Final Evaluation of

SAMMUNATI: Building Climate Adaptive Farming Opportunities and Improved Livelihoods for Women and Marginalized Groups in Nepal

December 2024

NDRI

Practical ACTION

Acknowledgment

Nepal Development Research Institute (NDRI) would like to acknowledge Practical Action Nepal for entrusting us to carry out this study entitled ***"Final Evaluation - SAMMUNATI: Building Climate Adaptive Farming Opportunities and Improved Livelihoods for Women and Marginalized Groups in Nepal"***. I am deeply grateful to Mr. Bhim (Monitoring and Evaluation Manager) Dev Bhatta (Project Manager) and the entire SAMMUNATI project team for their invaluable support, cooperation, and insightful feedback throughout the study process.

I am highly indebted to and sincerely appreciate the outstanding efforts of the study team: Mr. Rajendra Khatri (Team Leader), Dr. Manjeshwori Singh (Gender Equality, Disability, and Social Inclusion), Mr. Ram Prasad Devkota (Research Associate), Ms. Binita Shahi (Research Associate) and Mr. Daya Shrestha (Research Associate) for their dedication and hard work, which were instrumental in the successful execution of this project.

We extend our gratefulness to DECOS-Rolpa for their support and coordination during the entire field visit and data collection process. Their assistance ensured the smooth execution of the research activities at the local level.

We are immensely grateful to all the key informants from Practical Action Nepal, including local government representatives from Dang, Rolpa, and Rukum East districts; project stakeholders such as agro-vets, lead farmers, animal health workers, representatives from banks/financial institutions, and collection centers; as well as people with disabilities and other marginalized groups, for providing their invaluable inputs, perspectives, and information during the study.

Our heartfelt appreciation also goes to the interviewees, including project staff and external stakeholders, for their time and willingness to share their experiences. We would like to extend a special thanks to all the respondents across the eight municipalities for their voluntary participation, which contributed immensely to the success of this evaluation.

Finally, I would like to acknowledge the unwavering support, feedback, and encouragement of the entire NDRI team throughout the duration of this project. Without their collective efforts, this study would not have been possible.

Dr. Shankar Shrestha

Executive Director

Nepal Development Research Institute (NDRI)

Abbreviations

ADS	Agriculture Development Strategy
B2B	Business to Business
CFS	Climate Field School
CIP	Climate Investment Plan
DECOS	Development Concern Society
DID	Disability Inclusive Development
FGDs	Focus Group Discussions
GDP	Gross Domestic Product
GEDSI	Gender Equality, Disability, and Social Inclusion
GESI	Gender Equality and Social Inclusion
INGOs	International Non-Governmental Organizations
IPS	Interbank Payment System
KIIs	Key Informant Interviews
MFIs	Microfinance Institutions
MoALD	Ministry of Agriculture and Livestock Development
NDRI	Nepal Development Research Institute
NGOs	Non-Governmental Organizations
PPM	Participatory Market Mapping
PWDs	Persons with Disabilities
RM	Rural Municipality
SDG	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
UK Aid	United Kingdom Aid
VCA	Value Chain Analysis
WEAI	Women's Empowerment in Agriculture Index

Executive Summary

The *SAMMUNATI: Building Climate Adaptive Farming Opportunities and Improved Livelihoods for Women and Marginalized Groups in Nepal* project, implemented by Practical Action Nepal with the support of UK Aid, aimed to enhance the resilience and livelihoods of women and marginalized communities in the eight municipalities of Dang, Rolpa, and Rukum East districts in Lumbini Province. This final evaluation assesses the project's achievements, effectiveness, and sustainability, providing valuable insights for future initiatives.

The project's key goals were to increase agricultural production, improve market linkages, enhance entrepreneurial capacity, strengthen access to credit, and reduce drudgery while empowering women and marginalized groups. It employed a community-driven approach, focusing on inclusive development by integrating gender equality, social inclusion, and disability (GESI) principles.

Key Findings

Agricultural Productivity and Climate Resilience:

The project successfully promoted climate-adaptive farming practices, leading to increased agricultural production and reduced vulnerability to climate change.

Adoption of agroecological practices, such as crop diversification, organic farming, and climate-resilient seed varieties, was significant among beneficiaries.

Market Linkages and Entrepreneurial Capacity:

The establishment of collection centers and linkages with agro-vets, financial institutions, and local markets enhanced the marketability of farm products, boosting household incomes.

Training on business development and value chain promotion strengthened beneficiaries' entrepreneurial capacity.

Access to Credit:

Partnerships with local financial institutions improved access to microfinance and credit services, enabling farmers to invest in climate-resilient farming technologies and practices.

Participation and Social Inclusion:

Women and marginalized groups reported increased participation in decision-making processes and access to resources, contributing to their socio-economic empowerment.

The project actively involved persons with disabilities (PWDs) and ensured their inclusion in farming and livelihood activities.

Reduction in Drudgery:

The introduction of improved tools and technologies reduced the physical labor required in farming, particularly for women.

WEAI Analysis

The **Women's Empowerment in Agriculture Index (WEAI)** analysis for the SAMMUNATI project highlights significant gender disparities in agricultural involvement and credit access. Only 20.3% of women were considered empowered, compared to 43.7% of men. The Gender Parity Index (GPI) score of 0.911, which captures the percentage of women that are empowered or whose achievements are at least as high as the men in their households, reflects positive gains in achieving gender parity in dual-adult households, albeit with only 29.58% of women achieving gender parity. Key contributors to women's disempowerment include limited access to credit (17.8%) and time poverty (50.9%).

While some improvements in empowerment were observed, the findings underscore the need for targeted interventions to address systemic barriers and promote gender equity in agriculture.

Challenges

- Limited availability of climate-resilient inputs, such as seeds and fertilizers, in remote areas.
- Persistent socio-cultural norms restricting women's full participation in economic activities.
- Difficulty in sustaining market linkages and institutional relationships after the project period.

Key Innovations

- **Inclusive Tools**: Gender-sensitive and disability-friendly farming tools reduced drudgery and improved productivity.
- **Participatory Approaches**: Community involvement in planning and monitoring enhanced ownership and sustainability of interventions.

Broader Implications for Policy and Practice

- The project highlights the importance of integrating GESI principles into national and provincial agricultural policies.
- The scalability of SAMMUNATI's model offers a promising approach for replication in other climate-vulnerable and underserved regions across Nepal.

Recommendations

- Build the capacity of local institutions, including farmer groups and cooperatives, through training and leadership development to ensure long-term sustainability and community ownership.
- Establish a robust system to track beneficiaries' continued use of financial services and assess their economic progress over time.
- Provide mentorship, start-up resources, and market linkages to help beneficiaries transition into employment or entrepreneurship, supported by partnerships with local businesses.
- Strengthen farmer cooperatives for collective bargaining, fair pricing, and direct market connections to reduce reliance on middlemen and mitigate price volatility.
- Prioritize gender transformation by promoting equitable access to resources, decision-making opportunities, and leadership roles for women and marginalized groups. This includes fostering awareness of gender equity at the community level and integrating gender-responsive approaches into local policies and practices.

Conclusion

The SAMMUNATI project has made significant strides in improving the climate resilience and livelihoods of women and marginalized groups in Lumbini Province. By addressing key challenges in agriculture, market access, and financial inclusion, the project laid the foundation for sustainable development. Further efforts are needed to institutionalize these gains and ensure long-term benefits for targeted communities.

This evaluation highlights the transformative potential of integrating GESI-focused approaches in agricultural development and provides a roadmap for future initiatives to achieve inclusive and climate-resilient livelihoods.

Summary Table of Findings based on Log frame

The table below provides a summarized overview of the data collected from the survey, with extrapolated numbers based on the fact that 6,000 beneficiaries were reached by the SAMMUNATI project. For a more detailed analysis and further elaboration on the findings, please refer to the SECTION C: FINDINGS Section of the report.

Impact Indicator 1	**Baseline**	**Endline**	**Percentage Achieved**	**Remarks**
Outcome Indicator 1				
Number of Individuals (representing a household) doubling their annual income	0	6,024 Female: 4,902 Male:1,122 People with disabilities:231 (167 women)	100%	On average, all households doubled their income from agricultural and off-farm activities relative to the average baseline value of NPR. 47,439, once adjusted for inflation. To find out more on one-on-one comparison for each HH surveyed and their income being doubled or not please refer to the main report.
Outcome Indicator 2				
Increase in percentage of gross output value per farm	NPR 38,149	NPR 171,356	296.77%	Percentage of gross output value of a farm in end line = ((c-a)/a)) X100 = 296.77% after adjusting for inflation.
Outcome Indicator 3				
Number of women engaging with local government, influencing policies, and accessing services	0	1,565 women	31.92%	When extrapolated to the total number of women reached by the project—**4,902**—this percentage translates to an estimated 1,565 **women** engaging in such activities.

Number of new climate-resilient varieties and endangered landraces adopted by the farmers	0	6 new climate-resilient varieties		Positive that new climate-resilient varieties have been introduced, information accessed qualitatively and via project documents.
Output Indicator 1.2				
Number of people accessing improved water management services	0	5,874 Female: 4,710 Male:1164 People with disabilities:225 (166 women)	97.51%	Approximately **5,874 people** (rounding the nearest whole number) out of 0.97 beneficiaries would have access to improved water management services. 81 (20%) respondents said they adopted improved irrigation services such as solar pumps, drip irrigation, rainwater harvesting through ponds, and concrete canals.
Output Indicator 1.3				
Number of farmers reporting satisfaction with agri-inputs services	0	5,504 Female:4,480 Male:1,024 People with disabilities:223 (125 women)		Numbers are based on four categories seed, organic fertilizers, chemical fertilizer, and machinery provided through SAMMUNATI project and the levels of satisfaction are assessed on the basis of access, knowledge, quality, quantity, and timely availability. 64.
Output Indicator 2.1				
Number of farmers reporting satisfaction with the market infrastructure	0	4,348 Female:3,538 Male:810 People with	72.17%	Given that the total number of farmers is **6,024**, approximately **4,348 farmers** reported satisfaction with the market infrastructure.

		disabilities:167 (94 women)		
Output Indicator 2.2				
Number of cooperatives/farmers' groups agreeing contracts with traders to sell their produce at agreed volumes/prices	0	18		Accessed qualitatively and via project document.
Output Indicator 3.1				
Number of people with increased literacy, numeracy, and business acumen	0	5,994	99.5%	The numbers provided do not solely represent the beneficiaries, as it is understood that family members, in addition to the beneficiaries, have also participated in the training. Furthermore, it is important to note that each beneficiary may have received more than one type of training in absence of beneficiary unable to take training.
Numeracy Training Off-farm Vocational Training Record/Bookkeeping Training Business Planning Training No Training			66.33% 12.47% 81.30% 47.38% 7.23%	
Output Indicator 3.2				
Number of individuals gaining off-farm vocational skills	0	751 Female: 611 Male: 140 People with disabilities:116(65 women)	12.47%	Based on the information from the survey, approximately **751 beneficiaries** received off-farm vocational training, based on the extrapolation from 6024 total beneficiaries. Although project documents suggest only 518 beneficiaries received off-farm vocational training, it is to be noted that the number 751 is not a sole representation of

				SAMMUNATI but also trainings received through other sectors such as government.
Output Indicator 3.3				
Number of people gaining employment or self-employment after completing training	0	588 Female: 478 Male:110 People with disabilities:116 (65 women)	78.23%	Given that 78.23% of the participants reported starting their own business or becoming self-employed, approximately **588 beneficiaries** could have started their own business or become self-employed after receiving training, based on the extrapolation from 6024 total beneficiaries.
Output Indicator 4.1				
Number of people accessing formal financial services (credit, insurance, and government subsidies)	0	3,745 Female: 3,047 Male: 698 People with disabilities: 147 (82 women)	57.61%	Approximately **3,745 beneficiaries** are accessing formal financial services based on a total of 6,024 project beneficiaries.
Output Indicator 4.2				
Number of new financial products introduced by the FIs responding to the needs of the beneficiary	0	9		Assessed Qualitatively. Baseline values suggest that there were no financial products introduced by FIs responding to the needs of beneficiaries. 3 years down the line, it is observed that financial institutions such as cooperatives have been providing specialized services to women and farmers in general.

Output Indicator 5.1				
Number of women farmers adopting labor-saving devices	0	1,618	33%	Approximately 1,618 women farmers are adopting labor-saving devices based on a total of 4,902 women beneficiaries. The most common use case was during the land preparation and cultivation stage, followed by use during harvest and post-harvest.
Output Indicator 5.2				
Percentage of women empowered from the baseline value	29.3%		49.6%	The values are based on the 5 Domains of Empowerment (5DE) component of the Women's Empowerment in Agriculture Index (WEAI).

WEAI Key Findings

Overall WEAI Score: The overall WEAI score for the study area stands at 0.867, with minor variations across districts. Dang has a slightly higher score of 0.872, Rolpa follows with 0.880, and Rukum East has a score of 0.835. This indicates a relatively high level of empowerment in the study regions, though there is room for improvement, particularly in Rukum East. The WEAI value is a gauge of the state of empowerment and gender parity of women in the agricultural sector.

Empowerment by Gender:

Male Empowerment: The share of empowered men is 43.7%, while 56.3% of men remain disempowered.

Female Empowerment: A significantly lower share of women is empowered, with only 20.3% achieving empowerment. However, the proportion of dimensions in which disempowered women have adequate achievements has improved significantly with a score of 0.826. Taken together, the 5DE score of 0.862 shows that men and women are close to being equally empowered. For a detailed analysis on why the empowerment share of women went down, refer to the WEAI report.

Gender Parity: Only 29.58% of women achieve gender parity, which means they have at least the same level of empowerment as the men in their households. However, the average empowerment gap has gone down. The Gender Parity Index (GPI) score of 0.911 suggests a moderate level of parity, but a gap still exists between men and women.

Evaluation Summary

Criteria	Score	Remarks
Relevancy	**A (Highly Relevant)**	The project aligned closely with the needs of women, marginalized groups, and people with disabilities. It successfully addressed local governance gaps and introduced innovative, inclusive approaches to agricultural practices.
Effectiveness	**B (Effective)**	The project achieved significant improvements in agricultural productivity, women's empowerment, and livelihood resilience. However, pest management and adoption of crop insurance remain areas to strengthen.
Efficiency	**B (Efficient)**	Resources were used effectively, and training strategies were well-implemented. Some inefficiencies were noted in regional disparities (e.g., limited market access in specific areas) and the underutilization of the crop insurance component.
Coherence	**A (Highly Coherent)**	The project demonstrated strong alignment with national frameworks like ADS and GESI, and integration with complementary programs. Coordination issues in some regions, such as Rukum East, need attention.
Impact	**A (Highly Impacted)**	Socio-economic and environmental benefits were notable, including financial inclusion and increased agricultural productivity. Challenges such as pest damage and reliance on external support need to be addressed to maximize impact.
Sustainability	**A (Highly Sustainable)**	Promising long-term sustainability through climate-resilient practices and financial inclusion. Continued focus on strengthening local market linkages and reducing dependency on external inputs will enhance sustainability.
Overall Evaluation	**A (Highly Satisfactory)**	The project delivered strong outcomes and demonstrated high relevance, coherence, and sustainability. A few operational and impact-related challenges remain, but the overall performance is commendable.

