DECENTRALIZED
EvO/2026/01

Phase II: Climate-Smart Agriculture and Market Development Project Baseline Study

23 DECEMBER 2025

Conducted by: Strategic Development and Research Group (StratDever)
P.O. Box 4904, Kigali-Rwanda
Tel: +250788688386,
Email: info@stratdever.org
www.stratdever.org

UNHCR Evaluation Office

UNHCR's Evaluation Policy confirms UNHCR's commitment to support accountability, learning, and continual improvement through the systematic examination and analysis of organizational policies, strategies, and programmes. Evaluations are guided by the principles of impartiality, credibility, and utility, and are undertaken to enhance the organization's performance in addressing the protection, assistance, and solution needs of refugees, stateless people, and other persons of concern.

Evaluation Office
United Nations High Commissioner for Refugees
Case Postale 2500
1211 Genève 2
Switzerland
unhcr.org/about-unhcr/who-we-are/evaluation-office

Published by UNHCR

Acknowledgements

This baseline study was conducted by the Strategic Development and Research Group (StratDever), commissioned by UNHCR Rwanda in partnership with DUHAMIC-ADRI, as part of the Climate-Smart Agriculture and Market Development Project Phase II. We extend our sincere appreciation to all institutions and individuals whose support and collaboration made this exercise possible.

We particularly acknowledge the leadership of the evaluation manager, Mr. Marcellin Mugabe (UNHCR), whose oversight ensured the rigor and integrity of the study. We also gratefully acknowledge the contributions of the UNHCR support team, comprising Mr. Mukandi Herzel, Mrs. Safari Prosper Umubyeyi, Mr. Faustin Kalina, Mr. Richard Mungwakuzwe, and Mrs. Claudine Mukagatare, for their valuable coordination, insights, and facilitation throughout every stage of the assessment. Special thanks go to Mr. Rutayisire Richard (DUHAMIC-ADRI) for his technical support and continuous follow-up with the research team.

We further acknowledge the important role of the Ministry in Charge of Emergency Management (MINEMA), whose collaboration and policy guidance strengthened the relevance and alignment of the study within Rwanda's national refugee response framework. Their support in facilitating access to refugee camps, coordinating with local authorities, and overseeing refugee-host interventions was instrumental to the successful completion of the baseline.

Our deepest appreciation goes to the refugee and host community households in Kigeme and Nyabiheke, who generously shared their time, perspectives, and lived experiences. Their openness enriched the findings and provided a solid foundation for understanding the conditions and opportunities of their livelihoods. We also thank cooperative leaders, local administrators, and development partners for their engagement and contributions during consultations and validation processes.

Finally, we acknowledge the dedication of the StratDever research team, comprising technical experts, enumerators, supervisors, and a data manager, who demonstrated professionalism and adherence to ethical standards, ensuring the production of high-quality, reliable data.

This report reflects a collective effort grounded in partnership, technical excellence, and community participation. We appreciate all who contributed and look forward to continued collaboration in advancing climate-smart agriculture, market development, and inclusive livelihood opportunities for both refugees and their host communities in Rwanda.

Evaluation information at a glance	
Title of the evaluation:	Climate–smart agriculture and market development for enhancing livelihoods of refugees and their host communities in Rwanda – Phase 2 (baseline)
Timeframe covered:	2025
Completion Year:	2025
Type of evaluation:	Decentralised
Countries covered:	Rwanda
Regional Bureau:	RBESA
Evaluation manager/ contact in UNHCR:	Marcellin Mugabe mugabe@unhcr.org
Support staff:	Mukandi Herzel mukandi@unhcr.org; Rutayisire Richard rutayisire.richard@duhamic.org.rw Safari Prosper Umubyeyi UMUBYEYI@unhcr.org Faustin Kalina kalina@unhcr.org Richard Mungwakuzwe mungwaku@unhcr.org Claudine Mukagatare MUKAGATA@unhcr.org

Commissioned by UNHCR Rwanda
Evaluation Quality Assurance provided by UNHCR Evaluation Office

Table of Contents

Abbreviations and Acronyms

MINEMA	Ministry in charge of Emergency Management
UNHCR	United Nations High Commissioner for Refugees
KII	Key Informant Interviews
FGD	Focus Group Discussions
FI	Financial Institute
SG	Saving Group
SOP	Standard Operating Procedures
PBS	Participants-Based Survey
PFA	Partnership Framework Agreement
SMEs	Small and Medium Enterprises
M&E	Monitoring and Evaluation
RRA	Rwanda Revenue Authority
BP	Business Plan
IGA	Income Generating Activity
RDB	Rwanda Development Board
RCA	Rwanda Cooperative Agency

List of Tables

List of Figures

Executive summary

Project Overview

The Climate-Smart Agriculture and Market Development Project, launched in July 2024 by DUHAMIC-ADRI in partnership with UNHCR, strengthens the resilience and self-reliance of 2,016 households (722 refugees and 1,294 hosts) in Rwanda. The project emphasizes gender inclusion, ensuring women and men participate equally in agricultural and market activities. It addresses shared challenges, including limited land, dependence on rain-fed farming, climate shocks, and restricted market access, by promoting climate-smart agriculture and market linkages to reduce dependency on humanitarian aid and enhance economic independence.

The project aims to achieve two key outcomes: enhancing agricultural productivity through climate-smart practices, sustainable land and water management, and access to quality inputs; and increasing household incomes by strengthening cooperatives, connecting farmers to markets and financial services, and developing inclusive value chains.

Methodology

The baseline employed a mixed-methods approach, drawing on structured questionnaires for quantitative data alongside semi-structured interviews and focus group discussions for qualitative insights. All project-targeted refugee households were covered through a census, while host community households were sampled to ensure representativeness. Data collection was conducted with care to follow ethical principles, including obtaining informed consent, maintaining confidentiality, and ensuring secure data storage. Quantitative data were processed through Excel and SPSS, while qualitative information was thematically coded in Atlas.ti. The process included quality assurance measures such as tool pre-testing, enumerator training, cross-validation, and stakeholder validation workshops, ensuring both statistical robustness and community participation in the interpretation of findings.

Findings

→ Household Income and Demographic Characteristics

The findings reveal marked differences between refugee and host households in Kigeme and Nyabiheke. Females dominate refugee populations, constituting 73.9 % in Kigeme and 66.7 % in Nyabiheke, whereas males are more prevalent among host households, accounting for 54.5 % in Kigeme Host and 56.9 % in Nyabiheke Host. Marital status exhibits variability, with legally married individuals forming the largest group in Kigeme Host and Nyabiheke Camp, while cohabitation is more common in Kigeme Camp, and widowers represent a significant share, reflecting mature household management.

Household structures further illustrate disparities: female-headed households dominate refugee camps (66.3 % in Kigeme, 55.7 % in Nyabiheke), while host households are predominantly male-headed (83.6 % in Kigeme Host, 66.7 % in Nyabiheke Host). Education levels are generally low, with 40.2 % never attending school, and disability prevalence is higher among refugees. The average participant age is 49.5 years, highlighting a mature demographic responsible for household sustenance.

Economic dependency is high, particularly among refugees. Kigeme and Nyabiheke camps exhibit dependency ratios of 79 % and 81 %, respectively, whereas host communities report slightly lower ratios: 64 % in Kigeme Host and 81 % in Nyabiheke Host, resulting in an overall dependency ratio of 77 %. Refugee households are highly vulnerable, with 77.3 % in Kigeme and 85.9 % in Nyabiheke classified as highly vulnerable, compared to host households, nearly 91 % of which fall into middle-income tiers.

Average monthly household income is low across groups, ranging from 37,716 Rwf in Kigeme Camp to 40,142 Rwf in Nyabiheke Camp, barely covering expenditures and leaving minimal savings. Subsistence agriculture is the main source of income, with 87.5 % of Nyabiheke refugees dependent on farming, whereas host households engage more in daily wage labor and other minor activities. This limited diversification and reliance on agriculture heightens vulnerability to climate variability and market shocks.

→ **Humanitarian Assistance and Livelihood Conditions**

Humanitarian assistance is heavily relied upon by refugees, with 87.1 % of Kigeme and 89.1 % of Nyabiheke participants receiving food or cash aid in the past year. Host communities, conversely, report minimal access, while government support benefits mainly host households, particularly in Nyabiheke. Despite aid provision, refugee satisfaction is low, with 74 % in Kigeme and 81 % in Nyabiheke "not satisfied at all," citing inadequate quantities, poor quality, and unpredictability. Negative coping strategies, including reducing or skipping meals, are widespread, disproportionately affecting children.

Food security is precarious among refugees, with an average of four days per month without meals, 95–98 % expressing concern over food scarcity, and over 60 % experiencing a full day and night without food. Host households face less severe but notable seasonal shortages, peaking in pre-harvest periods. Nutritional quality is poor, with refugees consuming protein only 1.5–1.9 days per week and fruits 0.8–2.2 days. Employment patterns reinforce vulnerability: over half of Kigeme refugees have no job, while Nyabiheke refugees face lower but still significant unemployment. Refugees are largely limited to self-employment in informal sectors due to legal and structural barriers, while host communities have slightly more stable income sources.

Access to productive assets is constrained for refugees, who hold minimal land, livestock, or equipment, and rely predominantly on government-provided marshlands, whereas hosts possess larger, more secure, and varied holdings. This structural inequity underscores the urgent need for interventions improving access to productive resources for refugees.

→ **Agricultural Productivity**

Agricultural productivity demonstrates pronounced differences between refugees and hosts. Maize cultivation is near-universal (97.4 % in Kigeme Camp, 97.3 % in Kigeme Host, 91.1 % in Nyabiheke Camp, 86.3 % in Nyabiheke Host), yet host households achieve higher yields (149.05 kg and 102 kg) compared to refugees (54.45 kg and 62.93 kg). Bean cultivation is concentrated in Kigeme, while soybean is significant in Nyabiheke. Vegetable and Irish potato outputs are limited, particularly among refugees.

Climatic shocks are major constraints, with crop diseases affecting 70 % of households and droughts impacting over 90 % in Nyabiheke. Refugees employ pesticides (86.2 %), fertilization (55 %), and irrigation (72 % in Nyabiheke) as coping measures. Access to agricultural inputs is generally high, with Nyabiheke camp refugees reporting near-universal availability of extension services (95.3 %), fertilizers (96.4 %), and improved seeds (83.9 %), though machinery is scarce (15.4 %). Cooperative engagement is nearly universal (98.8 %), facilitating market access and input provision, with Nyabiheke households more integrated into value chains and formal agreements than Kigeme counterparts.

Climate-smart agriculture adoption is uneven: while 82.3 % access general extension services, only 38.3 % receive specialized climate-smart training. Adoption of soil conservation (89.6 % in Nyabiheke), efficient fertilizer use (78.6 %), and crop rotation (76.6 %) is notable, whereas intercropping, intensive farming, and drought-tolerant varieties are less widespread. Post-harvest handling is high (86.5 % overall), particularly in Nyabiheke camp (99.5 %), supported by facility access (97 %). Entrepreneurship and business management training remains limited, highest in Nyabiheke camp (42.2 % in saving group management, 39.1 % in financial literacy), while Kigeme lags behind. Market access is generally reliable (77 %), with Nyabiheke households exhibiting stronger integration, cooperative sales, and formal agreements than Kigeme.

→ **Social Cohesion and Self-Reliance**

Social cohesion is exceptionally strong, with 97.5 % of participants feeling integrated and 98.1 % maintaining cross-community friendships. Daily interactions in shared spaces occur for 95.8 % of households, and 99.2 % belong to mixed cooperatives. Joint commercial activities are reported by 95.6 %, and 98.6 % access inclusive financial services, with 96.7 % valuing cohabitation.

Despite cohesion, self-reliance remains low among refugees: only 7.9 % in Kigeme and 13.0 % in Nyabiheke report independence, compared to 50.9 % and 25.5 % of hosts. Key barriers include food insecurity (61.1–89.6 %), limited education, healthcare, housing, income-generating capacity, and

unstable employment. A substantial proportion of refugees feel poorer than before (37.1 % in Kigeme, 25 % in Nyabiheke), while hosts perceive improvements (67.7 % in Kigeme, 72.5 % in Nyabiheke). Future planning reflects these disparities: only 21.6 % of Kigeme and 35.4 % of Nyabiheke refugees have clear self-reliance plans, compared to 68.2 % and 49.0 % of hosts. Constraints include unstable housing (31.1–40.1 %), limited working capital (58.2–75.5 %), insufficient business skills (31.8–52.1 %), and restricted access to national services (14.5–29.7 %). Refugees prioritize income-generating activities (58.2–87 %), community savings and lending (46.8–82.3 %), and working with financial institutions (27.6–68.2 %). Supports needed include agricultural programs (54.5–92.7 %), financial literacy (45.5–74 %), improved market linkages (31.1–59.9 %), employment opportunities (52.1–65.1 %), and infrastructure (20.4 %), along with access to national systems (21.7 %).

Conclusions

The assessment draws five key conclusions, which are discussed in detail in the full report:

1. Strong social cohesion and integration between refugee and host communities provides a solid foundation for inclusive development.
2. Persistent economic disparities and limited financial access constrain refugee self-reliance, despite high levels of social integration.
3. Limited access to financial capital, business skills, and national systems undermines refugees' ability to plan for and achieve self-reliance.
4. Shared aspirations for self-reliance exist among both refugees and host communities, but structural and infrastructural barriers limit the realization of this potential.
5. Integrated, multi-sectoral approaches are necessary to sustain refugee–host inclusion and support the transition from coexistence to resilience.

Recommendations

Based on the findings and conclusions, six overarching recommendations have been identified. The full report provides a detailed narrative of each recommendation, including suggested actions:

- Recommendation 1: Strengthen economic independence among refugees through targeted income-generating initiatives, small-scale entrepreneurship, vocational training, and cooperative-based enterprises. Facilitate access to working capital through microfinance, savings groups, and partnerships with financial institutions. Advocate for enabling legal frameworks that allow refugees to participate in formal labor markets and pursue self-employment.
- Recommendation 2: Expand agricultural productivity and climate resilience through community-based programs promoting climate-smart practices, such as soil conservation, irrigation, drought-tolerant crops, and post-harvest management. Enhance access to inputs, extension services, and machinery for both refugee and host farmers.
- Recommendation 3: Improve food security and nutrition by diversifying diets, increasing protein and fruit consumption, and ensuring consistent access to food throughout the agricultural cycle. Integrate humanitarian food support with long-term livelihood programs to reduce dependency on aid.
- Recommendation 4: Expand market access and value-chain integration by linking farmers and cooperatives with buyers and formal markets. Support market information systems and transparent contractual frameworks to ensure equitable participation and fair pricing.
- Recommendation 5: Promote social cohesion and inclusive development by formalizing joint community initiatives, such as mixed cooperatives, agricultural projects, and financial groups. Ensure equitable representation of refugees and hosts in community decision-making and resource allocation.
- Recommendation 6: Strengthen human capital for sustainable self-reliance through capacity-building in financial literacy, business management, and cooperative governance. Complement skills development with investments in rural infrastructure, including roads, markets, and communication networks, to expand livelihood opportunities.

1. Introduction and background

1.1. Climate Smart Agriculture Project

Since July 2024, DUHAMIC-ADRI has been implementing Phase II of the Climate-Smart Agriculture and Market Development Project in close partnership with UNHCR, under the framework of a formally signed Partnership Framework Agreement (PFA). This collaboration reflects a shared commitment to advancing sustainable, inclusive, and climate-resilient livelihood solutions that respond to the protracted displacement context in Rwanda and the structural socio-economic vulnerabilities affecting both refugee and host communities.

The project is implemented within a shifting global humanitarian and development landscape, characterized by prolonged displacement, declining humanitarian funding, and increased emphasis on self-reliance and resilience-based approaches. Globally, more than 75% of refugees live in protracted displacement situations lasting over five years, with host countries increasingly encouraged to transition from short-term humanitarian assistance to sustainable development-oriented solutions (UNHCR, 2023; World Bank, 2022).

In this context, the project aligns directly with the Global Compact on Refugees (GCR), particularly its objectives of easing pressure on host countries, enhancing refugee self-reliance, and promoting inclusive solutions that benefit both host communities and refugees (United Nations, 2018). It also contributes to the 2030 Agenda for Sustainable Development, especially SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), and SDG 13 (Climate Action).

At the national level, the intervention is firmly embedded within Rwanda's progressive refugee and development policy framework, including the National Strategy for Transformation (NST2), the Strategic Plan for Agriculture Transformation (PSTA 4), and Rwanda's Refugee Law and National Refugee Policy, which grant refugees the right to work, freedom of movement, and access to national systems. These policies create an enabling environment for integrated refugee-host livelihood programming, supporting Rwanda's commitment to the humanitarian-development-peace nexus (Government of Rwanda, 2018; MINEMA & UNHCR, 2023).

The project's scope is both ambitious and inclusive. It targets 2,016 households, comprising 722 refugee households residing primarily in Kigeme and Nyabiheke refugee camps and 1,294 host community households living in surrounding districts. This integrated targeting approach is intentionally designed to prevent parallel systems of assistance, reduce aid-related tensions, and promote shared economic opportunities and social cohesion between refugee and host populations.

Gender equality and inclusion are cross-cutting priorities. The project directly reaches 1,148 women and 868 men, recognizing women's disproportionate responsibility for household food security and unpaid care work, while also ensuring men's active engagement in climate-smart production and market-oriented agriculture. This approach is consistent with evidence showing that gender-responsive agricultural interventions yield stronger food security and income outcomes (FAO, 2022).

Phase II of the project is implemented over a 24-month period (July 2024 – June 2026) and builds on lessons learned during Phase I, including the need for stronger market linkages, cooperative strengthening, and climate-resilience measures. The baseline study was conducted at the early stage of Phase II to establish reference values against which progress and outcomes can be systematically measured over time.

Refugee and host communities in Rwanda face shared and interlinked livelihood constraints, including limited access to arable land, small plot sizes, heavy reliance on rain-fed agriculture, and increasing exposure to climate variability. Climate change has intensified rainfall unpredictability,

prolonged dry spells, and localized flooding, significantly undermining agricultural productivity and income stability in areas hosting refugees (World Bank, 2022).

These challenges are compounded by restricted access to formal markets, limited financial services, and weak cooperative structures, particularly among refugee populations who face additional regulatory, social, and informational barriers. As humanitarian assistance becomes increasingly constrained due to global funding shortfalls, the need for climate-resilient, market-linked livelihood solutions has become more urgent (UNHCR, 2024).

Phase II of the Climate-Smart Agriculture and Market Development Project responds directly to these dynamics by combining climate-smart agricultural production, institutional strengthening, and market integration, thereby addressing both immediate livelihood needs and the structural drivers of dependency.

1.1.1. Project Outcome 1: Increased Agricultural Productivity

The first outcome focuses on transforming smallholder agriculture through sustainable and climate-resilient practices. This is achieved by promoting climate-smart agriculture techniques designed to conserve soil moisture, improve crop yields, and enhance the adaptability of farmers to changing weather patterns. Alongside this, the project invests in capacity building by training farmers on climate adaptation strategies, sustainable land management, and efficient water use. The provision of access to critical inputs and technologies further strengthens this outcome, as beneficiaries are supported with high-quality seeds, organic fertilizers, and appropriate farming tools capable of withstanding climatic shocks such as droughts and floods.

