.1 Orchid Farming: Citrus sinensis- The Orange Fruit

Sweet orange (Citrus sinensis L.) is one of the world's most widely grown fruits. In 2015, global production exceeded 68 million tons, led by Brazil, the United States, Mexico, and China, with Spain, Italy, Turkey, India, Egypt, and Greece also contributing substantial volumes ("Nutritional Composition and Antioxidant Properties of Fruits and Vegetables: Chapter 22 Orange," 2020; Project, 2019). Oranges are celebrated for their high vitamin C content and also provide natural sugars, carotenoids, flavonoids, essential oils, and minerals. Scientific studies have highlighted the health benefits of orange flesh, juice, and even peel—showing antioxidant properties that may help protect against oxidative damage and reduce risks of certain cancers, heart disease, and neurological disorders.

Locally (in Mardan), the most common variety is the "Malta" or blood orange—valued for its deep color and sweet taste. Other popular types and names include 'Mousambi', 'Naranji', 'Kinnow', and 'Sangtra', each with its own flavor profile and market niche. These varieties offer growers flexibility to meet different consumer preferences and expand market opportunities.

The Plantation

Sweet orange thrives in tropical and subtropical climates with temperatures ranging from 13 °C to 37 °C (Project, 2019). Growers normally use vegetative propagation—budding or grafting—because it produces fruit in 3–4 years, compared to 8–10 years from seed (Project, 2019). Each orchard begins by selecting a strong rootstock onto which the desired variety is grafted (frucosol, 2018).

Trees are spaced to balance sunlight, air flow, and land use. Standard spacing is 6 m × 6 m, which allows about 277 trees per hectare. Since one hectare equals 2.47 acres, this translates into roughly 100 trees per acre using a 20 ft × 20 ft grid (Project, 2019).

Oranges require ample water—between 900 mm and 1,100 mm annually. Young trees need irrigation every 10–15 days in winter and every 5–7 days in summer. A mature tree may use 60–170 liters per day during peak growth (Project, 2019).

A common early-season issue is the "naranj" or rootstock sucker. These shoots sprout below the graft union and, if left unchecked, can overtake the grafted variety. Although they sometimes bear fruit, it is usually of poor quality and not true to the desired cultivar. Removing suckers promptly helps maintain tree vigor and true-to-type production.

The Production Prospects

Orange trees focus their first three years on root and canopy development rather than fruiting. During this establishment phase, trees grow rapidly in height and girth but yield little or no fruit (*Best Fertilizer for Orange Tree*, 2024). By year 3 or 4, flowering begins and the first small harvests appear—around 10 kg of fruit per tree in that first fruiting season (Project, 2019).

As trees enter years 5 to 7, production ramps up. A typical tree will bear 30 kg of fruit in its second fruiting year, with full maturity and peak output reached by ages 8 to 10 (*Best Fertilizer for Orange Tree*, 2024; frucosol, 2018; lena, 2019). Under good management, a mature tree can produce 80 kg of oranges per season on average, with highly skilled growers achieving up to 400–600 fruits (approximately 100–200 g each) per tree (*Best Fertilizer for Orange Tree*, 2024; *Citrus | Ayub Agricultural Research Institute*, n.d.).

The productive lifespan of an orange tree extends 30–60 years, though many orchards plan for 15–20 years of maximum efficiency before replanting (Project, 2019). Overall, Citrus sinensis offers a reliable long-term return: modest early yields give way to substantial harvests in maturity

Economic Cost and Income Prospects

Establishing an orange orchard requires an initial investment in planting material and infrastructure, but ongoing costs are relatively low. Seedlings cost around PKR 150–200 each, so planting 100 trees on one acre runs between PKR 15,000 and 20,000. Fencing and early maintenance (weeding, pruning) are provided are only one-time expense. Fertilizer costs are modest, though irrigation needs are significant—mature trees may require up to 170 liters of water per day, especially during the hot season (Project, 2019).

Orange trees do not bear fruit for the first three to four years, so there is no income during that establishment phase (Project, 2019). Once production begins, fruit sales generate revenue by count or weight. Local market prices range from PKR 30–45 per orange or PKR 250–350 per kilogram. Assuming a conservative yield of 30 kg per tree (year 6th to year 9th) and a farm-gate price of PKR 150/kg, each tree brings in about PKR 4,500 per season. On a one-acre plot with 100 trees, this translates to roughly PKR 450,000 in seasonal income—equivalent to PKR 35,000–40,000 per month over a twelve-month cycle. Yields and incomes tend to rise further once trees reach full maturity (10–20 years). Given that, the average yield per tree is assumed as 45 Kg from year 10th onwards, an income of 675,000 per acre (monthly income of PKR 55,000 to 60,000).

The cost to income ratio on average during the first few years of fruit bearing is about 27: 73 (being conservative 30:70). While in the later years, the cost is substantially reduced to bring the cost – income ratio of about 20 : 80. Given this and the assumed market price of PKR 150, the profitability in the first few years stood at PKR 105, while in the remaining life span in maturity is PKR 120 (Project, 2019).

After the initial establishment, labor demands drop sharply. Farmers can reallocate time to other crops or off-farm work, boosting total household income (Commission, 2002). The wide spacing of orange

trees also leaves room for intercrops such as wheat or maize, or for grazing livestock between rows—creating additional revenue streams on the same land.

Overall, while the first few years require patience and in-kind investment, a well-managed orchard can deliver strong, multi-decade returns that complement and diversify traditional farm incomes.

5.3.2 Potential of Orchid Farming in District Mardan

Pakistan is blessed with diverse environment conducive to the production of nearly thirty types of fruits mainly citrus, mango, apple, guava, banana, dates, and melons (Aujla et al., 2007).

Khyber Pakhtunkhwa is rich in fruit diversity and ranks among Pakistan's leading producers of high-quality horticultural crops (Israr, 2010; Shah et al., 2014). Major commercial fruits include peach, plum, apple, apricot, pear, pomegranate, mango, and citrus. Within KPK, the central valley—comprising Peshawar, Charsadda, **Mardan**, and Nowshera—enjoys a climatic edge that favors deciduous fruit production over other regions.

District Mardan, in particular, boasts one of the highest annual horticulture outputs in KP (SMEDA, 2009). Its farmers grow a wide range of fruits—especially citrus varieties such as sweet oranges—alongside vegetables like potato, tomato, peas, and okra (KP-BOIT; agriext.kp.gov.pk). There are concerns, since there a growing shift of producers to citrus farming. In recent years, orchard planting has expanded as growers move away from traditional sugarcane and wheat toward more profitable fruit trees (The News International, 2019). The district's fertile soils and reliable water supply make it ideal for long-term orchard investments.

Given the dynamics of the recent economic positive, the time is to boost Mardan's role as a "Fruit Supply Centre" not only for the domestic market of Mardan but also for the other neighborhoods and the export potential can also be explored (Mardan District, 2017). These factors—climate, soil, market access, and farmer interest—combine to make orchard farming a promising, sustainable alternative to conventional field crops in Mardan.