Table of Contents

Acknowledgment 2
Abbreviations 3
Executive Summary 4
Summary Table of Findings based on Log frame 6
WEAI Key Findings 10
Evaluation Summary 12
LIST OF FIGURES 15
LIST OF TABLES 16
SECTION A: INTRODUCTION 17
Project Overview 18
Background and Context 18
Project Objective 19
Key Interventions and Activities 20
Evaluation Objectives and Approaches 23
Objectives 23
Approach 23
Sampling Methods 23
Data Collection Methods 24
Data Collection Methods 25
Data Analysis and Reporting Quantitative 27
Reporting 28
Evaluation Quality and Standards 28
Limitations 28
SECTION B: EVALUATION OF SAMMUNATI PROJECT 29
Relevancy 29
Effectiveness 30
Efficiency: 31
Coherence 32
Impact 33
Sustainability 34
Overall Evaluation 35
SECTION C: FINDINGS 36
Demographic Information 36
Outcome 37

Outcome 1: Number of Households/Individuals doubling their annual income 37
Outcome 2: Increase in percentage of gross output per farm 38
Outcome 3: Engagement of Women with Local Government 40
Output 41
Output 1: Increased agriculture production and climate resilience 41
Output 2: Improved Market Linkages.....43
Output 3: Increased Entrepreneurial capacity.....45
Output 4: Increased access to affordable credit and finance.....46
Output 5: Reduced drudgery and increased empowerment 48
Socio Economic Analysis 50
SECTION D: CONCLUSIONS AND LESSONS LEARNED 52
Lessons Learned: 52
Recommendations:.....52
SECTION E: WEAI ANALYSIS.....55
Methodology 55
ANNEX A: DATA AND ATTACHMENTS 64
ANNEX B: REFERENCE TABLES AND CALCULATIONS 65
ANNEX C: CASE STUDIES 68
CASE I Empowering Farmers through the SAMMUNUATI Project: Story of Ram Bahadur Pun 68
CASE II Empowering Local Enterprises through the SAMMUNATI Project: A Story of Lalira Sunar.....69
ANNEX D: PHOTOGRAPHS FROM FIELD.....70

LIST OF FIGURES

Figure 1 SAMMUNATI project sites....18
Figure 2 Saya Patri Multipurpose Farmers Group in Rukum East....20
Figure 3 Market Collection Centre in Putha Uttarganga Rural Municipality....21
Figure 4 Beneficiary with Le- Dabangg, Rolpa with his Log book....21
Figure 5 Digital Finance Poster for awareness....22
Figure 6 Women beneficiary expressing her opinion at a Focused Group Discussion....22
Figure 7 Data collection methods used for the final evaluation....26
Figure 8 Percentage of male and female in the evaluation site....36
Figure 9 Ethnic composition of respondent beneficiaries....36
Figure 10 Number of individuals facing difficulty based on the Washington's Classification 37
Figure 11 Percentage of Women participating in planning, implementation and monitoring with local government, cooperatives....41
Figure 13 Percentage of women who accessed any services from the local government/ financial institutions and cooperatives that are women focused....41
Figure 14 Percentage of people accessing improved water management services....42
Figure 15 Market infrastructure used by beneficiaries....44
Figure 16 Comparison of Number of people with increased literacy, numeracy and business acumen....45
Figure 17 SAMMUNATI supported an off-farm activity in Putha Uttarganga RM....46
Figure 18 Comparison of Baseline-endline for percentage of women farmers that adopted labor saving devices....48
Figure 19 Hand held tractor (Labor Saving Device) provided to farmers under the SAMMUNATI project....48
Figure 20 variables' contribution to a household's total annual income and total gross output value....51
Figure 21 Ram Bahadur Pun....68
Figure 22 Drip Irrigation provided by SAMMUNATI used in the apple farm....68
Figure 23 Shelf storage used by Ram....68
Figure 24 Lalira Sunar of Putha Uttarganga....69
Figure 25 Sprayer bottles provided to beneficiaries....70
Figure 26 Watering cans provided to beneficiaries....70
Figure 27 Sprinkler provided to beneficiaries....70
Figure 28 Sprinkler being used in a field....70
Figure 29 Climate filed school board in Rolpa....71
Figure 30 Agricultural log book maintained by a farmer....71
Figure 31 Vermi compost made by a farmer (learned in farmer's school)....71
Figure 32 KII with local representative of Rolpa....71
Figure 33 Female beneficiaries showing their agricultural log book....71
Figure 34 KII with Project Staff in Putha Uttarganga, Rukum East....71
Figure 35 KII with agro-vet supported by SAMMUNATI project....72
Figure 36 FGD with farmer's group in Rolpa....72
Figure 37 KII with lead farmer and enterprise owner of Rukum East....72
Figure 38 Survey with female beneficiary....72
Figure 39 FGD with farmers group in Rukum East....72
Figure 40 Survey with a female beneficiary in Rolpa....72

LIST OF TABLES

Table 1 Average annual income of beneficiaries at endline- compared to baseline 38
Table 2 Average output from all sources of beneficiaries at endline 40
Table 3 WEAI Score 57
Table 4 the share of disempowered women and men across each indicator, as well as a comparison with baseline values 60
Table 5 Outcome Indicator 1: Number of households /individuals doubling their annual income.....65
Table 6 Output Indicator 1.3: Number of farmers reporting satisfaction to Agri-inputs services 66
Table 7 Qualitative Assessments number summary.....67

SECTION A: INTRODUCTION

Agriculture plays a foundational role in Nepal's economy, employing approximately 57.3%[1] of the population and serving as the primary livelihood source for rural communities.

However, the sector faces significant challenges, particularly for women, marginalized groups, and people living with disabilities, who often have limited access to resources and opportunities. In addition to this, rural households have traditionally relied on subsistence livelihoods, limiting the households to insufficient opportunities in off farm income generating activities. These difficulties are compounded by the impacts of climate change, which threaten food security and the sustainability of traditional farming practices[2].

To address these issues, regenerative agricultural practices are gaining traction, promoting techniques that enhance soil quality, boost productivity, and contribute to environmental health[3]. Interventions such as the use of liquid manure have shown environmental benefits by enriching the soil naturally, reducing the reliance on chemical fertilizers, and improving the overall yield and quality of crops[4].

Agriculture is a vital part of the economy in the Lumbini Province, with its fertile plains supporting the cultivation of rice, wheat, vegetables and fruits. Agriculture accounts for 45.6 percent of the province's Gross Domestic Product (GDP), making it not only the foundation of livelihoods but also a priority sector for economic development. Due to its geographical diversity and infrastructure development potential, the province holds substantial possibilities for prosperity through agricultural development[5]. The province has achieved self-sufficiency in food production, producing around 2.51 million tonnes of food annually, resulting in a surplus of 445,000 tonnes. This success is largely attributed to the adoption of commercial farming practices, modern agricultural technologies, and the active involvement of the private sector and cooperatives. However, challenges remain, as 52% of households still experience food insecurity, largely due to unequal food distribution.[6] Additionally, climate change is putting pressure on agricultural productivity and reducing land availability.

Recent projects in regions like Lumbini Province have demonstrated that adopting these practices not only enhances profitability for local farmers but also contributes to resilient, climate-adaptive agricultural systems[7]. Improved soil quality from these interventions leads to increased production, setting a precedent for widespread adoption of sustainable farming practices across the country.

[1] Agriculture and Livestock Diary , MoALD 2081
[2] Statement on the State of the Global Climate, WMO 2023
[3] Regenerative Farming, Practical Action
[4] Turn the Table on Climate Change in Nepal, Practical Action
[5] MoALD, Lumbini Province Government
[6] Lumbini is self-sufficient in food production, The Kathmandu Post, 15th November 2024
[7] CIP-Lumbini.pdf,

Project Overview

Project Title: SAMUNNATI – Building Climate Adaptive Farming opportunities and improved livelihoods for women and marginalized groups in Nepal

Project Duration: January 2022 - December 2024 (3 years)
Project Location: Dang, Rolpa, and Rukum East districts, Lumbini Province, Nepal
Donor: UK Aid
Implemented By: Practical Action in partnership with DECOS

Background and Context

Agriculture is a central pillar of Nepal's economy, providing livelihoods for a large portion of the population, particularly in rural areas. However, farmers, especially women, marginalized groups, and people living with disabilities, face significant challenges related to limited access to resources, social norms, and infrastructure. These issues are compounded by climate change, which increasingly threatens food security, agricultural productivity, and community resilience in rural regions. In particular, the districts of Rolpa, Rukum East, and Dang, located in the hilly and poorly connected areas of Lumbini Province, face high levels of poverty, marginalization, and limited access to economic opportunities. Social and cultural barriers often hinder women's participation in economic activities, with only 4% of women in Rukum district having access

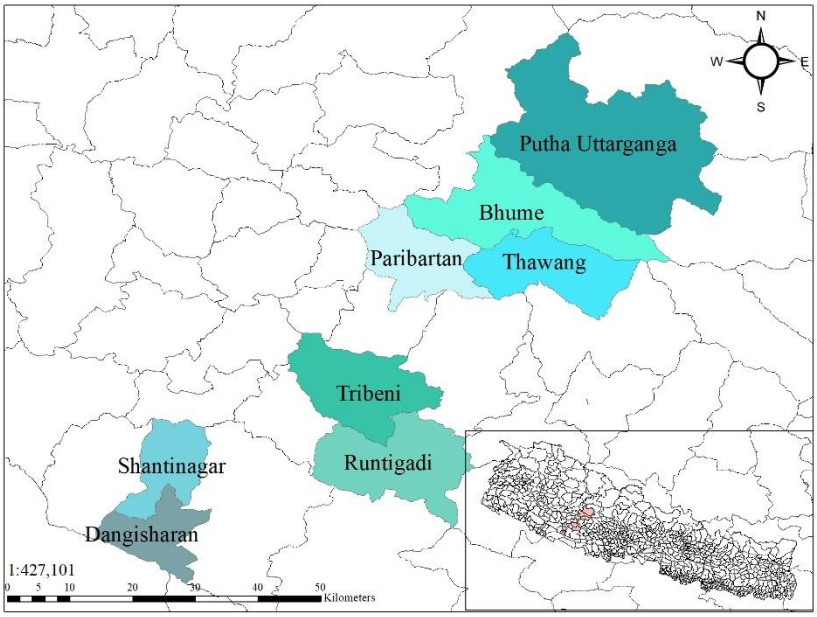


Figure 1 SAMMUNATI project sites

to savings accounts. Given these challenges, there is a pressing need for targeted interventions that can build resilience, improve livelihoods, and promote social and economic empowerment.

Project Objective

The **SAMUNNATI project** seeks to enhance the climate resilience and socio-economic empowerment of vulnerable populations—particularly women, marginalized groups, and persons with disabilities—by promoting sustainable and market-oriented agricultural practices. The project aims to improve the livelihoods of 6,024 individuals in the target districts through the adoption of climate-resilient farming techniques and the creation of off-farm employment opportunities.

The project supports key agricultural value chains such as vegetables, dairy, goat farming, walnuts, and mandarins, which are critical to the local economies in the targeted districts. Through a comprehensive approach, the project integrates climate resilience, market system development, and social inclusion, with a strong focus on gender equality and disability inclusion (GESI).

Alignment with Sustainable Development Goals (SDGs)

SAMUNNATI contributes to Nepal's commitment to achieving **Sustainable Development Goal 1** (SDG 1), which aims to reduce extreme poverty to less than 5% by 2030. The project is designed to align with Nepal's national strategies for poverty reduction, sustainable agriculture, gender equality, and climate resilience. The project also touches base on SDG 8: Decent Working and economic growth and SDG 17: Partnership for the Goals too.

Key Interventions and Activities

The major expected results of the project along with the activities are listed below:

Expected Result (ER-1): Increased Agricultural Production and Climate Resilience

- **Climate Field Schools (CFS)**: Establishment of 224 CFS, reaching 6,013 direct beneficiaries (4,894 women), demonstrating agroecological and regenerative agricultural practices. Climate-adaptive technologies, such as climate-resilient crop varieties, soil management techniques, and irrigation services, were incorporated into the training. Farmers were also trained on record-keeping, proper crop spacing, and experimenting with diverse vegetable seed varieties. These practices, replicated by member farmers, contributed significantly to improving agricultural productivity within the communities.

Figure 2 Saya Patri Multipurpose Farmers Group in Rukum East

- **Irrigation and Water Management**: Construction of 79 irrigation schemes to enhance water access for agriculture.
- **Vulnerability and Capacity Assessment (VCA)**: Use of VCA tools to build awareness of climate change impacts and the development of climate-adaptive plans by local communities.
- **Provision of Inputs**: Support for lead and member farmers with inputs such as seeds, spray tanks, and plastic tunnels to implement climate-adaptive practices.

These results highlight the tangible achievements of the project in improving climate resilience and agricultural production. The results mentioned here are actual achievements, not planned targets, and they reflect the direct impact of the interventions implemented during the project.

Expected Result (ER-2): Improved Market System Development

The project adopted a Participatory Market System Development (PMSD) approach, guided by Practical Action's PMSD Toolkit. This approach was grounded in four key principles—systems thinking, facilitation, participation, and gender—and tailors its application to the specific context of the implementation areas. The following key activities highlight the project's achievements in market system development:

- **Participatory Market Mapping (PMM)**: Conducting workshops to identify market constraints and opportunities, leading to the formation of market coordination committees in rural municipalities.
- **Business-to-Business (B2B) Linkages**: Organizing business interaction meetings between farmers, cooperatives, and market actors to establish direct sales channels for vegetables.

- **Market Centers and Infrastructure**: Upgrading 13 market collection centers and 5 dairy collection centers, providing platforms for farmers to access local and regional markets.
- **Market Literacy**: Providing training to farmers, especially women, in negotiation skills and market literacy to enhance their ability to engage with traders and secure fair prices.

Through these activities, the project has created a robust market system that enhances agricultural value chains, improves access to regional markets, and empowers women to actively engage in economic activities. These interventions reflect the project's commitment to fostering sustainable, inclusive, and gender-responsive market systems.

Figure 3 Market Collection Centre in Putha Uttarganga Rural Municipality

Expected Result (ER-3):Increased Entrepreneurship

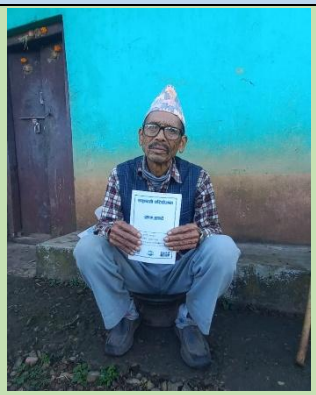


Figure 4 Beneficiary with Le- Dabangg, Rolpa with his Log book

The project's entrepreneurial skills development approach emphasizes enterprise development, particularly energy-based enterprises, to enhance livelihoods and economic resilience. Key interventions and outcomes include:

- **Orientation on Record Keeping and Business Literacy:** A total of 6,013 community members (4,894 women) participated in business literacy and record-keeping orientations conducted across 224 Climate Field Schools. Participants were guided on maintaining records of investments and income for five key sub-sectors: vegetable farming, goat rearing, dairy production, mandarin cultivation, and walnut production.
- **Enterprise Development**: Training 502 entrepreneurs in business plan development, entrepreneurship skills, leadership, and marketing strategies.
- **Vocational Skills**: Providing vocational training to 507 individuals (404 women), with 491 individuals (393 women) securing employment or becoming self-employed after training.

Expected Result (ER-4): Increased Access to Affordable Finance

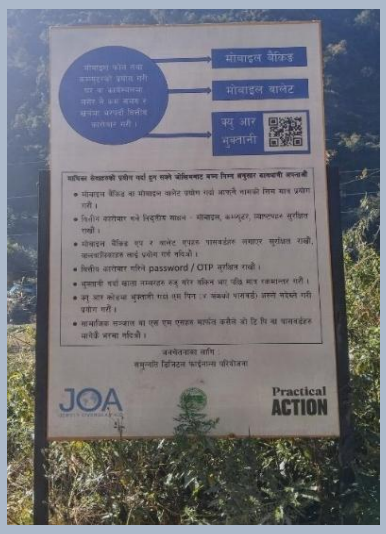


Figure 5 Digital Finance Poster for awareness

The project's key approach under affordable finance focuses on promoting financial inclusion, particularly for women and marginalized groups. Key activities and achievements include**:**

- **Assessment of Financial Landscape and Barriers:** An in-depth assessment of the financial and digital financial landscape was conducted to identify barriers faced by women and marginalized groups in accessing financial services.
- **Financial Inclusion Financial Literacy and Linkages**: Providing financial literacy training to farmers and facilitating connections with cooperatives, microfinance institutions (MFIs), and banks through matchmaking events.
- **Insurance Services**: Training 19 insurance agents to provide crop and livestock insurance services, with 254 farmers enrolled in insurance schemes.
- **Development of Financial Products**: Facilitating the development and piloting of 19 financial products across 7 cooperatives to meet the specific financial needs of farmers.

Expected Result (ER-5): Reduced drudgery and Increased Empowerment

The interventions focus on empowering women and promoting gender equality, disability inclusion, and social inclusion. Key activities and outcomes include**:**

Figure 6 Women beneficiary expressing her opinion at a Focused Group Discussion

- **Gender-Transformative Approaches**: Prioritizing gender equality and social inclusion, including distributing 663 labor-saving devices to reduce women's drudgery in agriculture.
- **Empowerment and Leadership**: Conducting awareness-raising events and capacity-building training to transform gender roles, build women's agencies, and encourage leadership in agriculture and community development.
- **Disability-Inclusive Development**: Conducting Disability Inclusive Development (DID) training for project staff, supporting the formation of a network of people with disabilities, and advocating for inclusive policies and programs.

Evaluation Objectives and Approaches

Objectives

The purpose of the evaluation, as mentioned in the Terms of References (TOR) was as follows:

- To measure and evaluate the results (overall progress against the log frame indicators) of the project using the six OECD/DAC evaluation criteria (relevance, effectiveness, impact, coherence, efficiency, and sustainability) to promote accountability to stakeholders.
- To extract lessons learned and prepare recommendations to enhance the design, implementation, operation, and management of similar future projects.

The specific objectives of the evaluation were:

- Develop an evaluation matrix with evaluation criteria, the related evaluation questions (and, where needed, sub-questions), the data sources required to answer the questions, the data collection, and data analysis methods.
- Relevancy: Appropriateness of the project strategy to the actual needs and priorities of the target groups/beneficiaries taking into account the circumstances.
- Effectiveness: Contribution of the project results to the achievement of the project objectives.
- Efficiency: Measures the outputs - qualitative and quantitative - in relation to the inputs.
- Coherence: Assess how well the project's activities and strategies are coordinated with other relevant initiatives and programs. Evaluate the integration and synergy of the project with broader policies and frameworks.
- Impact: The positive and negative changes produced by the project, directly or indirectly, intended, or unintended. Main effects resulting from the project on the local social, economic, environmental, and other development indicators
- Sustainability: Analyze to what extent the effects and results of the project are likely to last beyond its implementation period.

Overall evaluative conclusion (integration of five evaluation results).

The evaluation was independently conducted by the Nepal Development Research Institute (NDRI) and conceptualized through the development of an inception report.

Approach

To answer the evaluation criteria, a mixed method approach was applied with individual survey representing quantitative component and focus group discussions, key informant interviews, in-depth interviews among people with disabilities, case study, direct observations forming the qualitative components.

The mixed methods approach (hybrid form) of the convergent parallel design enabled evaluators to obtain different, but complementary quantitative and qualitative data. Data was analyzed separately, and then merged, in order to best understand the findings and convergence in data at outcome level. This design used different groups of people from both the qualitative and quantitative study based on the data collection methodology in the program monitoring and evaluation plan.

Sampling Methods

For the **quantitative data**, a stratified random sampling approach was used to ensure the representation of diverse groups and to capture variability across the **8** targeted rural

municipalities in Dang, Rolpa, and Rukum East districts. The study focused on **6,024** project beneficiaries, including women, marginalized groups, and people living with disabilities, as the primary population. A detailed list of beneficiaries provided by the project team served as the sample frame, ensuring the inclusion of individuals from all relevant sub-groups and geographical areas. To account for the socio-economic and geographic diversity of the project area, stratification was conducted based on district and rural municipality. Specific focus was given to the representation of women, marginalized groups, and people with disabilities, reflecting the project's emphasis on gender equality, equity, and social inclusion. A statistically significant sample size was calculated to ensure robust findings. The sample size was determined using a **95%** confidence level and a **5%** margin of error, adjusted for the total population of project beneficiaries. A buffer (non-response rate) of **10%** was added to account for non-response or incomplete surveys. The total sample frame was **401 direct beneficiaries** of the project. Within each stratum, random sampling was applied to select participants. This method minimized bias and ensured that everyone within a stratum had an equal chance of being included in the study. For a detailed questionnaire on the individual beneficiary survey please refer to ANNEX A.