1.1.2. Project Outcome 2: Increased Household Income

The second outcome emphasizes strengthening the economic dimension of food security and resilience by enhancing household income through market participation and livelihood diversification. Market development initiatives are introduced to integrate smallholder farmers into inclusive and competitive agricultural value chains, ensuring that they can benefit from improved market opportunities. The project also supports the strengthening of cooperatives and farmer groups, building their institutional capacity to foster collective action, improve governance, and sustain meaningful engagement in markets. In addition, beneficiaries are linked to buyers, input suppliers, and microfinance institutions, facilitating access to financial services and business opportunities that promote profitable and sustainable livelihoods.

2. Purpose, scope and method(s) of the evaluation

2.1. Understanding of the Scope and Objectives of the Study

This section clarifies why the baseline evaluation was conducted (purpose), what it covered (scope), and what it sought to achieve (objectives), in line with good evaluation practice and UNHCR evaluation standards.

2.1.1. Purpose of the Baseline Study

The primary purpose of the baseline study was to establish a robust reference point at the early stage of project implementation for the Climate-Smart Agriculture and Market Development Project (Phase II). The baseline provides foundational data against which progress, outcomes, and changes attributable to the project can be systematically measured over time.

Specifically, the baseline was intended to:

- Generate reliable, disaggregated evidence on pre-intervention socio-economic, agricultural, and livelihood conditions of refugee and host community households;
- Support evidence-based planning and adaptive management during project implementation;
- Strengthen accountability to stakeholders, including UNHCR, implementing partners, and affected communities; and
- Serve as a benchmark for monitoring, learning, and future evaluations, including midline and end-line assessments.

2.1.2. Scope of the Baseline Study

The scope of the baseline study was defined by the geographic, thematic, and population coverage of the project.

- Geographically, the study covered: Kigeme and Nyabiheke refugee camps, and Surrounding host community areas within the project's operational districts.
- In terms of population, the baseline targeted: Refugee households selected under Phase II of the project; and Host community households living in proximity to the camps and participating in project activities.
- Thematically, the baseline focused on key domains aligned with the project's theory of change and outcome framework, including: Household socio-economic characteristics; Agricultural practices and productivity; Food security and coping strategies; Income sources and livelihood diversification; Access to land, inputs, markets, and financial services; Awareness and application of climate-smart agriculture practices; and social cohesion and refugee–host community relations.

The baseline did not attempt to assess project impact, but rather to document pre-intervention conditions against which future changes can be assessed.

2.1.3. Objectives of the Baseline Study

The baseline study was designed around four interrelated objectives:

- To assess the baseline socio-economic and agricultural conditions of targeted refugee and host community households, including farming practices, food security status, income sources, market access, and climate-related challenges, in order to develop a comprehensive beneficiary profile and inform tailored interventions.
- To inform the setting of realistic, measurable, and context-sensitive project targets, grounded in actual beneficiary conditions rather than assumptions.
- To establish baseline benchmarks for key indicators linked to the project's outcome areas, providing reference points for routine monitoring, annual reporting, and future evaluations.
- To identify key constraints, risks, and gaps affecting agricultural productivity, market participation, and household resilience, including structural, environmental, and socio-economic barriers, in order to guide prioritization of resources and adaptive implementation strategies.

2.2. Baseline Study Design

The baseline study adopted a mixed-methods design, combining both quantitative and qualitative approaches and supported by a systematic review of secondary data. This design was chosen to provide a holistic understanding of the socio-economic conditions of refugees and host communities, establish credible baseline values for project indicators, and generate actionable insights for program implementation.

2.2.1. Overall Design

- Quantitative Component: A structured household survey provided numerical estimates on key indicators, such as demographics, livelihoods, income levels, and access to services. This component offered measurable and comparable baseline values that can be tracked over time.
- Qualitative Component: Semi-structured interviews and Focus Group Discussions (FGDs) were conducted to capture participants' experiences, perceptions, and contextual nuances. These methods enriched the interpretation of statistical findings, uncovering underlying reasons and barriers behind observed trends.
- Secondary Data Review: Relevant reports, project documents, and publications from MINEMA, UNHCR, DUHAMIC ADRI, and other institutions were reviewed to complement field data and provide a broader contextual understanding.

2.2.2. Justification for the Design

This design was particularly appropriate for the baseline study because:

- Purpose-driven: The combination of qualitative and quantitative methods allowed the study to both measure the current status, progress against indicators, and understand the lived realities of target communities.
- Scope-sensitive: Given the study's coverage of two refugee camps and surrounding host communities, the design enabled comprehensive data collection while balancing depth and breadth.
- Resource-appropriate: The use of mixed methods maximized efficiency by leveraging existing secondary data and combining large-scale surveys with focused qualitative insights, ensuring rigor within available time and logistical constraints.
- Validity and Reliability: Triangulation across multiple methods and sources enhanced the robustness of findings and minimized bias.

2.2.3. Study Framework

The baseline study was guided by the project's theory of change, which links interventions on economic inclusion to improved household resilience and self-reliance among refugees and host communities. Data collection and analysis were structured around this framework, ensuring alignment with the project's intended outcomes.

2.3. Data Sources and Collection Methods

The baseline drew on both primary and secondary data sources to generate a comprehensive and credible evidence base. Data were collected between July 14-30, 2025, over a ten-day period across Kigeme and Nyabiheke refugee camps and surrounding host communities.

2.3.1. Secondary Data

Secondary data were reviewed continuously throughout the assessment. The team examined critical documents and reports related to refugees' livelihoods, socio-economic integration, and service access. Sources included:

- Project-specific documents (Project proposal, M&E plan).
- Reports and research from MINEMA, UNHCR, and DUHAMIC ADRI.
- Publications from other organizations working in refugee and host community contexts.
- Additional documents suggested during the inception report validation workshop.

This review provided background, contextual framing, and benchmarks for triangulating the findings of primary data.

2.3.2. Primary Data

→ **Quantitative Data (Household Survey)**

The quantitative component of the baseline assessment was conducted through a household survey targeting both refugee and host community households in Kigeme and Nyabiheke. Data collection was carried out using structured questionnaires, administered directly by trained enumerators to ensure accuracy, consistency, and inclusivity across the study population.

- Target group: Refugee and host community households in Kigeme and Nyabiheke.
- Tool: Structured household questionnaire (translated into Kinyarwanda and administered electronically via Kobo Collect).
- Approach: Enumerator-administered, door-to-door surveys.
- Fieldwork team: 25 trained enumerators, gender-balanced, deployed in two field teams.
- Coverage: Each enumerator interviewed ~8 respondents daily, ensuring the full sample was covered within five days.

→ **Qualitative Data (FGDs and KIIs)**

Focus Group Discussions (FGDs): Eight FGDs (n=8 per group) were conducted using semi-structured guides. Participants were purposively selected to ensure diversity by gender, age, and residence. Each FGD was facilitated by two data collectors (one male, one female), one acting as moderator, the other as note-taker and recorder. FGDs included:

- Male participants, Nyabiheke camp
- Female participants, Nyabiheke camp
- Male participants, Nyabiheke host community
- Female participants, Nyabiheke host community
- Male participants, Kigeme camp
- Female participants, Kigeme camp
- Male participants, Kigeme host community
- Female participants, Kigeme host community

Key Informant Interviews (KIIs): Eight KIIs were conducted with camp managers (MINEMA, UNHCR), DUHAMIC ADRI staff, refugee committee representatives, and local leaders (cell and village). These were semi-structured and designed to capture institutional perspectives and contextual insights.

2.4. Sampling Strategy

The study population consisted of 2,016 households, comprising 722 refugee households and 1,294 host community households, across the two project districts. The sampling strategy combined a census approach for refugees with a probability-based sample for host community households, ensuring both comprehensive coverage and statistical validity.

2.4.1. Refugee Households

Given the relatively small total number of refugee households (722) and the project's commitment to cover all targeted refugee beneficiaries, a census approach was initially proposed. This approach was

expected to maximize inclusivity and ensure that the baseline accurately reflected the conditions of all refugee households. However, during fieldwork, several challenges limited full coverage. These included:

→ Relocation of some households to other camps or districts.
→ Temporary unavailability of respondents due to illness or other personal commitments.
→ Difficulties in reaching some households by phone or in person.

As a result, the survey successfully reached 572 refugee households, representing 79% coverage of the target population. Of these, 380 households were from Kigeme Camp and 192 households were from Nyabiheke Camp.

2.4.2. Host Community Households

For host community households, a representative sample was calculated using the finite population sampling formula, which ensured statistical rigor while balancing available resources.
Sampling Formula Parameters:

$$\text{Unlimited population: } n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2}$$

$$\text{Finite population: } n' = \frac{n}{1+\frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2 N}}$$

- Confidence Level: 95%, Margin of Error: 5%, Population Proportion: 50%
- Population Size: 1,294
- z = 1.96 (at 95% confidence level)
- ε = 0.05
- p̂ = 50%

This calculation yielded a required sample size of 297 households. However, due to similar logistical and availability constraints as encountered with refugees, the survey ultimately reached 271 households (91% of the planned sample). Of these, 220 households were from Kigeme host communities and 51 households from Nyabiheke host communities. The final sample size reached was 843, as indicated in the table below:

Table 1: Sample Size Reached by the Survey

Beneficiary Group	Planned Sample	Achieved Sample	Distribution by Site
Refugee households	722 (census)	572	380 Kigeme, 192 Nyabiheke
Host community households	297	271	220 Kigeme, 51 Nyabiheke
Total	**1,019**	**843**	

Source: Author Field Data

This final achieved sample size provided a robust dataset for the baseline assessment, enabling both statistical analysis of host community households and near-comprehensive coverage of refugee households.

2.5. Data Analysis

The analysis phase brought together information from multiple sources, including household surveys (quantitative), FGDs and KIIs (qualitative), and secondary literature and project documents. All data were systematically cleaned, verified, and organized to ensure reliability before being subjected to analysis. This phase aimed to generate a comprehensive and nuanced understanding of refugee and host community households by integrating numerical evidence with contextual insights.

2.5.1. Quantitative Data Analysis

Quantitative data were analyzed using SPSS and Microsoft Excel to transform raw survey responses into meaningful evidence. A combination of descriptive and inferential statistical techniques was employed, depending on the nature of the variables and study objectives.

- Descriptive Statistics: Frequencies, %ages, means, and standard deviations were computed to summarize socio-demographic profiles and key livelihood indicators.
- Inferential Analysis: Cross-tabulations, correlation, and regression analyses were applied to test associations between variables (e.g., household characteristics and livelihood outcomes).
- Significance Testing: Where relevant, chi-square and t-tests were used to determine the statistical significance of observed relationships.
- Visualization Tools: Outputs such as frequency tables, histograms, pie charts, bar graphs, and line graphs were generated to improve the interpretation and presentation of findings.

This systematic approach provided a quantitative foundation for understanding patterns in living conditions, income sources, food security, and access to services across study groups.

2.5.2. Qualitative Data Analysis

Qualitative data from FGDs and KIIs were transcribed, translated where necessary, and coded for analysis. Using thematic analysis supported by Atlas.ti software, the research team identified recurring themes, emerging issues, and participants' nuanced perspectives. The process involved:

- Open coding to capture keywords and concepts raised by participants.
- Categorization of codes into broader themes such as livelihood opportunities, barriers to economic self-reliance, gender dynamics, and community cohesion.
- Content analysis to quantify the frequency and intensity of certain issues raised across groups.

This analysis revealed the "why" behind the numbers, helping to explain underlying drivers of observed quantitative trends. For example, while survey results highlighted food insecurity levels, qualitative narratives provided context about coping strategies and perceived challenges in agricultural practices.

2.5.3. Integration and Triangulation of Findings

A mixed-methods integration strategy was applied to ensure that the study did not rely solely on either quantitative or qualitative data. The research team used triangulation to cross-check and validate findings across different sources and methods. For example:

- Quantitative survey results on access to credit were compared with qualitative testimonies from FGDs to confirm barriers to financial inclusion.
- Patterns identified in refugee livelihood data were cross-validated with secondary sources such as UNHCR and MINEMA reports.

This triangulation not only strengthened the credibility of the results but also allowed the study to present a richer, multidimensional picture of household conditions and experiences.

2.6. Baseline Evaluation Questions

Table 2: Baseline Evaluation Questions

Baseline Question	Key Indicators	Data Sources	Analysis Methods
(i) Increased Household Income			
1. What is the socio-economic status of project participants, and how does it vary across different demographic groups?	Socio-economic categories: income levels across age, gender, household size, education, dependency ratios	Household surveys, FGDs, and KIIs with participants	Descriptive statistics, cross-tabulations, thematic analysis
1.1 What are the demographic characteristics of participating households?	Age, gender, household size, education, dependency ratio	Household surveys	Descriptive statistics

			(frequencies, means)
1.2 What is the current median monthly and annual income of households, and main sources of income?	Median household income; share of different income sources	Household surveys, KIIs	Descriptive & inferential statistics; triangulation with KIIs
(ii) Reduced Reliance on Humanitarian Food/Cash Assistance			
2. What proportion of households receive humanitarian assistance, and from which organizations?	% Households receiving assistance; types of support	Household surveys, KIIs with participants & UNHCR officials	Descriptive statistics; content analysis
2.1 What is the current food security status and coping strategies?	Food Consumption Score (FCS); Household Dietary Diversity Score (HDDS);	Household surveys, FGDs, food security tools	Statistical scoring, thematic analysis
2.2 What is the employment status/background of household members?	% Employed; type of employment; job stability; income from IGAs	Household surveys, KIIs with participants & local leaders	Cross-tabulations, descriptive analysis
2.3 What assets are owned by households?	% Owning productive assets (livestock, land, tools) and non-productive assets	Household surveys	Descriptive analysis, asset index creation
2.4 What proportion of households have access to arable land, and what are usage patterns?	% With land access; average land size; tenure arrangements; usage	Household surveys, FGDs, and KIIs with authorities	Descriptive statistics, thematic analysis
(iii) Increased Agricultural Productivity			
3. What is the current level of agricultural productivity on marshlands?	Crop yields per hectare; cropping intensity	Agricultural assessments, KIIs with farmers & extension staff	Descriptive & trend analysis
3.1 What proportion of participants has access to production kits?	% Receiving seeds, fertilizers, tools	Household surveys, FGDs	Descriptive statistics; qualitative triangulation
3.2 How many participants are cooperative members, and how effective are cooperatives?	% Cooperative membership; functionality and sustainability indicators	Household surveys, KIIs with co-op leaders	Cross-tabulation; thematic analysis
3.3 What is the level of awareness/application of climate-smart practices?	% Applying water mgmt., soil conservation, CSA practices	Household surveys, FGDs, and agricultural trainers	Descriptive analysis; thematic coding
3.4 What training in business/ entrepreneurship did participants receive and apply?	# Trained; % applying business skills	Household surveys, KIIs with institutions	Descriptive statistics; qualitative triangulation
3.5 Do participants have regular access to agricultural markets, and what are the barriers?	% With market access, the main barriers (distance, price, transport)	Household surveys, KIIs with market actors	Descriptive analysis; thematic analysis
3.6 To what extent are participants integrated into value chains?	% With contract farming/linkages to buyers	Household surveys, KIIs with co-ops, market actors	Cross-tabulations; content analysis
(iv) Social Cohesion			
4. How do refugee and host community members perceive their social relationships and peaceful co-existence?	Levels of trust, collaboration, conflict, and joint participation in activities	FGDs, KIIs, social cohesion assessment tools	Thematic analysis; perception scoring

2.7. Ethical Considerations and Consent

Ethical principles guided all stages of the baseline study to ensure that participants' dignity, privacy, and rights were fully respected. The research adhered to international standards of ethical research involving human subjects, as well as national requirements set forth by the Rwanda National Ethics Committee and the Rwanda Data Protection Law. Key ethical safeguards included:

→ **Ethical Approval**

Prior to fieldwork, the research team sought and obtained authorization from the Ministry in Charge of Emergency Management (MINEMA), targeted district authorities, and camp management officials. This ensured compliance with government regulations and secured official permission to access both refugee camps and host communities. Early engagement with authorities also facilitated smoother collaboration with local leaders and improved community.

→ **Confidentiality**

Strict confidentiality measures were observed to protect participants' identities and sensitive information. Names, addresses, and other personal identifiers were neither recorded in the final dataset nor reported in outputs. Enumerators received tailored training on privacy protocols, data handling, and ethical interviewing techniques. All electronic data were stored in password-protected devices and later transferred to a secure server accessible only to the lead consultant and data manager. This ensured that participants' information remained confidential and safeguarded against unauthorized access.

→ **Informed Consent and Assent**

Participation in the study was entirely voluntary. Enumerators presented participants with a consent form, verbally explained its contents in Kinyarwanda, and answered any questions that required clarification. The form outlined the study's objectives, the nature of the questions, data privacy measures, and participants' rights, including the right to decline participation or withdraw at any stage without consequence. Only after participants confirmed full understanding and agreement was written consent obtained. For participants with limited literacy, verbal consent was documented. Special attention was given to ensuring that women, youth, and other vulnerable groups were provided a safe and respectful environment to express their views freely.

→ **Data Management**

Data collection was conducted electronically using Kobo Collect, preloaded on tablets with unique enumerator logins. Each day, completed survey data were uploaded to a secure central server, and records were erased from devices to minimize the risk of breaches. To preserve anonymity, each household was assigned a unique identification number, and no names were used in analysis or reporting. In addition, each project participant maintained a personal record booklet or register to track services and support received, ensuring transparency and accountability.

→ **Additional Safeguards:**

Beyond these measures, the study also ensured:

- Gender balance among enumerators, which encouraged openness among both male and female participants.
- Do-no-harm principles, whereby sensitive topics were approached carefully to avoid traumatization, particularly for refugee households with experiences of displacement.
- Continuous monitoring by the lead consultant to address any ethical concerns during fieldwork in real time.

2.8. Limitations, Risks, and Mitigation

Despite careful planning, the baseline study faced several limitations and risks. These are presented transparently below, along with the measures taken to minimize their effect on the validity of findings:

Table 3: Limitations, Risks, and Mitigation

Limitation / Risk	Potential Effect	Mitigation Measures
Non-response or unavailability of some households (especially refugees who relocated, were sick, or had other commitments)	Reduced coverage of the intended sample, possible non-response bias	A census approach was attempted for refugee households; substitutes were made where appropriate, and final results were weighted to reflect the original population distribution
Sampling bias for host community households	Over- or under-representation of some groups, affecting generalizability	A statistically valid sample size was calculated using a finite population formula; random sampling ensured representativeness; deviations (e.g., shortfall in Nyabiheke) were documented and adjusted for during analysis
Timing constraints (ten-day fieldwork window)	Risk of rushed interviews, potential data quality issues	Deployed two fully trained field teams with balanced workloads; daily supervision and spot-checks ensured quality
Self-reported data (income, assets, food security)	Risk of recall bias or intentional misreporting	Used standardized questionnaires, triangulated with FGDs, KIIs, and secondary sources; cross-checked inconsistencies during data cleaning
Language and interpretation issues	Risk of miscommunication affecting the accuracy of responses	All tools were translated into Kinyarwanda and pretested; enumerators were fluent in local dialects; both male and female enumerators were used to improve comfort in sensitive discussions
Data entry and technical issues	Potential data loss or errors during electronic collection	Used Kobo Collect with built-in skip logic and consistency checks; daily uploads to a secure server with backup protocols
External Contextual Factors	Ongoing resettlement processes, seasonal migration, and community-level events influenced participation and availability	Results were presented as baseline values, with recommendations emphasizing the need for continuous monitoring to capture dynamic changes.
Secondary Data Gaps	Some secondary documents were outdated or incomplete, limiting the ability to fully cross-validate certain indicators. This may have restricted the robustness of some comparisons or trend analyses.	Priority was given to the most recent and credible sources, supplemented with primary data to fill gaps.