5.3.3 OSDI Intervention: Orchid Farming LFA & M&E

For Orchid farming, the M&E and closure reviews followed these LFA criteria, alongside context-specific checks:

Outcomes

a. Improved livelihood and economic resilience of small farmers through sustainable orange orchard farming and efficient irrigation systems.
   - 40 per cent Increase in HH income of beneficiary farmers.
   - 60 per cent increase in Agricultural productivity
   - 60 per cent increase in market linkages and profitable sale of produce

b. Increased agricultural productivity and sustainable income generation for farmers
   - 40 per cent of farmers successfully cultivating and maintain the orchards
   - 60 per cent of farmers earning income from orchard produce after 4 years

- Increase in per acre yield of Wheat and Maize Current 8 maunds increase by 60 per cent

c. Improved irrigation access through solar powered water wells
   - No solar wells installed Phase I is one
   - No. of farmers (7) using irrigation water from solar wells

d. Enhanced Capacity of farmers in Orchard Management and plant survival
   - 60 per cent of plants survived (Phase I & II is 60 per cent)
   - Number of farmers trained in orchard management and pest control (Phase I and II total 10)
   - Number of trained farmers applying learned techniques in orchard maintenance (Phase I and II total 10)

Many of the revenue and productivity targets in the LFA—such as a 40 per cent rise in household income, a 60 per cent boost in overall agricultural output, and stronger market linkages—cannot be fully measured yet because our orchards are still too young. Likewise, it is premature to track income from fruit sales, which only begins after year 4. However, we can reliably assess several early indicators such as survival rates and solar power irrigation system installation and completion of training. Orchard management and pest control can be proxied with the retention rates of plants.

5.3.4 OSDI Intervention: Orchid Farming with Selected Beneficiaries

OSDI's Citrus sinensis orchard project began in 2021 to introduce sustainable orange production and boost rural incomes. In Phase I, seven farmers each received 80 young orange trees—560 in total—to plant on their 0.75-acre plots (100 trees per acre standard, allowing for a 10–20 per cent first-year loss). After four years, 524 trees remain healthy, a 93.6 per cent survival rate. To meet high irrigation needs, OSDI installed a solar-powered borehole in Akhundara on an interest-free loan. The PKR 256,268 investment now pumps over 25,000 liters daily during sunlight hours—more than enough to water each mature tree at its 170 L/day requirement (Project, 2019). Repayment was completed within two years.

In Phase II (2022), three additional beneficiaries on two-acre plots each received 210 tree s—630 in total, again accounting for expected early losses. Survival topped Phase I, at 95 per cent (only 10 trees lost per orchard), despite the rocky, water-scarce terrain. Without borewells, these farmers rely on rainwater harvesting and gravity-fed channels from nearby hills. Following table exhibits the details of the land utilization for Orchid Farming.

Table 31 : Malta Plantation and Land Utilization under Orchid Farming					
Phase(s)	# of Beneficiaries	Land Ownership (Acres)	Planted Land (Acres)	Total Orchard Planted [a]	Orchard Plants Status (% Retained) [b]
Phase – I	7	5.25	5.25	560	**93.6 %**
Phase – II	3	9	6	630	**95 %**
Total ➔	10	14	11.25	**1,125**	**94.3%**

[a] baseline plantation (approx. assumption 100 plants per acre, with expected replacement up to 10 per cent)

[b] as of M&E Visit – Retention is 100 per cent based on replantation on average of 5%-10 % per acre with in the first year. (**Survival rates reflect healthy trees remaining after expected first-year replanting)**

Data Source: OSDI Baseline Data **|** M&E Data March 2025

To date, 100 per cent of 10 participating farmers have successfully planted and are actively maintaining their trees. In Phase I, OSDI installed one solar-powered well, and all seven Phase I beneficiaries now irrigate from it. Survival rates of the 1,190 grafted trees stand at 94.3 per cent, well above the 60 per cent benchmark. This also reflects the successful training in orchard management and pest control and application of those techniques in their groves with the assistance of OSDI, where needed. These early achievements demonstrate strong foundations for meeting the longer-term LFA goals.

These early results demonstrate that, with proper support—quality planting stock, reliable irrigation, and rainwater catchment—orange orchards can thrive in Mardan's climate. High retention rates (higher than targeted LFA) and successful water solutions lay a solid foundation for future fruit production and income generation.

Cost – Income Estimates

Planting material costs about PKR 100 per tree, so establishing 100 trees on one acre runs around PKR 10,000. Farmers themselves provide fencing, weeding, pruning, and all labor, so these costs are in-kind and not paid out of pocket. Fertilizers and plowing equipment are modest expenses, most intensive in years 1–4.

Local data show that a 17 kg carton of 120 oranges recently sold for about PKR 4,500 in Mardan markets (PKR 37.50 per fruit or PKR 260/kg). However, farm-gate prices typically run at no more than half of retail because of marketing costs, middle-man commissions, and post-harvest losses. Studies in Peshawar report that growers receive between 40 per cent and 70 cent of urban retail prices, depending on supply and demand (Hussain, 2012). Many farmers—70–90 per cent—even sell their harvest rights at flowering stage to contractors (Aujla et al., 2007). According to Aujla

et al., 2007, producers often end up with only about 25% of what consumers pay, while intermediaries capture the remaining three-quarters.

Box 7 : Assumptions for Estimate

Production Estimates:

"Malta" or "blood" orange varieties, commonly used in Mardan, tend to yield slightly smaller fruit—around 2–3 inches in diameter—but can match standard oranges in total weight and market value. The special focused Malta 'Malts' are typically smaller than standard oranges, often around 2-3 inches in diameter, while oranges are usually 3-4 inches. A single Malta or regular orange typically weighs between 100 and 200 grams.

Assumption: ***Taking Average weight of 150 grams, there are about 7 oranges in 1 Kg****.*

- According to Citrus Research Institute, Sargodha, the average number of fruits per plant at maturity is 350-400.
- In Mardan, Yield per acre is 4413 kg - approx. 30,891 in nos of oranges / malta - (Shah et al., 2014). Given this, The average yield per tree ranges between 40 kg to 50 kg (Approximate: 45 Kg) in maturity period.
- According to local expert (interviewed), Orange trees typically begin fruiting after the 4th year. During this initial year, the yield is modest, averaging 10 to 20 oranges per plant. By the 6th year to 9th Year, production generally reaches to 200, and by the 10th year to onwards, each tree yields between 300 (42Kg) to 360 (50 Kg) oranges annually. This is also aligned with the district average production reported.

Assumption: Given the reliable information through published articles, M&E assumes an average production per tree as:

- **210 in Nos (30 Kg) from 6th year to 9th Year.**
- **315 in Nos (45 Kg) From 10th Year to 20th Year.**

Farm-gate Price Estimates:

- Market price ranges between PKR 250 to PKR 300 per Kg
- producer share as of the urban retails prices in Peshawar (KPK) varies between minimum 40 per cent to a maximum of 70 per cent for fruits
- Discounting with the market price, the farm-gate price is expected to much lower (Approx. 60 per cent of market price PKR 250) than the market price.
  - ✓ **150 per Kg (on average, whole life, net of inflation)**

Profitability: Based on Cost-Income Ratio:

- Youth Age (6 - 9 Years) cost to income ratio 30 : 70 (conservative)
  - ✓ Given PKR 150 per Kg, **Profitability is PKR 105 per KG**
- Maturity Period (10 Years & Above) Cost to Income Ratio is 20 : 80 (conservative)
  - ✓ Given PKR 150 per Kg, **Profitability is PKR 120 per KG**

Source: *M&E Market Assessment |Author's Calculation based on cited studies* (*Best Fertilizer for Orange Tree*, 2024; *Citrus | Ayub Agricultural Research Institute*, n.d.; Hussain, 2012; Project, 2019; Shah et al., 2014)

Based on the assumptions provided in **Box** 7, the following estimates (**Table 32 :**) reflect the expected production and monthly profit (income) per household from orchard farming under Phase I and Phase II.