The **Women's Empowerment in Agriculture Index (WEAI)** assessment was conducted with a sample of **71 women/men beneficiaries** selected through **purposive sampling** to ensure representation of households actively engaged in agricultural activities within the SAMMUNATI project areas. The sampling aimed to capture data on women's empowerment across key domains such as decision-making, resource control, income autonomy, and leadership roles. This approach ensured insights into gender dynamics and the project's impact on women's empowerment in agriculture. For a detailed questionnaire on WEAI assessment please refer to ANNEX A.

Qualitative Sampling

Information that couldn't be captured through the quantitative was collected using **qualitative methods.** The study utilizes tools and techniques such as **Focus Group Discussions (FGDs)** engaging a small group of target respondents in discussions to gather diverse perspectives on the project's successes and challenges, **Key Informant Interviews (KIIs)** to gain in-depth insights into the project outcomes, case studies to analyze specific examples of the project in detail to highlight lessons learned or significant outcomes and observations to assess the physical progress and real-time implementation of the project. In-depth interviews were also conducted among the people with disabilities. The detailed list of groups and individuals interviewed can be viewed in Data Collection Methods

Conducting in-depth interviews with people with disabilities offers several benefits and challenges:

Benefits:

1. **Rich, Detailed Insights**: In-depth interviews allow for a deeper understanding of the unique experiences and perspectives of individuals with disabilities. This can lead to more nuanced and comprehensive data.
2. **Tailored Solutions**: The detailed information gathered can help in designing more effective and inclusive policies, programs, and services that better meet the needs of people with disabilities

.

Challenges:

1. **Accessibility**: Ensuring that the interview process is fully accessible can be challenging. This includes providing appropriate accommodations such as sign language interpreters, accessible locations, or assistive technologies.
2. **Time and Resources**: In-depth interviews are time-consuming and resource-intensive. They require significant planning, especially when accommodating various disabilities

The sampling approach for the SAMUNNATI project evaluation was designed to ensure inclusivity and representativeness across diverse stakeholder groups and project locations. By combining random sampling for individual surveys with purposive and quota sampling for qualitative methods, the evaluation captured both quantitative measures of project impact and qualitative insights into its effectiveness and sustainability. and for the checklist for qualitative assessment please refer to ANNEX A.

Data Collection Methods

The sampling approach for the SAMUNNATI project evaluation was designed to ensure inclusivity and representativeness across diverse stakeholder groups and project locations. By combining random sampling for individual surveys with purposive and quota sampling for qualitative methods, the evaluation captured both quantitative measures of project impact and qualitative insights into its effectiveness and sustainability.

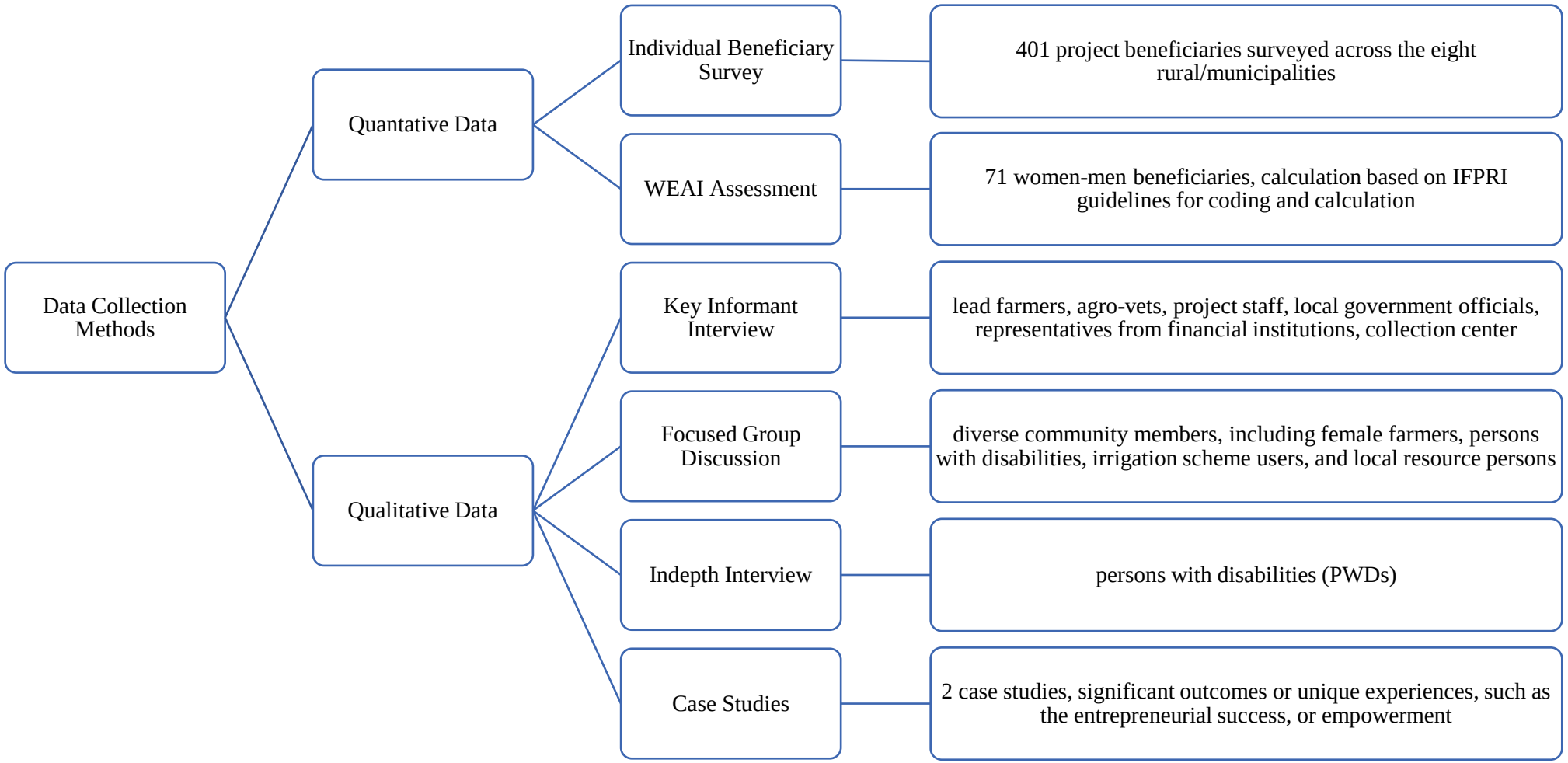


Figure 7 Data collection methods used for the final evaluation

Data Analysis and Reporting Quantitative

The quantitative data for the SAMMUNATI project was initially collected through the **Kobo Toolbox** platform, a widely used open-source tool designed for data collection in field settings. This tool facilitated the efficient and systematic gathering of data from the beneficiaries across various regions, ensuring a robust and comprehensive dataset.

Data Collection Process:

- **Survey Design**: The survey was carefully designed to capture relevant data points related to the project's objectives, focusing on key indicators such as agricultural input usage, satisfaction with services, and the adoption of labor-saving devices.
- **Data Entry**: The data was directly entered into Kobo Toolbox through mobile devices and tablets, which ensured accuracy and reduced errors that could occur during manual data entry.
- **Survey Implementation**: Field enumerators conducted surveys among beneficiaries across the targeted project areas, ensuring that a diverse and representative sample of participants was reached.

Data Cleaning and Processing:

Once the data was collected through Kobo Toolbox, it was exported into a format suitable for analysis (e.g., Excel or CSV). The following steps were undertaken:

- **Data Cleaning**: The raw dataset was thoroughly checked for inconsistencies, outliers, and missing data. Any identified errors were corrected or addressed to maintain data integrity.
- **Data Validation**: Logical checks were performed to ensure that the responses were consistent and met the expected criteria.
- **Categorization and Transformation**: Data values were categorized and transformed as needed to facilitate analysis. For example, responses for satisfaction levels (e.g., "agree" or "fully agree") were coded into numerical values for statistical analysis.

Data Analysis: The quantitative survey data was analyzed using Stata. All treatment data points, and beneficiary characteristics were categorized as dummy variables through which frequency shares were generated. All calculations for the output and outcome indicators were performed according to the project's log frame. Calculations for total gross output value of different product categories were done by winsorizing price, production, and consumption data at the top 10 percent to account for the significant outliers influencing the overall average. Baseline monetary values were adjusted for inflation using the latest regional Consumer Price Index published by the central bank, Nepal Rastra Bank.

T-tests were used to statistically establish whether beneficiaries doubled their total annual incomes over the project duration. Standard multivariate regression models helped determine statistically significant interventions that contributed to beneficiary incomes and gross output values. The regressions were also used to understand what sociodemographic characteristics made the most impact in beneficiary outcomes. Linear probability regressions were used where the outcome variable was a binary value.

Reporting

The analysis results were compiled into detailed reports, which were structured to provide a comprehensive overview of the data findings. The reports included:

- **Summary of Findings**: Key insights and trends were highlighted, such as the percentage of farmers satisfied with agri-input services or the number of women adopting labor-saving devices.
- **Graphs and Visualizations**: Visual aids, such as bar charts, pie charts, and tables, were used to present data in a clear and understandable format.
- **Extrapolated Data**: The findings were extrapolated to the total beneficiary population (6,024 beneficiaries, 4,902 of which were women) to estimate the broader impact of the project.
- **Recommendations**: Based on the analysis, recommendations were made for improving project implementation, addressing gaps, and enhancing the overall impact of the interventions.

The project team was able to produce actionable insights that would guide future efforts and improve the effectiveness of the SAMMUNATI project

Evaluation Quality and Standards

The evaluation of the SAMMUNATI project adhered to the **OECD-DAC criteria**, ensuring quality, credibility, and alignment with international standards. These criteria provided a comprehensive framework to assess the project's relevance, effectiveness, efficiency, impact, and sustainability. By using the OECD-DAC criteria, the evaluation-maintained transparency and accountability while providing actionable recommendations for improving future projects. Special attention was also given to cross-cutting issues such as gender equity, social inclusion, and disability considerations to ensure the findings were inclusive and holistic.

Limitations

The survey sampling strategy for a final evaluation does not capture the true before and aftereffects of the project's interventions. In an ideal scenario, the same beneficiary households that were evaluated during the baseline should have been evaluated in the endline. This would have enabled an exact before-after comparison. The program's impact assessment is limited to an average effect across all outcome indicators. Additionally, the choice of dual-member households for the WEAI survey focused solely on male beneficiaries, which meant that the impact of empowerment and gender-specific training was not captured for female-beneficiary households.

SECTION B: EVALUATION OF SAMMUNATI PROJECT

Relevancy

Score: A (Highly Relevant)

Relevancy *in the context of project evaluation refers to the extent to which a project's objectives, strategies, and activities align with the needs, priorities, and circumstances of its target beneficiaries, stakeholders, and the broader socio-economic or environmental context.*

The SAMMUNATI project demonstrated strong relevancy by addressing the specific needs and priorities of farmers, especially women, marginalized groups, and people with disabilities. Feedback from beneficiaries consistently confirmed that the project catered to their requirements. Families of individuals with disabilities expressed appreciation for the attention given to their disabled members, showcasing the project's inclusive approach. The strategy employed by Practical Action was well-aligned with community needs, incorporating dimensions of gender, ethnicity, and religious minority representation.

The project was particularly relevant in building climate-resilient livelihoods for the beneficiaries. Farmers found the introduction of new technologies, such as digital literacy, record-keeping, and labor-saving devices, to be highly useful and applicable. Beneficiaries highlighted the value of off-farm vocational training, which enabled them to earn income and improve their overall livelihoods.

Lead farmers noted improvements in soil productivity through the use of organic fertilizers, aligning with the project's focus on sustainable agricultural practices. However, they also mentioned challenges, such as the time-intensive nature of organic fertilizer production compared to chemical fertilizers, which some farmers continued to use for convenience. This feedback reflects the practical realities faced by farmers, emphasizing the importance of balancing sustainability with feasibility.

The project's support for animal health workers and agro-vets also addressed relevant gaps in local capacity, providing training and resources to enhance their services. Enterprise owners appreciated the project's efforts to provide targeted support, market linkages, and skill-building, which directly aligned with their needs for business growth.

> *We have collaborated with various NGOs and INGOs, and through my work and observation in the community, I found the SAMMUNATI project to be very relevant to the needs of the community people. The project lasted only three years; I wish it had continued longer. I had always envisioned an "**Organic Municipality**". If the project had been extended, we could have declared our municipality as an organic municipality along with the SAMMUNATI project.*
>
> ***-Suk Bahadur Budha Magar, Chairperson,***
>
> ***Paribartan Rural Municipality, Rolpa***

Local representatives highlighted the project's critical role in addressing gaps that local governments could not fully address, such as reaching underserved populations and promoting sustainable practices.

The project's efforts to promote crop and livestock insurance further addressed the financial vulnerability of beneficiaries, even though initial adoption was low. By the project's conclusion, more beneficiaries began ensuring livestock, and financial institutions observed

increased engagement from cooperative members. This indicates that SAMMUNATI successfully aligned with the broader goal of financial inclusion and resilience.

Regarding support for people with disabilities (PWDs), the project placed a strong emphasis on inclusivity. Families with PWDs were prioritized during beneficiary selection to ensure equitable access to resources and opportunities. These households, largely supported by the implementing partner DECOS, were provided with tailored interventions, such as water management facilities and active inclusion in decision-making processes. Beneficiaries from such households were also engaged in community discussions and project activities, ensuring their needs and perspectives were addressed.

The project's inclusive approach, guided by insights from the WEAI tool, extended beyond participation by implementing targeted interventions such as labor-saving devices, sensitization events to challenge social norms, and capacity-building for marginalized groups, including people with disabilities (PWD), who were supported through Disability Inclusive Development training, collaboration with DECN, and the formation of advocacy networks to ensure their needs were integrated into local policies and programs.

Overall, SAMMUNATI's strategy was highly relevant, focusing on the community's actual needs and priorities. The project's integration of sustainable livelihoods, inclusion of marginalized groups, and capacity-building efforts demonstrated its alignment with the unique socio-economic and environmental challenges faced by the beneficiaries. The impacts of the project interventions are still in the early stages of implementation, so it will take some time to fully understand their effects. However, the initial indications suggest that the interventions are having a positive impact.

Score: B (Effective)

Effectiveness *in project evaluation refers to the degree to which a project achieves its intended objectives and produces the desired outcomes.*

The SAMMUNATI project has demonstrated significant effectiveness in enhancing agricultural productivity, improving market access, and empowering farmers, particularly women, in the targeted areas of Dang, Rolpa, and Rukum. Farmers reported improved soil quality through the use of organic fertilizers, which has resulted in higher crop yields, particularly in vegetables like potatoes and cash crops. While some farmers consume most of their produce, others have achieved substantial profits, with examples of individual farmers earning up to Rs. 40,000 from tomato and cauliflower farming.

The project successfully introduced modern technologies, organic fertilizers, and record-keeping practices, which were widely adopted by farmers. Improved market linkages, particularly through Haat bazaars, have enabled farmers to secure fair prices for their products, with vegetables now being sold at double the previous rates in some cases. Farmers highlighted the use of grading and video calls for quality verification, allowing them to negotiate better deals with traders. However, challenges persist in Rukum, where the lack of market structure forces farmers to find customers individually, resulting in price inconsistencies.

It is understood that 9 new financial products have been introduced in the project area, despite the new financial products being introduced it is observed that not many beneficiaries know about these products. It further goes to show how much more work needs to be done to further enhance the expected outcome 4 of the project. Financial inclusion has been another area of success. Farmers now access loans easily through cooperatives and microfinance institutions without discrimination, enabling investments in agriculture. Despite this progress, self-employment has increased, but creating jobs for others remains limited.

Earlier the farmers would not keep records of their expenses, production and income but now, they have started keeping records of all expenses and incomes from start to end, which I think is the best outcome of the project.

Sarita KC, Vice Chairman

Runtigadi Rural Municipality, Rolpa

Project documents show that 19 insurance agents were trained for catered insurance packages, as it has only been 3 years into the project, the outcome of these catered loan programs are expected to be visible in the coming years. Women's empowerment through GEDSI training has strengthened their decision-making roles within communities, while financial institutions and cooperatives have played a critical role in supporting farmers.

Livestock insurance is available in Rolpa, but crop insurance and broader services are yet to be widely implemented, despite willingness from insurance agents to expand their offerings. *Haat Bazaars* have become essential hubs for coordination, providing platforms for traders and farmers to negotiate prices, compare rates with neighboring markets, and discuss production strategies before planting seasons. Approximately 17–18 vehicles of vegetables are sold weekly in Dangisaran of Dang, reflecting increased production and market engagement. Overall, the SAMMUNATI project has effectively supported farmers in improving their livelihoods through enhanced agricultural practices, better market access, financial inclusion, and community empowerment. However, challenges like pest damage, limited crop insurance, and market structure gaps in Rukum East remain areas for further improvement. **87% of respondents** observed a reduction in gender-based violence in their community. **83% (331 respondents, including 274 women)** reported increased participation in leadership and decision-making roles within their community

Efficiency:

Score: B (Efficient)

The SAMMUNATI project demonstrates a commendable level of efficiency in its implementation and delivery of outputs. Below is an analysis of the project's efficiency based on input utilization, activity execution, and cost-effectiveness: Farmers and community members noted a significant increase in agricultural yield, indicating the effective utilization of project inputs. The adoption of new technologies, such as logbook keeping and labor-sharing devices, has positively impacted farmers' livelihoods by saving time, energy, and resources.