2.9. Validity, Reliability, and Credibility

Ensuring the rigour of the baseline study was a core priority throughout the design, data collection, and analysis phases. Multiple safeguards were integrated into the methodology to enhance validity, reliability, and credibility:

- Triangulation of Data Sources and Methods: The study applied methodological triangulation by combining household surveys, FGDs, KIIs, and secondary document reviews. This allowed quantitative findings to be validated and contextualized with qualitative insights, and vice versa.
- Data source triangulation ensured that information was verified across different respondent groups (refugees, host community members, local authorities and project staff).

- Standardized and Pretested Tools: All data collection instruments (household questionnaires, FGD guides, KII protocols) were pretested with a small sample before full deployment. Feedback from the pretest was used to refine question wording, adjust translations into Kinyarwanda, and improve sequencing to minimize ambiguity and ensure consistency across enumerators.
- Training and Supervision of Enumerators: A gender-balanced team of 25 enumerators received intensive training on research ethics, data collection protocols, and use of Kobo Collect. Standard Operating Procedures (SOPs) guided fieldwork to minimize interviewer bias. Field supervisors conducted daily debriefings, spot checks, and back-checks to monitor data quality and adherence to protocols.
- Statistical Robustness of Quantitative Analysis: Data were analyzed using SPSS and Excel, applying both descriptive statistics (frequencies, means, medians) and inferential methods (correlation, regression) to test relationships between variables. Significance testing was applied where relevant to strengthen interpretation and ensure findings were not the result of random variation. Outlier checks and error detection procedures (e.g., consistency checks, duplicate entries) were systematically applied.
- Systematic Coding and Peer Review of Qualitative Data: Transcripts from FGDs and KIIs were coded in Atlas.ti using a structured codebook. To strengthen intercoder reliability, coding was independently verified by multiple researchers, followed by reconciliation of discrepancies. Thematic analysis was complemented by peer review sessions within the research team to challenge interpretations and reduce subjectivity.
- Respondent Validation (Member Checking): Preliminary findings were presented during a validation workshop involving project stakeholders, district representatives, and community members. Feedback from participants confirmed the accuracy of results, clarified contextual factors, and provided further nuance for final interpretation.
- Transparent Documentation of Deviations: Any deviations from the sampling plan (e.g., shortfall in household coverage) or field challenges (e.g., non-response, mobility of refugees) were carefully documented. During analysis, these deviations were openly acknowledged, and mitigation measures (such as weighting and triangulation) were applied to maintain credibility.

2.10. Governance, Management, and Quality Assurance of the Baseline Evaluation

The baseline evaluation was conducted under clearly defined governance and quality-assurance arrangements to ensure independence, methodological rigor, and adherence to UNHCR evaluation standards.

- Management and Oversight: UNHCR Rwanda Operation held overall responsibility for commissioning and overseeing the evaluation, ensuring alignment with operational priorities and accountability requirements.
- Evaluation Reference Group (ERG): An ERG comprising representatives from UNHCR Rwanda, DUHAMIC-ADRI, and technical specialists provided strategic guidance, reviewed key deliverables (inception report, tools, draft report), and ensured methodological soundness without influencing analytical judgments.
- Implementing Partner: DUHAMIC-ADRI supported logistical coordination, access to sites, and documentation while maintaining a non-influential role in data collection and analysis to preserve independence.
- Evaluation Team: The independent evaluation team, Strategic Development and Research Group (StratDever), a Rwandan private research company, was responsible for study design, data collection, analysis, and reporting.
- Quality Assurance: Quality assurance was conducted in accordance with the UNHCR Evaluation Policy and UNEG norms, including the approval of inception reports, tool validation, triangulation, peer review of qualitative analysis, and stakeholder validation workshops.

3. Context and UNHCR's operation

In Rwanda, the refugee response operates under a strong government humanitarian partnership in which the United Nations High Commissioner for Refugees (UNHCR) works alongside the Ministry in Charge of Emergency Management (MINEMA) to coordinate protection and assistance for displaced populations. This collaborative framework ensures that national policies and international protection standards are closely aligned. According to UNHCR's most recent operational statistics, as of July 2025, Rwanda hosts an estimated 120,000 refugees and asylum seekers, the majority of whom originate from the Democratic Republic of the Congo and Burundi. Approximately 90 % of this population resides in five designated refugee camps: Kiziba, Nyabiheke, Kigeme, Mugombwa, and Mahama, which continue to serve as the primary hubs for service delivery and community-based protection (UNHCR, 2025).

In Rwanda, the United Nations High Commissioner for Refugees (UNHCR) is working directly with the Ministry in Charge of Emergency Management (MINEMA) to jointly lead the refugee response and coordinate protection and assistance for displaced populations. Through this partnership, both institutions actively align national policies with international protection standards. UNHCR's latest operational statistics indicate that, as of July 2025, Rwanda hosts an estimated 120,000 refugees and asylum seekers, most of whom come from the Democratic Republic of the Congo and Burundi. Approximately 90 % of these individuals reside in five designated refugee camps: Kiziba, Nyabiheke, Kigeme, Mugombwa, and Mahama, which serve as the primary centers for service delivery and community-based protection (UNHCR, 2025).

Beyond camp-based operations, Rwanda also plays a significant regional protection role by hosting the Emergency Transit Mechanism (ETM) in Gashora. Through this facility, the UNHCR, in collaboration with the Government of Rwanda and the African Union, facilitates the evacuation of vulnerable refugees and asylum seekers from Libya who are in urgent need of safety and international protection (UNHCR, 2025).

UNHCR's engagement in Rwanda is guided by a comprehensive, multi-year strategy organized around four interlinked pillars. The first concerns access to protection, which focuses on ensuring that refugees, asylum seekers, and stateless persons can obtain legal documentation, undergo proper registration procedures, and benefit from services that safeguard their rights, including mechanisms for preventing and responding to sexual and gender-based violence and child protection concerns (UNHCR, 2024).

The second pillar, improving living conditions, emphasizes the provision of essential services that contribute to dignified and safe living environments. This includes support to healthcare systems, water and sanitation services, energy access, shelter rehabilitation, and camp infrastructure upgrades, many of which are delivered in partnership with national institutions and development actors (UNHCR, 2024).

UNHCR's third strategic area focuses on livelihoods and economic inclusion. This component aims to reduce long-term aid dependency by expanding opportunities for skills development, financial inclusion, entrepreneurship, and access to formal and informal employment. The organization also supports the integration of refugee children and youth into Rwanda's national education system and facilitates access to technical and vocational training aligned with national labour-market needs (UNHCR, 2024).

The fourth pillar, durable solutions, underscores UNHCR's mandate to pursue long-term pathways for displaced populations. This includes facilitating voluntary repatriation when conditions in countries of origin allow, advancing resettlement and complementary pathways for those with heightened protection needs, and supporting local integration for refugees who are able to sustain themselves within Rwanda. Additionally, UNHCR assists in the return and reintegration of Rwandan nationals who repatriate after seeking asylum abroad (UNHCR, 2024; UNHCR, 2025).

4. Key findings

4.1. Household Income

4.1.1. Demographic Characteristics

The demographic characteristics of participants across Kigeme and Nyabiheke camps and host communities reveal significant differences in gender distribution, marital status, household composition, education levels, disability prevalence, and dependency ratio.

Table 4: Participants' Demographic Characteristics

			Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Gender	Female	Count	281	100	128	22	531
		%	73.9%	45.5%	66.7%	43.1%	63.0%
	Male	Count	99	120	64	29	312
		%	26.1%	54.5%	33.3%	56.9%	37.0%
	Total	Count	380	220	192	51	843
		%	45.1%	26.1%	22.8%	6.0%	100.0%
Marital Status	Divorced	Count	22	5	9	2	38
		%	5.8%	2.3%	4.7%	3.9%	4.5%
	Legally married	Count	108	161	100	26	395
		%	28.4%	73.2%	52.1%	51.0%	46.9%
	Living together but not married	Count	109	33	28	3	173
		%	28.7%	15.0%	14.6%	5.9%	20.5%
	Single(Never married)	Count	52	1	31	8	92
		%	13.7%	0.5%	16.1%	15.7%	10.9%
	Widower	Count	89	20	24	12	145
		%	23.4%	9.1%	12.5%	23.5%	17.2%
Household Types	Female-Headed Households	Count	252	36	107	17	412
		%	66.3%	16.4%	55.7%	33.3%	48.9%
	Male-Headed Households	Count	128	184	85	34	431
		%	33.7%	83.6%	44.3%	66.7%	51.1%
Level of Education	None/Never attended School	Count	191	57	73	18	339
		%	50.3%	25.9%	38.0%	35.3%	40.2%
	Middle School with a certificate	Count	2	4	4	0	10
		%	0.5%	1.8%	2.1%	0.0%	1.2%
	Middle School, no certificate	Count	14	6	15	1	36
		%	3.7%	2.7%	7.8%	2.0%	4.3%
	Primary School with a certificate	Count	29	71	22	11	133
		%	7.6%	32.3%	11.5%	21.6%	15.8%
	Primary School, no certificate	Count	111	63	62	19	255
		%	29.2%	28.6%	32.3%	37.3%	30.2%
	No certificate secondary school	Count	17	9	9	1	36
		%	4.5%	4.1%	4.7%	2.0%	4.3%
	Secondary with a certificate	Count	13	9	7	1	30
		%	3.4%	4.1%	3.6%	2.0%	3.6%
	University with a certificate	Count	1	1	0	0	2
		%	0.3%	0.5%	0.0%	0.0%	0.2%
Household Composition	Children under 5 years		0.95	0.51	0.97	0.59	0.76
	Children 6-15		1.91	1.37	1.94	1.49	1.68
	Elders over 65 Years		0.26	0.26	0.29	0.20	0.25
	Total HH members		7.07	5.46	7.15	5.10	6.19
Dependency Ratio			79%	64%	81%	81%	77%
Participants with Disabilities		Count	52	16	34	4	106
		%	13.7%	7.3%	17.7%	7.8%	12.6%
Average Age			48.3	51.1	50.1	50.2	49.54

Source: Author Field Data

Overall, females constitute the majority, particularly within the refugee camps, where they represent 73.9% in Kigeme and 66.7% in Nyabiheke. In contrast, males dominate the host community populations, accounting for 54.5% in Kigeme Host and 56.9% in Nyabiheke Host. Across the total sample of 843 participants, females make up 63 %, reflecting a predominance of women among project participants.

Marital status varies notably between groups. Legally married participants represent the largest category overall (46.9%), particularly in Kigeme Host (73.2%) and Nyabiheke Camp (52.1%). Individuals living together without formal marriage are more common in Kigeme Camp (28.7%), while single participants are relatively few, constituting just 10.9% of the total. Widowers account for 17.2 % overall, highlighting the presence of mature adults managing households.

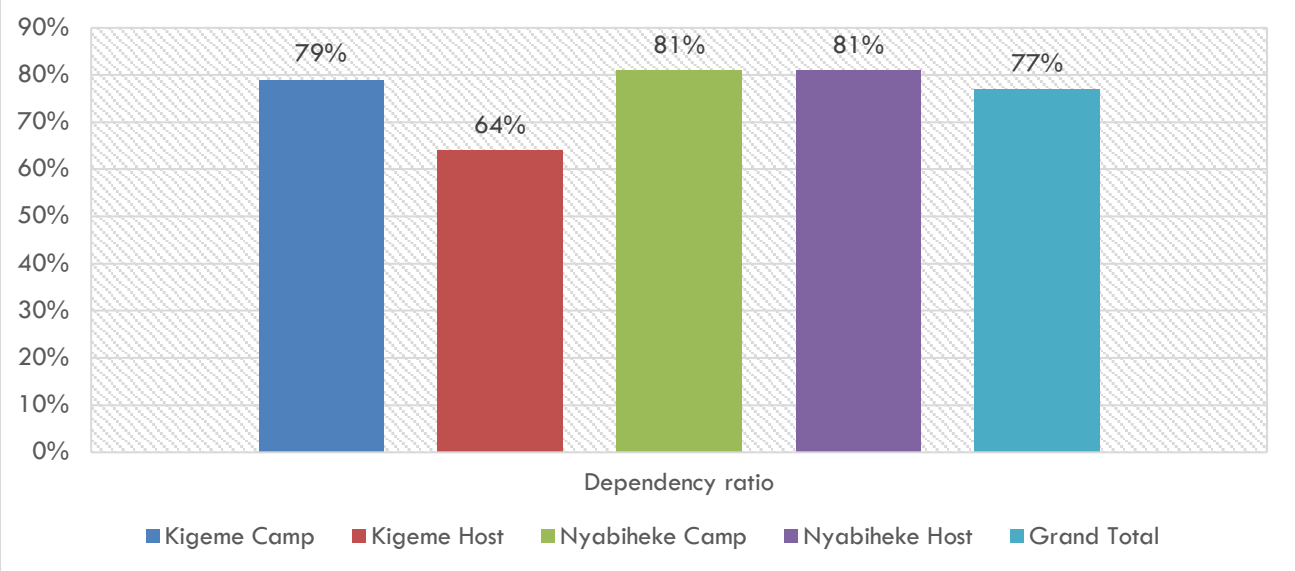
Household types show a clear distinction between refugee and host populations. Female-headed households are predominant in refugee camps, comprising 66.3% in Kigeme and 55.7% in Nyabiheke, whereas male-headed households are more prevalent among host communities, with 83.6% in Kigeme Host and 66.7% in Nyabiheke Host. Overall, the distribution between male- and female-headed households is nearly equal, at 51.1% and 48.9%, respectively.
The education levels among participants are generally low, with 40.2% having never attended school. Primary education without certification is common, accounting for 30.2 % overall, while secondary and tertiary attainment is minimal, indicating limited access to formal education, particularly among refugees. Only 0.2 % of participants hold a university certificate, reflecting the need for targeted educational support.

Disability prevalence is higher in refugee camps, with 13.7% in Kigeme and 17.7% in Nyabiheke, compared to lower rates in host communities (7.3% and 7.8%). The average age of participants is approximately 49.5 years, indicating a mature population likely responsible for household management and community participation.

4.1.2. Dependence Ratio

The dependency ratio reflects the balance between the working-age population and those who rely on them for support, namely children and the elderly. Looking at the data from Kigeme and Nyabiheke, both in the camps and host communities, a clear pattern emerges.

Figure 1: Dependency Ratio



Source: Author Field Data

In Kigeme Camp, the average household has approximately 2.86 young dependents and 0.26 elderly individuals, totaling just over three people who rely on others. With an average household size of just over seven, this leaves around 3.95 people of working age. When dependents are compared with those in working age, the ratio is about 79 %. This means that for every 100 working-age individuals, there are about 79 dependents, a considerable burden.

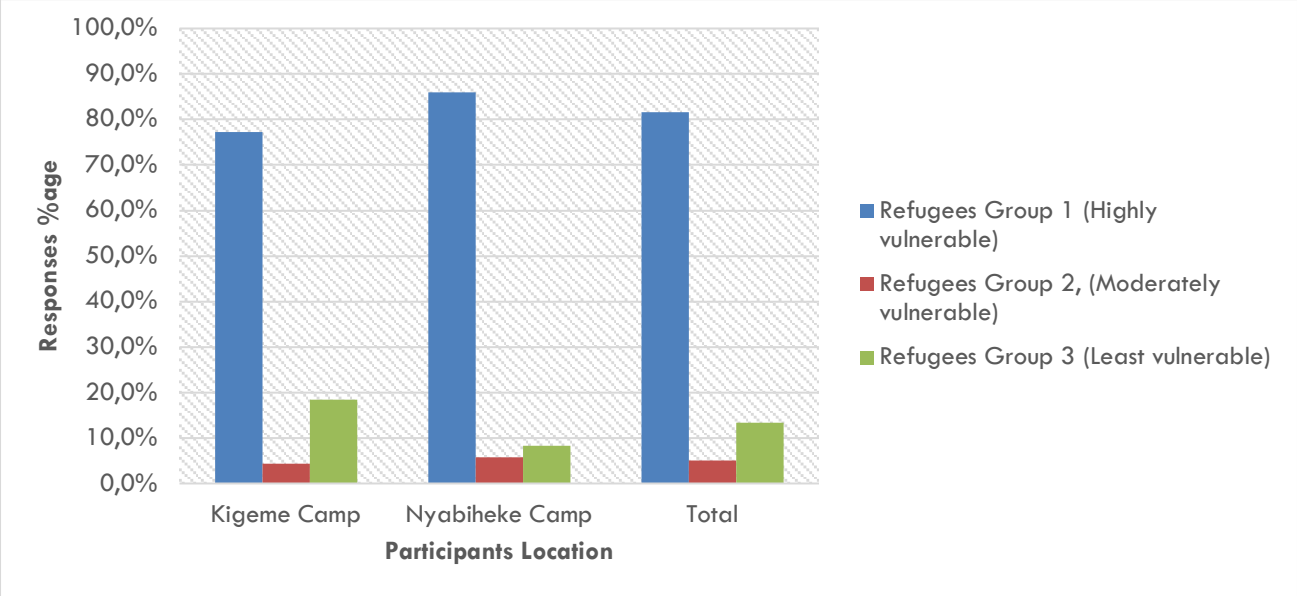
In the Kigeme Host community, the picture is slightly different. With fewer children on average, dependents make up about 2.14 per household, leaving a working-age population of 3.32. Here, the dependency ratio falls to 64 %. Compared with the camp, host households have fewer children and a smaller overall household size, which reduces the strain on working-age members.

Nyabiheke Camp shows a similar pattern to Kigeme Camp, with around 3.20 dependents per household and 3.95 working-age individuals. The dependency ratio here reaches 81 %, the highest among the groups. Nyabiheke Host households, while smaller in size, still show a dependency ratio of about 81 %. This suggests that despite having fewer people overall, the balance between dependents and working-age individuals remains tilted toward high dependency.

4.1.3. Household Vulnerability

The assessment of household vulnerability revealed stark disparities between refugee and host community households, with refugees consistently exhibiting higher levels of socioeconomic fragility. Vulnerability was assessed based on indicators such as income levels, food security, asset ownership, and coping strategies.