Table 32 : Annual Production & Monthly Profit Estimates

Phase(s)	# of Beneficiaries	Land Utilized Per HH	Estimated Production Per Beneficiary (Kg) [a]		Average Farm-Gate Price (PKR) [a]	Monthly Income (Profit Only) per HH [b]	
			Year 6 -9	Year 10 & above		Year 6 -9	Year 10 & above
Phase – I	7	0.75	2,250	3,375	105 & 120	19,687.0	33,750.0
Phase – II	3	2.0	6,000	9,000	105 & 120	52,500.0	90,000.0
Total ➔	10	**2.75**	8,250	12,375	105 & 120	72,187.00	123,750.00

[a] see assumption for estimates (see **Box 7**) Amount in PKR

[b] Estimated Production x Average Farm Gate Price (adjusted with cost & profit only) / 12 months

Data Source: OSDI Baseline Data **|** M&E Data March 2025

In Phase I, a total of 7 beneficiaries has cultivated 0.75 acres each. By Year 6–9, each household is expected to produce approximately 2,250 kg of fruit, increasing to 3,375 kg from Year 10 onwards. With an average farm-gate price of PKR 150 per kg, adjusting with cost assumption (45 & 30), this translates into an estimated monthly profit income of PKR 19,687 during Year 6–9, rising to PKR 33,750 from Year 10 and beyond.

In Phase II, 3 beneficiaries are cultivating larger landholdings (2 acres each). Their estimated production per household is 6,000 kg in Year 6–9 and 9,000 kg in Year 10 and above. At the same farm-gate price of PKR 150 per kg, the estimated monthly profit per household is PKR 52,500 in the initial productive years, increasing to PKR 90,000 in later years.

These figures are based on adjusted estimates of production, market conditions, and farm-gate pricing, excluding initial capital or in-kind costs, and are meant to provide a realistic outlook on the income-generating potential of the orchard farming intervention.

According to the Logical Framework Analysis (LFA), the project set a target of achieving a 40 per cent increase in household income for beneficiary farmers. The data presented in Table (**Table 33** :) clearly shows that this target has not only been met but significantly exceeded across both Phase I and Phase II beneficiaries.

In Phase I, the average baseline monthly income per household was PKR 6,857. With orchard farming, this increases to PKR 19,687 in Year 6–9 and PKR 33,750 in Year 10 and beyond, representing an increase of 2.9 to 4.9 times the original income.

In Phase II, where landholding per beneficiary is larger, the baseline monthly income was PKR 7,666. The estimated income from orchard farming reaches PKR 52,500 in Year 6–9 and PKR 90,000 in Year 10 and above, indicating a 6.9 to 11.7 times increase in income.

When averaged across all 10 beneficiaries, the monthly income increases from PKR 14,523 to PKR 72,187–123,750, reflecting an overall income growth of 5.0 to 8.5 times compared to baseline levels.

Table 33 : Estimated Increase in Monthly Household Income

Phase(s)	# of Beneficiaries	Monthly Baseline Income Per HH	Estimated Income from Orchid Farming per HH		% Income Increase / (Decrease)
			Year 6 -9	Year 10 & above	
Phase – I	7	6,857	19,687.0	33,750.0	2.9 (x) – 4.9 (x)
Phase – II	3	7,666	52,500.0	90,000.0	6.9 (x) – 11.7(x)
Total ➔	10	**14,523**	**72,187.00**	**123,750.00**	**5.0 (x) – 8.5 (x)**

Amount in PKR

Data Source: OSDI Baseline Data | M&E Data March 2025

It is also important to note that these income gains are additional to existing off-farm income sources, which, as previously cited (Commission, 2002), are not expected to be negatively affected by orchard-related activities. This suggests a strong case for improved livelihoods and economic resilience among beneficiary households, well beyond the project's stated income enhancement goal.

By year 6, all ten beneficiary households move from an average PKR 5,865 deficit to a PKR 66,322 surplus, rising further to PKR 117,885 at full maturity. The following table exhibits (**Table 34** :) the estimated income-expenditure surplus / (deficit) during early period and in the period of maturity.

Table 34 : Estimates of Income-Expenditure Surplus / (Deficit)

Phase(s)	# of Beneficiaries	Baseline Income-Expenditure Surplus / (Deficit)	Estimated Income-Expenditure Surplus / (Deficit)	
			Year 6 -9	Year 10 & above
Phase – I	7	(3,381.0)	16,306.0	30,369.0
Phase – II	3	(2,484)	50,016.0	87,516.0
Total ➔	10	-5,865	66,322	117,885

Amount in PKR

Data Source: OSDI Baseline Data | M&E Data March 2025

According to local experts, orange trees remain productive for around 30–40 years before gradual replanting is needed. Well-managed orchards thus offer decades of steadily increasing returns. These projections show that, once established, Citrus sinensis orchards can transform farm finances—turning initial debts into strong surpluses and multiplying household income well beyond the LFA's 40 per cent increase target. Moreover, intercropping space and reduced labor after year 4 allow farmers to diversify into other crops or off-farm work, further strengthening rural resilience.

6.0 The Learning Curve, Recommendations and Epilogue

6.1 The Learning Curve

One of the key lessons learned from implementation is that the annual coverage of beneficiaries has been quite low. Over a span of two and half years, only 118 eligible beneficiaries (excluding those under orchard farming) were reached in 2.5-years' time. This translates to around 48 beneficiaries per year, which is not efficient considering the level of human resources and administrative costs involved. Going forward, the field team should aim to complete the intervention cycle within 12 to 18 months, rather than spreading it over several years.

For SREP activities located in or near cities and suburban areas, the focus should remain on vocational and skills-based interventions, which have shown better outcomes. On the other hand, LDP interventions should concentrate on more remote rural or hilly areas, where economic vulnerability is higher. For instance, mortality rates among beneficiaries were higher in Hassan-abad, a semi-urban location, suggesting that LDP interventions may not be suitable there. In contrast, SREP has shown greater success in Hassan-abad, indicating a better match between program design and local context.

Market access has emerged as a critical factor in the success of SREP beneficiaries. Those engaged in product-based work need access not only to local intra-village markets but also to larger markets to sell their goods and purchase raw materials or accessories needed for their work. Without this, their ability to scale or sustain income-generating activities is limited.

A major challenge identified was the gap between baseline and M&E data. This is largely due to inconsistencies in data collection tools and errors in data entry. In some cases, the M&E team had to refer back to original hard copies of the baseline questionnaires to verify figures. It is therefore essential to revisit and align baseline and assessment tools to ensure consistency and accuracy.

Additionally, specialized tools for orchard farming interventions need to be developed in consultation with field staff, as the current formats do not adequately capture the unique aspects of this activity.

Finally, the baseline data collection should be carried out by the Program team, while the M&E team should independently verify the information once the list of eligible beneficiaries is finalized and before the intervention begins. This will improve accuracy, ownership, and accountability in future program cycles.