***Efficiency** refers to the ability of a project or initiative to achieve its outputs or results using the least number of resources (such as time, money, and effort).*

It is understood that although no formal written agreements were established between farmers and traders, the establishment of market collection centers has provided an effective platform for farmers to sell their produce and benefit from market linkages. Project documents show that **18 cooperatives/farmer groups**—comprising 12 market management committees/cooperatives and 6 dairy cooperatives—have entered into informal agreements with traders and private sector actors. It would be beneficial for these bodies to enter a formal contract ensuring the farmers have an effective system for business. The project adopted a **top-down approach** to training, where lead farmers, after receiving training, provided knowledge transfer to community members, ensuring efficient dissemination of skills. A **bottom-up approach** was utilized to identify and address the needs of farmer beneficiaries, ensuring that

activities were aligned with the community's requirements and priorities. Project staff paid close attention to the needs of farmers, communities, and marginalized groups, implementing activities in an inclusive manner that reflects the principle of "leave no one behind." This approach demonstrates a strong alignment with planned objectives. Budget utilization has been optimal, with significant outcomes achieved in terms of improving market linkages, providing training, and enhancing digital literacy among beneficiaries. However, certain components, such as the insurance section of the project, may require more time to show tangible results. The digital literacy initiative has enabled beneficiaries to gain awareness of financial products, including loans, interest rates, and insurance coverage. Concurrently, insurance agents were trained to introduce unique financial products, marking an important step in financial inclusion.

Regional Disparities

Market collection centers in Dang and Rolpa were highly active and benefited enterprise owners, creating self-employment opportunities. However, Rukum East experienced limited penetration of market collection centers, likely due to challenging terrain and landscape. This regional disparity highlights an area where efficiency could be further improved. The SAMMUNATI project has successfully converted its inputs into outputs and delivered activities in a manner aligned with plans, with some areas for improvement. While the project's overall implementation has been efficient, regional disparities in market linkage activities and the underutilization of the insurance component suggest there is scope for enhanced operational strategies to ensure even greater efficiency.

Coherence

Score: A (Highly Coherent)

The SAMMUNATI project demonstrates strong coherence in aligning its activities and strategies with other relevant initiatives, programs, and broader policy frameworks.

***Coherence** in the context of project evaluations refers to the extent to which a project's activities, strategies, and objectives align and coordinate with broader policies, frameworks, and other relevant programs or initiatives.*

Alignment with National Policies and Frameworks

The project aligns with Nepal's broader agricultural development and rural livelihood enhancement policies, including **Agriculture Development Strategy (ADS) and Gender Equality and Social Inclusion (GESI) Framework.** By improving agricultural yields, market linkages, and the adoption of modern farming techniques, the project supports the ADS goals of increased productivity, commercialization, and competitiveness in agriculture. The project's focus on empowering women through GEDSI training and decision-making aligns with Nepal's policy objectives of social inclusion and gender equity.

The project complements various other initiatives aimed at improving rural livelihoods and resilience, including financial inclusion programs by providing access to loans and introducing beneficiaries to financial products like insurance. Programs promoting modern agricultural practices and technologies. The use of grading, labor-sharing devices, and market collection centers complements efforts by the government and NGOs to modernize agriculture in Nepal.

The project's approach to engaging local cooperatives, market centers, and community-level stakeholders reflects strong local coordination. For instance, the establishment of market collection centers in Dang and Rolpa provided platforms for coordination between farmers and traders. However, there is limited coordination in **Rukum East**, where market collection centers have not been successfully established due to geographical challenges. This limits the synergy of the project in that region compared to others. Another instance despite the alignment

between local government insurance policies and cooperative insurance packages for livestock and crop insurance, the uptake of these insurance options has yet to be observed. The efforts to facilitate the process for easier uptake is being coordinated by the project team concurrently.

The project integrated well with existing agricultural structures, such as cooperatives and financial institutions. For example: Financial literacy efforts helped beneficiaries understand loans, interest rates, and insurance products, complementing government financial inclusion strategies.

Nonetheless, **insurance coverage** remains a weakness. While livestock insurance is available, crop insurance and other innovative financial products are not yet fully integrated, which weakens the project's coherence in addressing farmers' broader risks and needs.

Challenges in Coordination and Synergy include the absence of formal agreements between farmers and traders, though partially mitigated by market collection centers, highlighting a need for better institutional coordination. Challenges that come along with the terrain in Rukum East also hindered the project's ability to integrate with broader market-focused initiatives in the region.

The SAMMUNATI project has effectively aligned with national policies and other initiatives, particularly in financial inclusion, modern agriculture, and market linkages. However, gaps in geographic reach, formal coordination mechanisms, and insurance integration highlight areas for improvement. The project is coherent in its strategy and implementation but would benefit from stronger integration in regions like Rukum East and deeper synergy with insurance schemes to address farmers' broader needs more comprehensively.

Impact

Score: A (Highly Impacted)

The SAMMUNATI project has made substantial contributions to improving the socio-economic and environmental well-being of the communities. While some limitations remain, the overall changes brought about by the project are profound and sustainable.

Impact *refers to the long-term, significant changes—positive or negative, intended or unintended—that a project contributes to in the lives of its beneficiaries, communities, and stakeholders.*

Beneficiaries reported visible improvements in soil fertility and crop health due to the adoption of sustainable practices promoted by the project, such as organic composting and improved seed varieties. The introduction of climate-resilient crop varieties and improved farming techniques resulted in increased crop yields for many farmers. Farmers found the introduced technologies (e.g., water-saving irrigation, labor-saving devices) user-friendly and contextually appropriate. Many stated that they have adapted these practices in their fields, influencing neighboring communities to adopt similar approaches. Beneficiaries confirmed that project interventions, such as the provision of training on improved seeds, sustainable farming practices, and distribution of water schemes and farmer field schools (CFS) enhanced their capacity to withstand climate shocks.

Increased crop yields and diversified income sources (e.g., vocational training, livestock rearing) have led to an increase in household income in most cases. Established market linkages and negotiated contracts with traders have enabled cooperatives to sell produce at fair and agreed-upon prices. Collection centers and B2B agreements have streamlined the supply chain. Beneficiaries are now maintaining detailed records of production, sales, and expenses, which has enhanced their financial literacy and transparency in household budgeting. Off-farm

vocational training programs provided alternative income opportunities, with participants reporting job creation or self-employment, particularly in tailoring, agro-processing, and small-scale enterprises. Increased use of savings products, agro-loans, and crop insurance among beneficiaries, particularly marginalized groups. Financial literacy training has encouraged many women to access formal financial services

> *This project has helped a lot to women, marginalized groups, or people with disabilities. Even we both husband and wife are disable. I have seen other disable people as well who has received support and help from SAMMUNATI.*
> *-Owner of Mairaj Maccha Palan tatha Cheu Kheti,*
> *Dangisaran, Dang, Lumbini*

GEDSI training has increased women's participation in decision-making processes within cooperatives and local government, as well as in household budgeting and resource management. Labor-sharing devices reduced women's workload and drudgery, providing more time for productive activities. Women and people with disabilities are seen as role models within their communities, with increased respect and visibility due to their enhanced skills and participation in governance.

Beneficiaries have access to tailored financial products introduced by the project, including crop insurance, livestock insurance, and digital finance options (mobile banking, Krishi cards). Some beneficiaries highlighted limited digital literacy and low awareness about insurance claims as areas requiring further attention. The project worked closely with local governments to align with their priorities, ensuring coherence with national policies and SDGs. Local government officials confirmed that SAMMUNATI contributed to improving access to services, such as irrigation and agro-inputs, and promoted gender equity in planning and decision-making.

The SAMMUNATI project has achieved substantial impacts in agriculture, livelihoods, gender inclusion, and resilience to climate change.

Sustainability

Score: A (Highly Sustainable)

The project closely collaborated with local governments to align interventions with existing policies and priorities. This partnership has increased the likelihood of government support for scaling and sustaining project activities, such as cooperative support and infrastructure maintenance.

Sustainability *refers to the ability of a project's outcomes, benefits, and processes to continue and thrive beyond the completion of the project, without ongoing external financial, technical, or institutional support.*

Involvement of local representatives in training beneficiaries and stakeholders on inclusive planning and climate-resilient agriculture ensures the continuation of best practices beyond the project timeline. It is also assessed that 100% of the households have doubled their income.

Strengthened farmer cooperatives are now functioning independently, providing members with access to inputs, financial services, and markets. The establishment of savings groups and agro-enterprises ensures ongoing economic benefits for participants. At the same time, beneficiaries have demonstrated strong ownership of project interventions, such as adopting climate-resilient farming practices and managing savings and credit cooperatives. The empowerment of women and marginalized groups has led to positive shifts in social norms. Farmers are adopting

sustainable agricultural practices, such as organic composting, water-saving irrigation, drought resistant seeds among others which have long-term environmental benefits. Training programs and farmer field schools have built the capacity of local farmers, who now act as resource persons within their communities. Off-farm vocational training has diversified income sources, reducing reliance on agriculture alone.

The project has enhanced access to credit and savings mechanisms, enabling beneficiaries to sustain livelihoods and invest in new opportunities but without continued external financial support, cooperatives and savings groups may struggle to maintain liquidity and extend loans during crises.

The SAMMUNATI project has laid a solid foundation for sustainability, particularly in terms of institutional strengthening, economic resilience, and environmental sustainability. However, continued efforts are needed to ensure financial independence and scale interventions to wider communities.

Overall Evaluation

Score: A (Highly Satisfactory)

The SAMUNNATI project demonstrated significant achievements in terms of its relevance, effectiveness, efficiency, impact, and sustainability. It has contributed meaningfully to building climate-adaptive farming opportunities and improving livelihoods for women and marginalized groups in Lumbini province. The project prioritized women's empowerment by enhancing their roles in decision-making processes and providing them with targeted support such as training, access to credit, and improved technologies to reduce drudgery. Women beneficiaries reported increased confidence, economic independence, and resilience. However, there remain challenges in addressing deeply rooted social norms, which could limit the sustainability of gender-based outcomes without continued community engagement. The project made significant efforts to include marginalized groups, such as indigenous populations and economically disadvantaged households, by tailoring interventions to their specific needs. These measures helped reduce inequalities in agricultural production and market access. The project emphasized participatory approaches, fostering a sense of ownership among beneficiaries. By engaging farmers, local government officials, and other stakeholders in project design and implementation, the initiative increased its acceptance and relevance. However, sustaining this level of participation post-project will require continued institutional support. Future projects should build upon this foundation, incorporating more robust and targeted strategies for integrating cross-cutting issues. Doing so will ensure that the project's benefits are sustained, equitably distributed, and inclusive of all stakeholders, contributing to broader systemic change across the region.

SECTION C: FINDINGS

Demographic Information

The demographic data for the project's evaluation included respondents from eight municipalities and rural municipalities across Dang, Rolpa, and Rukum East districts. A total of 401 individuals participated in the survey, with **49 respondents** from Bhume, **59** from Dangisaran, **68** from Paribartan, **32** from Putha Uttarganga, **41** from Rumtigadi, **46** from Shantinagar, **48** from Thawang, and **58** from Triveni. The distribution of male and female is shown in Figure 8. This diverse representation highlights the geographical distribution of respondents across the project areas.

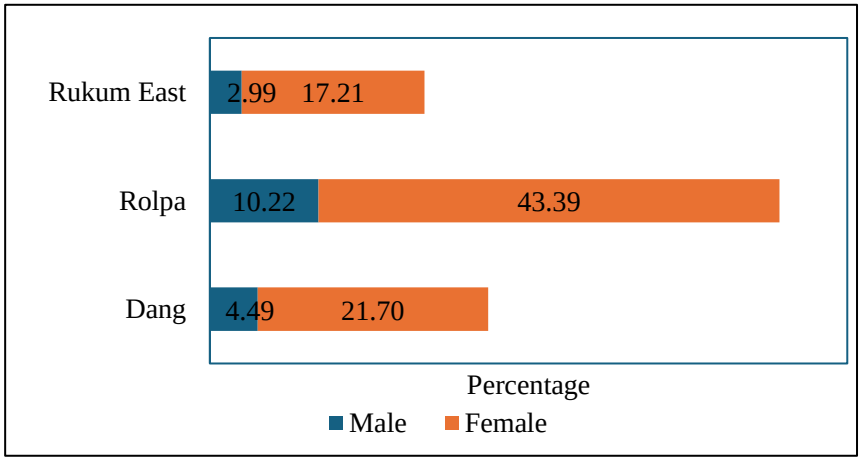


Figure 8 Percentage of male and female in the evaluation site

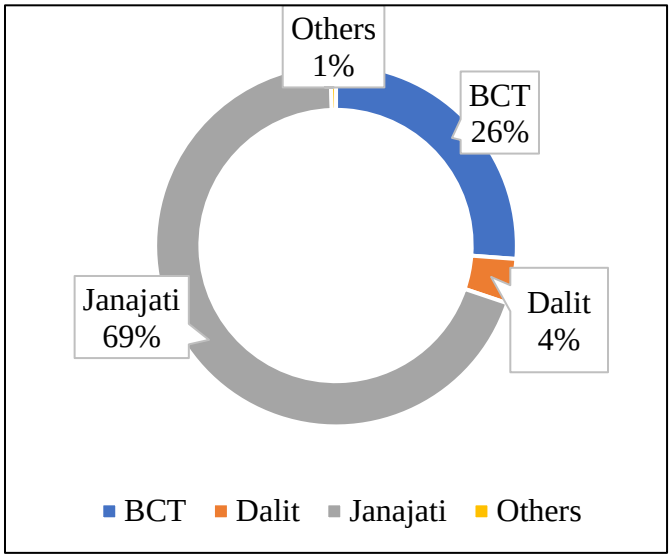


Figure 9 Ethnic composition of respondent beneficiaries

The percentage of head of Household being male is 92.27% while that of female is only 7.73%. The vast majority of households are led by men, highlighting a traditional household structure where men typically take on the role of primary decision-makers and heads of families. The relatively low percentage of female-headed households underscores the limited representation of women in leadership roles at the household level, which could be linked to structural gender inequalities, socio-economic factors, or cultural traditions. However, this smaller percentage of female-headed households may also signal opportunities to focus more on empowering women through targeted interventions in leadership, decision-making, and livelihood support.

According to the Washington Classification, among the 401 individuals surveyed, 11.5% faced one or the other form of difficulty. Among which 1.2% faced difficulty in seeing, 1% in hearing, 4% in walking, 1.5% in remembering, 2.2% in taking self-care and 1.5% in communicating. The figure below depicts the overall number of individuals facing difficulty according to the Washington Classification.

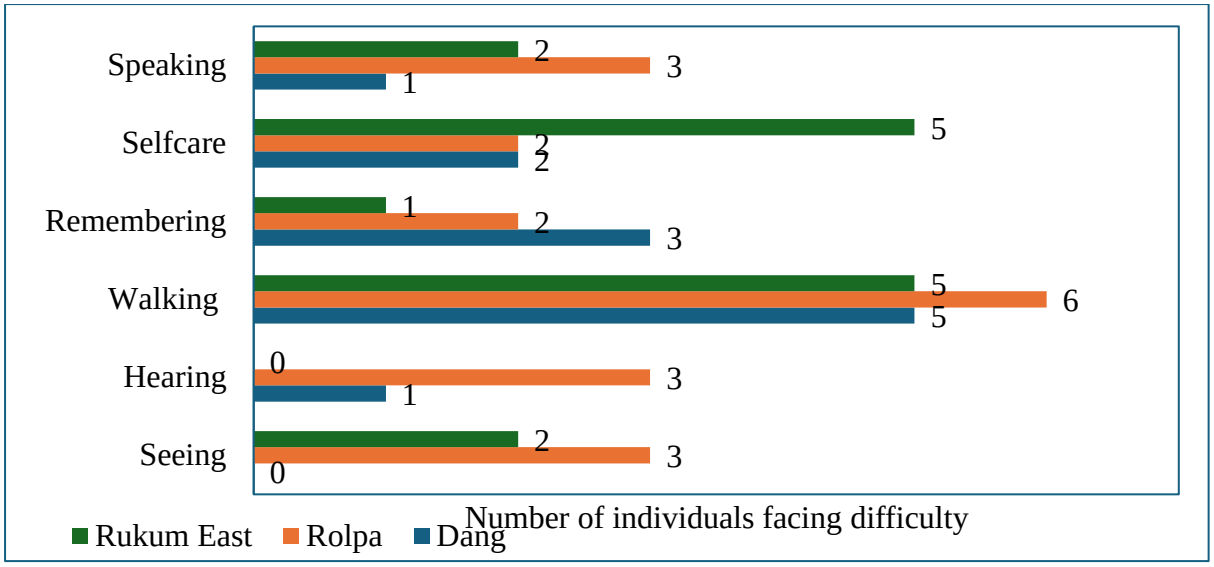


Figure 10 Number of individuals facing difficulty based on the Washington's Classification

Outcome

Outcome 1: Number of Households/Individuals doubling their annual income

The project has demonstrated a significant impact on the livelihoods of beneficiary households, with a considerable percentage reporting a doubling of their annual income. The annual income considered include those generated from agricultural and fruit farming and livestock rearing, areas in which the project focused. Survey results indicate that the average annual income across all project areas increased to NPR 29476 per annum, compared to the baseline value of NPR 47,439 suggesting a **100% of beneficiary households were able to double their income on average**. While this suggests notable progress, it is important to recognize that external factors, in addition to project interventions, may have contributed to these outcomes. Respondents in Dang reported the largest average annual income (NPR 402,629) while those in Rukum East reported the lowest (NPR 198,012). Table 1 provides a district-wise breakdown. In percentage terms, the largest income gain can be seen in Dang.