Figure 2: Refugees Vulnerability



Source: Author Field Data

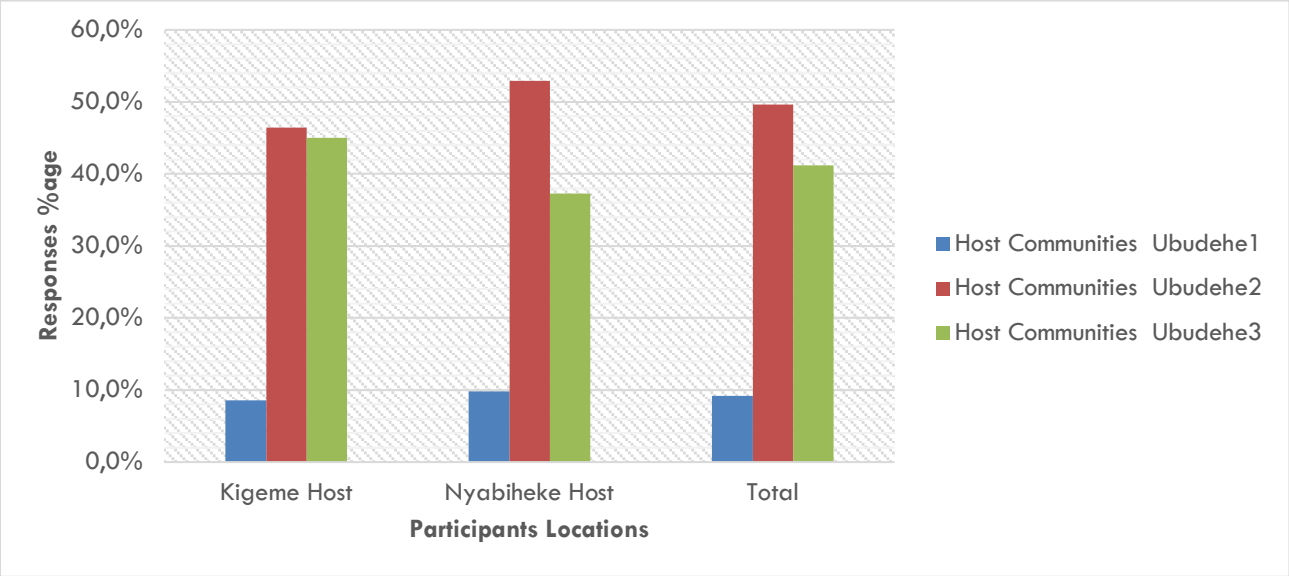
In Kigeme. Camp, an overwhelming 77.3 % of refugee households were categorized as highly vulnerable, indicating severe challenges in meeting daily subsistence needs. Only 4.3 % were moderately vulnerable, while 18.4% fell into the least vulnerable category, suggesting that even in this camp, a relatively small proportion of households had some stability.

In Nyabiheke Camp, the situation appeared even more acute, with 85.9 % of households classified as highly vulnerable the highest proportion among the surveyed groups. Only 5.8 % were moderately vulnerable, and a mere 8.3 % were least vulnerable. These findings suggest limited resilience among Nyabiheke refugee households, with the vast majority dependent on humanitarian support or struggling to sustain their livelihoods with inadequate resources.

When looking at the combined refugee population across both camps, the results remain striking. Overall, 81.6 % of refugee households fall into the highly vulnerable category, compared to just 5.1 % in the moderately vulnerable group and 13.4 % in the least vulnerable group.

Unlike refugee households, whose vulnerability was assessed based on humanitarian criteria, host community households were classified according to Rwanda's Ubudehe social stratification system, which groups households by socio-economic status. The distribution across Ubudehe categories indicates that most host households fall within the middle socio-economic tiers, with relatively fewer experiencing extreme deprivation.

Figure 3: Host Communities Vulnerability



Source: Author Field Data

In Kigeme host communities, nearly half of the surveyed households (46.4 %) were categorized in Ubudehe 2, reflecting a moderate socio-economic position with limited but stable livelihoods. A further 45.0 % were placed in Ubudehe 3, the higher of the middle-income categories, indicating slightly better living conditions and access to resources. Only 8.6 % of households fell into Ubudehe 1, the category for the most economically disadvantaged families.

In Nyabiheke host communities, a similar pattern emerged, though with some variation. The majority of households (52.9 %) belonged to Ubudehe 2, while 37.3 % were classified as Ubudehe 3. A slightly higher proportion (9.8 %) were in Ubudehe 1, indicating extreme vulnerability, compared to Kigeme. When aggregated across both sites, the results show that nearly nine in ten host households (90.9 %) fall within Ubudehe 2 and Ubudehe 3 categories, reflecting moderate but generally sustainable livelihoods. Only 9.2 % of households overall are categorized as Ubudehe 1, suggesting that while pockets of severe vulnerability exist, the majority of host households enjoy greater socio-economic security compared to their refugee counterparts.

These findings highlight a clear contrast between refugees and host communities. Whereas over 86 % of refugee households are highly vulnerable, most host households are distributed across moderate categories, with relatively fewer experiencing extreme poverty. This disparity underscores the differentiated needs between the two groups and reinforces the importance of tailoring interventions to address both acute vulnerability among refugees and livelihood strengthening among host households.

4.1.4. Household Income

4.1.4.1. Median Monthly and Annual Income

The analysis of household revenues and expenditures reveals that both refugee and host households in Kigeme and Nyabiheke operate under low- and unstable-income conditions, with average revenues barely exceeding subsistence levels. Average monthly household revenues ranged from 37,716 Rwf in Kigeme Camp to 40,143 Rwf in Nyabiheke Camp, while hosts in both sites reported slightly higher averages than refugees in Kigeme (39,545 Rwf vs. 37,716 Rwf), but somewhat lower in Nyabiheke (38,147 Rwf vs. 40,143 Rwf), equivalent to roughly US$312 to US$332 per year, depending on location and status.

Expenditure levels closely mirrored earnings, suggesting that households spend nearly all they earn, leaving little room for savings or financial buffers. Kigeme refugees reported average monthly expenditures of 37,341 Rwf, nearly identical to their monthly income, while Nyabiheke refugees reported 31,870 Rwf, slightly below their revenues. Among hosts, monthly expenditures were slightly lower than incomes in both Kigeme (34,374 RWF) and Nyabiheke (34,126 RWF).

When compared to national standards, the financial disadvantage of both refugee and host communities becomes even clearer. According to the Fifth Integrated Household Living Conditions Survey (EICV5), the average monthly consumption expenditure per adult equivalent in Rwanda was estimated at about 64,000 Rwf (NISR, 2018). The refugee and host households in Kigeme and Nyabiheke therefore operate at only 50–55 % of the national average, placing both groups well below the national poverty threshold.

Perceptions of income change and savings capacity further illustrate these disparities. Overall, 54.6 % of participants reported an increase in income compared to the previous year; however, this optimism was not evenly distributed. Kigeme refugees (19.1%) were the most likely to report higher incomes, while Nyabiheke hosts (4.4%) were the least likely. In terms of savings, 52.8 % of respondents reported that their savings had improved, with hosts experiencing much stronger gains (68.2% in Kigeme and 68.6% in Nyabiheke) compared to refugees (42.1% in Kigeme and 52.1% in Nyabiheke). Similarly, just over half of all respondents (51.0 %) said they could afford more goods and services than in the previous year, again with host households showing a consistently better position (66.4% in Kigeme and 68.6% in Nyabiheke) compared to refugees (39.2% in Kigeme and 52.1% in Nyabiheke).

Table 5: Revenue and Expenditures

Revenue and Expenditures	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Average Monthly Revenues (Rwf)	37,716.36	39,544.87	40,142.71	38,146.58	38,887.63
Average Annual Revenue (Rwf)	452,596	474,538	481,713	457,759	466,652
Average Annual Revenue (US$)	312.14	327.27	332.22	315.70	321.83
Average Monthly Expenditures (Rwf)	37,341.46	34,373.85	31,870.02	34,125.87	34,427.80
Average Annual Expenditures (Rwf)	448,097.52	412,486.20	382,440.24	409,510.44	413,133.60
Average Annual Expenditures (US$)	309.03	284.47	263.75	282.42	284.92
Participants' perception of their income and savings					
Participants who reported increased income compared to the previous year	19.1%	18.4%	12.7%	4.4%	54.6%
Participants who reported increased savings compared to the previous year	42.1%	68.2%	52.1%	68.6%	52.8%
Participants who reported to afford more goods or services compared to the previous year	39.2%	66.4%	52.1%	68.6%	51.0%

Source: Author Field Data

4.1.4.2. Sources of Primary Income

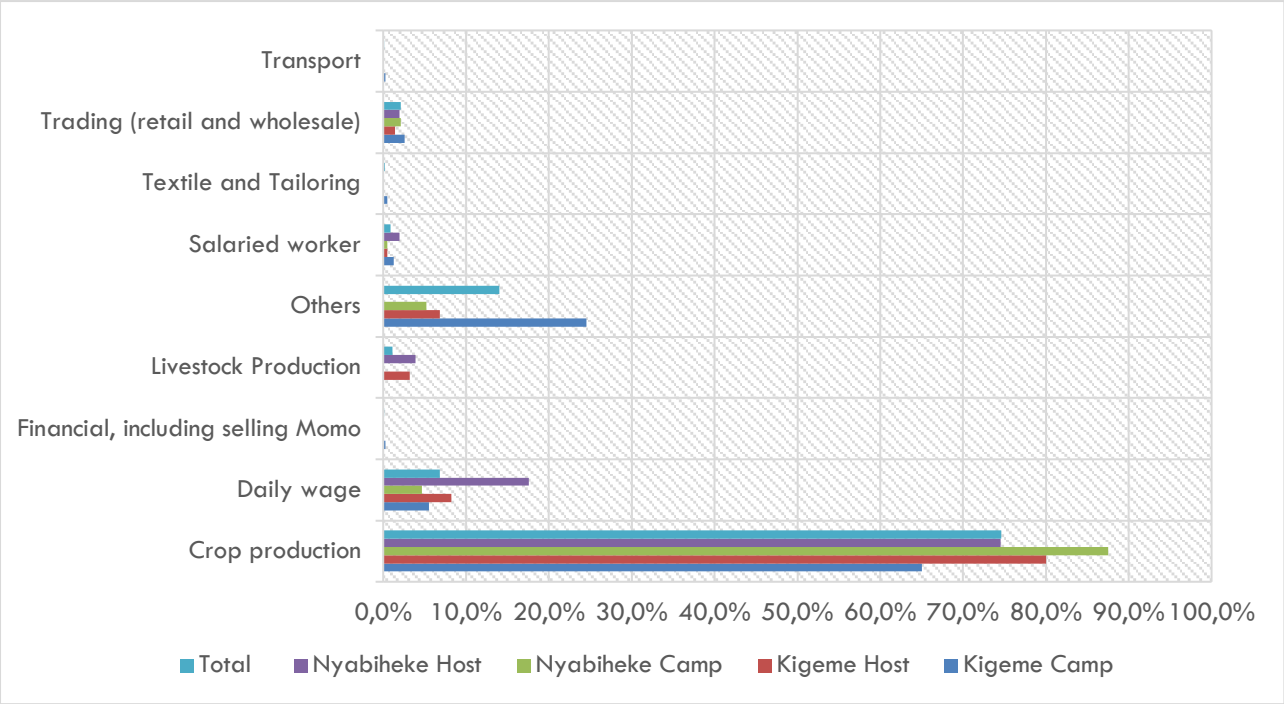
The analysis of primary income sources underscores the dominance of subsistence agriculture as the main livelihood. Across all groups, nearly three-quarters of households (74.6%) reported farming as their primary activity. This proportion was highest among Nyabiheke refugees (87.5 %), reflecting their heavy dependence on small-scale cultivation. Host households also relied heavily on farming (e.g., 80 % in Kigeme), but demonstrated slightly greater diversification.

Daily wage labor played a more significant role among hosts, particularly in Nyabiheke (17.6%), compared to less than 6% among refugees. This suggests that host households may have greater integration into local labor markets and more access to short-term employment opportunities.
Other income sources remained marginal, including salaried work (0.9% of overall income), livestock production (1.1%), and petty trade (2.1%). However, there were some notable exceptions: Kigeme refugees (24.5 %) reported reliance on "other" activities (e.g., handicrafts, hairdressing, informal services), which may reflect adaptive strategies in contexts where access to land for cultivation is severely constrained.

Comparisons with national benchmarks further illustrate the livelihood gap. Nationally, while agriculture remains the dominant source of employment, it accounts for about 66 % of the labor force, with non-farm wage employment and services playing increasingly important roles (NISR, 2021). By contrast, the refugee and host communities in Kigeme and Nyabiheke show even higher dependence on subsistence agriculture (75–87 %), with minimal engagement in salaried work or business, reinforcing their economic vulnerability and limited diversification.

This heavy reliance on farming, combined with low-income levels and near-total expenditure of earnings, exposes households to significant risks from climate variability, land scarcity, and market shocks. It underscores the importance of livelihood programs that promote non-farm opportunities, skills development, and market integration for both refugees and host communities.

Figure 4: Sources of Primary Income



Source: Author Field Data

4.2. Humanitarian Assistance

4.2.1. Access to Humanitarian and Government Assistance

The data on access to humanitarian and government assistance indicate a clear distinction between refugees and host community members in Kigeme and Nyabiheke. In the refugee camps, a significant majority of participants received humanitarian support over the past 12 months, with 87.1 % in Kigeme and 89.1 % in Nyabiheke reporting receipt of food or cash assistance. In contrast, host community members did not receive comparable humanitarian aid, with 0% reporting support in both Kigeme and Nyabiheke host areas. Government support followed an opposite pattern: while negligible among refugees, a notable portion of the host community benefited, particularly in Nyabiheke Host (52.9 %), compared to only 10 % in Kigeme Host. Feedback from the FGDs corroborates the survey findings that access to direct humanitarian assistance (in the form of food or cash) is extremely limited among community members. Across multiple discussion groups, participants repeatedly emphasized that they do not receive regular support from government or aid agencies and that household coping relies primarily on self-provisioning. The following verbatim responses illustrate this widely held perception and the depth of need expressed by respondents:

"We cannot really rely on any support at the moment. Personally, I have not received any assistance from the government, nor have I seen any aid provider saying they would give me food. As for cash support, that is also not available." FGD participant, Nyabiheke host communities

"There is no support; we survive on our own. We have never received any assistance, whether in the form of money or food." FGD participant, Kigeme host communities.

Table 6: Assistance or Support from the Government or Humanitarian Organizations

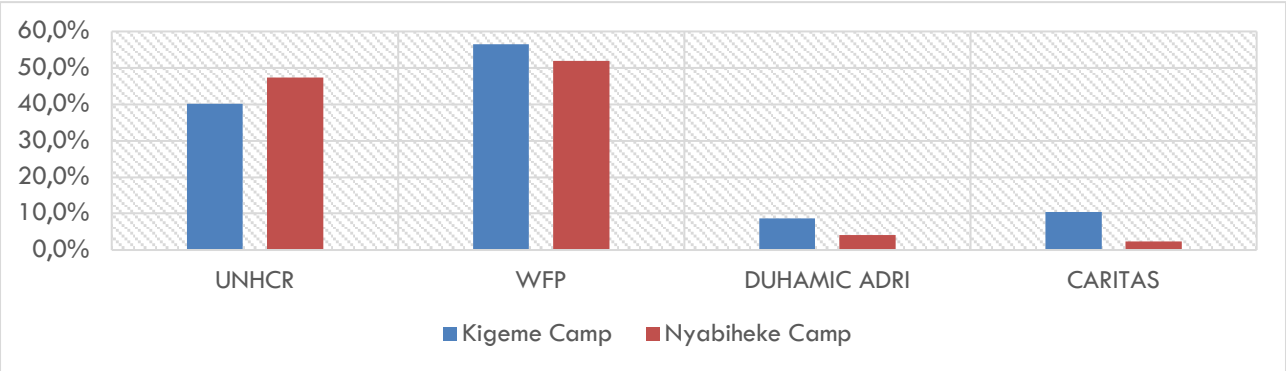
	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host
Participants who received humanitarian assistance in terms of food or cash in the last 12 months	87.1%	0.0%	89.1%	0.0%
Participants who received assistance or support from the Government	0.0%	10.0%	0.0%	52.9%

Source: Author Field Data

4.2.2. Sources of Humanitarian Assistance

Regarding sources of humanitarian assistance, the refugees primarily relied on established agencies such as WFP and UNHCR, which provided 56.5 % and 40.1 % of support in Kigeme, respectively, and 52 % and 47.4 % in Nyabiheke. Other actors like DUHAMIC ADRI and CARITAS played smaller but meaningful roles in both camps.

Figure 5: Sources of Humanitarian Assistance

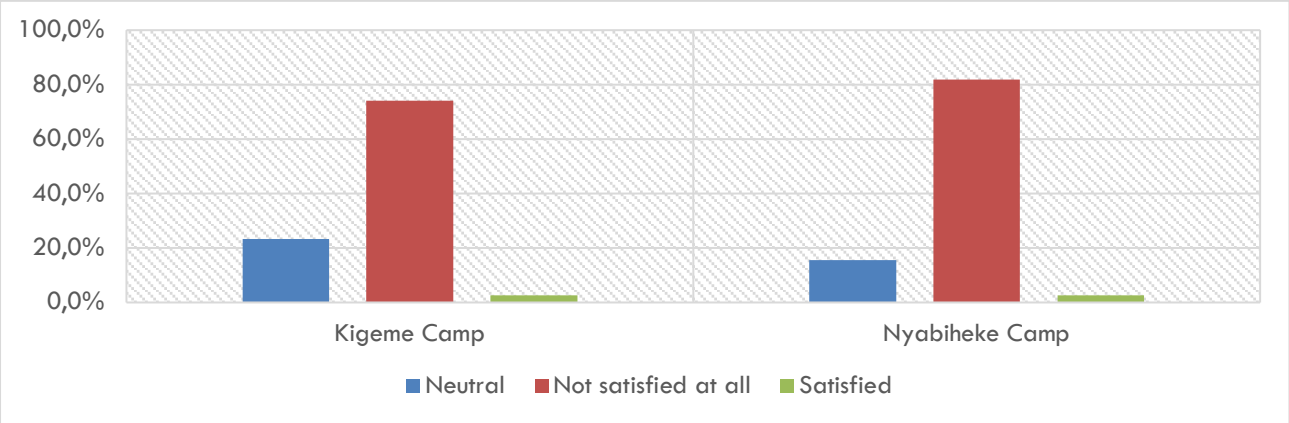


Source: Author Field Data

4.2.3. Level of Satisfaction with Humanitarian Assistance

Despite the widespread provision of humanitarian support within the camps, focus group discussions (FGDs) with refugee households and key informant interviews (KIIs) with Refugee Committee Representatives confirmed that satisfaction levels with the aid provided remain very low. This mirrors the survey results, where 74.2 % of refugees in Kigeme and 81.8 % in Nyabiheke reported being "not satisfied at all," compared to only 2.6 % in each camp who expressed any degree of satisfaction.

Figure 6: Level of Satisfaction with Humanitarian Assistance



Source: Author Field Data

Refugees across both camps acknowledged that humanitarian assistance, primarily food distributions and occasional cash transfers, continues to play a central role in their survival. However, they raised strong concerns about the quality, adequacy, and predictability of the support. The majority indicated that rations and cash transfers are insufficient to cover even their most basic needs, forcing them to rely on negative coping strategies such as reducing meal sizes or borrowing food.