6.2 Proposed Recommendations

1. **Training Sessions in Phases**
   Trainings should be conducted in three phases—at the start, mid-point, and end of the intervention. Currently, training is provided only once at the beginning, which is insufficient for long-term learning and behavior change.
2. **Training Evaluation by M&E**
   The Monitoring & Evaluation (M&E) team should develop and use pre- and post-training evaluation tools to assess knowledge improvement and the effectiveness of the training. This will also to segregate these training evaluation questions from the assessment tools used in mid and end-terms.

3. **Strengthening Community Networks**
   Encourage the formation of social network groups among beneficiaries to build stronger, more resilient communities. These groups can help:

   - ✓ Share information on livestock, disease outbreaks, and treatment.
   - ✓ Trade resources and services.
   - ✓ Promote early awareness and response to health or economic risks.

4. **Health Assessments by OSDI Medical Department**
   The OSDI medical team should be involved in providing medical assistance to all selected beneficiaries at three stages: baseline, mid-term, and end-line**.**

   - ✓ Once the eligible beneficiaries are identified, medical assistance should be provided to all**.**
   - ✓ Basic medical tests such as CBC, thyroid function, and urine tests (or any other tests recommended by OSDI medical team) should be performed**.**
   - ✓ The team should also assess the use of harmful substances like Gutka and tobacco. These assessments can be scheduled during training phases.

5. **Data Collection and Verification**

   - ✓ The Program Office should conduct baseline data collection, while the M&E team should carry out sample-based verification of identified eligible beneficiaries.
   - ✓ Tools should clearly differentiate between village-level information and household-level information to improve data quality.
   - ✓ Observational assessments (e.g., of livestock shed condition, livestock, stock in the outlets etc.) should be conducted using separate checklists/tools by the M&E team, rather than relying solely on interviews with beneficiaries.

6. **Beneficiaries Selection Criteria: a need to revisit**

A revised selection framework—using a national poverty scorecard together with dependency and unemployment measures—will ensure that OSDI's limited resources reach the poorest and most vulnerable families.

- ✓ Replace the current "per-capita income" test—calculated by dividing the provincial minimum wage by average household size—with a validated poverty scoring tool, such as the national Poverty Scorecard used by the Benazir Income Support Program (BISP).
- ✓ Incorporate household dependency ratios (number of non-earning members per earner) rather than a fixed "one breadwinner for eight dependents" threshold.
- ✓ Account for unemployment status and under-employment of potential beneficiaries when assessing vulnerability.
- ✓ Continue to prioritize female-headed households and those lacking productive assets, but verify asset ownership through simple field checks rather than self-reports.

- ✓ Use a combined index—poverty score plus dependency and unemployment metrics—to rank and select the most vulnerable households for each program phase.

6.2.1 Strengthening Training Approach for Better Retention and Impact

During the monitoring and evaluation process, it was observed that many beneficiaries were unable to recall key content from the training sessions conducted earlier. This appears to be linked to low literacy levels in rural areas, particularly in Tehsil Rustam. To improve comprehension and retention, it is recommended that training be delivered in three separate phases throughout the project cycle, with appropriate intervals in between. This phased approach will help beneficiaries better understand, retain, and apply the training content.

The proposed structure is as follows:

1. **Initial Briefing / Training:** Conducted at the time of grant disbursement, this session will introduce beneficiaries to the program's objectives, their roles, responsibilities, and key expectations.
2. **Mid-Term Counselling and Evaluation:** Conducted around the midpoint of the program (e.g., after four months), this session will reinforce earlier learning, address any challenges faced by beneficiaries, and include mid-term monitoring and evaluation. (**Note:** The rate of stillbirths in some areas, estimated around 10 per cent, suggests the need for a refresher training at mid-term to strengthen awareness, especially among livestock beneficiaries.)
3. **Sustainability and Exit Orientation (Advocacy for Sustainability):** Held near project completion, this session will guide beneficiaries on how to sustain their livelihoods, manage their resources, and continue good practices after project support ends.

In addition to this M&E during the mid-training and closure-training sessions, physical monitoring should be carried out by the M&E team during the implementation period. This can be done either for all beneficiaries or through a representative sample from each village. The purpose is to track progress, provide on-the-spot guidance, and ensure that beneficiaries are implementing the training effectively.

6.3 Challenges Faced

A key challenge has been baseline data quality. Inconsistencies and errors in baseline recording—compounded by mismatched or outdated M&E templates—have made it difficult to compare initial conditions with follow-up results. Data entry mistakes and gaps in the tools themselves have further widened the divide between baseline and M&E figures. In some cases, the assessment forms do not capture the indicators defined in the Logical Framework, leaving important outcomes unmeasured. These issues underscore the need for streamlined, error-proof data collection instruments that align fully with program goals and allow clear, accurate visualization of progress.

6.4 Future Directions: M&E Reporting Structure

This inaugural M&E report by Manzil Pakistan sets the foundation for a clearer, more focused reporting approach. Going forward, each intervention (ADP / Orchard Farming, LDP, and SREP) will be covered in its own standalone report. For every intervention phase, two volumes will be produced: Volume I for the mid-term assessment and Volume II for the end-term or project-closure evaluation.

This phased reporting structure will make it easier for stakeholders to track progress, compare results, and draw actionable insights for each program. The same approach will be applied to our work in

Lasbella: after a comprehensive introductory report, subsequent M&E reports will focus on individual phases in the same mid-term and end-term format.

By standardizing our reporting in this way, we aim to improve clarity, enhance decision-making, and strengthen accountability across all OSDI interventions.

7.0 References

Aujla, K., Abbas, M., Mahmood, K., & Saadullah, S. (2007). Marketing System of Fruits, Margins and Export Potential in Pakistan. *Pak J Life Soc Sci*, *5*(1–2), 34–39.

Awan, N., Inam, S., & Saeed, A. (2022). Analysis of Rural Women's Participation in Income Generating Activities in District Mardan. *Journal of Accounting and Finance in Emerging Economies*, *8*(1), 143–152. https://doi.org/10.26710/jafee.v8i1.2244

Best Fertilizer for Orange Tree: Expert Growing Guide. (2024, November 5). https://growplant.org/blog/best-fertilizer-for-orange-tree/

BoS. (2024). *Development Statistics of Khyber Pakhtunkhwa* (p. 454) [Development Statistics]. Bureau of Statistics, Planning and Development Department, Government of Khyber Pakhtunkhwa.

Breeding in Goats—Management and Nutrition. (2024). MSD Veterinary Manual. https://www.msdvetmanual.com/management-and-nutrition/management-of-reproduction-goats/breeding-in-goats

Bughio, S., Moriani, A. A., Mirani, A. H., Oad, F. C., & Bughio, B. A. (2002). Reproductive Performance of Kamori Goat Flock under Semi-intensive Management System. *Journal of Applied Sciences*. https://doi.org/10.3923/jas.2002.747.749

Castro, N., Suarez-Trujillo, A., Gonzalez-Cabrera, M., Hernandez-Castellano, L. E., & Argüello, A. (2023). Goat lactation research as a gateway for the development of the dairy goat industry. *Animal Frontiers: The Review Magazine of Animal Agriculture*, *13*(3), 108–111. https://doi.org/10.1093/af/vfad005

Citrus | Ayub Agricultural Research Institute. (n.d.). Retrieved July 24, 2025, from https://aari.punjab.gov.pk/citrus_fruits

Commission, P. (2002). Citrus growing and processing. *Inquiry Report*, *Report No. 20*, Article 0207002.