However, it should be noted that 13.7% of households did not achieve a doubling of their income on a one-to-one comparison. Individual beneficiary incomes were compared against the average baseline value, which revealed that not all households were able to sufficiently double their total annual income from sources targeted by the project. Out of eight municipalities, seven achieved a doubling or more in average annual income, demonstrating substantial economic progress for households in these areas during the project period. The doubling threshold was confirmed using a upper-tailed t-test after adjusting the baseline value for inflation. However, beneficiaries in **Putha Uttarganga** qualitatively showed income improvements but did not reach the doubling milestone, suggesting room for further targeted interventions in this region. Perhaps the topographical challenges associated with a more arid terrain contributed to a less than anticipated return on agricultural yields. However, it should be noted that the baseline average income for households in Putha Uttarganga was already relatively high, which meant that more concerted interventions were necessary to achieve a twofold increase in total annual income. For a better understanding of each rural municipality doubling their income please refer to ANNEX A.

Another important factor to consider is the fact that these households may have more lucrative alternative sources of income. A probit model suggests that households that had other income

sources such as remittances, social security, and salaried work were 12.2% less likely to double their annual income vis-a-vis the project's interventions (p-value of 0.031). This highlights the need for nuanced analysis when interpreting income growth outcomes across diverse socio-economic contexts. From a gender perspective, a 59% difference in the reported baseline average total annual income between men and women (NPR 69,041 vs. NPR 43,188) was reduced to less than 1% in the final evaluation (NPR 297,864 vs. NPR. 295,807). This suggests that the project has made a huge impact on the agricultural and off-farm returns of female beneficiaries, not only significantly raising income levels but also bringing them to parity with those of male beneficiaries. The project's interventions on its beneficiaries have paid off.

These figures reflect the effectiveness of SAMMUNATI's initiatives in improving income levels, likely through increased agricultural production, enhanced market access, skill-building in farming and entrepreneurship, and climate-resilient agricultural practices. Furthermore, **96.51% of respondents (387 out of 401 surveyed)** perceived an overall change in their income due to project activities, underscoring the broad-reaching positive outcomes experienced by the beneficiaries. It should be noted that the perceived increase may not necessarily be understood as perceived doubling of their incomes.

Table 1 Average annual income of beneficiaries at endline- compared to baseline

SN	District	Annual Average Income at Baseline (NPR)	Annual Average Income at Endline (NPR)	Income Doubled?
1	Dang	43,493	402,629	Yes
2	Rolpa	60,321	283,639	Yes
3	Rukum East	41,167	198,012	Yes

The project was especially successful in improving the income of the most economically vulnerable households. Among low-income households (0-25% of the baseline income decile), there was a remarkable increase in average annual income relative to the baseline. These households earned, on average, NPR 84,551 from agricultural and livestock farming as a result of the project's interventions. The benefits were realized across all three districts, with the biggest impact seen in Dang. Those from the middle-income bracket (25%-75% of the baseline income decile) also reported sizeable gains, elevating their social profile. Among beneficiaries from the high-income class bracket (75%-100% of the baseline income decile), relative income gains were smaller compared to the lower-income groups but the increase in absolute income was substantial. Again, among the surveyed sample, Dang had the highest concentration of high-income households at the final evaluation while Rolpa had the highest concentration of middle-income households. Within the three income brackets, the project's impacts were felt equally by both male and female beneficiary households.

Outcome 2: Increase in percentage of gross output per farm

The outcome indicator for **Percentage Increase in Average Gross Output Value per Farm** aims to measure the growth in farm output in terms of gross value over the project period. This indicator helps to track the improvement in farm productivity and income resulting from various project interventions. In this case, the gross output value refers to the total value of agricultural products produced per farm annually, including vegetables, dairy products,

walnuts, mandarin, and goat farming. The gross output reflects all production, encompassing expected unharvested yields at the end of the year and amounts consumed by the households from what they produce. This provides an overestimate of what the household can realize in income from their farming activities. However, the argument is that by including consumption shares as well, the income families would have spent in otherwise purchasing food products for consumption is saved. It is also important to note that losses incurred post-harvest or during transport are not recorded.

Calculation of Percentage Increase in Gross Output Value

To calculate the percentage increase in average gross output value per farm, the formula used is:

$$\text{Percentage Increase of Gross Output Value of a Farm in End Line} = \frac{c - a}{a} * 100$$

Where:

- **a** = Average Gross Output Value per Farm at baseline (adjusted for inflation)
- **c** = Average Gross Output Value per Farm at the end line (current value)

At the baseline, the average Gross Output Value per farm was **NPR 43,188** (after adjusting for inflation, NPR 38,149 prior). At the end line, the average Gross Output Value per farm is **NPR 171,356** after subtracting household consumption shares. The average share of consumption of all items produced by each household was 26.5%.

This gives a **296.77% increase** in the average gross output value per farm, highlighting a significant improvement in farm productivity. The table below gives a brief summary of the output per farm of the direct project interventions at endline.

The project also promoted other livestock rearing practices such as poultry and pig farming as well as other off-farm activities. Beneficiaries reported that they generated, on average, NPR 23,196 from other livestock rearing activities and NPR 39,669 from other off-farm activities.

The district-wise breakdown of the average output value per farm reveals distinct variations across the regions. In Dang, the average output value per farm stands at NPR 176,035, while in Rukum East, it is slightly higher at NPR 177,522. Rolpa recorded the lowest value at NPR 166,748. When considering gender and disability, female beneficiaries show an average output value of NPR 168,613, while male beneficiaries have a slightly higher average of NPR 184,103. However, the differences between the two genders are insignificant (t-test p-value of 0.34), indicating that the benefits of the project have been fairly distributed across different beneficiary groups**.** For persons with disabilities (PWD), the average output value is NPR, 153,209. The average value is similar to that of households without disabled members (insignificant t-test, p-value of 0.43, indicating that PWDs have not been left behind by the project's gains.

The impressive **296.77% increase** in the average gross output value per farm from baseline to end line reflects the successful implementation of various project activities that enhanced farm productivity, access to markets, and the adoption of new agricultural practices and climate-resilient seeds. The improvements across various agricultural sectors, such as vegetables, dairy, walnuts, and livestock, have collectively contributed to this increase, benefiting both men and women farmers, as well as persons with disabilities, in the target ed districts of Dang, Rolpa, and Rukum East.

Table 2 Average output from all sources of beneficiaries at endline

	Baseline (NPR)	Endline (NPR)	Dang (NPR)	Rolpa (NPR)	Rukum East (NPR)
Output from vegetables (per annum)	17,575	99,086	93,724	97,609	109,956
Output from diary, milk and milk products (per annum)	22,847	25,224	30,094	20,259	32,087
Output from walnuts (per annum)	3,500	547	N/A	126	2,376
Output from mandarin (per annum)	14,879	3,945	1,233	5,482	3,381
Output from goat (per annum)	38,927	42,554	50,984	43,271	29,721

[8] Price, consumption, and production data winsorized at the top 10 percent for extreme outliers that will heavily skew average values upwards.

Outcome 3: Engagement of Women with Local Government

While men had a slightly higher percentage of full participation compared to women, the data reveals that a significant proportion of both men and women (especially women) had no involvement in these governance processes. This underscores the need for targeted strategies to encourage inclusive and meaningful participation, particularly for women, in planning, implementation, and monitoring activities.

The number of women engaging with local government, influencing policies, and accessing services is 1565 women.

The data indicates a notable improvement in participation levels over the course of the project. While full participation increased slightly, the most significant change was the reduction in non-participation and the rise in partial engagement. This reflects progress in the project's

[*] The data for price and production has been winsorized at the top 10% to adjust for extreme outliers that could skew the average values upwards. Winsorization ensures that extreme values are limited to a reasonable range, providing a more accurate and representative measure of the typical farm output. This adjustment is important in ensuring that the gross output values do not reflect disproportionately high figures from rare instances of extreme performance.

efforts to involve more individuals, though there is room for further improvement, especially in transitioning more individuals from partial to full participation.

The data demonstrates remarkable progress in improving access to women-focused services over the course of the project. The sharp decline in those with no access (**81.9% → 23.94%**) and the corresponding rise in full access (**11.9% → 44.39%**) highlight the project's success in enhancing service availability and inclusivity. The increase in partial access (**6.1% → 13.97%**) further indicates that more individuals were introduced to these services, even if not fully integrated into them. This suggests effective intervention efforts, though additional work may be needed to ensure even more comprehensive access.

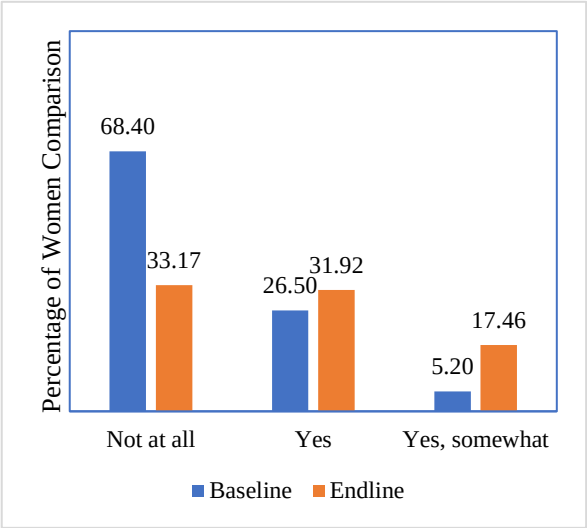


Figure 11 Percentage of Women participating in planning, implementation and monitoring with local government, cooperatives

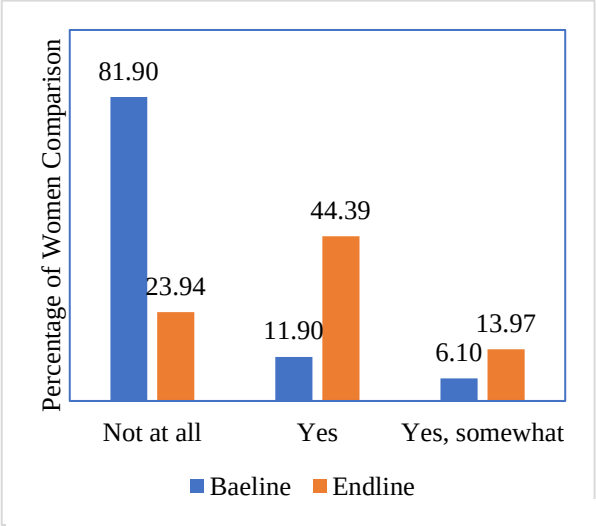


Figure 12 Percentage of women who accessed any services from the local government/ financial institutions and cooperatives that are women-focused

The SAMMUNATI project has made a notable contribution to empowering women in the project areas, enabling them to engage with local government, influence policy decisions, and access essential services. Based on the survey data, **87.2% of women** (288 out of 330 surveyed) reported engaging with local government, actively influencing policies, and accessing services.

Output

Output 1: Increased agriculture production and climate resilience

The Output 1 incorporates increased agriculture production and climate resilience, under which are 3 sub-indicators explained below:

Output Indicator 1.1: Number of new climate-resilient varieties and endangered landraces adopted by farmers

Key contributions from the project included the provision of **lifting irrigation systems**, seeds, tunnels, crates, and other agricultural tools. The introduction of lifting irrigation significantly improved water availability, enabling farmers to grow vegetables even during the off-season. This marks a transformative shift from traditional reliance on seasonal rainfall to a more adaptive and resilient farming approach.

The following information has been obtained from secondary literature and project documents. Farmers have adopted agroecological and regenerative farming practices in vegetable

cultivation, incorporating climate-resilient seed varieties. Specifically, they have **adopted six new varieties,** including Srijana and Gaurav 555, cauliflower: White top and Nimpo, cabbage: Green hot, and cucumber: Bhaktapur Local.

The farmers shared that seasonal seeds and plants provided through the project have enabled diversification into climate-resilient crop varieties. These varieties were distributed systematically, ensuring the community could collectively adopt and implement these changes. The adoption of new climate-resilient varieties and endangered landraces has been facilitated through infrastructure support (e.g., lifting irrigation), capacity building, and a focus on women-led groups.

Output Indicator 1.2: Number of people accessing improved water management services

The survey results indicate that a significant majority of respondents (391, or 97.51%, with 321 being women) reported having access to improved water management services. However, traditional irrigation methods remain the most commonly used, with 49.87% of respondents relying on rain-fed irrigation, 59.85% utilizing water from rivers, and 39.64% drawing from ponds.

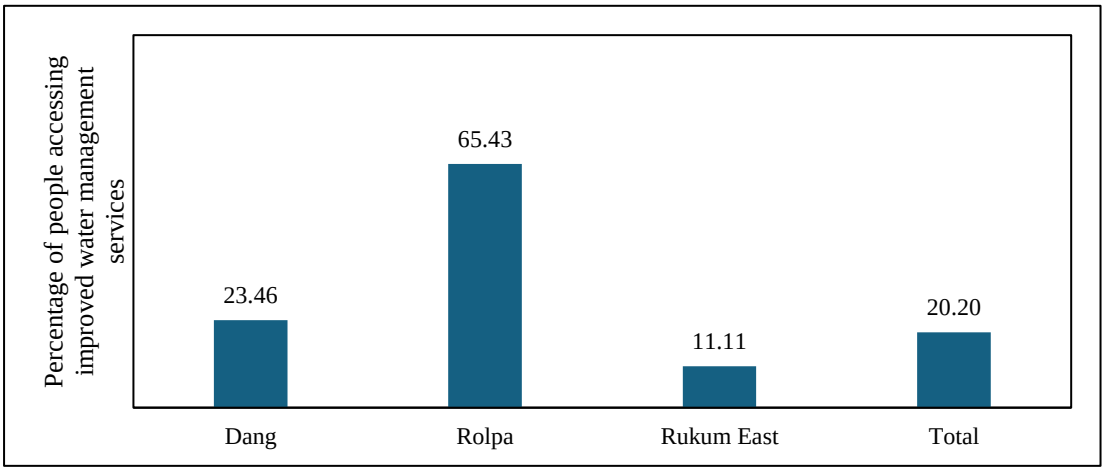


Figure 13 Percentage of people accessing improved water management services

Notably, nearly 15% of participants were uncertain about the specific type of irrigation service they used. Furthermore, 204 respondents (50.87%, including 171 women) stated that they had access to sufficient irrigation facilities throughout the year. In contrast, modern irrigation techniques such as solar pumps (7.93%) and drip irrigation (5.88%) were adopted by a smaller proportion of respondents.

When these number are extrapolated the number of beneficiaries accessing improved water management services are 5,874 beneficiaries out of which 4,710 are female beneficiaries and 225 are PWDs.

Output Indicator 1.3: Number of farmers reporting satisfaction to agri-inputs services

Farmers reported a high level of satisfaction with the support provided on **seeds** across all districts. The survey revealed that all respondents (401 farmers) used the seeds provided by the project, demonstrating 100% uptake. Additionally, 99% of farmers felt they had adequate knowledge to access and use the seeds effectively. In terms of satisfaction, 64.8% of farmers agreed that the ease of access to seeds met their expectations, with 24.7% fully agreeing. Similarly, 66.1% were satisfied with the quality of seeds, while 76.8% appreciated the quantity provided. Timely availability received positive feedback from 67.3% of respondents, though

qualitative responses highlighted dissatisfaction among some farmers in **Rukum East**, particularly regarding ease of access and timely receipt of seeds.

The use of **organic fertilizers** was reported by 92.3% of farmers (370 respondents), reflecting its widespread acceptance. Farmers expressed high levels of satisfaction with knowledge-sharing (71.4% agreed, 25.7% fully agreed), ease of access (74.1% agreed, 19.2% fully agreed), quality (71.9% agreed, 23% fully agreed), and quantity (68.7% agreed, 18.1% fully agreed). However, there were concerns in **Rolpa**, where some farmers reported dissatisfaction with the timeliness of supply and the amount provided, highlighting logistical challenges in distribution.

Regarding **machinery and agricultural tools**, 87.3% of farmers (350 respondents) reported using the machinery provided by the project. While 70.9% agreed they had sufficient knowledge to access and use these tools, issues such as timely availability and ease of access were frequently mentioned in qualitative feedback. Farmers in **Dang** and **Rolpa** noted dissatisfaction with access mechanisms and expressed a need for greater awareness about where and how to obtain machinery. Satisfaction with the quality of tools was relatively high, with 76.9% of farmers agreeing it met their expectations, though fewer farmers (63.4%) were satisfied with the quantity provided. For the calculation table for farmers satisfaction to agri inputs please refer to ANNEX B .

In summary, farmers were most satisfied with the project's support for **seeds** and **organic fertilizers**, indicating the program's success in promoting sustainable agricultural practices and building farmer capacity. However, the availability and timely delivery of **chemical fertilizers** and **machinery** remain significant areas for improvement, particularly in districts like **Rukum East**, **Dang**, and **Rolpa**. Addressing these logistical gaps and increasing awareness about access mechanisms could further enhance satisfaction and the overall impact of the program.

The total number of farmers reporting satisfaction to agri-inputs services include 5,504 beneficiaries out of which 4,480 were female and 223 were PWDs.

The project was able to make the livelihood of Mr. Ram Bahadur Pun easier who has been growing apple in Thawang, for learning more about his story, please refer to below.

Output 2: Improved Market Linkages

Output Indicator 2.1: Number of farmers reporting satisfaction to the market infrastructure

Data indicates that nearly 72.17% of farmers (59.43% satisfied + 12.74% very satisfied) had a positive perception of the market infrastructure, while 12.74% (10.38% dissatisfied + 2.36% very dissatisfied) expressed dissatisfaction. The remaining 15.09% held a neutral stance.