An FGD participant in Kigeme explained: ***"Yes, we receive food, but it is never enough for a family of our size. Sometimes we skip meals or stretch the rations for longer than intended. The children are the ones who suffer the most." FGD participant, Kigeme Camp.***

Similarly, in Nyabiheke, one refugee stated: ***"The food we get is often the same every month, and sometimes it is not of good quality. Even if it helps us survive, it does not give us dignity. We wish for more variety and better quality." FGD participant, Nyabiheke Camp.***

Key informant interviews with Refugee Committee Representatives also emphasized these issues. One representative in Kigeme noted: ***"People are grateful for the assistance, but they are not satisfied. Families tell us that the ration does not last until the end of the month, and the cash top-up is too small compared to market prices. This is why you see such high dissatisfaction in the survey results." Refugee Committee Representative, Kigeme Camp.***

From Nyabiheke, another committee member stressed the psychological and social dimensions of dissatisfaction: ***"It is not only about the amount. Refugees feel they have no voice in deciding what they receive. They want to participate in discussions about their needs, but decisions are made far away from them. This lack of consultation increases their frustration." Refugee Committee Representative, Nyabiheke Camp.***

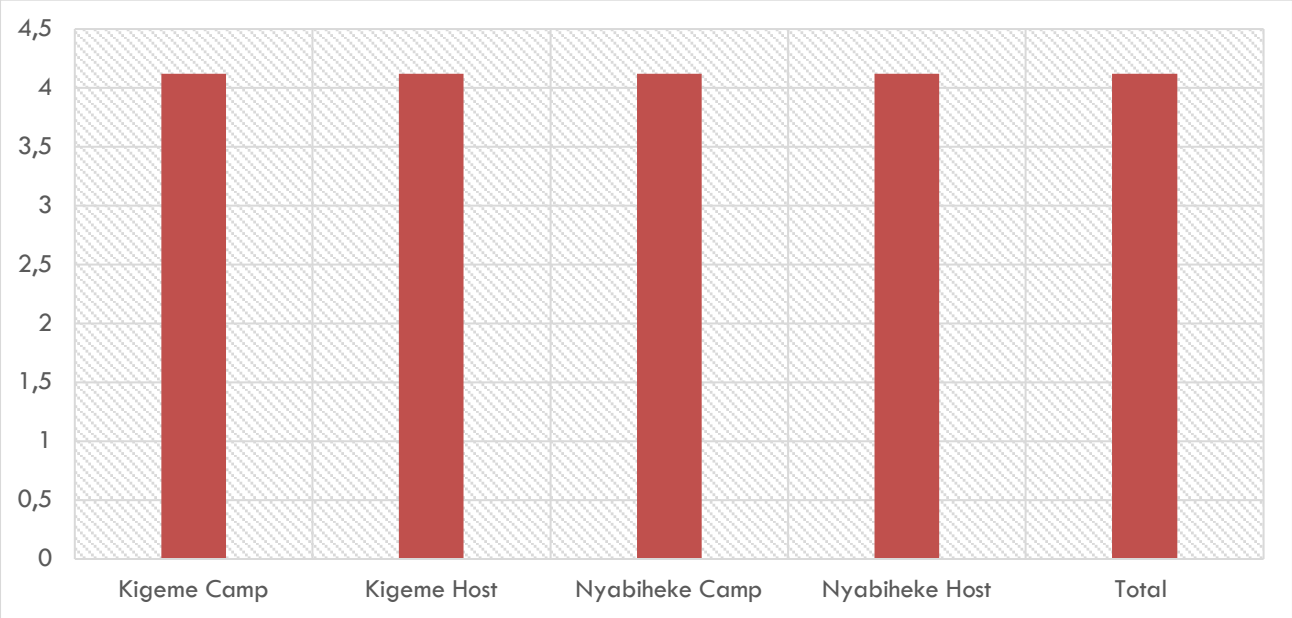
These findings illustrate a stark contrast in assistance distribution: refugees predominantly rely on humanitarian actors, while host communities access government support but at the very low extent.

Dissatisfaction among beneficiaries signals the need for improving both the delivery and effectiveness of aid within refugee camps.

4.2.4. Food Security

The analysis of food security conditions over the past four weeks reveals stark differences. Overall, the findings demonstrate that food insecurity remained a pervasive challenge, particularly for refugee households, with consistently higher levels of vulnerability compared to their host community counterparts. On average, households across all groups reported spending just over four days (4.12) in the past four weeks without any meals. While this average may appear uniform across groups, the frequency and depth of food insecurity indicators demonstrate that refugees bore a disproportionately heavier burden, both in terms of prevalence and intensity of food deprivation.

Figure 7: Average Number of Days Spent in 4 Weeks (Month) Without Any Meals



Source: Author Field Data

In both Kigeme and Nyabiheke camps, the overwhelming majority of refugee households reported worrying about not having enough food, with 95.3 % in Kigeme and 97.9 % in Nyabiheke indicating this concern. In contrast, only 48.6 % of Kigeme host households and 68.6 % of Nyabiheke host households experienced similar worries. The intensity of this worry was also far greater among refugees: 26.8 % of Kigeme refugees and 20.8 % of Nyabiheke refugees reported worrying “often” (more than ten times), while 51.6 % in Kigeme and 69.3 % in Nyabiheke experienced it “sometimes” (three to ten times). Among hosts, these proportions were considerably lower, with only 8.2 % in Kigeme and 15.7 % in Nyabiheke reporting frequent worry.

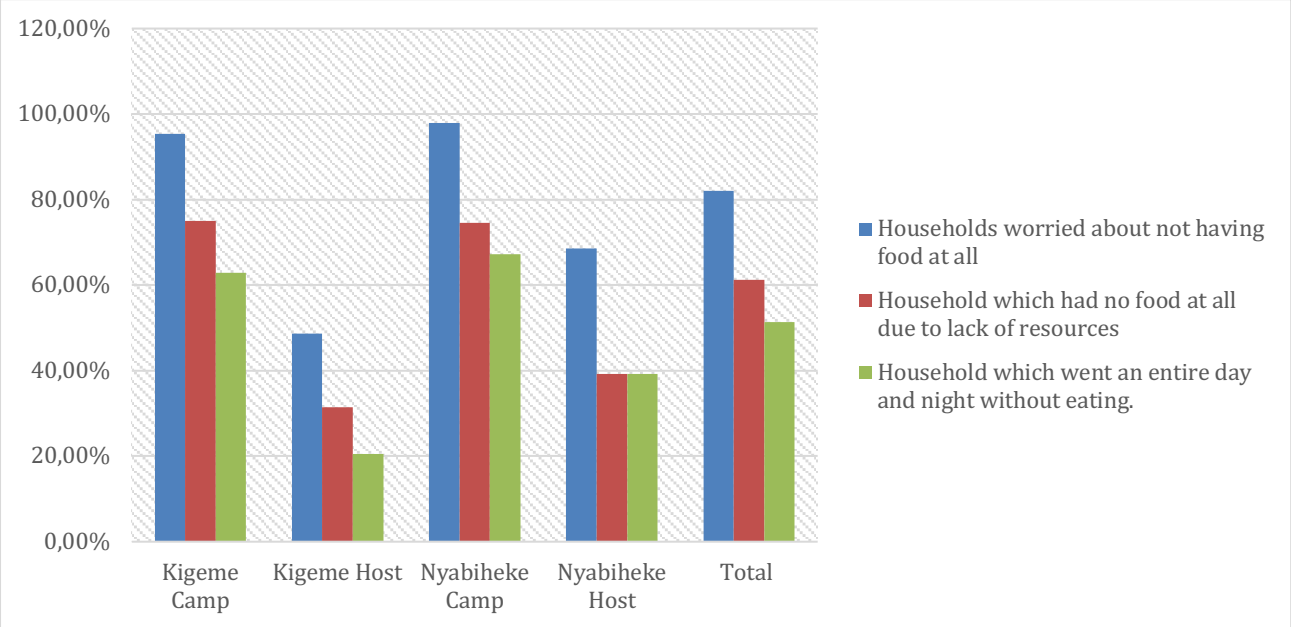
The lack of preferred foods due to resource constraints was nearly universal among refugees. In Kigeme, 96.1 % of refugee households were unable to consume their preferred foods, while in Nyabiheke, this reached 100 %. Host communities were also affected, but to a lesser extent, 61.8 % in Kigeme and 88.2 % in Nyabiheke reported the same challenge. Frequency analysis further underscores the disparity: in Nyabiheke camp, 72.4 % of refugees said this occurred “sometimes,” while 21.4 % reported it happening “often.” Among Kigeme hosts, only 8.6 % experienced this frequently.

Dietary diversity was similarly constrained, with 94.7 % of Kigeme refugees and 95.8 % of Nyabiheke refugees reporting having to eat a limited variety of foods due to lack of resources, compared to 52.7 % of Kigeme hosts and 78.4 % of Nyabiheke hosts. Likewise, being compelled to eat foods they

did not want was common among refugees 96.6 % in Kigeme and 99 % in Nyabiheke while 67.7 % of Kigeme hosts and 88.2 % of Nyabiheke hosts reported the same. Alarmingly, 38.2 % of Kigeme refugees experienced this “often,” compared with only 14.1 % of Kigeme hosts.

Meal reduction emerged as one of the most severe indicators of food insecurity. In Nyabiheke, 99 % of refugees reported eating smaller meals because of insufficient food, and 96.9 % reduced the number of meals in a day. Kigeme refugees faced similar challenges, with 96.3 % reducing meal sizes and 95 % eating fewer meals. By contrast, the situation was significantly better among Kigeme hosts, with only 49.1 % reporting smaller meals and 45.5 % reporting fewer meals. In Nyabiheke hosts, however, vulnerability was higher, with 74.5 % affected in both cases.
The situation worsened when examining extreme experiences of food deprivation. About 75 % of Kigeme refugees and 74.5 % of Nyabiheke refugees reported days when no food was available at all, compared to only 31.4 % of Kigeme hosts and 39.2 % of Nyabiheke hosts. In terms of sleeping hungry, 78.2 % of Kigeme refugees and 84.4 % of Nyabiheke refugees acknowledged this experience, compared to 30.9 % and 60.8 % among host households. Even more alarming, 62.9 % of Kigeme refugees and 67.2 % of Nyabiheke refugees reported going a whole day and night without eating anything, whereas only 20.5 % of Kigeme hosts and 39.2 % of Nyabiheke hosts. The frequency distribution reveals that these hardships were not rare or isolated. For example, 70.8 % of Nyabiheke refugees and 58.2 % of Kigeme refugees ate fewer meals “sometimes” (three to ten times) in the past four weeks. Similarly, 64.1 % of Nyabiheke refugees and 48.7 % of Kigeme refugees reported sleeping hungry at least three times in the same period. Even the most severe outcome, going a whole day and night without food, was experienced “sometimes” by 51 % of Nyabiheke refugees and 42.4 % of Kigeme refugees.

Figure 8: Participants’ Perception about their Household Food Security in the Past Four Weeks



Source: Author Field Data

Taken together, these findings paint a picture of profound and persistent food insecurity among refugee households, far more acute than in surrounding host communities. While host households, particularly in Nyabiheke, also experienced notable food insecurity, the severity and recurrence of food shortages, reduced diet diversity, and extreme hunger episodes were disproportionately concentrated in refugee camps. This underscores the urgent need for interventions that go beyond immediate food assistance, focusing on strengthening household resilience, improving access to food and resources, and promoting sustainable livelihood opportunities. At the same time, supporting host communities remains critical to mitigating disparities and preventing social tensions arising from uneven levels of food insecurity.

4.2.5. Food Shortage Seasonality

4.2.5.1. Seasonal Patterns of Food Insecurity

The analysis of seasonal patterns of food shortages reveals clear differences in vulnerability, with refugee households consistently experiencing more frequent and prolonged shortages. The data show that while both camps and host populations are affected, food insecurity peaks at certain times of the year, and refugee households remain disproportionately impacted throughout.
In the early months of the year, food shortages were already widespread. In January, 50.3 % of Kigeme refugees and 69.8 % of Nyabiheke refugees reported experiencing shortages, compared to 29.1 % of Kigeme hosts and 52.9 % of Nyabiheke hosts. This gap widened in February, with 52.1 % of Kigeme refugees and 64.1 % of Nyabiheke refugees facing shortages, while only 34.5 % and 54.9 % of hosts, respectively, reported the same. By March, shortages became even more pronounced, affecting 55.3 % of Kigeme refugees and a striking 72.9 % of Nyabiheke refugees. Although host communities also reported increases of 45.9 % in Kigeme and 60.8 % in Nyabiheke, the burden was consistently heavier for refugees.

April emerged as the peak month of food shortage across all groups. At this point, more than four-fifths of Nyabiheke refugees (80.7 %) and hosts (82.4 %) reported food shortages, making it the single most difficult period in that settlement. Kigeme also saw increases, with 57.6 % of refugees and 65.5 % of hosts affected. This spike across both camps and host communities suggests a seasonal factor likely linked to pre-harvest lean periods where both populations face heightened vulnerability.

Following April, patterns began to diverge between camps. In Kigeme, the prevalence of food shortages fell, with 38.2 % of refugees and 29.5 % of hosts reporting shortages in May, dropping further to 42.4 % and 12.3 % in June, and 43.2 % and 17.3 % in July. By contrast, Nyabiheke experienced continued strain. In May, 58.9 % of refugees and 72.5 % of hosts still faced shortages, and although June and July showed temporary declines (31.8 % and 16.1 % among refugees; 31.4 % and 17.6 % among hosts), the overall levels remained relatively higher than in Kigeme during the same period.

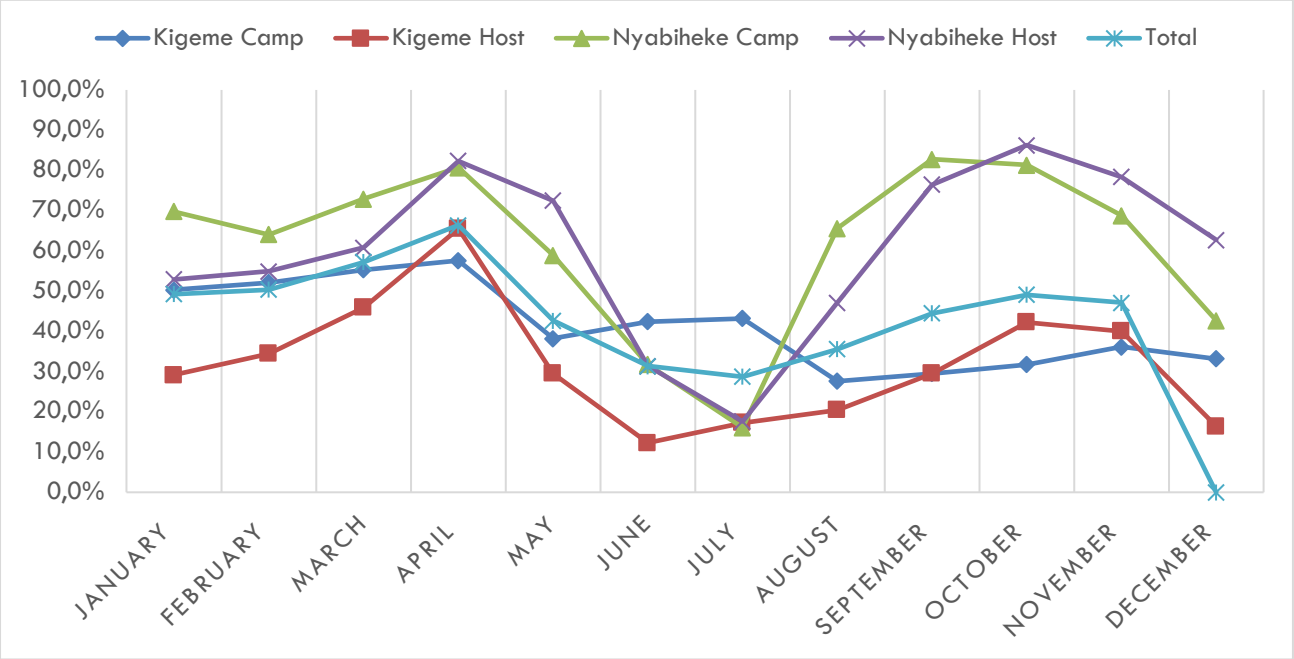
From August onward, Nyabiheke again displayed alarming increases. In August, 65.6 % of refugees and 47.1 % of hosts reported shortages, compared to only 27.6 % and 20.5 % in Kigeme. The disparities widened in September and October, when Nyabiheke reached its highest levels of deprivation. In September, 82.8 % of refugees and 76.5 % of hosts experienced food shortages, compared to just 29.5 % in both refugee and host populations in Kigeme. October was even more severe, with 81.3 % of Nyabiheke refugees and 86.3 % of hosts affected, while Kigeme showed more moderate levels, at 31.8 % and 42.3 %, respectively.

Overall, the results show that food shortages were not only more common among refugees but also more prolonged and severe, particularly in Nyabiheke. For instance, Nyabiheke refugees reported shortages at a rate exceeding 80 % in both September and October, while Kigeme refugees never rose above 58 % in any month. Host communities, while generally less vulnerable than camps, also displayed high levels of deprivation at seasonal peaks, most notably in April, September, and October, when shortages in Nyabiheke hosts exceeded even those of refugees in Kigeme.

These findings highlight a pattern of seasonal food insecurity that disproportionately impacts refugees, especially in Nyabiheke, where shortages remained more frequent and intense throughout the year. The April–May lean season and the September–October pre-harvest months were consistently the most difficult periods. The data suggest that while host communities share some

vulnerabilities, refugee households are systematically more exposed, experiencing food shortages in higher proportions and for longer durations.

Figure 9: Months of Food Shortage



Source: Author Field Data

4.2.5.2. Main Reasons Driving Food Shortage

The analysis of the main reasons driving food shortages across Kigeme and Nyabiheke, and between camp and host communities, reveals that while food insecurity is widespread, the underlying causes vary significantly across contexts. Three key drivers decreased income, inconsistency in access to food, and general increases in food prices emerge prominently, though their prevalence differs between refugees and host communities.

The most commonly reported reason across all groups was inconsistency in access to food, highlighting structural and logistical barriers rather than household-specific limitations. In Nyabiheke, this challenge was nearly universal: 96.4 % of refugee households and 98 % of host households cited inconsistent food access as their primary concern. Similarly high levels were observed in Kigeme, though slightly lower in magnitude, with 74.7 % of refugees and 75.9 % of hosts identifying it as a problem. Overall, 81.4 % of respondents across all groups reported inconsistency in food access, making it the most dominant driver of food shortages. The strikingly high prevalence across both camps and host communities suggests systemic disruptions in food supply chains or humanitarian distribution mechanisms, exacerbating seasonal shortages already identified in earlier data.

The general increase in food prices emerged as the second most significant driver, though its weight varied considerably between communities. Host households were particularly affected, with 44.5 % in Kigeme and 68.6 % in Nyabiheke citing rising prices as a cause of food shortages. Refugee households also felt this pressure, particularly in Nyabiheke where 61.5 % reported it, compared to only 24.7 % in Kigeme. Taken together, 40.9 % of all households identified inflationary pressures as a key factor, underscoring the wider macroeconomic context in which food insecurity is unfolding. The difference between camps suggests that Nyabiheke refugees and hosts are especially exposed to market dynamics, possibly due to greater dependence on local food markets compared to Kigeme, where humanitarian aid may partially cushion against price volatility.

The third driver, decreased income, showed a contrasting pattern, being most prevalent among Kigeme refugees, where 51.6 % reported income decline as the main reason for food shortages. By comparison, only 30.5 % of Kigeme hosts and 31.4 % of Nyabiheke hosts reported this factor. Refugees in Nyabiheke cited decreased income far less frequently (23.4 %), suggesting that while income loss is a serious issue, it is more pronounced in Kigeme camp, perhaps due to limited livelihood opportunities or disruptions in income-generating activities in that area. At the aggregate level, 38.4 % of all households reported decreased income as a driver of food shortages, reinforcing the connection between economic vulnerability and food access.