Fernandez, D. (2014). *Managing Perinatal Mortality in Goats*. School of Agriculture, Fisheries and Human Sciences, University of Arkansas.

frucosol. (2018, September 18). Life cycle of an orange—All you need to know. *Frucosol*. https://frucosol.com/en/2018/09/18/life-cycle-of-an-orange/

Goat milk nutrition facts and analysis. (n.d.). Retrieved July 10, 2025, from https://www.nutritionvalue.org/Goat_milk_11116000_nutritional_value.html?size=1+kg+%3D+1000+g

Haldar, A., Pal, P., Datta, M., Paul, R., Pal, S. K., Majumdar, D., Biswas, C. K., & Pan, S. (2014). Prolificacy and Its Relationship with Age, Body Weight, Parity, Previous Litter Size and Body Linear Type Traits in Meat-type Goats. *Asian-Australasian Journal of Animal Sciences*, *27*(5), 628–634. https://doi.org/10.5713/ajas.2013.13658

Hussain, D. A. (2012). Rural-Urban Retail Prices and Marketing Margins of Fresh Fruits and Vegetables in Pakistan Introduction. *Pakistan Journal of Agricultural Research*, *25*(3), 12.

Hussein, F. A., N. O., L., S., K., K., & A., A. (2009). *A NATIONAL SURVEY OF PERINATAL MORTALITY IN SHEEP AND GOATS IN JORDAN*. *29*(3), 102–1069.

Israr, M. (2010). A comparative study of model and non-model fruit growers in rural areas of Khyber PukhtunKhwa Pakistan. *Sarhad Journal of Agriculture*, *26*(4), 641–647.

Jamal, H. (2021). Updating Pakistan's Poverty Numbers for the Year 2019. In *MPRA Paper* (105135; MPRA Paper). University Library of Munich, Germany. https://ideas.repec.org/p/pra/mprapa/105135.html

Khan, Khan, M. A., & Mahmood, S. (2008). Genetic Resources and Diversity in Pakistani Goats. *NTERNATIONAL JOURNAL OF AGRICULTURE &*, *10*(2), 227–231.

Khan, M., Rehman, A., Mahmood, A., M.Younus, Naeem, M., Hassan, F. M., Maqbool, A., & Nazir, F. (2012). *Impact of Prompt Delivery of Veterinary Services upon Morbidity and Mortality Rate in the Flocks of Indigenous Goat Farms in Central Punjab, Pakistan*.

Kumbhar, H. K., Memon, A. A., Khatri, P., Gaisuddin, S. M., & Bhutto, A. L. (2016). PRODUCTIVE PERFORMANCE OF FEMALE KAMORI GOAT MAINTAINED UNDER SEMI-INTENSIVE MANAGEMENT CONDITIONS. *Advances in Agriculture and Animal Science*, *32*(1), 123–131.

lena. (2019, August 2). The life of an orange tree. *Farming and Beekeeping Blog*. http://www.naranjasdelcarmen.com/blog/oranges-and-beyond/2019/08/02/the-life-of-an-orange-tree/

Ndibazza, J., Muhangi, L., Akishule, D., Kiggundu, M., Ameke, C., Oweka, J., Kizindo, R., Duong, T., Kleinschmidt, I., Muwanga, M., & Elliott, A. M. (2010). Effects of Deworming during Pregnancy on Maternal and Perinatal Outcomes in Entebbe, Uganda: A Randomized Controlled Trial. *Clinical Infectious Diseases : An Official Publication of the Infectious Diseases Society of America*, *50*(4), 531–540. https://doi.org/10.1086/649924

Nutritional Composition and Antioxidant Properties of Fruits and Vegetables: Chapter 22 Orange. (2020). In E. Tütem, K. Sözgen Başkan, Ş. Karaman Ersoy, & R. Apak, *Nutritional Composition and Antioxidant Properties of Fruits and Vegetables* (pp. 353–376). Elsevier. https://doi.org/10.1016/b978-0-12-812780-3.00022-2

PBS. (2023). *7th Population and Housing Census-2023* (p. 150). Pakistan Bureau of Statistics, Ministry of Planning, Develoment and Special Initiatives, Government of Pakistan. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.pbs.gov.pk/sites/default/files/population/2023/Key_Findings_Report.pdf

Project, T. (2019, April). *Orange Farming*. https://www.techno-preneur.net/technology/project-profiles/food/Orange.htm

Salama, A. a. K., Caja, G., Such, X., Casals, R., & Albanell, E. (2005). Effect of Pregnancy and Extended Lactation on Milk Production in Dairy Goats Milked Once Daily. *Journal of Dairy Science*, *88*(11), 3894–3904. https://doi.org/10.3168/jds.S0022-0302(05)73075-7

Sattar, A. (2020, March 1). Milk Production in Pakistan. *PIDE Blog*. https://pide.org.pk/blog/milk-production-in-pakistan/

Shah, N., Farooq, A., Hassan, A., Khan, A., & Niazi, M. (2014). Status of Fruit Farming in Central Valley of Khyber Pakhtunkhwa. *Asian Journal of Agriculture and Rural Development*, *4*, 496–505.

SMEDA, Balochistan. (2023). *Pre-Feasibility Study: Intensive Goat Breeding Farm* (Feasibility Report PREF-NO. 02; p. 19). Small and Medium Enterprises Development Authority (SMEDA), Ministry of Industries and Production, Government of Pakistan. https://smeda.org/index.php?option=com_phocadownload&view=category&download=1219:intensive-goat-and-sheep-breeding-farm-rs-11-94-million-sep-2023&id=140:livestock-birds-and-other-animals&Itemid=308

SMEDA, K. (2009). *District Profile of Mardan*. Small & Medium Enterprises Development Authority, Ministry of Industries & Production, Government of Pakistan.

SMEDA, Punjab. (2021). *Pre-Feasibility Study: Intensive Goat Breeding Farm* (Feasibility Report PREF-NO. 20; p. 20). Small and Medium Enterprises Development Authority (SMEDA), Ministry of Industries and Production, Government of Pakistan. https://smeda.org/index.php?option=com_phocadownload&view=category&download=1219:intensive-goat-and-sheep-breeding-farm-rs-11-94-million-sep-2023&id=140:livestock-birds-and-other-animals&Itemid=308

Solangi, T. (2025). Tea Consumption in Pakistan: Culture & Economy. *The Agricultural Economist*, 2.

South Asia Investor Review. (2020, October 22). Pakistan's Per Capita Milk Consumption Reaches 231 Liters. *South Asia Investor Review*. https://www.southasiainvestor.com/2020/10/pakistans-per-capita-milk-consumption.html

The News International. (2019, March 14). Growers in Mardan opting to grow fruit orchards in place of sugarcane. *The News International*, 1.

Waheed, A., & Khan, M. S. (2013). Lactation curve of Beetal goats in Pakistan. *Archives Animal Breeding*, *56*(1), 892–898. https://doi.org/10.7482/0003-9438-56-089

Wilson, R. T. (1986). *Livestock production in central Mali: Long-term studies on cattle and small ruminants in the agropastoral system*. INTERNATIONAL LIVESTOCK CENTRE FOR AFRICA ADDIS ABABA, ETHIOPIA. https://www.fao.org/4/x5531e/x5531e00.htm#Contents

Yitagesu, E., & Alemnew, E. (2022). Mortality rate of Boer, Central Highland goat and their crosses in Ethiopia: Nonparametric survival analysis and piecewise exponential model. *Veterinary Medicine and Science*, *8*(5), 2183–2193. https://doi.org/10.1002/vms3.876

Zahraddeen, D., Butswat, I., & Mbap, S. (2009). A note on factors influencing milk yield of local goats under semi-intensive system in Sudan savannah ecological zone of Nigeria. *Livestock Research for Rural Development*, *21*.