To calculate the number of farmers reporting satisfaction with market infrastructure:

- **Satisfaction**: 59.43% of farmers
- **Very Satisfied**: 12.74% of farmers

Combined, the total percentage of farmers who reported satisfaction or very satisfaction is 72.17%

Given that the total number of farmers is **6,024**, the number of farmers reporting satisfaction would be 4,330 farmers.

Thus, approximately 4348 farmers reported satisfaction with market infrastructure out of which 3598 were female beneficiaries and 167 were PWDs.

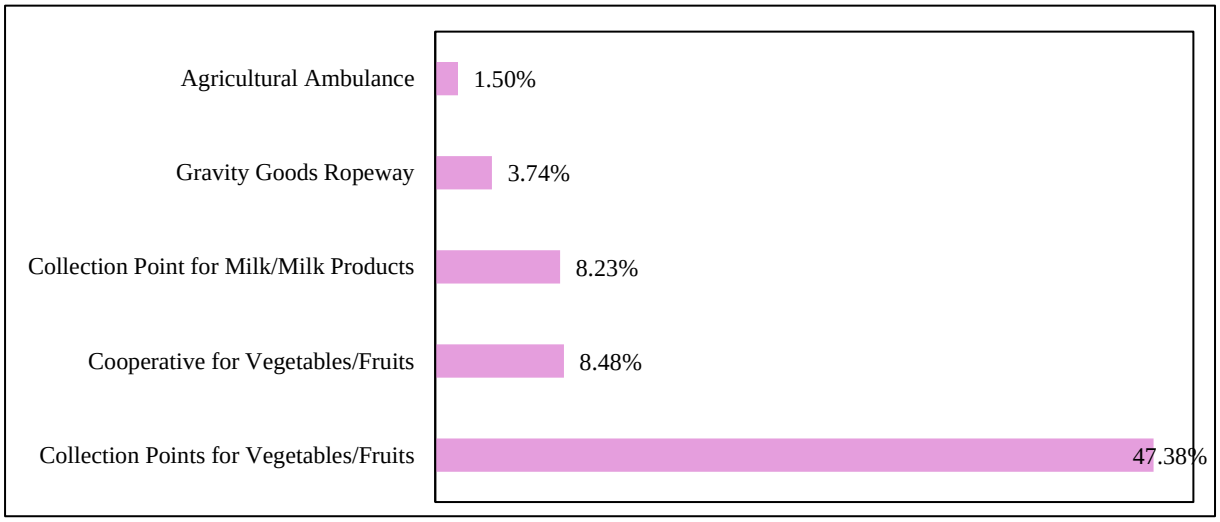


Figure 14 Market infrastructure used by beneficiaries

Project documents show that in coordination with the local government 13 collection centers, 5 diary collection centers and dairy sub-collection centers. Holeri bazaar in particular which was re-opened in collaboration with local government caught attention for its huge market set in place and benefitting over 500 household. Market collection in Bhume was seen to be facilitated by the Marin Cooperative. A collection center established in Putha Uttarganga was deemed to be used occasionally only given its terrain and remoteness and comparatively productivity.

Output Indicator 2.2: Number of cooperatives/farmers group agreeing contracts with traders to sell their produce at agreed volumes/prices

Survey suggests that only 40 (9.98%) even when 242 said they had a family member as a member of an agricultural cooperative. The project has not yet facilitated formal, written contracts or established structured agreements between cooperatives, farmers' groups, and traders to sell agricultural produce at agreed volumes or prices. However, the discussions during focus group discussions (FGDs) revealed diverse perspectives and ongoing challenges regarding market access, price stability, and sales mechanisms.

According to project documents and secondary literature, by the end of the third year, the project aimed for **16 cooperatives/farmer groups** to establish contracts (formal or informal) with traders for selling their produce at agreed volumes and prices. As of this time, **18 cooperatives/farmer groups**—comprising 12 market management committees/cooperatives and 6 dairy cooperatives—have entered into informal agreements with traders and private sector actors. This progress indicates that the project is on track to achieve the targeted outcome.

Most farmers expressed the absence of mutual agreements or market linkages to secure their produce at reasonable rates. Instead, competition among sellers dominates the marketplace. For instance, vegetable growers reported that while there is no difficulty in finding buyers, the major issue lies in securing fair prices. Price fluctuations, particularly during peak production periods, lead to significant dissatisfaction among farmers. As shared by the participants, vegetables often fetch very low rates when there is surplus production, forcing some farmers to sell at unprofitable prices or even discard unsold produce by feeding it to livestock.

Farmers also highlighted the impact of external competition, particularly from imported vegetables from India, which often depress local market prices. Many shared frustrations over middlemen exploiting the system by purchasing vegetables at very low rates and selling them at much higher prices in larger markets. Without organized collection centers or dedicated haat bazaars, farmers frequently sell their produce locally, often door-to-door or in small neighborhood markets, which limits their bargaining power and market reach.

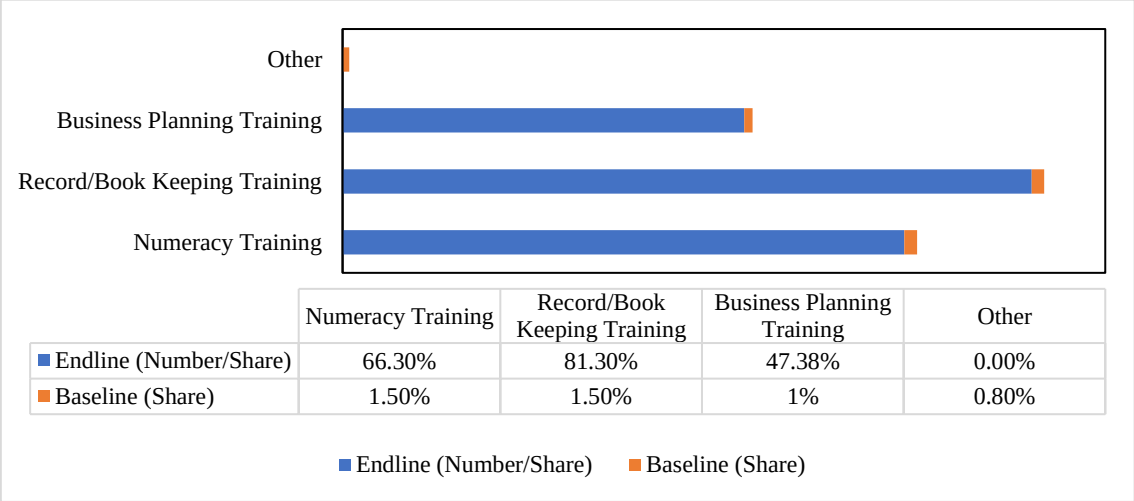
Despite these challenges, some positive developments were noted. In areas where haat bazaars have been established, farmers reported improvements in market access and reduced wastage of produce. Similarly, in some cases, SAMMUNATI facilitated connections between farmers and larger markets such as Burtibang Bazaar, Baglung Bazaar, and Pokhara Bazaar, enabling direct sales. Farmers emphasized that such initiatives have reduced their dependency on middlemen and allowed them to sell at more competitive prices. The introduction of tools like the Geo Krishi app has also helped farmers monitor market rates and make informed decisions about pricing and distribution.

Output 3: Increased Entrepreneurial capacity

Output Indicator 3.1 Number of people with increased literacy, numeracy and business acumen

The data acquired from the survey highlights a significant shift in training participation among respondents. There is a notable increase in participation in numeracy, record/bookkeeping, and business planning training, reflecting efforts to enhance financial literacy and entrepreneurial skills. Meanwhile, the dramatic reduction in "No Training" participation shows successful inclusion of previously untrained groups.

The number of people with increased literacy, numeracy and business acumen is 5,994 beneficiaries out of which 4,878 are female and 230 are PWDs. This number is an extrapolation based on total beneficiary number 6,024 reached by SAMMUNTI.



	Numeracy Training	Record/Book Keeping Training	Business Planning Training	Other
Endline (Number/Share)	66.30%	81.30%	47.38%	0.00%
Baseline (Share)	1.50%	1.50%	1%	0.80%

Figure 15 Comparison of Number of people with increased literacy, numeracy and business acumen

From qualitative assessments, it is understood that Marin Finance has plans for extending its services to a digital forefront. They already have Connect IPS, a mobile application, and are supporting the training classes for digital literacy in Bhume. This is aligned well with the vision of the project in making marginalized farmers specially women digitally literate.

The data indicates that the majority of project beneficiaries received training in numeracy, record-keeping, and business planning. One of the notable impacts of the project, observed within a short period, was the significant improvement in digital literacy among participants.

Output Indicator 3.2 Number of individuals gaining off-farm vocational skills

Survey suggests 70.82% (284) individuals have received one or other form of off-farm vocational training through the project and gained employment or became self-employed. The off farm vocational training included poultry farming, goat farming, pig rearing, *dhakiya* (basket weaving), skilled mason, sewing and cutting.

When extrapolated the number of beneficiaries that have received off-farm vocational training were beneficiaries out of which 611 were women beneficiaries and 116 were PWDs. Secondary literature suggest that 518 individuals (412 women)/116 PWD had gained these skills directly by the project.

To find out more about a specific case of Ms. Lalira Sunar. Please refer to Case Studies below.

Figure 16 SAMMUNATI supported an off-farm activity in Putha Uttarganga RM

Output Indicator 3.3 Number people gaining employment or self-employment after completing training

The data shows that 82% of respondents found the entrepreneurial training helpful, with 28.76% frequently benefiting and 35.75% finding it helpful occasionally. A significant 78.23% started their own enterprises, highlighting the training's effectiveness in fostering self-employment, while only 0.54% secured formal jobs. However, 19.72% of participants did not transition into employment or entrepreneurship, indicating barriers like limited resources or market access. The results suggest the need for enhanced post-training support and diversified opportunities to address these challenges.

When extrapolated, the total beneficiaries that gained employment after completing trainings were 588 out of which 478 were female and 116 were PWDs.

Output 4: Increased access to affordable credit and finance

Output indicator 4.1: Number of people accessing formal financial services (credit, insurance and government subsidies)

The SAMUNNATI project has contributed significantly to improving access to formal financial services among its beneficiaries. According to the evaluation findings, **231 beneficiaries (57.16% of respondents)** reported using one or more types of financial services, marking a noticeable increase from the baseline figure of **52.5%**. This demonstrates a positive trend in financial inclusion over the course of the project. However, there was a weak uptake on insurance services as less than 5% of the respondents said they accessed some kind of insurance service, even though over two thirds said they knew of locally available livestock and crop insurance services.

When extrapolated, the number of beneficiaries using 3,745 beneficiaries were reached out of which 3,047 were female and 147 PWDs.

Formal financial services accessed by beneficiaries include banks, cooperatives, mobile banking, insurance, government subsidies, reduced interest rates, loan provisions, and savings accounts. Among these, tailored financial products specifically designed for farmers and women have played a crucial role in boosting participation. For instance:

- **Tailored loan products**: These enabled farmers to invest in climate-adaptive farming practices, such as purchasing improved seeds, irrigation equipment, or livestock.
- **Savings accounts**: Encouraged financial literacy and long-term savings habits among beneficiaries, especially women.

Qualitative assessments indicate that the project's focus on enhancing awareness and building financial literacy contributed to this improvement. Training and workshops organized by the project helped beneficiaries understand the benefits of formal financial services and guided them in accessing these opportunities. Furthermore, women, who were often excluded from financial services in the past, reported increased access due to tailored products that catered specifically to their needs.

Despite these achievements, challenges remain. Some beneficiaries, particularly those from economically and socially disadvantaged groups, faced difficulties in meeting eligibility criteria for formal financial services or lacked collateral for loans. To address this, the project worked with cooperatives and financial institutions to develop more inclusive financial products and reduce entry barriers.

Output Indicator 4.2: Number of new financial products introduced by the FIs responding to the need of the beneficiary

Baseline values suggest that there were no financial products introduced by FIs responding to the need of beneficiaries. 3 years down the line, it is observed that the financial institutions such as cooperatives have been providing specialized services to women and farmers in general. After the project intervention, training and awareness, the financial institutions have refined their loan schemes and interest rates to better adjust the demands of marginalized farmers.

From secondary data and project reports, it is observed that 9 new financial products have been introduced. These 9 new financial products are effective among 19 piloted/introduced by 7 cooperatives.

For example, the Marin Finance in Bhume, provides subsidized loans to women and farmers of the cooperative. It is a general practice of providing an interest of 14% to general members, women farmers however are charged with only 13.5% in the first year and upon renewal of loan the rate is reduced to 13% only. The cooperative has a total 3700 general members out of which 1200 are female. To add 75% of the loan users of the finance are from the Marin Cooperative.

Output 5: Reduced drudgery and increased empowerment

Output Indicator 5.1: Number of women farmers adopting labor saving devices

At endline, 82.79% of respondents (332 individuals) reported adopting labor-saving devices, with 273 of them being women. Among beneficiary households, 86.14% (286) indicated that female members actively used such devices. The primary applications were during land preparation and cultivation (279 respondents), followed by harvesting (74) and post-harvest activities (45).

In comparison, baseline data revealed only 35.1% of respondents (or female household members) using labor-saving devices, with the highest adoption rates in Dang (39.8%), followed by Rolpa (32%) and Rukum (3.3%), and no evidence of women-friendly technology use in Dang or Rolpa based on interviews. Additionally, 41.87% of respondents (139 individuals) reported owning their own labor-saving devices, of whom 110 were women. Furthermore, 60 women indicated joint ownership of such devices with their spouses, reflecting shared decision-making and resource access.

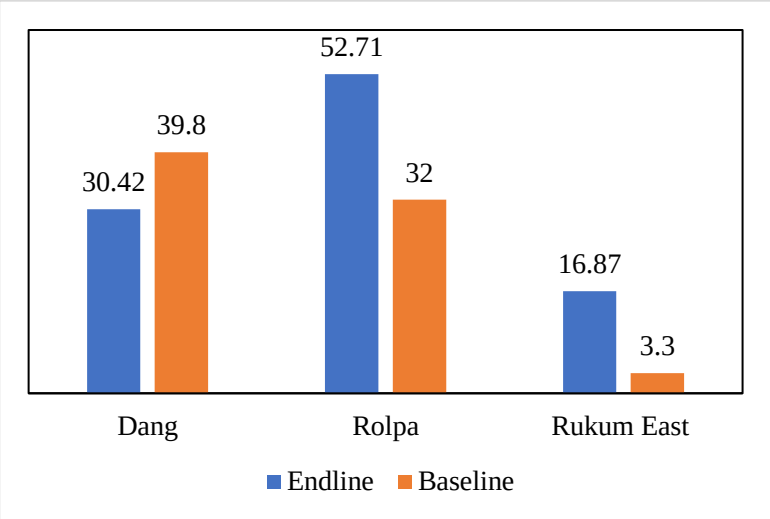


Figure 17 Comparison of Baseline-endline for percentage of women farmers that adopted labor saving devices

Figure 18 Hand held tractor (Labor Saving Device) provided to farmers under the SAMMUNATI project

When extrapolated, the number of women farmers adopting labor saving devices was a total of **1,618 women beneficiaries however, 960 women** were provided with labor saving devices by the SAMMUNATI project. It is observed that the number of users of labor saving devices exceeds the anticipated number which may be attributed to the ones using such devices through imitation.

Output Indicator: 5.2 Percentage of women empowered from the baseline value

Accounts from the quantitative survey revealed that female beneficiaries reported significant improvements in their role and voice in their communities and within their households as a result of the program's activities and awareness campaigns. **93% (373 respondents)** recognized the project's contribution to improving gender equality in their community, with the majority being women (**307 women**), in terms of district **breakdown**: Dang (94), Rolpa (206), Rukum East (73). This high percentage indicates that the project had a significant positive effect on gender relations, despite only **61.4% (246 respondents)** participating in Gender Equality, Disability, and Social Inclusion (GEDSI) action plan implementation activities.

Similarly, **93% (372 respondents)** noted that the project contributed to changes in gender roles, such as shared responsibilities between men and women. Again, the district breakdown is Dang (95), Rolpa (201), Rukum East (76).

87.2% of women (288 out of 330 surveyed) reported engaging with local government, actively influencing policies, and accessing services as mentioned above in Outcome 3. **87% of respondents** observed a reduction in gender-based violence in their community. **83% (331 respondents, including 274 women)** reported increased participation in leadership and decision-making roles within their community. The district break down is; Dang (102), Rolpa (172), Rukum East (57).

There is a notable gap between participation in specific activities (GEDSI action plans: 61.4%; awareness events: 67.1%) and the overall perception of the project's impact (93% for gender equality and role changes). This suggests that the project's influence extended beyond direct participants, potentially through ripple effects in the community or indirect exposure to project activities. During field observations, notable changes in community behavior were evident, such as women actively stepping into leadership roles within their communities. Additionally, there was a visible increase in collaboration between men and women on tasks traditionally considered gender-specific (shared responsibility in household chores, raising children, collecting fire wood, fetching water), signaling a shift towards more equitable gender dynamics.

However, data from the WEAI survey, paints a more muted picture. The percentage of women empowered from baseline is a whopping 49.6 % (975 women).

More information on women empowerment can be viewed in the SECTION E: WEAI below.

Socio Economic Analysis

The project's overall impact across all output indicators was also assessed using a regression framework. The endline outcome variable of interests were regressed with respect to all treatment indicators available as well as a beneficiary's socio-economic characteristics. The framework takes into account to what extent a beneficiary's independent socioeconomic and demographic characteristics contributed to the project's outcomes and impacts. Other local idiosyncrasies that could have influenced the program's impact across the three years are also controlled using farmer group fixed effects. Pre-treatment measures of the outcome variable are also included since it captures a significant share of variance in outcomes across beneficiaries. Standard errors are clustered at the municipality-level to account for local-level time-invariant shocks to agricultural and business outcomes.