Taken together, these findings highlight a layered picture of food insecurity. For most households, both refugee and host, the core challenge lies in systemic and structural barriers to accessing food, affecting over 80 % of respondents. This is compounded by inflationary pressures, particularly acute in Nyabiheke, where nearly two-thirds of refugees and over two-thirds of hosts were directly impacted by rising food prices. Income decline, while less universally reported, remains a critical factor in Kigeme camp, where more than half of refugees depend on precarious and unstable livelihoods.

The evidence suggests that while short-term interventions must ensure stable and consistent food access, particularly through improving supply chains and humanitarian distribution, longer-term strategies need to address the dual pressures of rising prices and limited income-generating opportunities. The evidence suggests that while short-term interventions must ensure stable and consistent food access, particularly through improving supply chains and humanitarian distribution, longer-term strategies need to address the dual pressures of rising prices and limited income-generating opportunities.

Table 7:Main Reasons for Food Shortage

Reasons for Food Shortage	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Decreased Income	51.6%	30.5%	23.4%	31.4%	38.4%
Inconsistency in Access to Food	74.7%	75.9%	96.4%	98.0%	81.4%
General Increase in Food Price	24.7%	44.5%	61.5%	68.6%	40.9%

Source: Author Field Data

4.2.5.3. Consumption of Key Nutritious Food

The findings on nutritious food consumption reveal that diets among both refugee and host populations are highly unbalanced, with critical deficiencies in protein and fruit intake. Refugees consistently reported lower access to these food groups than hosts, reflecting structural constraints tied to reliance on food assistance and limited purchasing power. An exception to this trend was observed among Nyabiheke hosts, whose exceptionally high vegetable intake placed them at a distinct nutritional advantage compared to other groups. Overall, while vegetables are relatively accessible, the widespread insufficiency of proteins and fruits raises serious concerns about dietary diversity, long-term nutrition, and associated health risks across both refugee and host households.

Protein consumption emerged as the most constrained food group. Refugee households in Kigeme consumed protein-rich foods such as fish, eggs, or meat only 1.5 days per week, while Nyabiheke refugees reported a slightly higher average of 1.92 days. In contrast, Kigeme host households enjoyed substantially greater access, averaging 2.93 days per week, nearly double that of their refugee counterparts. Surprisingly, Nyabiheke hosts recorded the lowest frequency of protein consumption at just 0.96 days per week, suggesting localized challenges in accessing or affording animal-sourced foods. The overall average across all groups was 1.94 days per week, underscoring the pervasive inadequacy of protein intake in household diets.

Vegetable consumption painted a more positive, though uneven, picture. Kigeme and Nyabiheke refugees consumed vegetables on average 3.95 and 4.22 days per week, respectively, while Kigeme hosts reported a slightly higher frequency of 4.48 days. Nyabiheke hosts, however, stood out markedly, averaging 7.31 days per week, indicating near-daily consumption. This figure demonstrates far better access to vegetables among Nyabiheke hosts compared to both refugee households and Kigeme hosts. The overall average across groups was 4.35 days per week, though this was significantly skewed upward by the high vegetable consumption in Nyabiheke host communities, masking relatively lower access in refugee camps.

Fruit consumption was consistently the weakest across all food groups and communities. Kigeme refugees consumed fruits less than once per week on average (0.77 days), while Kigeme hosts reported only a slightly higher intake at 1.10 days. Nyabiheke refugees reported the highest frequency, averaging 2.19 days per week, more than double that of Kigeme refugees but still well below recommended dietary guidelines. Nyabiheke hosts fared only marginally better than Kigeme households at 1.25 days per week. The overall average across all groups was 1.21 days per week, confirming that fruit consumption remains largely absent from household diets in both refugee and host populations.

Table 8:Consumption of Nutritious Food

Consumption of Nutritious Food	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Average number of days for protein consumption per week	1.50	2.93	1.92	0.96	1.94
Average number of days for vegetable consumption per week	3.95	4.48	4.22	7.31	4.35
Average number of days for fruit consumption per week	0.77	1.10	2.19	1.25	1.21

Source: Author Field Data

4.2.6. Employment Status

The analysis of employment status highlights stark disparities in labor market participation between refugee and host populations, underscoring structural barriers that disproportionately affect camp residents. In Kigeme Camp, more than half of households (53.2%) reported having no job at all, compared with only 14.5% of Kigeme host households and virtually 0% among Nyabiheke hosts. In Nyabiheke Camp, unemployment was significantly lower at 7.3%, suggesting relatively better economic opportunities than in Kigeme, though still lagging behind host communities.

Self-employment emerged as the dominant livelihood strategy across all groups, albeit to varying degrees. In Nyabiheke camp, nearly 79.2% of refugee households relied primarily on self-generated work, reflecting the lack of formal employment options. Among Kigeme refugees, only 32.4% engaged in self-employment, compared to 59.1% of Kigeme hosts and 66.7% of Nyabiheke hosts. This pattern indicates that while self-employment is widespread, host households are better positioned to diversify or supplement it with formal wage work. Employment by others remained marginal across all groups, averaging 7.2%, while dual employment (self-employed plus wage work) was more common among hosts, 20.5% in Kigeme and 23.5% in Nyabiheke, signaling greater flexibility and income diversification.

When compared to national benchmarks, these figures reveal the exceptional constraints in refugee settings. According to Rwanda's Labour Force Survey, informal employment accounts for over 82.5% of all jobs (NISR, 2023), and the national unemployment rate stood at 11.1% in early 2025 (NISR, 2025). While national unemployment is notable, the 53.2% unemployment rate among Kigeme refugees is extraordinarily high by comparison. Conversely, host communities in this study appear to perform better than national averages, likely due to their access to markets, infrastructure, and

diversified livelihoods. These findings confirm broader trends of informality but also underscore how refugees face deeper systemic challenges in accessing meaningful work opportunities.

Qualitative evidence adds further nuance to these quantitative results. Refugees frequently cited mobility restrictions, lack of work permits, limited social networks, and discrimination as key barriers to formal employment. In a KII with a refugee committee leader in Nyabiheke, it was noted: ***"Many refugees say that employers will not hire them because they fear legal or documentation issues."***

Such perceptions highlight how legal and structural barriers translate into real exclusion from the labor market. Similarly, during an FGD in Kigeme, one participant explained: ***"We try small trades, but having just one source of income is risky; some months, there is no work."*** These testimonies reinforce the picture of precarious livelihoods, where even self-employment offers no guarantee of stability.

These evidences underscore a dual reality: while host communities navigate the informal labor market with relative resilience, refugees, particularly in Kigeme, remain trapped in high unemployment and vulnerable self-employment. This points to the urgent need for policies and programs that expand refugees' access to labor markets, address legal and social barriers, and create pathways for sustainable income generation.

Table 9:Employment Status and Revenue

Employment Status	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
No Job	53.2%	14.5%	7.3%	0.0%	29.4%
Self employed	32.4%	59.1%	79.2%	66.7%	52.1%
Employed by others	7.6%	5.9%	7.3%	9.8%	7.2%
Both Self-employed& employed by others	6.8%	20.5%	6.3%	23.5%	11.3%

Source: Author Field Data

4.2.7. Access to Productive Assets

The analysis of access to productive assets reveals a stark disparity between refugee and host communities, highlighting significant constraints on refugees' capacity to engage in sustainable livelihood activities. Among agricultural productive assets, ownership was overwhelmingly low for refugee households. In Kigeme camp, only 1.1 % of households reported owning livestock, while a similarly minimal proportion had access to coffee or tea plantations, leased land, or forest resources. Nyabiheke camp showed slightly higher livestock ownership at 51 %, yet other agricultural assets remained virtually non-existent. By contrast, host communities demonstrated substantially greater ownership of assets. In Kigeme, 48.2 % of households had livestock, while in Nyabiheke, 64.7 % of hosts reported livestock ownership. Other agricultural assets, such as tea plantations and forests, were more common among hosts than refugees, though still limited in absolute terms. Overall, nearly 89 % of households surveyed reported owning no agricultural productive assets, reflecting a widespread lack of resource endowment, with refugees being disproportionately affected.

Non-agricultural productive assets also revealed similar patterns of limited access. Ownership of bicycles, milling machines, and sewing machines was exceedingly rare among refugee households, with 98.9 % of Kigeme and 99.5 % of Nyabiheke camp residents reporting no non-agricultural assets. Host communities fared somewhat better, with 5.5 % of Kigeme and 13.7 % of Nyabiheke households possessing bicycles, while ownership of other non-agricultural equipment remained negligible. Overall, 96.9 % of households reported having no non-agricultural productive assets.

These findings underscore the severe structural constraints facing refugee households in terms of asset accumulation. Limited access to both agricultural and non-agricultural productive assets

restricts refugees' ability to generate income, diversify livelihoods, and build resilience against food insecurity. Hosts, while better endowed, still face asset gaps, suggesting that interventions aimed at increasing access to productive assets could play a critical role in enhancing livelihood opportunities, particularly for refugee populations. The data clearly highlights a pressing need for programs that facilitate equitable access to essential resources such as livestock, land, and tools, which are pivotal for fostering self-reliance and sustainable development.

Table 10:Ownership of Productive Assets

Ownership of Productive Assets	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Productive Assets Related to Agriculture					
Household with Livestock	1.1%	48.2%	51.0%	64.7%	28.6%
Coffee Plantation	0.3%	1.4%	0.0%	0.0%	0.5%
Tea Plantation	0.3%	9.5%	0.0%	0.0%	2.6%
Land for Leasing	0.3%	2.3%	0.5%	2.0%	0.9%
Forest	0.5%	11.8%	0.0%	3.9%	3.6%
Others	4.7%	6.4%	6.3%	7.8%	5.7%
None	95.0%	74.1%	93.8%	86.3%	88.7%
Productive Assets Not Related to Agriculture					
Bicycle	0.0%	5.5%	0.5%	13.7%	2.4%
Milling machine	0.0%	0.9%	0.0%	0.0%	0.2%
Sewing machine	0.3%	0.9%	0.0%	0.0%	0.4%
Other	1.1%	0.0%	0.0%	0.0%	0.5%
None	98.9%	93.6%	99.5%	86.3%	96.9%

Source: Author Field Data

4.2.8. Access to Arable Land

The analysis of access to arable land highlights both widespread availability of land for cultivation and marked disparities in ownership, size, and location between refugee and host households. Across all areas, the vast majority of households reported access to arable land, with 92.6 % of Kigeme camp refugees, 99.5 % of Nyabiheke camp refugees, and nearly universal access among host communities in Kigeme (98.2 %) and Nyabiheke (100 %). However, the average size of land held by refugees was substantially smaller than that of host households. Kigeme camp households had an average of 290 square meters, while Nyabiheke camp households had slightly larger plots averaging 500 square meters. In contrast, host households enjoyed significantly larger land holdings, with Kigeme hosts averaging 2,107 square meters and Nyabiheke hosts averaging 1,035 square meters, reflecting a substantial disparity in resource endowment.

Land ownership patterns further illustrate this imbalance. Among refugees, formal ownership was virtually non-existent, with only 1.1 % in Kigeme and none in Nyabiheke claiming ownership, while the majority relied on government-provided land (83.4 % in Kigeme and 99.5 % in Nyabiheke). A small portion of refugees in Kigeme camp borrowed land (15 %) or rented (0.5 %), highlighting limited access to secure tenure. In contrast, a significant proportion of host households owned their land, particularly in Kigeme (76.4 %) and to a lesser extent in Nyabiheke (25.5 %), with government-owned or rented land making up the remainder.

The location of farmland also differed markedly between groups. Refugees overwhelmingly relied on marshlands, with 97.6 % of Kigeme and 99.5 % of Nyabiheke households cultivating in these low-lying areas, often less productive and more vulnerable to climate shocks. Host households had more diverse locations, with substantial shares farming on hillsides, marshlands, or a combination of both, reflecting greater flexibility and access to higher-quality land. Kigeme hosts, for instance, cultivated 39.1 % of their land in marshlands and 49.5 % across both hillsides and marshlands, while Nyabiheke hosts used 72.5 % marshlands and 25.5 % mixed locations.

Overall, while arable land was widely accessible, refugees were disadvantaged in terms of plot size, ownership, and land quality, relying heavily on government-provided marshlands. Host households not only held larger and more secure plots but also benefited from more diverse farmland locations. This disparity highlights the structural constraints that limit refugee agricultural productivity and underscores the need for interventions that improve access to secure and productive land, thereby enhancing self-reliance and sustainable livelihoods.

Table 11:Access to Arable Land

Access to Arable Land	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Household with arable Land	92.6%	98.2%	99.5%	100.0%	96.1%
Average size in square meters of the arable land	289.57	2,106.96	500.26	1,035.20	289.57
Land Ownership					
Own land	1.1%	76.4%	0.0%	25.5%	21.9%
Rent	0.5%	15.9%	0.0%	7.8%	4.9%
Government owned	83.4%	64.1%	99.5%	88.2%	82.3%
Borrowed	15.0%	5.9%	0.0%	0.0%	8.3%
Location of the farm					
Hill sides	1.1%	11.4%	0.0%	2.0%	3.6%
Hill sides and Marshland	1.3%	49.5%	0.5%	25.5%	15.2%
Marshland	97.6%	39.1%	99.5%	72.5%	81.3%

Source: Author Field Data

4.3. Agricultural Productivity

4.3.1. Level of Agricultural Production

The analysis of agricultural production among refugee and host households reveals distinct patterns in crop choice and output, reflecting differences in land access, farming experience, and agro-ecological conditions. Maize emerged as the most commonly cultivated crop across all groups, with near-universal adoption in Kigeme camp (97.4 %), Kigeme host households (97.3 %), Nyabiheke camp (91.1 %), and Nyabiheke host communities (86.3 %). Despite this widespread cultivation, the average maize yields varied significantly, with Kigeme and Nyabiheke host households producing substantially more (149.05 kg and 102.0 kg, respectively) compared to refugee households in Kigeme (54.45 kg) and Nyabiheke (62.93 kg), indicating the impact of larger land holdings, better inputs, and potentially more experience among hosts.

Bean cultivation showed a contrasting pattern. While widely grown by Kigeme camp and host households (76.8 % and 88.6 %, respectively), it was minimally adopted in Nyabiheke camp (1.6 %) and host households (11.8 %). Production levels followed a similar trend, with Kigeme host households achieving an average of 74.19 kg, compared to only 34.54 kg for Kigeme camp refugees, reflecting both scale and intensity differences.

Soybeans were predominantly cultivated in Nyabiheke, with 95.3 % of camp households and 96.1 % of host households engaging in production. Notably, the average yield for Nyabiheke camp refugees was exceptionally high at 386.03 kg, compared to 52.91 kg for host households, suggesting either concentrated production on smaller plots or intensive cultivation practices for this crop. In contrast, soybean production remained negligible in Kigeme, with minimal adoption and low output.

Vegetable production was relatively limited across all areas but showed some concentration among Kigeme hosts, where 14.1 % of households grew vegetables with an average production of 237.21 kg. Kigeme camp refugees produced far less, averaging only 26.11 kg, while Nyabiheke households had almost no vegetable production. Irish potatoes were mainly cultivated in Kigeme, particularly

among host households, yielding an average of 150.13 kg, whereas Nyabiheke households barely produced this crop.

Overall, the data illustrate a pattern in which refugee households, despite cultivating similar types of crops to those of host communities, consistently produce lower quantities, likely reflecting constraints in land size, access to inputs, and farming resources. Host households, benefiting from larger plots, greater asset ownership, and more diverse land locations, achieved higher yields and more varied production. These findings highlight the structural inequalities in agricultural capacity between refugee and host communities and underscore the importance of targeted interventions to improve productivity, enhance input access, and support climate-smart farming practices among refugee households.

Table 12:Agricultural Production of Selected Crops

Agricultural Production of Selected Crops	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Types of Crops commonly grown					
Maize	97.4%	97.3%	91.1%	86.3%	95.3%
Beans	76.8%	88.6%	1.6%	11.8%	58.8%
Soya Beans	0.3%	0.9%	95.3%	96.1%	27.9%
Vegetables	5.3%	14.1%	0.5%	0.0%	6.2%
Irish potatoes	40.8%	30.9%	0.5%	0.0%	26.6%
Others	3.2%	11.8%	0.0%	3.9%	4.7%
Average Production in Kilograms					
Maize	54.45	149.05	62.93	102.00	92.1
Beans	34.54	74.19	25.00	41.31	43.8
Soybeans	7.0	25.00	386.03	52.91	117.7
Vegetables	26.11	237.21	7.3	-	67.7
Irish Potatoes	72.76	150.13	9.4	-	58.1

Source: Author Field Data

4.3.2. Climatic Shocks and Mitigation Measures

The analysis of climatic shocks experienced highlights the pervasive and varied nature of environmental challenges affecting agricultural productivity. Overall, pests and diseases emerged as the most frequently reported shocks, affecting 46.3 % and 70 % of households, respectively. Refugees in Kigeme and Nyabiheke camps were particularly affected by these shocks, with 42.9 % and 50.5 % reporting pest infestations and 66.8 % and 62 % reporting crop diseases. Host households also reported high exposure, with disease prevalence reaching 85.5 % in Kigeme and 56.9 % in Nyabiheke, and pest issues affecting nearly half of the households in both areas. Floods and strong winds were less common but still notable, impacting between 11.5 % and 40.5 % of households depending on location. Droughts, however, were highly concentrated in Nyabiheke, affecting 91.1 % of camp refugees and 90.2 % of host households, while they were less pronounced in Kigeme, impacting 14.2 % of refugees and 25.9 % of hosts. These variations indicate that the types and severity of climatic shocks are heavily influenced by local geographic and agro-ecological conditions, with Nyabiheke appearing particularly vulnerable to water scarcity and drought stress.

Table 13:Climatic Shocks Faced

Climatic shocks faced	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Floods	40.5%	29.5%	11.5%	13.7%	29.4%
Strong winds	17.4%	10.0%	8.3%	3.9%	12.6%
Pest	42.9%	48.2%	50.5%	47.1%	46.3%
Diseases	66.8%	85.5%	62.0%	56.9%	70.0%
Drought	14.2%	25.9%	91.1%	90.2%	39.4%
Other	9.7%	3.6%	3.1%	0.0%	6.0%

Source: Author Field Data

Households employed a range of coping mechanisms to mitigate the effects of these climatic shocks, with varying levels of adoption across locations. The use of pesticides was widespread, with 86.3 % of Kigeme camp refugees and 82.3 % of Nyabiheke camp refugees reporting its use, and similarly high adoption among host households, indicating a common reliance on chemical pest management to protect crop yields. Fertilization was another common practice, used by 58.7 % of Kigeme camp refugees and 55.7 % of Nyabiheke camp refugees, while host households generally reported slightly lower adoption rates, particularly in Nyabiheke at 41.2 %. Irrigation emerged as a key adaptive strategy in response to drought-prone areas, particularly in Nyabiheke, where 71.9 % of camp refugees and 72.5 % of host households employed irrigation techniques, compared to only 26.1 % and 31.4 % in Kigeme. Herbicide use and other mitigation measures were less prevalent, reflecting a narrower focus on priority interventions for immediate yield protection.