8.0 Annexure

8.1 : Household Population, Income and Expenditure(Baseline Details) in Selected Villages under Phase IV of LDP

Table 8.1 : Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase IV of LDP					
Name of village	Phase IV	Total Population	Average Household Size	Total Income	Total Expenditure
Saleem Khan Banda	8	45	5.6	86,000	**132,828**
Hassan-abad	8	49	6.1	98,000	**195,498**
Shanay Zangal	2	11	5.5	28,000	**26,268**
Total ➔	**18**	**105**	**5.7**	**212,000**	**354,594**

Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline data, 2022 | M&E Data March 2025

8.2 : Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase V of LDP

Table 8.2 : Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase V of LDP					
Name of village	Phase V	Total Population	Average Household Size	Total Income	Total Expenditure
Umar Dhair	6	41	6.8	112,500	**123,818**
Saleem Khan Banda	6	34	5.7	106,166	**128,658**
Hassan-abad	1	6	6.0	24,500	**26,500**
Morra Banda	12	83	6.9	200,300	**240,023**
Shanay Zangal	4	22	5.5	62,000	**66,360**
Total ➔	29	**186**	**6.2**	**505,466**	**585,359**

Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

8.3: Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase V of SREP

Table 8.3 : Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase V of SREP					
Name of village	Phase V	Total Population	Average Household Size	Total Income [a]	Total Expenditure [a]
Morra Banda	1	9	9	28,000	**26,016**
Hassan-abad	3	18	6.0	67,000	**75,527**
Total ➔	4	**27**	**6.7**	**95,000**	**101,543**

[a] before OSDI Intervention — Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

8.4: Household Population, Income and Expenditure (Baseline Details) for each SREP Beneficiary under Phase V

Table 8.4 : Household Population, Income and Expenditure (Baseline Details) by SREP under Phase V of SREP					
Name of village	SREP	Household Population	Total Income [a]	Total Expenditure [a]	Surplus / (Deficit)
Morra Banda	Grocery & General Store	9	**28,000**	26,016	**1,984**
Hassan-abad	Cosmetic Shop	6	12,000	23,677	**(11,677)**
	Mobile Chicken Shop	7	35,000	27,840	**7,160**
	Bread (Naan) Shop 'Tandoor'	5	20,000	24,010	**(4,010)**
	Total ➔	**27**	**95,000**	**101,543**	**(6,543)**

[a] before OSDI Intervention — Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

8.5: Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase VI of SREP

Table 8.5 : Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase VI of SREP					
Name of village	**Phase VI**	**Total Population**	**Average Household Size**	**Total Income [a]**	**Total Expenditure [a]**
Saleem Khan Banda	1	8	8	23,000	**23,000**
Hassan-abad	4	23	5.7	74,000	**111,408**
Total ➔	5	**31**	**6.2**	**97,000**	**134,408**

[a] before OSDI Intervention — Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

8.6: Household Population, Income and Expenditure (Baseline Details) for each SREP Beneficiary under Phase VI

Table 8.6 : Household Population, Income and Expenditure (Baseline Details) in Selected Villages under Phase VI of SREP					
Name of village	**SREP**	**Household Population**	**Total Income [a]**	**Total Expenditure [a]**	**Surplus / (Deficit)**
Saleem Khan Banda	Grocery & General Store	8	23,000	23,000	-
Hassan-abad	Loading Vehicle (Rikshaw)	5	15,000	21,000	**(6,000)**
	Mobile (Bike) Scrap Collection	5	16,000	29,383	**(13,383)**
	Tailor Shop	8	25,000	33,000	**(8,000)**
	Bike Mechanic Shop	5	18,000	28,025	**(10,025)**
Total ➔	5	**31**	**97,000**	**134,408**	**-37,408**

[a] before OSDI Intervention — Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline Data, 2022 | M&E Data March 2025

8.7: Household Population, Income and Expenditure (Baseline Details) under Phase I & II of Orchard Farming

Table 8.7 : Household Population, Income and Expenditure (Baseline Details) under Phase I & II of Orchard Farming					
Phase(s)	**# of Beneficiaries**	**Total Population**	**Average Household Size**	**Total Income [a]**	**Total Expenditure [a]**
Phase – I	7	39	5.6	48,000	**71,670**
Phase – II	3	5	5	23,000	**30,450**
Total ➔	10	**44**	**4.4**	**71,000**	**102,120**

[a] before OSDI Intervention — Amount in PKR

Note: *Higher expenditure profile (deficit as per income) may reflect a living using the loans*

Data Source: OSDI Baseline Data, 2022 **|** M&E Data March 2025

8.8: M&E Data Collection Instrument / Tools

8.5.1: Livestock Development Program: Mid Term Assessment Tool

FILLED BY		**DATE**	
VILLAGE		**DISTRICT**	
NAME OF THE BENEFICIARY		**FATHER'S/HUSBAND NAME**	
CNIC NO.		**CONTACT NO.**	

Q 1. Do you have livestock other than OSDI's financed animals?	☐ Yes ☐ No (if no, skip to Q. 3)				
Q 2. If yes, how many animals do you have	Large Ruminant		Small Ruminant		☐ NA
Q 3. Are you involved in milking?	☐ Yes ☐ No ☐ NA (If no, skip to Q. 5)		Q 4. If Yes Monthly Income	PKR-	☐ NA

Q 5. Details of Goats received from OSDI

Animal	Animals' status (alive/ dead)	Bread	Pregnancy status (first cycle)	No. of Kids (if kidding done)	Gender of Kids	Kids Status (alive/ dead)	Per day milk production	Utilisation of milk	Second-cycle pregnancy status
Doe 1	☐ Alive ☐ Died		☐ P ☐ NP ☐ GK ☐ SB ☐ DK ☐ NA		☐ Doe ☐ Buck ☐ Both Does ☐ Both Buck ☐ Doe & Buck ☐ NA	☐ Alive ☐ Died			☐ P ☐ NP ☐ GK ☐ SB ☐ DK ☐ NA
Doe 2	☐ Alive ☐ Died		☐ P ☐ NP ☐ GK ☐ SB ☐ DK ☐ NA		☐ Doe ☐ Buck ☐ Both Does ☐ Both Buck ☐ Doe & Buck ☐ NA	☐ Alive ☐ Died			☐ P ☐ NP ☐ GK ☐ SB ☐ DK ☐ NA
Doe 3	☐ Alive ☐ Died		☐ P ☐ NP ☐ GK ☐ SB ☐ DK ☐ NA		☐ Doe ☐ Buck ☐ Both Does ☐ Both Buck ☐ Doe & Buck ☐ NA	☐ Alive ☐ Died			☐ P ☐ NP ☐ GK ☐ SB ☐ DK ☐ NA

Pregnancy Status: P= Pregnant, **NP=** Not Pregnant, **GK=** Given Kids, **SB=** Stillbirth, **DK=** Don't Know, **NA=**Not Applicable

Q 6. Have you been given a buck? (If no, skip the remaining details)	☐ Yes ☐ No	Status of buck	☐ Alive ☐ Died ☐ NA	Breed of Buck	
Q 7. Total herd	Buck____	Does____	Kids____	Avg. Value of Kids	
Q 8. Observations about Does, Buck & Kids' health & prices					

Status of Livestock Feeding & Drinking

Q 9. Feeding	☐ Green Fodder ☐ Dry Fodder ☐ Tree Leaves ☐ Grazing
Q 10. Feeding times per day	☐ Once ☐ Twice ☐ Three times a day ☐ Others
Q 11. Do all the animals get sufficient fodder daily?	☐ Yes ☐ No (If "No" why?)