The summary statistics show that on average, the size of the surveyed household was 5 members, with some households reporting up to 20 members. Similarly, beneficiaries were, on average, 41 years old, with the youngest being 18 years old and the eldest being 79 years old. Almost all households reported owning or having access to cultivable land, with beneficiaries owning, on average, 8,266 sq meters of land. Almost 95 percent of the beneficiaries said they owned at least one type of lives. By proxying the receipt of remittance as a source of income as an indicator for whether the beneficiary household had a migrant, just over a third of the sample households had migrants.

The results show that beneficiaries that used labor-saving devices, had access to strong market infrastructure, used chemical fertilizers, and participated in off-farm entrepreneurial activities earned significantly more annual income. When it comes to other beneficiary-specific characteristics, larger households and households that owned larger land areas or owned some type of livestock earned more. The increased relevance of these factors makes sense since larger households have more members participating in income generating activities, while those with larger or more assets are effectively capitalizing on their productive resources. Similarly, the use of labor-saving devices and organic fertilizer contributed significantly to a beneficiary's total gross output, primarily from farming activities. The contradictory influence of chemical and organic fertilizers may be concerning, but it is likely to be the case that vegetable production, which contributes to total gross output, as reflected by anecdotal accounts, benefits more from organic fertilizer. It is also worth noting that the project emphasized the use of organic fertilizers, so the true benefits of the program might be slightly overshadowed.

A full breakdown of all the variables' contribution to a household's total annual income and total gross output value can be seen in Figure 19 below. Whiskers that are on the positive side of the x-axis show significant positive contributors to the two outcome variables. The coefficients highlight that the program's interventions, especially when it comes to promoting the use of labor-saving devices that reduce drudgery, and the introduction of yield-increasing agri-inputs are particularly promising. The productive use of available labor and asset resources is also a crucial positive takeaway, highlighting the influence the project has had in ensuring available resources are not underutilized. The absence of significant coefficients for a beneficiary's other characteristics such as education, disability, and gender also reflect the positive influence of the project, showing that all beneficiaries show homogeneous returns in spite of potentially discriminating features. A key point to note is that beneficiary households that have a migrant member are significantly less likely to show improvements in their total annual income (p-value: 0.005). The case is especially salient if the beneficiary is a woman.

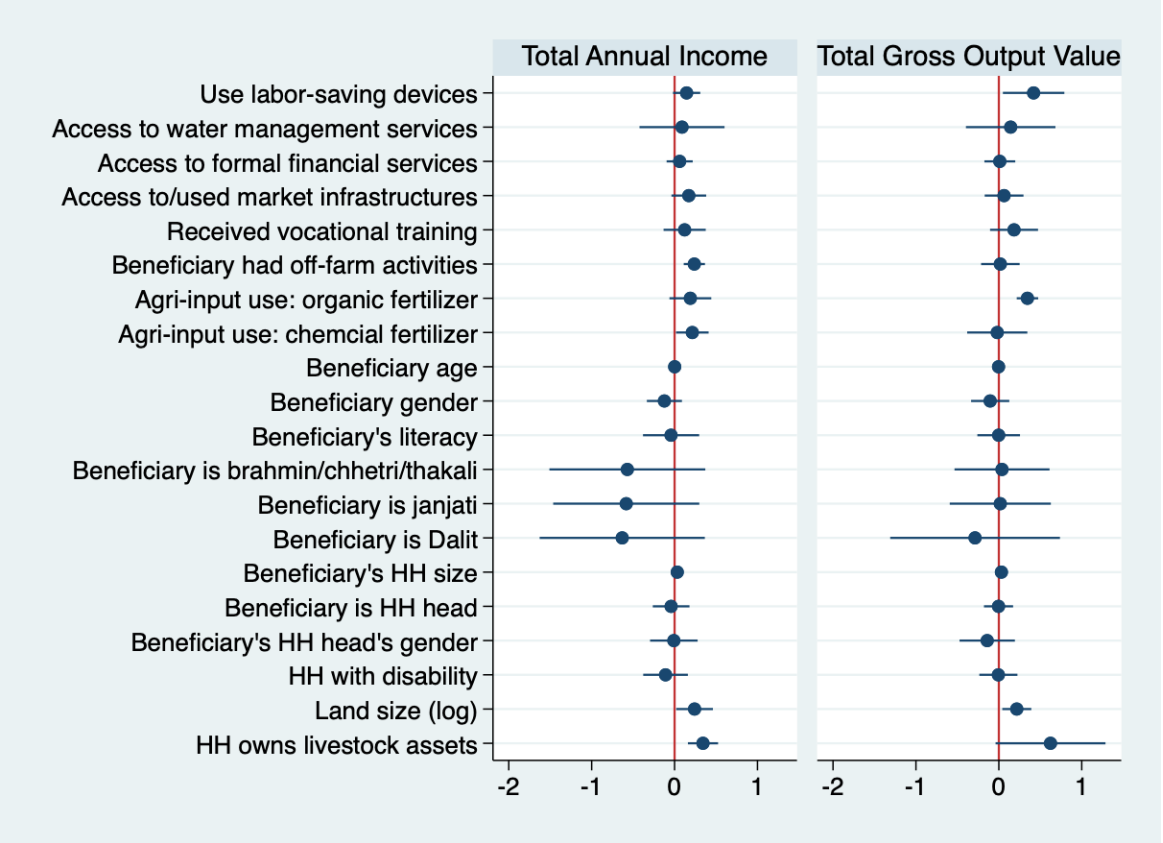


Figure 19 variables' contribution to a household's total annual income and total gross output value

In addition to this, linear probability models assessed whether project interventions increased women's local empowerment for female beneficiaries, positively improved market linkages for farmers, helped farmers adopt modern irrigation facilities, and enabled trained farmers to capitalize on their newly acquired skills. Women that had some form of access to financial services were 25 percent more likely to be empowered (p-value: 0.005). Women that participated in GEDSI trainings were 8.3% more likely to report that the project helped improve gender equality in the community (p-value: 0.004).

Farmers that reported access to water services from the project were 23% more likely to adopt modern irrigation techniques such as solar pumps and drip irrigation setups (p-value: 0.001). Similarly, 72 percent of the farmers that reported access to market infrastructure were likely to report a positive experience with the linkages developed (p-value: 0.000). The positive experiences were 10% more likely for beneficiaries with disabilities, highlighting the project's targeted objectives (p-value: 0.080). However, beneficiaries that received some form of numeracy or vocational training were likely to report that the training was not very useful (p-value: 0.857). The issue is most likely driven by older beneficiaries who may not be as adept in applying new skills to their entrepreneurial activities (p-value: 0.048).

SECTION D: CONCLUSIONS AND LESSONS LEARNED

The SAMMUNATI project has successfully achieved significant progress in improving the livelihoods of its beneficiaries, particularly women, smallholder farmers, and marginalized groups. Through its focus on enhancing agricultural productivity, fostering gender equality, promoting financial inclusion, and empowering communities with new skills, the project has demonstrated a substantial impact. Beneficiaries, especially women, reported increased self-employment opportunities, reduced gender-based violence, and a greater role in decision-making. Agricultural productivity has improved with better access to inputs and labor-saving technologies, and the project's alignment with national policies has further enhanced its relevance.

While the project's efficiency in resource utilization and its coherence with broader development strategies were commendable, certain challenges persist. Issues such as ensuring the full integration of marginalized groups, addressing sustainability concerns, and strengthening local ownership of interventions require attention. Nevertheless, the project has provided valuable lessons for future programming, and its success in empowering women and improving agricultural practices has set a strong foundation for sustainable development.

Lessons Learned:

1. **Inclusivity in Training Programs**: The project highlighted the importance of ensuring better outreach to marginalized groups. While significant progress was made, further efforts to increase the inclusivity of training programs, particularly for the elderly and more remote or marginalized members of the community, will foster greater participation and impact.
2. **Gender-Focused Interventions**: The success of the project's gender-focused interventions, particularly in terms of improving gender equality and empowering women, offers a model for future projects. The positive transformation in gender roles and reductions in gender-based violence underscore the critical importance of integrating gender equality as a core strategy.
3. **Local Institutional Capacity Building**: The project's emphasis on building the capacity of local institutions, such as women's cooperatives and farmer groups, has been essential for ensuring community buy-in and sustainability. Strengthening these local structures will be crucial for ensuring the long-term impact of future interventions.

Recommendations:

1. **Strengthen Local Institutional Capacity for Sustainability**: Future projects should continue to build the capacity of local institutions, including farmer groups, cooperatives, and community leaders, to ensure that the benefits of the project can be sustained in the long term. Training local facilitators and leaders to continue the work will enhance community ownership and sustainability.
2. **Monitoring and Evaluating Financial Impact**: To assess the long-term effectiveness of increased financial access, a robust monitoring system should be set up to track the financial outcomes for beneficiaries. This could include tracking how many beneficiaries continue to use financial services, the types of services used, and the impact on their overall economic status.
3. **Provide Post-Training Support and Access to Resources**: Develop a comprehensive post-training support system that includes mentorship, access to start-up resources, and market linkages. This could involve providing seed funding, facilitating microcredit

schemes, or establishing resource centers to assist participants in transitioning to employment or entrepreneurship. Additionally, fostering partnerships with local businesses and organizations can create more diverse and inclusive opportunities tailored to participants' skills and interests as well as market demands.

4. **Facilitate Farmer Cooperatives and Market Linkages:** Establish and strengthen existing farmer cooperatives to enable collective bargaining and better negotiation with buyers. These cooperatives can work towards creating mutual agreements with markets and buyers, ensuring stable and fair prices. Additionally, cooperatives can build direct market linkages, reducing reliance on middlemen and protecting farmers from price volatility, especially during peak production periods.

The SAMMUNATI project has successfully contributed to enhancing the livelihoods, gender equality, and resilience of marginalized communities, particularly in rural areas. To ensure that these positive changes endure, it is essential to address the challenges identified during the evaluation, deepen local ownership, and build on the momentum of this project. The lessons learned and recommendations offered here will be instrumental in designing future initiatives that continue to empower vulnerable communities, ensure sustainability, and contribute to long-term development goals.

SAMMUNATI: Building Climate Adaptive Farming Opportunities and Improved Livelihoods for Women and Marginalized Groups in Nepal

Women's Empowerment in Agriculture Index (WEAI) Analysis

December 2024

NDRI

Practical ACTION

54

SECTION E: WEAI ANALYSIS

The **Women's Empowerment in Agriculture Index (WEAI)** is a tool developed to measure the empowerment, agency, and inclusion of women in the agricultural sector. Released in 2012 by the International Food Policy Research Institute (IFPRI), it helps identify areas where women are disempowered and guides the design of programs to address these issues[9]. This study was conducted in Dang, Rolpa, and Rukum East districts to evaluate progress in women's empowerment compared to a baseline, using the 5DE (Five Domains of Empowerment) and the Gender Parity Index (GPI). The findings shed light on the intersection of gender and agriculture, revealing areas of progress and persistent challenges.

The WEAI focuses on five domains of empowerment in agriculture:

a. **Decisions about agricultural production**

b. **Access to and decision-making power over productive resources**

c. **Control over use of income**

d. **Leadership in the community**

e. **Time allocation**

The index is based on individual-level data collected from both men and women within the same household, providing a comprehensive view of gender parity and empowerment[10].

Methodology

The WEAI score is calculated by assessing multiple subdomains, such as input in productive decisions, autonomy, control over income, and access to resources. The final score incorporates the 5DE score and the Gender Parity Index (GPI) to determine the overall empowerment level. The 5DE classifies a woman as empowered if she has adequate achievements in at least four of the five domains or if she has a weighted adequacy score above 0.8. The 5DE's Alkire Foster Method also enables researchers to understand how women fare in domains in which they face inadequacies and devise ways to improve the situation of disempowered women. The GPI measures how empowered women are relative to men in the same household, shedding a light on the disempowerment gap between men and women. The report follows the IFPRI guidelines for the WEAI calculation, which includes assessing gender disparity and determining how empowerment is distributed within households. It strictly follows the conditions required to achieve adequacy within each domain and indicator. The 5D-index contributes 90 percent of the weight of the overall WEAI score.

Despite the merits of the WEAI, it is worth noting that the tool was initially designed to be measured with population-based surveys at a country or regional level. Limited development interventions have smaller samples which can in turn limit the interpretability of the results. Pro-WEAI tools have been developed to be used in project-level assessments, but this was not adopted for this study. Additionally, the arbitrarily set threshold of 80 percent can mask seemingly good progress made toward empowering women.

WEAI Calculation

Step 1: Calculating weighted adequacy based on adequacy scores for each domain

[9] Women's Empowerment in Agriculture Index (WEAI)
[10] International Food Policy Research Institute

Weighted adequacy =
Input in Productive Decisions × 1/10 + Autonomy × 1/10 + Ownership of Assets × 1/15 + Purchase, sale, or transfer of assets × 1/15 + Access to Credit × 1/15 + Control over Use of Income × 1/5 + Group Member × 1/10 + Speaking in Public × 1/10 + Leisure Time × 1/10 + Workload × 1/10

Step 2: Share of men and women empowered

Share of men empowered: 43.7% (Share of men not empowered: 56.3%)

Share of women empowered: 20.3% (Share of women not empowered: 79.7%)

Step 3: 5DE Calculation

5DE = He + Hn (Aα)

Where,

He = Proportion of women who are empowered = 0.203

Hn = Proportion of women who are not empowered = 0.797

Aα = Proportion of dimension in which disempowered women have adequate achievements

= Sum of weighted adequacy for women who are not empowered/ Total number of women who are not empowered = 0.827

So, **5DE = He + Hn (Aα)** = 0.2030303 + 0.79696971 × 0.82739729 = 0.85881877 ≈ **0.862**

Step 3: Calculating gender parity

A woman enjoys gender parity if i) she is empowered or ii) if her empowerment score is equal to or greater than the empowerment score of the primary male her household.

This shows that 29.58% of women experience gender parity.

GPI = 1 – Hw (Rp)

Where,

Hw = Proportion of women without gender parity = 0.704

Rp = Average percentage shortfall that a woman without parity experiences relative to the male in her HH = sum of (Weighted adequacy score of men - Weighted adequacy score of women)/total number of HHs = empowerment gap = (52.6- 43.67)/71 = 12.58%

GPI = 1 - 0.7042× 0.1258 = 0.91139328≈ **0.911**

Step 4: WEAI

WEAI = 0.9 (5DE) + 0.1 (GPI) = 0.9 × 0.862+ 0.1 × 0.911= 0.8669548≈ **0.867**

The study revealed significant insights into women's empowerment levels in agriculture, measured through the Five Domains of Empowerment (5DE) and the Gender Parity Index (GPI). Only **20.3% of women** were considered empowered (i.e. achieved a weighted adequacy score of 0.80 or higher), compared to **43.7% of men**. This is a 9 percentage point drop relative to the baseline values. Disempowered women had a weighted adequacy score of **0.827**, indicating sizeable but ultimately inadequate progress toward empowerment. This is a significant improvement from the baseline. Women are on a more equal footing to male counterparts along almost all domains, but they still fall short of meeting the 80% adequacy threshold to be considered empowered. Nonetheless, the disparity underscores the ongoing challenges faced by women in agricultural decision-making, resource control, and community leadership.

In terms of gender parity, only **29.58% of women** achieved parity with their male household counterparts, resulting in a GPI score of **0.911**. The empowerment gap of **12.58%**, however, went down slightly in dual-adult households, highlighting progress in ensuring men and women have an equal say in household matters. However, it is worth noting that the poor parity is most likely due to the sampling strategy adopted. Since the parity score was calculated from just

dual-member households of which only male beneficiaries were selected, the score only captures male beneficiaries and their female counterparts. The score reflects the fact that these male beneficiaries that received gender empowerment training were less likely to adopt gender-inclusive practices that would help minimize the parity gap with their spouses. The less-than-desired translation of training effects men received onto their spouses' role in the household showcases the project's shortcomings in ensuring equitable learnings.

Nonetheless, the overall WEAI score was **0.867**, reflecting an 18.8% progress in women's empowerment and gender parity in agriculture compared to the baseline assessment. Despite poor individual component scores, both the 5DE score and the GPI score improved relative to the baseline. Within the 5DE score, the share of empowered women was underwhelming, but this was compensated by the fact that the proportion of dimensions in which disempowered women have adequate achievements. This means that among those considered disempowered, their adequacy levels fell just short of the 0.80 threshold, with almost 60% of the disempowered women having a score between 0.6 and 0.79. The project was able to push almost all women toward achieving adequate achievement but fell short only by a small margin. This highlights that the program has had the desired effects. Deep-rooted gender norms that favor men over women take time to breakdown, but the project's interventions are a testament to the fact that concerted campaigns can achieve social equality among men and women. Similarly, the smaller shortfall in parity between men and women (Rp value) offset the high gender disparity (Hw value).

Regional findings highlighted small variations in empowerment levels across districts. The 5DE scores were **0.868** in Dang, **0.869** in Rolpa, and **0.826** in Rukum East, showing relatively better outcomes in Dang and Rolpa. The GPI scores showed similar patterns with Rukum East faring the worst **(0.914)** and Rolpa faring the best (**0.980)**. Overall, empowerment levels improved across all three districts, with Rolpa achieving the highest absolute score, but Rukum East achieving the most notable percentage gain of 41.5%. Nevertheless, gender parity worsened in Rolpa and Dang, underscoring the need for more targeted interventions to bridge the empowerment gap. Table 4 provides a breakdown of all the components and overall scores, as well as a comparison with baseline values. Green highlights show positive effects.

Table 3 WEAI Score

Indicator	Overall	Dang	Rolpa	Rukum East
5DE Score	**0.862**	**0.868**	**0.869**	**0.826**
N (number of observations)	401	105	215	81
% of women achieving empowerment	20.30	22.99	21.71	13.23
% of adequate achievement among not yet empowered women.	86.20	82.83	83.24	80.00
GPI Score	**0.911**	**0.915**	**0.980**	**0.914**
N (number of dual-adult households)	71	18	40	13

% of women achieving gender parity	29.58	44.44	30.0	7.69
Average empowerment gap	12.58	15.37	2.83	9.23
WEAI Score	**0.867**	**0.872**	**0.880**	**0.835**

These indicators when compared to baseline yield the following results.