Table 14:Coping Mechanisms for Climatic Shocks Faced

Coping Mechanisms for Climatic shocks faced	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Fertilizing soil	58.7%	51.4%	55.7%	41.2%	55.0%
Pesticide	86.3%	90.9%	82.3%	80.4%	86.2%
Herbicide	25.5%	21.4%	20.8%	23.5%	23.3%
Irrigation	26.1%	31.4%	71.9%	72.5%	40.7%
Other	12.4%	8.6%	5.2%	7.8%	9.5%

Source: Author Field Data

Collectively, these findings illustrate that both refugee and host communities face significant and recurring climatic risks that threaten agricultural productivity. Refugee households, in particular, appear vulnerable due to limited access to resources and adaptive infrastructure, though both groups actively adopt coping strategies such as pesticide application, fertilization, and, where possible, irrigation. The differences in coping mechanism adoption and exposure to shocks underscore the importance of tailored climate-smart interventions that account for local environmental conditions and resource access, aiming to enhance resilience, reduce vulnerability, and sustain agricultural production in both camps and host communities.

4.3.3. Access to Agricultural Production Kits

The analysis of access to agricultural production kits and advisory services reveals a generally high level of support provided to both refugee and host households, with refugees in Nyabiheke reporting the greatest access. Overall, 91.5 % of households received some form of farming advice or inputs, with Nyabiheke camp refugees leading at 97.9 %, followed closely by host households at 96.1 %, while Kigeme camp and host households reported 86.1 % and 94.1 %, respectively. This indicates a broadly inclusive reach of agricultural support, although slight disparities remain across locations.

In terms of the type of support received, extension service advice was the most commonly accessed form of assistance, reaching 84.1 % of households overall. Again, Nyabiheke refugees reported the highest receipt at 95.3 %, while Kigeme camp refugees were slightly lower at 76.3 %. Fertilizer distribution followed a similar pattern, with 77.9 % of all households receiving inputs, including 96.4 % of Nyabiheke camp refugees, reflecting targeted efforts to enhance soil fertility and productivity in the camps.

Access to improved seeds was also substantial, particularly among Nyabiheke beneficiaries, where over 83 % received them, compared to 57.4 % of Kigeme camp refugees. Herbicide and pesticide support was less widespread but still significant, with 39 % of households overall benefiting from such inputs. Machinery and farming tools were the least accessible, reaching only 15.4 % of households overall, with Nyabiheke and Kigeme camp refugees slightly higher than host communities, signaling limited availability of more sophisticated equipment.
The sources of assistance were diverse, highlighting the collaborative nature of agricultural support. Development partners and NGOs were the primary providers, serving 68 % of households overall,

while UNHCR support was more concentrated in Nyabiheke (39.6 % of camp refugees) compared to Kigeme (22.4 %). Government projects also contributed substantially, particularly in Nyabiheke, where 41.1 % of camp households received assistance. Village-level extension agents and input suppliers played complementary roles, albeit with limited coverage, suggesting that much of the support was provided through organized programs rather than informal local channels.

Actual utilization of agricultural inputs reflected high engagement among beneficiaries. Fertilizers and pesticides were widely used, with 95.3 % and 92.5 % of households employing them, respectively, and near-universal use among Nyabiheke camp refugees. Herbicide use was lower at 35.5 %, while irrigation materials were adopted by 49 % overall, peaking at 64.6 % for Nyabiheke camp refugees, demonstrating adaptation to water-related challenges. Machinery use remained limited at 7.8 %, consistent with the lower access reported earlier. Extension services were actively utilized by 20.8 % of households, reflecting ongoing engagement in advisory programs.

Table 15:Access to Farming Advice and Inputs

Access to farming advice and inputs	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
HH that received farming advice or inputs	86.1%	94.1%	97.9%	96.1%	91.5%
Types of farming advice/ support or farming inputs, kits, and fertilizers received					
Advice on extension services	76.3%	85.9%	95.3%	92.2%	84.1%
Fertilizers	66.3%	78.6%	96.4%	92.2%	77.9%
Improved	57.4%	64.1%	83.9%	84.3%	66.8%
Herbicide or Pesticide	32.9%	36.4%	51.6%	49.0%	39.0%
Machinery and tools	15.8%	15.9%	16.1%	7.8%	15.4%
Sources of assistance					
UNHCR	22.4%	14.5%	39.6%	25.5%	24.4%
Government project	15.0%	21.4%	41.1%	35.3%	23.8%
Development partners in agriculture	62.1%	74.1%	71.9%	70.6%	68.0%
Extension agent at the village level	18.4%	20.9%	13.0%	9.8%	17.3%
Inputs suppliers	8.7%	20.5%	14.6%	13.7%	13.4%
Commodity Aggregators	0.8%	3.2%	3.6%	0.0%	2.0%
Other	3.4%	1.4%	0.5%	0.0%	2.0%
Use of Agricultural Inputs					
Fertilizers	93.4%	93.6%	100.0%	98.0%	95.3%
Pesticides	88.9%	94.5%	96.4%	96.1%	92.5%
Herbicides	33.7%	31.4%	41.1%	45.1%	35.5%
Irrigation materials	43.9%	41.4%	64.6%	60.8%	49.0%
Machinery	4.2%	4.1%	16.7%	17.6%	7.8%
Extension service	16.3%	16.4%	32.3%	29.4%	20.8%
Other	6.6%	2.7%	0.5%	2.0%	3.9%

Source: Author Field Data

4.3.4. Participation in Cooperatives

The analysis of participation in cooperatives demonstrates an exceptionally high level of membership across both refugee and host communities in Kigeme and Nyabiheke. Overall, 98.8 % of respondents reported being members of a cooperative, with Kigeme camp at 97.6 %, Kigeme host at 99.5 %, and full membership reported in both Nyabiheke camp and host communities. This indicates that cooperative structures have been successfully integrated into the social and economic fabric of these communities.

Active participation within the cooperatives is similarly robust. Nearly all members consistently paid their contributions, with 98.3 % of the total population reporting regular payments. Attendance at cooperative meetings was also high, with 93.2 % of members participating regularly, reflecting strong engagement and governance adherence. Participation in social activities within cooperatives was slightly lower but still substantial at 85.3 %, suggesting that cooperatives also serve as platforms for

community cohesion. Training in cooperative management showed variation, with Nyabiheke members most likely to have received formal instruction, 91.7 % of camp members and 94.1 % of host members, while Kigeme camp and host members reported slightly lower rates of 73.4 % and 80.5 %, respectively. This indicates a concerted effort to build management capacity, particularly in Nyabiheke.

Cooperative membership also translated into tangible benefits for participants, particularly in accessing markets and agricultural inputs. Assistance with market access was most prominent among Nyabiheke refugees and hosts, with 95.3 % and 90.2 % benefiting, compared to 60.3 % and 63.6 % in Kigeme. Similarly, access to inputs was more prevalent in Nyabiheke, with 91.1 % of camp members and 84.3 % of host members reporting support, while Kigeme figures ranged from 58.9 % to 65 %. Access to financial capital was lower overall, with only 29.2 % of members benefiting, though Nyabiheke host members reported higher access at 41.2 %. Training on agricultural practices was moderately accessed, with 52.8 % of all members reporting participation, and the figures were relatively consistent across locations.

These data indicate that cooperatives are a highly effective mechanism for fostering participation, building management skills, and providing key services to both refugee and host communities. Membership and engagement are nearly universal, with the most substantial benefits seen in market access and input provision, particularly for Nyabiheke residents. However, access to financial capital remains limited, suggesting an area for potential expansion to further enhance the economic resilience and productivity of cooperative members.

Table 16:Participation in Cooperatives

Participation in Cooperatives	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Participants members of cooperatives	97.6%	99.5%	100.0%	100.0%	98.8%
Active participation in cooperatives					
Members who always pay due contributions	98.4%	97.7%	98.4%	100.0%	98.3%
Members who always attend meetings	90.3%	93.6%	97.9%	96.1%	93.2%
Members who participate in social activities	83.7%	89.1%	83.9%	86.3%	85.3%
Participants who have been trained in cooperative management	73.4%	80.5%	91.7%	94.1%	80.7%
Services Benefited from Cooperatives					
Assistance in accessing to market	60.3%	63.6%	95.3%	90.2%	70.9%
Access to inputs	58.9%	65.0%	91.1%	84.3%	69.4%
Access to financial capital	28.9%	22.3%	34.4%	41.2%	29.2%
Training on agricultural practices	49.7%	53.2%	58.9%	51.0%	52.8%
Other	9.2%	11.8%	2.1%	0.0%	7.7%

Source: Author Field Data

4.3.5. Awareness and Application of Climate-Smart Agriculture

The analysis of awareness and application of climate-smart agriculture reveals notable differences in access to extension services, training, and practical adoption of climate-smart practices across Kigeme and Nyabiheke, as well as between refugee and host communities. Overall, access to general agricultural extension services was relatively high, particularly for topics such as cropping and livestock husbandry, which reached 82.3 % of respondents overall. Nyabiheke residents, both camp and host communities, reported the highest coverage, with 89.1 % in the camp and 88.2 % in host areas, compared to Kigeme camp at 78.4 % and Kigeme hosts at 81.8 %. Access to more specialized services, such as post-harvest practices, harvest quality assurance, and farmer field schools, was lower overall but showed higher uptake among Nyabiheke refugees, suggesting a targeted focus or more intensive support in that area.

The frequency of access to extension services also varied. While nearly half of the total respondents reported accessing services “very often” (49.8 %), a substantial share still relied on less frequent

support, indicating uneven intensity in service provision. Training in specific areas demonstrated significant variation, with modern farming practices reaching 66.3 % of respondents, post-harvest handling 54.4 %, and climate-smart agriculture skills 38.3 % overall. Nyabiheke camp respondents reported the highest coverage in modern farming practices at 82.8 % and in integrated pest and disease management at 50.5 %, whereas Kigeme camp and host populations generally reported lower training coverage, particularly in value chain development and climate-smart practices.

Table 17: Access to Agricultural Extension Services

Agricultural Extension Services	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Cropping and livestock husbandry	78.4%	81.8%	89.1%	88.2%	82.3%
Farming demonstrations	42.4%	41.8%	49.0%	31.4%	43.1%
Good agricultural practices	56.6%	61.8%	77.1%	76.5%	63.8%
Post-harvest practices	40.0%	44.5%	78.6%	72.5%	52.0%
Harvest quality assurance	18.2%	23.6%	47.9%	49.0%	28.2%
Farmer field school	12.4%	14.5%	25.0%	27.5%	16.7%
Other	22.6%	18.6%	16.1%	19.6%	19.9%
Frequency of Accessing Agricultural Extension Services					
Often	32.4%	35.9%	51.0%	54.9%	38.9%
Rarely	228	114	59	19	420
Very Often	60.0%	51.8%	30.7%	37.3%	49.8%
Training Received					
Modern farming practices	60.0%	63.6%	82.8%	62.7%	66.3%
Post-harvest handling and management	46.6%	52.7%	71.4%	56.9%	54.4%
Business and value chain development	22.1%	29.5%	42.2%	25.5%	28.8%
Climate-smart agriculture skills	31.1%	36.4%	53.6%	43.1%	38.3%
Integrated pest and disease management	24.5%	28.2%	50.5%	37.3%	32.1%
Others	29.5%	18.6%	15.1%	27.5%	23.3%

Source: Author Field Data

The uptake of climate-smart agriculture practices mirrored the patterns observed in training. Soil conservation was the most widely adopted practice, with 76.3 % overall, and particularly high among Nyabiheke camp residents at 89.6 %. Fertilizer application in an efficient manner was similarly common, reaching 63.8 % overall, with adoption highest in Nyabiheke camp at 78.6 %. Other practices, including crop rotation (56.2 % overall), intercropping (18.3 %), intensive farming (20.8 %), and irrigation (27.3 %), showed more variation across locations, with Nyabiheke respondents consistently reporting higher uptake. Adoption of drought-tolerant varieties, planning based on meteorological information, and minimum tillage were limited, indicating areas where further awareness, training, and support could enhance resilience to climate variability.

Table 18: Climate Smart Agriculture Practices

Climate Smart Agriculture Practices	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Soil conservation	69.5%	76.4%	89.6%	76.5%	76.3%
Applying fertility in a good manner	55.8%	62.7%	78.6%	72.5%	63.8%
Use of organic fertilizer	40.3%	45.9%	47.4%	45.1%	43.7%
Rotating crops	45.0%	55.0%	76.6%	68.6%	56.2%
Intercropping	11.8%	18.2%	30.7%	19.6%	18.3%
Intensive farming	11.6%	14.1%	44.8%	27.5%	20.8%
Irrigation	18.2%	21.8%	48.4%	39.2%	27.3%
Farming drought-tolerant varieties	5.8%	13.6%	14.6%	13.7%	10.3%
Planning and farming based on information provided by the meteo services	3.9%	8.6%	9.9%	5.9%	6.6%
Minimum tilling	23.2%	13.2%	8.9%	17.6%	17.0%

Source: Author Field Data

The analysis of post-harvest technique application highlights a generally high level of engagement among both refugee and host communities, with notable variation between camps and host areas. Overall, 86.5 % of households applied some form of post-harvest handling techniques, with Nyabiheke camp households demonstrating the highest adoption at 99.5 %, followed by Nyabiheke host communities at 90.2 %. Kigeme camp and host households also showed substantial application, at 79.2 % and 86.8 %, respectively.

When examining specific techniques, timely harvesting was widely practiced across all areas, with the highest uptake in Nyabiheke camp at 87.5% and Kigeme camp at 73.2%. Drying was another commonly applied technique, particularly in Nyabiheke camp (95.8%) and among Nyabiheke hosts (86.3%), while Kigeme camp and host communities reported lower but still significant use at 65.3% and 75.5%, respectively. Techniques such as cleaning, sorting, and sizing or grading showed greater variation, with Nyabiheke camp again reporting the highest adoption of cleaning at 57.8 %, sorting at 93.8 %, and sizing/grading at 75 % compared to Kigeme camp, where these practices were applied by fewer households (cleaning 29.7 %, sorting 36.6 %, sizing/grading 26.6 %). Packaging and minimal processing were less commonly adopted overall, indicating potential gaps in capacity or resources for more advanced post-harvest management.

Access to harvesting facilities, including drying structures, was notably high, reaching 97 % of households overall, with Nyabiheke host communities reporting universal access (100 %) and Kigeme hosts at 97.7 %. The widespread availability of facilities likely supports the relatively high uptake of drying and other post-harvest techniques. However, the disparity in the application of other practices suggests that further training and technical support could enhance overall post-harvest management, particularly in Kigeme camp and host communities.

In summary, while post-harvest practices are widely applied and supported by access to facilities, there is clear evidence that households in Nyabiheke, especially in the camp, have more comprehensive engagement with a range of techniques, whereas Kigeme households could benefit from targeted interventions to improve adoption of cleaning, sorting, packaging, and minimal processing practices.

Table 19:Application of Post-Harvest Techniques

Access to farming advice and inputs	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Households that applied post-harvest handling techniques	79.2%	86.8%	99.5%	90.2%	86.5%
Types of post-harvest handling techniques applied					
Timely Harvesting	73.2%	84.1%	87.5%	78.4%	79.6%
Cleaning	29.7%	28.6%	57.8%	52.9%	37.2%
Sorting	36.6%	43.6%	93.8%	78.4%	54.0%
Sizing and grading	26.6%	26.8%	75.0%	68.6%	40.2%
Drying	65.3%	75.5%	95.8%	86.3%	76.2%
Packaging	14.5%	20.5%	55.7%	39.2%	26.9%
Minimal processing	20.0%	15.0%	35.4%	15.7%	21.9%
Other	2.9%	2.7%	0.5%	0.0%	2.1%
Households with access to harvesting facilities, like drying facilities	95.3%	97.7%	99.0%	100.0%	97.0%

Source: Author Field Data

4.3.6. Training in Entrepreneurship and Business Management

The analysis of training in entrepreneurship and business management indicates uneven access to capacity-building opportunities across refugee and host communities. Overall, the proportion of households that received training was relatively low, with notable differences between camps and host areas. Nyabiheke camp reported the highest levels of participation across all training areas, with 42.2 % of households trained in saving group management, 39.1 % in financial literacy, and 39.1 % in business planning. In comparison, Kigeme camp had considerably lower participation, with only 22.1 % engaged in saving group management, 20.3 % in financial literacy, and 10 % in business planning.

Host communities in both locations exhibited slightly higher engagement than their respective camps in some areas, but still lagged behind the Nyabiheke camp. Kigeme hosts had 29.5 % participation in saving group management, 29.1 % in financial literacy, and 14.5 % in business planning, while Nyabiheke hosts recorded 25.5 % in saving group management, 25.5 % in financial literacy, and 23.5 % in business planning. Training in business and cooperative management was consistently the least accessed, with overall participation at 16.7 %, ranging from 12.4 % in Kigeme camp to 27.5 % in Nyabiheke hosts.

These findings suggest that while some households, particularly in Nyabiheke camp, benefited from entrepreneurship and business management training, access remains limited for the majority, especially in Kigeme camp. The low overall coverage highlights a need for more comprehensive and equitable training programs to enhance household capacities in financial management, business planning, and cooperative operations, thereby supporting more sustainable livelihood development across both refugee and host communities.

Table 20: Entrepreneurship and Business Management Training

Agricultural Extension Services	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Saving Group Management	22.1%	29.5%	42.2%	25.5%	28.8%
Financial literacy	20.3%	29.1%	39.1%	25.5%	27.2%
Business Planning	10.0%	14.5%	39.1%	23.5%	18.6%
Business and Cooperative Management	12.4%	14.5%	25.0%	27.5%	16.7%

Source: Author Field Data

4.3.7. Access to Markets

The analysis of market access reveals significant disparities between refugee and host communities, both in terms of accessibility and utilization. Overall, 77 % of respondents reported having access to a reliable market, though the level of access varied considerably across locations. Refugee camps, particularly Kigeme, showed lower access at 58.4 % compared to Nyabiheke camp at 96.9 %. Host communities enjoyed generally higher market access, with 87.7 % in Kigeme and 94.1 % in Nyabiheke reporting reliable access.

The perceived level of market accessibility also varied, with only 32.4 % of Kigeme camp participants indicating high access, where demand exceeds supply, while 65.6 % of Nyabiheke camp respondents reported high access. The majority of host respondents described an average level of access, with demand and supply roughly matching, particularly in Kigeme host at 65.9 %. Conversely, limited access, where demand is lower than what producers supply, was reported by 25.8 % of Kigeme camp households, highlighting challenges in offloading produce in refugee settings.