Q 12. Do you provide compound feed to the animals for fattening?	☐ Yes ☐ No (If "No" why? & skip to Q. 14)
Q 13. If yes, provide details.	☐ Wanda Feed ☐ Wheat choker/flour ☐ Maize grain/flour ☐ Pulses ☐ Any others _____ ☐ NA
Q 14. Do all the animals get proper water?	☐ Yes ☐ No (If "No" why?)
Q 15. Is the water given to animals clean and hygienic?	☐ Yes ☐ No (If "No" why?)
Q 16. Is a feeder available for animals in the shed? (observation)	☐ Yes ☐ No (If "No" why?)
Q 17. Is a waterer available for animals in the shed? (observation)	☐ Yes ☐ No (If "No" why?)
Livestock shed (observatory section)	
Q 18. Is a livestock shed available?	☐ Yes ☐ No (If "No" why?)
Q 19. Type of livestock shed	☐ Covered ☐ Uncovered ☐ Partially Covered ☐ Others_____
Q 20. Is the shed protected from harsh weather conditions?	☐ Yes ☐ No (If "No" why?)
Q 21. The shed has proper ventilation	☐ Yes ☐ No (If "No" why?)
Q 22. Shed cleanliness status	☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very poor
Vaccination of Livestock	
Q 23. Have the animals been vaccinated against seasonal diseases?	☐ Yes ☐ No (If "No" Why? & skip to Q 25)
Q 24. If yes, please provide vaccination details	
Q 25. Does the Vet expert visit to see your livestock?	☐ Yes ☐ No (If no, skip to Q. 27)
Q 26. Does he guide you on modern Livestock rearing?	☐ Yes ☐ No (If no, ask the district head to validate)
Q 27. Have your animals been ill since the provision?	☐ Yes ☐ No (If no, skip to Q. 32)
Q 28. If yes, how many and what was the reason?	
Q 29. What did you do to treat the ill animals?	☐ Contacted OSDI ☐ Contacted Vet (Attempt Q 30 and skip to Q 32) ☐ Used home Remedies (skip to Q. 31) ☐ Others_____
Q 30. What medication did the Vet prescribe?	
Q 31. What was the home remedy?	
Q 32. Do you deworm your animals regularly?	☐ Yes ☐ No (If "No" why?)
Q 33. When were the animals last dewormed?	
Q 34. Animals' Health Status (observatory question)	☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very poor
Training	
Q 35. Did you participate in the training on goat management organised by OSDI?	☐ Yes ☐ No (If "No" why & skip the next Q)
Q 36. What did you learn from the training?	

8.5.2: Livestock Development Program: End Term / outcome / Project End Assessment Tool

GENERAL INFORMATION			
District		*Tehsil*	
UC		*Village*	
Name of the Beneficiary with Father's name		*CNIC*	
Contact Number		*Gender*	
Total Family members		*Family Structure*	
Primary Sources of Income		*Avg. Monthly Income from Livestock*	
Avg. Monthly Income from primary source		*Total Monthly Income*	
Per Capita Income			

How many goats (does) did you receive from OSDI?

- ☐ 1 ☐ 2 ☐ 3 ☐ Other: _____

Were you also provided a buck?

- ☐ Yes ☐ No (If no, skip to next section)

Status of the Buck:

- ☐ Alive ☐ Died ☐ NA

- Breed:

- Are you sharing the buck for breeding? ☐ Yes ☐ No

- Do you receive anything in return? ☐ Yes ☐ No

1. Provide details of the given animals in LDP phase IV

Goats	Pregnancy Status	No. of Kids (If accompanied)	Gender of kid (if accompanied)	First kidding date (If pregnant)
Doe 1	☐ Pregnant ☐ Not Pregnant ☐ Had kid(s) accompanied		☐ Buck(s) ☐ Doe(s) ☐ 1 Buck 1 Doe	
Doe 2	☐ Pregnant ☐ Not Pregnant ☐ Had kid(s) accompanied		☐ Buck(s) ☐ Doe(s) ☐ 1 Buck 1 Doe	
Doe 3	☐ Pregnant ☐ Not Pregnant ☐ Had kid(s) accompanied		☐ Buck(s) ☐ Doe(s) ☐ 1 Buck 1 Doe	

2. How many kids have been born since the provision?

Goats	Kidding cycle 1			Kidding cycle 2		
	Kidding status	No. of kids	Gender	Kidding status	No. of kids	Gender
Doe 1	☐ NP ☐ P ☐ GK ☐ SB ☐ DD			☐ NP ☐ P ☐ GK ☐ SB ☐ DD		
Doe 2	☐ NP ☐ P ☐ GK ☐ SB ☐ DD			☐ NP ☐ P ☐ GK ☐ SB ☐ DD		
Doe 3	☐ NP ☐ P ☐ GK ☐ SB ☐ DD			☐ NP ☐ P ☐ GK ☐ SB ☐ DD		

3. How many animals have died from project inception to date?

No. Bucks died	No. of Does die (seed animal)	First Kidding Cycle		Second Kidding Cycle	
		No. of male Kids	No. of female kids died	No. of male Kids	No. of female kids died.

4. What were the reasons for death? (Choose Multiple Options if needed)

☐ Losses due to transportation.
☐ Losses due to acclimatisation issues
☐ Losses due to poor shed management
☐ Vaccines were not administered
☐ Animals were not dewormed
☐ Overeating or eating poisonous herbs
☐ Stray Dog bite or Snakebite
☐ Died right after birth due to weakness (for kids only)
☐ Due to Illness_____
☐ Any other_____

5. What is the current total herd count?

Description	Bucks	Does	Kidding cycle 1		Kidding cycle 2	
			Female kid	Male kid	Female kid	Male kid
No of animals						
Value of animals						

6. Please provide illness, vaccination and deworming details

Type of animal	Suffered from Illness	Consulted with Vet	Treatment Prescribed by a Vet	Regularly vaccinate your animals	Regularly de-worm your animals	vaccinating and deworming your animals before
Buck	☐ Yes ☐ No	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Doe 1	☐ Yes ☐ No	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Doe 2	☐ Yes ☐ No	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Doe 3	☐ Yes ☐ No	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Kids	☐ Yes ☐ No	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

7. What do you feed to your herd? ☐ Green fodder ☐ Tree leaves ☐ Dry fodder ☐ Open Grazing ☐ other specify _____

8. Do you provide compound feed to your animals for fat-fattening or increasing milk? ☐ Yes ☐ No

9. Do you pay to buy feed/fodder (green/dry)? ☐ Yes ☐ No

10. What is the average milk production? (Please provide consumption details of milk.)

Animal	Avg. Milk produced	No. of milking	Avg. consumption at home	Avg. consumption by Doe kids	**Qty. Sold**	**Value if sold**
Doe 1						
Doe 2						
Doe 3						