WEAI Score Comparison with baseline results				
Indicator	Overall	Dang	Rolpa	Rukum East
5DE Score	Improved	Improved	Improved	Improved
% of women achieving empowerment	Decreased	Decreased	Decreased	Decreased
% of adequate achievement among not yet empowered women.	Increased	Increased	Increased	Increased
GPI Score	Worsened	Worsened	Improved	Worsened
% of women achieving gender parity	Decreased	Decreased	Decreased	Decreased
Average empowerment gap	Decreased	Decreased	Decreased	Decreased
WEAI Score	Improved	Improved	Improved	Improved

Understanding the decline in share of empowered women

The subdomain analysis provides deeper insights into specific areas of (dis)empowerment. It is important to understand why the overall share of empowered women (He) went down following the project's interventions. Based on the disaggregated scores, women's disempowerment was mainly attributable to three indicators within two domains – access to and decisions on credit (Resources domain) and workload and leisure indicators with the Time domain. Since all domains have equal weights in contributing to overall empowerment, a poor showing in one domain can offset the gains made in others.

Some qualitative accounts support this finding. Women beneficiaries were particularly constrained from accessing credit services, especially due to the fact that their male counterparts were abroad and there was a greater perceived possibility of defaults. However, the inadequacies faced in the time domain are slightly more puzzling. It is likely to be the case that the greater demands on agricultural work placed by the project's training and interventions resulted in more work time and less leisure time.[11] Almost 90% of the women had inadequate

[11] An individual is considered to have inadequate workload if they worked more than 10.5 hours in the previous day. Work is defined as any of the following activities: Cooking and preparing to cook, essential household

leisure time and 92% had inadequate workload. Qualitative accounts did not reflect the lack of free time, possibly because beneficiaries considered this a good thing considering the fact that they were able to utilize their time in productive, income-generating activities. The burden of increased workload was not seen as a negative.

Table 4 provides an in-depth look at the share of disempowered women and men across each indicator, as well as a comparison with baseline values. The bottom rows highlight the differences between before and after effects as well as those between men and women. Women achieved greater adequacy than men across three indicators (autonomy in production, access to and decisions on credit, and group membership). The final difference row shows the overall impact of the project between men and women, suggesting women have benefited across 2 domains (production and resources) while their relative standing across the other 3 domains (income, leadership, and time) have worsened, with the greatest impact seen in leadership. However, it is important to note that the decline in relative empowerment of women is because men were able to realize larger gains as a result of the program's interventions. In absolute terms, women were most impacted in the time domain, suggesting that the increased workload fell disproportionately on women and men enjoyed a large share of the leisure time.

work, caring for elder and children, livestock raising, farming, and fetching water. An individual is considered to have inadequate leisure time if they had less than 5 hours of leisure time in the previous day.

Table 4 the share of disempowered women and men across each indicator, as well as a comparison with baseline values

	Production				**Resources**						**Income**		**Leadership**				**Time**			
Contribution to disempowerment	**Input in productive decisions**		**Autonomy in production**		**Ownership of assets**		**Purchase, sale, or transfer of assets**		**Access to and decisions on credit**		**Control over use of income**		**Group membership**		**Speaking in public**		**Workload**		**Leisure**	
Indicator weight	0.1		0.1		0.067		0.067		0.067		0.2		0.1		0.1		0.1		0.1	
WOMEN	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**
Share of women who achieved adequacy (%)	58.71	95.15	36.82	72.42	76.62	87.27	62.19	86.36	49.25	36.67	98.51	96.36	56.22	91.52	54.23	60	51.74	7.88	82.59	11.52
Share of women who did not achieve adequacy (%)	41.29	4.85	63.18	27.58	23.38	12.73	37.81	13.64	50.75	63.33	1.49	3.64	43.78	8.48	45.77	40	48.26	92.12	17.41	88.48
Percentage contribution to disempowerment (F)	1.4%		7.8%		3.6%		3.8%		17.8%		1.0%		2.4%		11.3%		26.0%		24.9%	

% Contribution by dimension	9.1%				25.3%						1.0%		13.7%				50.9%			
MEN	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**	**B**	**F**
Share of men who achieved adequacy (%)	66.17	98.59	39.8	67.61	90.55	98.59	75.62	92.96	52.74	26.76	97.01	100	24.38	90.14	23.88	88.73	52.24	25.35	87.56	33.8
Share of men who did not achieve adequacy (%)	33.83	1.41	60.2	32.39	9.45	1.41	24.38	7.04	47.26	73.24	2.99	0	75.62	9.86	76.12	11.27	47.76	74.65	12.44	66.2
Percentage contribution to disempowerment (F)	0.5%		11.7%		0.5%		2.5%		26.4%		0.0%		3.6%		4.1%		26.9%		23.9%	
% Contribution by dimension (F)	12.2%				29.4%						0.0%		7.6%				50.8%			
Difference in achieved adequacy between male and female beneficiaries (B, p.p.)	7.46		2.98		13.93		13.43		3.49		-1.50		-31.84		-30.35		0.50		4.97	
Difference in achieved adequacy between male and female beneficiaries (F, p.p.)	3.44		-4.81		11.32		6.6		-9.91		3.64		-1.38		28.73		17.47		22.28	

Difference in difference (p.p.)	4.02	7.79	2.61	6.83	13.40	-5.14	-30.46	-59.08	-16.97	-17.31

(Note: B=baseline, F = final evaluation), p.p. = percentage points)

A brief discussion for each of the five domains is as follows:

a. **Domain 1 – Production** (Input in Productive Decisions + Autonomy in production)**:** Women's participation in decision-making processes related to agricultural production improved significantly. They were more likely to participate in input decisions and they had more confidence to contribute to decisions, with the degree of their input almost identical to men. The autonomy score indicates that women's ability to make decisions without external pressure improved dramatically, usurping the relative autonomy men enjoy. Overall, the interventions helped improve women's empowerment in both indicators of domain 1 but not to the desired level. Domain 1 still contributed 9.1% to the disempowerment of women.

b. **Domain 2 – Resources** (Ownership of assets + Purchase, sale, transfer of assets + access to and decisions on credit)**:** The share of women who achieved adequacy relative to the baseline went up in two of three indicators. They reported a greater likelihood to own at least one large asset and participate in decisions regarding the use of those assets. However, the gains in these two indicators were heavily offset by the decline in the number of women reporting adequate access to and decisions on credit. It was not the case that women did not have access to credit, but rather credit providing agencies required decisions to be made by male counterparts. Overall, domain 2 contributed 25.3% to the disempowerment of women, driven largely by the inadequacies in access to and decisions on credit.

c. **Domain 3 – Income** (Control over use of income): There were negligible negative changes in the share of women who achieved adequacy in domain 3. It is worth noting, though, that men reported a 100% control over the use of income. This highlights the fact that women are rarely solely responsible for the control over use of income but rather make decisions jointly. Overall, domain 3 contributed around 1% to the disempowerment of women.

d. **Domain 4 – Leadership** (Group membership + Speaking in public): The project's interventions helped women become more actively engaged in community groups, but their confidence levels still lagged in comparison to those of men when talking in public within those groups. Group membership went up for both men and women, more so for men, which meant the presence of women within those groups was domineered by the presence of men. As a result, the domain contributed almost 14% to the disempowerment of women.

e. **Domain 5 – Time** (Workload + Leisure): Adequacy levels for both workload and leisure time went down significantly for both men and women relative to the baseline. This is due to the fact that members of the household spent longer times in farming and livestock rearing activities, representing an unintended consequence of the project's overall interventions. However, importantly, and somewhat concerning, the burden of workload fell more heavily on women as they worked more and enjoyed less leisure time than their male counterparts. This significant divide contributed the most to the share of disempowered women, driving over 50% of the disempowerment score.

Recommendations

1. **Improve Access to Resources and Credit:** Policies and interventions should focus on increasing women's access to financial resources, including credit, to support their agricultural activities and economic independence. Formal lenders and cooperatives need to understand that women can also work toward paying off loans and that they do not require the approval of male counterparts.
2. **Provide women a stronger voice within community groups:** Programs aimed at increasing women's involvement in various community groups should not come at the expense of ceding authority to male members within the same groups. By providing platforms for women to participate in discussions and decision-making processes, groups can build the confidence of women when it comes to public speaking. Moreover, those female voices need to be heard to give a greater sense of ownership and authority within said groups.
3. **Address Workload and Time Constraints:** Addressing the unequal distribution of workloads between men and women is critical. Programs should aim to reduce the time burden on women, allowing them more time for personal development and community involvement through the improved access to childcare services, and the encouragement of equitable sharing of household and agricultural responsibilities.
4. **Gender-Specific Programs:** Tailored programs that address the specific needs of women in each district are essential. This includes initiatives to improve leadership opportunities, public speaking, and resource management skills for women. These programs should also focus on building confidence, enhancing decision-making abilities, and creating platforms for women to actively participate in community development and policy discussions. Moreover, the subtle nuances and externalities associated with the program's interventions must be recognized and addressed.

Conclusion

While there have been improvements in the empowerment of both men and women, significant gender disparities persist, especially in terms of access to credit, workload distribution, and leadership roles. The WEAI score of 0.867 overall indicates that empowerment is being achieved, but a closer look at its components suggests that the improvements can be even higher with targeted understanding and subsequent efforts. Targeted interventions are needed to close the gender gap and enhance the share of empowered women in agriculture.

ANNEX A: DATA AND ATTACHMENTS

Inception Report

Survey Questionnaire English and Nepali

Qualitative questions

Qualitative Assessments

ANNEX B: REFERENCE TABLES AND CALCULATIONS

Table 5 Outcome Indicator 1: Number of households /individuals doubling their annual income

Total average annual income (estimated) (Rural Municipality breakdown)				
District	Municipality	Baseline (B) (396)	Endline (E) (401)	Doubled?
Rukum East	Bhume	28,147	261,837	Yes***
	Putha Uttarganga	58,192	100,281	No
Dang	Dangisaran	54,814	420,170	Yes***
	Shantinagar	31,829	380,130	Yes***
Rolpa	Paribartan	44,381	170,815	Yes***
	Rumtigadhi	59,188	443,439	Yes***
	Thawang	52,784	206,477	Yes***
	Triveni	96,588	366,810	Yes***

Notes: Doubled? column based on statistically significant p-values of t-test; baseline amounts shown are before adjusting for inflation

Table 6 Output Indicator 1.3: Number of farmers reporting satisfaction to Agri-inputs services

Satisfaction with agri-input services					
Input: Seed					
Use:	Yes: 401	No: 0			
Access knowledge	Yes: 99 % (397)	No: 1% (4)			
Satisfied with	Ease of access	Quality	Quantity	Timely availability	
Agree	89.5	80.6	90.77	83	
Input: Machinery and agri-input					
Use:	Yes: 87.3% (350)		No: 12.7% (51)		
Access knowledge	Yes: 81.2 % (352)	No: 18.8 % (75)			
Satisfied with	Ease of access	Quality	Quantity	Timely availability	
Agree	89.1	84.9	NA	71.4	

Table 7 Qualitative Assessments number summary

SN	District	Palika	Stakeholders								
			Lead farmers (KII)	Members (FGD) *	KII (Local Government)	KII- Agrovet	Animal Health Worker (KII)	BFI and Cooperatives	IDIs with PWD	Project staff (KII)	Case study
1	Dang	Dangisaran RM	1	1	1	1	1	1	1	3	2
2		Shantinagar RM	1	1	1	1	1	1	1		
3		Runitgadhi RM	1	1	1	1	1	1	1		
4	Rolpa	Triveni RM	1	1	1	1	1	1	1		
5		Paribartan RM	1	1	1	1	1	1	1		
6		Thawang RM	1	1	1	1	1	1	1		
7	Rukum	Bhume RM	1	1	1	1	1	1	1		
8		Putha Uttarganga RM	1	1	1	1	1	1	1		

ANNEX C: CASE STUDIES

CASE I Empowering Farmers through the SAMMUNUATI Project: Story of Ram Bahadur Pun

Figure 20 Ram Bahadur Pun

Ram Bahadur Pun dearly called Prem, a farmer in Thawang, Rolpa, has been engaged in agriculture since the age of 16. Rearing livestock (goats and chickens) and cultivating vegetables are parts and parcels of his life. Recently, he has also ventured into growing apples and potatoes for sale, with a very small portion of his harvest reserved for personal consumption.

Despite initial challenges, Ram's dedication to farming has made it the primary source of livelihood for his family. However, access to resources, training, and market linkages remained a barrier to achieving his full potential. The SAMUNNATI project, implemented in the region, provided the much-needed support to enhance his farming practices and scale up his business.

Figure 21 Drip Irrigation provided by SAMMUNATI used in the apple farm

The SAMMUNATI project provided Ram with targeted support, enabling him to adopt improved farming practices and entrepreneurial skills. The technical trainings he received were Enterprise Development where he was guided on running farming as a business, risk taking and scaling operations. The training instilled an entrepreneurial mindset in Ram, motivating him to take calculated risks and expand his business operations. He has also been actively keeping a log book of earning and expenses. Ram was supported with drip irrigation system and pipes.

He praised the SAMMUNATI project since they have been actively listening to the needs of farmers and catering to their needs. Ram believes that the support has been being received from local government much more than the ones

Figure 22 Shelf storage used by Ram

After applying the knowledge gained from the project, Ram's annual income increased to NPR 150,000–250,000, primarily from selling apples. With 200 apple trees currently in production and an additional 150 saplings maturing, his earnings are projected to increase further in the coming years.

Ram views his farming business as a lifelong endeavor that sustains his family's livelihood. He expressed concerns about the end of the SAMUNNATI project but remains committed to applying the knowledge and skills he acquired. To maintain growth, Ram plans to continue improving his practices and exploring market opportunities.

He also hopes for the introduction of similar projects in the future, emphasizing that they play a crucial role in empowering farmers and fostering sustainable livelihoods in the region.

CASE II Empowering Local Enterprises through the SAMMUNATI Project: A Story of Lalira Sunar

Lalira Sunar, a resident of Putha, Ward 10, in Rukum, has been running her tailoring business for the past three years. As the sole provider for her 3-year-old son, she has worked tirelessly to establish and grow her enterprise, which serves as her family's primary source of income. Specializing in cultural dresses, regular clothing, and kids' headcaps, Lalira has steadily built her reputation in the community. Tailoring has become her primary source of income, helping her sustain her livelihood and support her family.

Through the SAMMUNATI project, Lalira received significant support to enhance her business operations including training and technical assistance and materials support. Lalira participated in a four-day business literacy training where she learned essential business management skills, including how to plan, manage, and sustain her enterprise. The project staff evaluated her business and provided her with vital tools, including a cupboard, table, and rack. These additions transformed her workspace, making cloth-cutting and other tasks more efficient.

Figure 23 Lalira Sunar of Putha Uttarganga

The support Lalira received through the project has positively influenced her business in several ways including increased efficiency, improved business mindset and growing customer base. Before receiving a table and other tools, Lalira struggled to cut cloth properly, which slowed her workflow. The new tools have streamlined her processes, allowing her to serve more customers effectively.

The project's intervention indirectly boosted her visibility in the community. As a result, the number of her customers has increased, leading to higher income and profitability. Lalira now dedicates consistent time and effort to her business, adopting the project's teachings about long-term growth and efficiency. Despite these advancements, Lalira faces some challenges such as pricing perceptions of customers (some customers perceive her services as expensive) and machine nearing the end of its functional lifespan.

Lalira Sunar's story highlights the transformative impact of the SAMMUNATI project on small-scale entrepreneurs. By providing technical training, material support, and business insights, the project has empowered Lalira to expand her tailoring business, increase her income, and contribute to her community. With additional support and continued dedication, Lalira is poised to achieve even greater success in the future.

ANNEX D: PHOTOGRAPHS FROM FIELD

Figure 24 Sprayer bottles provided to beneficiaries

Figure 25 Watering cans provided to beneficiaries

Figure 26 Sprinkler provided to beneficiaries

Figure 27 Sprinkler being used in a field

Figure 28 Climate filed school board in Rolpa

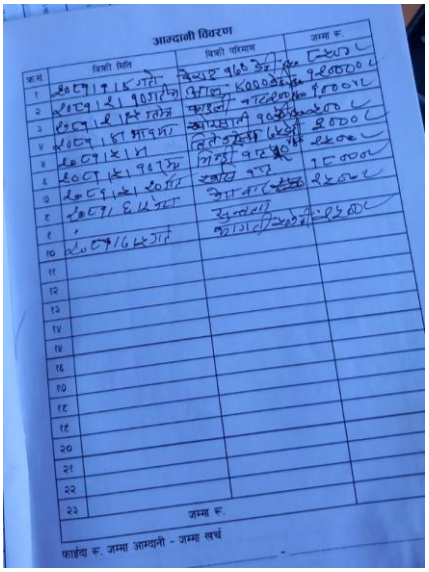


Figure 29 Agricultural log book maintained by a farmer

Figure 30 Vermi compost made by a farmer (learned in farmer's school)

Figure 32 Female beneficiaries showing their agricultural log book

Figure 31 KII with local representative of Rolpa

Figure 33 KII with Project Staff in Putha Uttarganga, Rukum East

Figure 36 KII with lead farmer and enterprise owner of Rukum East

Figure 39 Survey with a female beneficiary in Rolpa

Figure 34 KII with agro-vet supported by SAMMUNATI project

Figure 37 Survey with female beneficiary

Figure 35 FGD with farmer's group in Rolpa

Figure 38 FGD with farmers group in Rukum East

Practical
ACTION