11. Have you sold out animals from the herd so far? (If no, skip Q# 16)

☐ Yes (if yes, provide details) ☐ No (if no, skip to next question)

Description	Bucks	Does	Female kid(s)	Male kid(s)	Not Applicable
No of animals					
Value of animals					

12. What was the purpose of selling Animals?

_____

13. Have you been given any training on Livestock Development? ☐ Yes ☐ No (If no, skip Q# 17)

14. Which topics were included in the training you received?

☐	Shed management
☐	Fodder management
☐	Fat-fattening feed management
☐	Animal drinking water management
☐	Seasonal vaccines
☐	Deworming-animals
☐	Managing/isolating sick animals
☐	Overall health and hygiene of animals
☐	Other (please explain:

15. Did you know about the above topics before the training? ☐ Yes ☐ No ☐ Refuse to answer

16. Do you need any further training? ☐ Yes ☐ No ☐ Refuse to answer

17. If yes, provide details. _____

18. Are veterinary services available? (If no, skip Q# 21) ☐ Yes ☐ No ☐ Don't Know ☐ Refusing to answer

19. Do you avail yourself of veterinary services when you need them? ☐ Yes ☐ No ☐ Don't Know ☐ Refused to answer ☐ NA

20. Did OSDI's appointed vet visit you monthly to check animals during the project period? ☐ Yes ☐ No

21. Did the vet guide you on modern livestock domestication during monthly visits to you? ☐ Yes ☐ No

22. Did you have an animal shed before intervention? ☐ Yes ☐ No (If no, skip 25)

23. What was the status of the shed before intervention? ☐ Covered ☐ Uncovered ☐ Partially Covered ☐ Refuse to answer ☐ NA

24. Animal shed available now (Observatory question- If no, skip q 25) ☐ Yes ☐ No

25. What is the current status of your animal shed? ☐ Covered ☐ Uncovered ☐ Partially Covered ☐ NA

26. How satisfied are you with the Livestock Development Project?

☐ Extremely satisfied ☐ Very Satisfied ☐ Moderate satisfied ☐ slightly satisfied ☐ not satisfied

27. What changes do you suggest for the Asset Creation through the Livestock Development Project?
28. What, in your opinion, are the most significant factors contributing to the success of the LDP?
29. What are your plans for your animal herd in the upcoming year?

8.5.3: Small Rural Enterprise Program: Mid Term Assessment Tool

Personal Information			
District	**Mardan**	**Tehsil**	**Rustam**
UC	**Bazar**	**Village**	**Bazar**
Beneficiary Name	Salman	**Gender**	Male
CNIC No.		**Contact No.**	
No. of HH members	5	**Family Structure**	Joint
Project Start date		**Project duration**	

Section 1: Small Rural Enterprise Project			
Source of Income before	Skilled Labour (define skilled labour)	Monthly income before	28000
Source of Income current	Motorcycle Repairing & Spare Parts Shop	Monthly Income current	
Any other source of income	☐ Yes ☐ No	If Yes, Monthly Income	
Monthly Expense before	33000	Monthly Expense current	
What was the value of your business assets when you started the business?			PKR-138600
What is the current value of your business assets? (calculate stock)			PKR-
Do you know how to maintain daily/ monthly sales and purchase records?			☐Yes ☐ No ☐ Don't Know ☐ Refuse to Answer
Sale and purchase records are available (observatory)			☐Yes ☐ No (if not available, please ask why)
Received financial literacy training			☐Yes ☐ No (if no, please ask why)
Knows about financial literacy			☐Yes ☐ No (if no, please ask why)
Required any further FL or any other training			☐Yes ☐ No (if no, yes specify)
What are the main aspects of your small business that need to be improved?			

Monthly Business Progress					
Description	Starting Month	Second Month	Third Month	Fourth Month	Any other
Monthly Profit in PKR					
Which are the Most Running Items					

8.5.4: Small Rural Enterprise Program: End Term / Project End Assessment Tool

GENERAL INFORMATION			
District		***Tehsil***	
UC		***Village***	
Name of the Beneficiary with Father's name	s/o	***Gender***	
CNIC		***Contact Number***	
Total Family members		***Family Structure***	
Sources of Income Other Than SREP		***Avg. Monthly Income from another source***	
Avg. Monthly Income from SREP		***Total Monthly Income***	
Per capita income			

1. What business are you running currently?

a. Grocery and General Store	☐	b. Nan Shop	☐	c. Clothing & Cosmetic Shop	☐
d. Tailoring Shop	☐	e. Mobile Chicken Shop	☐	f. Cloth and stitching shop	☐
g. Qing Qi Loader Rickshaw	☐	h. Motorcycle Repairing & Spare Parts Shop	☐	i. Mobile Confectionary and Scrap Collection Shop	☐
j. Qing Qi/Loader Rickshaw	☐	k. Blocks/bricks making Business	☐	l. Donkey Cart	☐
m. Any Other Please specify					

2. When did you set up the business? (Month/Year) _____

3. How much was the total grant or value of the initial stock_____

4. What was your contribution to setting up this business? _____

5. Were you doing the same business before OSDI's intervention?

☐ Yes (**If yes, Skip Q 8 to 10; if "no", skip to Q 8)** ☐ No

6. If yes, how much was your monthly earning from this business before OSDI's Intervention?

_____

7. How much Income has been increased due to OSDI's intervention? _____

8. If you were not involved, then what did you do to understand managing your current business?

Got training from OSDI's	☐	Got help from an experienced person	☐	OSDI's field team assisted me	☐
Family members helped me.	☐	Any other	☐	Not Applicable	☐

9. What was your previous source of income if not involved with the current business?

Daily wage Labour	☐	Private Job	☐	Agro Labour	☐
Fishing	☐	Govt. Job	☐	Own small business	☐
Skilled Labour (define skilled labour)	☐	Agriculture-farming	☐	Livestock Farming	☐
Not working	☐	Any other	☐	Not Applicable	☐

10. How much was your monthly income before OSDI's intervention? _____

11. How much were your monthly expenses? _____

12. How were you managing your monthly expenses?

Borrowing loan	☐	Purchasing groceries on credit	☐	Skipping meals to decrease expense	☐
Getting help from relatives or neighbours	☐	Any other			☐

13. What is the current stock value in the shop?	
14. How much is the credit or the receivables from the villages?	
15. How much money do you have in cash on hand?	
16. What is the value of the fixed Asset in your shop?	
17. Details of the Fixed Assets	
18. How much are you earning monthly from this business	
19. How much do you reinvest to increase the business monthly	
20. How much do you save from your monthly income?	
21. Mention the details of the utilization of the profit earned from SREP	
22. No. Of persons employed/hired to run SREP	

23. How are the local villages responding to your business?

Cooperative	☐	Non-Cooperative	☐	Normal	☐
Any other	☐				

24. How satisfied are you with the current condition of the small business?

Very Satisfied	☐	Satisfied	☐	Neutral	☐
Dissatisfied	☐	Very Dissatisfied	☐		☐

25. Which training(s) have you received from OSDI?

Book Keeping	☐	Financial Literacy	☐
Daily selling and purchase record keeping	☐	Any other	

26. Do you need any further training to improve your business skills? Yes ☐ No ☐

27. If yes, explain what type of training you need. _____

28. What challenges are you facing in running the small business?

_____

29. In your opinion, what aspects of SREP need to be improved?

_____

30. Do you have any suggestions for improving SREP income?

_____