Table 21: Access to Market

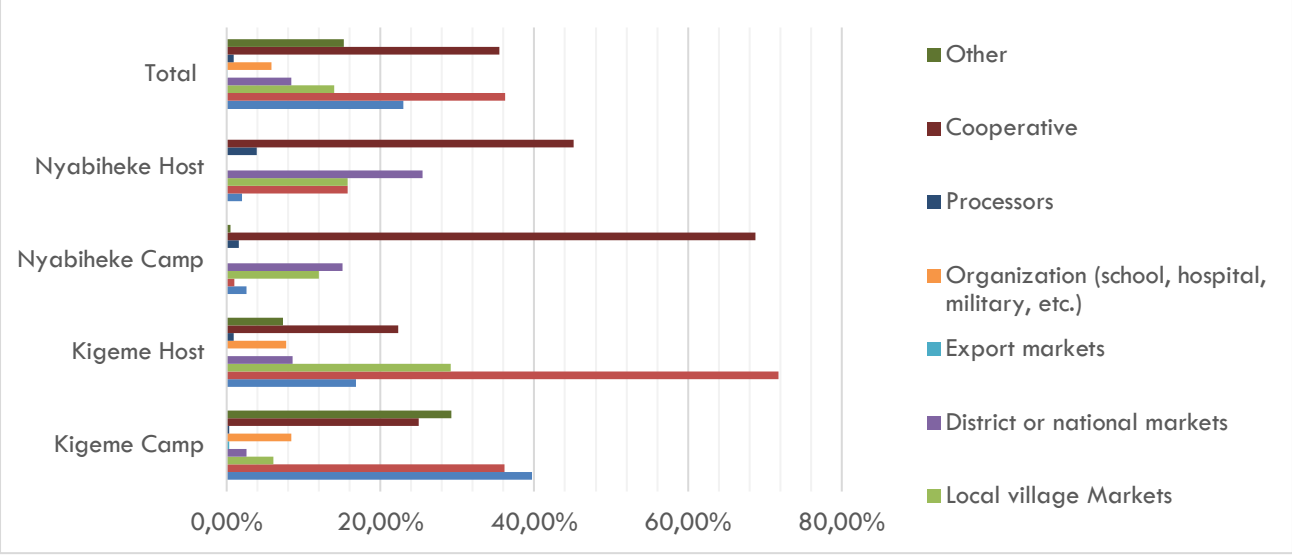
	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Participants with access to a reliable market	58.4%	87.7%	96.9%	94.1%	77.0%
Level of Market Accessibility					
High access (Demand exceeds what I sell)	32.4%	26.8%	65.6%	58.8%	40.1%
Average (Demand and what I sell match)	41.8%	65.9%	33.3%	37.3%	45.9%
Less access (Demand is lower than supply)	25.8%	7.3%	1.0%	3.9%	14.0%
Distance to the nearest market from home					
Less than 10 min	40.0%	8.6%	14.1%	7.8%	24.0%
10-30 min	43.9%	30.9%	41.7%	29.4%	39.1%
30-60 min	15.3%	47.7%	32.3%	39.2%	29.1%
60-90 min	0.8%	10.0%	1.0%	11.8%	3.9%
Over 90 min	0.0%	2.7%	10.9%	11.8%	3.9%

Source: Author Field Data

Distance to markets presented another barrier, especially for camp residents. In Kigeme camp, 40 % of households were less than 10 mins from the nearest market, 43.9 % were within 10-30 mins, and 15.3 % traveled 30-60 minutes. By contrast, Kigeme host households were more likely to spend 30-60 mins reaching a market, at 47.7 %, but fewer faced extreme distances. In Nyabiheke, camp households mostly accessed markets within 10-30 minutes (41.7 %) or 30-60 minutes (32.3 %), while host households frequently traveled longer distances, with 39.2 % traveling within 30-60 minutes and 11.8 % traveling over 60 minutes.

The types of markets accessed differed notably between camps and hosts. Refugee households relied heavily on camp markets (39.7 % in Kigeme) and cooperatives (68.8 % in Nyabiheke), whereas host communities primarily used host community markets (71.8 % in Kigeme) and cooperatives (45.1 % in Nyabiheke). Access to larger district or national markets was limited, particularly for camp households, indicating constrained integration into broader commercial networks.

Figure 10: Types of Markets



Source: Author Field Data

Sources of market information were also skewed. Cooperative networks were the most frequently cited source across all groups, particularly in the Nyabiheke host (76.5%) and camp settings (66.7%). Informal networks, such as neighbors, friends, and relatives, were also critical, accounting for 50.4% of the total respondents. Access to formal channels, such as radio, internet, NGOs, or district authorities, was minimal, highlighting the reliance on social and cooperative networks rather than institutional market intelligence.

Table 22: Access to Market

Sources of Market Information	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
UNHCR	3.7%	3.2%	5.7%	2.0%	3.9%
Neighbours, friends, and relatives	44.7%	67.3%	44.8%	41.2%	50.4%
Cooperative	48.9%	58.2%	66.7%	76.5%	57.1%
Radio and Newspaper	2.9%	10.0%	4.2%	3.9%	5.1%
Internet	0.0%	3.6%	0.0%	0.0%	0.9%
District Authorities	0.0%	1.8%	0.5%	0.0%	0.6%
NGO/Project	0.5%	2.3%	0.5%	0.0%	0.9%
At the market	46.3%	57.7%	1.6%	3.9%	36.5%
Meetings	21.1%	19.5%	3.1%	9.8%	15.9%
Social groups	24.5%	15.9%	18.8%	19.6%	20.6%
Professional networks and groups	0.3%	0.0%	0.0%	0.0%	0.1%
Other	8.2%	1.8%	2.1%	2.0%	4.7%

Source: Author Field Data

4.3.8. Marketing Challenges

A detailed analysis of marketing challenges reveals a range of constraints affecting both refugee and host communities, although the intensity and nature of these challenges vary by location. Overall, the most frequently cited challenge was the lack of personal capital, reported by 30.8% of respondents, with the highest incidence in Nyabiheke Camp at 33.9% and Kigeme Camp at 32.1%. Limited access to credit was also a concern, affecting 6.5% of participants overall, with slightly higher rates reported in Nyabiheke Camp (7.3%) and Kigeme Camp (6.8%). High collateral requirements and high-interest rates were less prominent constraints, but they still posed barriers for some, particularly in Kigeme Camp, where 7.9% cited collateral requirements and 5.5% noted high-interest rates.

Transport-related issues were significant for some respondents, with high transport costs reported by 6.3% overall, most acutely among Kigeme hosts at 15.5%, and a lack of transport affecting 3.1% of respondents. Poor road infrastructure was a concern, particularly in Nyabiheke Camp (6.3%) and the Nyabiheke host communities (3.9%), suggesting that geographic and infrastructural factors influence market accessibility. Other operational constraints, such as high taxes, low demand, storage shortages, and seasonal fluctuations, were relatively minor but still present, with a supply shortage cited by 10.3% overall and theft reported by 0.6% of participants.

A substantial proportion of respondents, 18 % overall, indicated uncertainty about the challenges they face, reflecting possible gaps in market knowledge or awareness. Additionally, Other challenges were reported by 39.7% of participants, reaching as high as 56.9% in Nyabiheke host communities and 51.6% in Nyabiheke Camp, indicating that context-specific or nuanced barriers are significant but not fully captured in predefined categories.

Qualitative findings from FGDs and KIIs revealed that other challenges encompass limited market space, lack of reliable market information, stiff competition, and weak integration into formal value chains. For example, a refugee trader in Nyabiheke explained: "***Sometimes the problem is not capital or transport, but simply that we do not know where to sell and how to connect to bigger buyers."*** These perspectives reveal that, beyond financial and logistical barriers, institutional and informational challenges play a decisive role in shaping market access. Secondary data also confirm that both refugees and host households in Rwanda often face structural obstacles in marketing, including weak integration into formal value chains, mobility restrictions, and limited access to cooperative networks (UNHCR, 2023; MINEMA & WFP, 2022).

Table 23: Challenges in Marketing

Challenges	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Lack of own capital	32.1%	26.8%	33.9%	27.5%	30.8%
Lack of credit	6.8%	5.9%	7.3%	3.9%	6.5%
High collateral requirements	7.9%	6.8%	3.6%	2.0%	6.3%
High-interest rates on credit	5.5%	3.2%	1.6%	0.0%	3.7%
High transport cost	3.9%	15.5%	2.1%	0.0%	6.3%
Lack of means of transport	2.6%	5.9%	1.6%	0.0%	3.1%
Poor road infrastructure	0.5%	1.8%	6.3%	3.9%	2.4%
High tax payment	2.9%	0.5%	0.5%	2.0%	1.6%
Low demand	2.6%	4.5%	1.0%	3.9%	2.8%
Shortage of supply	13.7%	13.6%	1.6%	3.9%	10.3%
Few people control the market	1.6%	0.9%	0.0%	2.0%	1.1%
Shortage of storage	1.6%	0.9%	0.0%	0.0%	0.9%
Seasonal business	1.3%	1.8%	0.5%	0.0%	1.2%
Theft	0.3%	0.0%	1.0%	3.9%	0.6%
I don't know	22.6%	16.4%	13.0%	9.8%	18.0%
Other	34.2%	35.0%	51.6%	56.9%	39.7%

Source: Author Field Data

4.3.9. Integration Into Agricultural Value Chains

The analysis of integration into agricultural value chains reveals notable differences between refugee and host communities in Kigeme and Nyabiheke. Across all areas, the majority of participants sell their produce without a formal agreement, with 78.9% of Kigeme camp residents and 74.1% of Kigeme hosts doing so, compared to 51% in Nyabiheke camp and 37.3% in Nyabiheke host communities. This suggests that informal market arrangements predominate, particularly in camp settings, thereby limiting formalized contractual engagement. Verbal agreements are relatively minor, reported by 17.7% of participants overall, while written agreements are more common in Nyabiheke, particularly among host households at 45.1%, suggesting a stronger presence of formalized market arrangements in that location.

When examining cooperative sales, substantial disparities are observed in participation levels. In Nyabiheke, both camp and host households report high engagement with cooperatives, with approximately 68.8% of Nyabiheke camp farmers and 68.6% of Nyabiheke hosts selling their entire harvest through the cooperative. In contrast, Kigeme camp and host households report lower levels of full cooperative sales, at 17.6% and 31.4%, respectively, indicating that cooperative-based market integration is less developed in Kigeme. Many participants sell only part of their harvest through cooperatives, with approximately a quarter to half of the produce being sold cooperatively, particularly among residents of Kigeme.

A notable proportion of participants, 10.7 % overall, could not recall the quantity of harvest sold through cooperatives, suggesting either limited record-keeping or inconsistent engagement with formal value chain structures. Overall, the data suggest that while formal integration into agricultural value chains exists, particularly in Nyabiheke, informal market arrangements remain dominant, especially in refugee camps. This highlights the need to strengthen cooperative engagement and formal contracts to enhance market stability, improve bargaining power, and ensure better returns for both refugees and host communities.

Table 24: Integration into Agricultural Value Chains

	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Non-agreement just selling	78.9%	74.1%	51.0%	37.3%	68.8%
Verbal agreement	17.4%	15.0%	21.4%	17.6%	17.7%
Written agreement	3.7%	10.9%	27.6%	45.1%	13.5%
Participants Reporting Selling Quantity of Harvest through Cooperatives					
Sold all (100%) through the cooperative	17.6%	31.4%	68.8%	68.6%	35.9%
Sold about three-quarters	19.5%	21.4%	18.8%	17.6%	19.7%
Sold half through the cooperative	30.0%	33.2%	10.9%	7.8%	25.1%
Sold a quarter through the cooperative	9.2%	5.0%	1.0%	0.0%	5.7%
Sold Less than a quarter through the cooperative	3.2%	4.1%	0.0%	5.9%	2.8%
I can't remember	20.5%	5.0%	0.5%	0.0%	10.7%

Source: Author Field Data

4.4. Social Cohesion and Self-Reliance

4.4.1. Social Relationships and Integration

The analysis of social cohesion and integration between refugee and host communities in Kigeme and Nyabiheke reveals exceptionally strong social ties and interactions. Across both camps and host areas, the vast majority of participants report feeling integrated within their communities, with an overall average of 97.5 %. Friendships spanning refugee and host populations are also widespread, with 98.1 % of participants maintaining such connections. Coexistence in shared spaces, such as marshlands, is similarly high, with 95.8% of respondents indicating joint use of these areas, reflecting strong patterns of daily interaction and mutual reliance.

Qualitative data further illustrate this sense of unity and mutual respect. One host community respondent expressed:

"For me, the relationship between refugees and the host community is perfect, I'd say one hundred % good." *FGD participants from the host community, Nyamagabe.*

Similarly, a refugee participant described the deep bonds of friendship and mutual support:

"Let me tell you, we live together very well; we help each other, and honestly, we are close friends one hundred %. There's nothing I would withhold from them, and they would never withhold anything from me. You know, it's like when one person's cow goes down to graze and another's bride comes up the hill, it means life moves together in harmony. In fact, we often say they shouldn't even be called refugees anymore; we're all Rwandans." *FGD participant from the refugee community, Gatsibo.*

These sentiments were echoed by another participant who emphasized the degree of social acceptance and shared leadership within the community:

"You can see it for yourself, some of them are even among the local leaders here, and they are respected. When we visit their places, they welcome us warmly. Have you ever seen anyone quarrel with another here? When we have food, we share it together without any problem." *FGD participant from the host community, Nyamagabe.*

Cooperative structures further reinforce integration, as 99.2 % of participants belong to cooperatives that include both host and refugee members. Commercial partnerships bridging the two communities are also significant, with 95.6 % of respondents engaging in joint economic activities. Access to financial services and savings groups that serve both refugees and host communities is nearly

universal, at 98.6 %, highlighting shared economic participation and collaboration. Moreover, the perceived value of cohabitation is widely recognized, with 96.7 % of participants appreciating the benefits of living alongside members of the other community.

"No, we don't experience any conflicts over resources. The good thing is that we divided the land equally among ourselves, so everyone knows their share. What makes it even better is the spirit of mutual support. For instance, if my neighbor harvests while my crops fail, they will often share part of their yield with me, and I do the same for them. Because of that cooperation, we don't have disputes at all." *FGD participant from the refugee community, Nyamagabe.*

"Whenever members harvest, they also provide us with opportunities to work for them and earn some income, especially during the harvest period. So, instead of conflicts, what we see is solidarity. We support each other economically through employment and sharing resources." *FGD participant from the host community, Nyamagabe.*

"No, we have no problems among ourselves. In fact, many of us are family or related by marriage. That connection makes it easy to work together in a peaceful manner. If some of them move away, we would either go with them or stay and continue working with their families; that is how strong our social ties are." *FGD participant from the refugee community, Gatsibo.*

These testimonies collectively demonstrate that both refugees and host communities experience a high degree of mutual trust, shared resources, and social cohesion. Integration in these areas is not only structural but emotional and relational, rooted in reciprocity, shared livelihood activities, and everyday cooperation.

Table 25: Social Relationship and Integration

	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Participants who feel more integrated in the community	96.0%	100.0%	97.4%	98.0%	97.5%
Participants who have friends from the host communities and refugees	97.4%	99.1%	97.9%	100.0%	98.1%
Participants who have co-existed with host communities and refugees on marshlands	94.7%	93.6%	99.5%	100.0%	95.8%
Participants with cooperatives comprising both host communities and refugees	99.2%	99.5%	98.4%	100.0%	99.2%
Participants with commercial partnerships between members of the host and refugees	92.6%	97.3%	98.4%	100.0%	95.6%
Participants who used financial services or savings groups that catered to both refugees and members of the host community	98.2%	99.5%	97.9%	100.0%	98.6%
Participants who highly value the cohabitation of refugees and members of the host community	97.1%	95.9%	95.8%	100.0%	96.7%

Source: Author Field Data

4.4.2. Self-Reliance

The analysis of self-reliance among participants in Kigeme and Nyabiheke reveals significant disparities between refugee and host communities, highlighting ongoing economic vulnerabilities, particularly among refugees. Across camps, relatively few respondents feel self-reliant, with only 7.9% of Kigeme refugees and 13.0% of Nyabiheke refugees reporting a sense of independence, compared to 50.9% of Kigeme hosts and 25.5% of Nyabiheke hosts.

"Honestly, it's hard to say that I am self-reliant. Here in the camp, almost everything depends on the aid we receive. The little we earn from casual labor or selling small items only helps for a few days. Without the food ration or support from NGOs, many of us wouldn't survive. I want to work for myself, but opportunities are too limited." *FGD participant from the refugee community, Nyamagabe*

"For us, the host community, at least we can rely on our small pieces of land. Even when we don't have much money, we can grow something to feed our families or sell at the local market. That gives us a bit of independence, though life is still a daily struggle." *FGD participant from the host community, Nyamagabe*

The primary barriers to self-reliance for refugees revolve around basic needs and financial capacity. Limited ability to afford sufficient food is reported by 61.1% of Kigeme refugees and 89.6% of Nyabiheke refugees, while restricted access to education and healthcare costs further compound vulnerability. Constraints in housing, income-generating activities, and stable employment also limit economic independence. In contrast, host communities report fewer limitations, though gaps remain in accessing financial resources and running income-generating activities (IGA).

"Sometimes we skip meals because there's simply no food left. You go out in the morning hoping to find small work, but if you fail to find it, your family goes hungry. That's the reality for many of us. It's not that we don't want to work, we just don't have steady jobs or capital to start something." *FGD participant from the refugee community, Gatsibo.*
"Even if you manage to start a small business, it's hard to sustain. The market is small inside the camp, and moving outside requires permission and transport money. When you make a little profit, most of it goes to buying food, so you can't really grow your business." *FGD participant from the refugee community, Nyamagabe.*

"For us hosts, we also face challenges, especially when farming seasons fail. But at least we have the freedom to move, to work anywhere, and to join cooperatives. That makes a big difference compared to refugees who are more restricted." *FGD participant from the refugee community, Gatsibo.*

Table 26: Perception of Participants' Self-Reliance

	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Participants who feel self-reliant	7.9%	50.9%	13.0%	25.5%	21.4%
Reasons for not considering self-reliant					
Limited capacity to afford the education costs	23.7%	32.7%	78.1%	70.6%	41.3%
Limited capacity to afford health care costs	20.5%	32.7%	79.2%	52.9%	39.0%
Limited capacity to afford food for the HH	61.1%	40.0%	89.6%	60.8%	62.0%
Limited capacity to afford safe& stable house	28.9%	23.2%	62.0%	35.3%	35.3%
Limited capacity to run IGA	33.7%	35.9%	68.2%	27.5%	41.8%
Limited capacity to access financial resources	20.5%	8.2%	51.0%	27.5%	24.7%
Limited access to stable job opportunities	37.9%	16.8%	54.7%	29.4%	35.7%
Limited strong social support networks	1.8%	0.5%	6.8%	3.9%	2.7%
Limited participation in decision-making	5.5%	1.4%	4.2%	0.0%	3.8%
Others	25.8%	31.8%	4.7%	7.8%	21.5%

Source: Author Field Data

When comparing current economic conditions to the past, a substantial proportion of refugees feel poorer than before, 37.1 % in Kigeme and 25.0 % in Nyabiheke, whereas hosts generally perceive improvement, with 67.7 % of Kigeme hosts and 72.5 % of Nyabiheke hosts feeling better off than before.

Table 27:Comparison of Current Economic Aspects and Poverty Level with Before

	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
I feel better off than before	21.8%	67.7%	41.1%	72.5%	41.3%
Nothing has changed	41.1%	28.6%	33.9%	7.8%	34.2%
I feel poorer than before	37.1%	3.6%	25.0%	19.6%	24.6%

Source: Author Field Data

"When I first arrived here, I thought it was temporary, that maybe things would change and we'd rebuild our lives. But it's been years now, and life keeps getting harder. Food prices have increased, support has decreased, and job opportunities are limited. Sometimes I feel poorer than when I first came." *FGD participant from the refugee community, Nyamagabe.*

"Compared to five or six years ago, I can say things are a bit better now. I joined a cooperative, and we started saving small amounts every month. I learned that even saving a few hundred francs can help during hard times. So, for me, I feel we are moving forward, slowly but surely." *FGD participant from the host community, Nyamagabe.*

The data on plans for the future and self-reliance reveal notable disparities, highlighting the structural and economic constraints. Only a small proportion of refugees have clear plans for their future, particularly regarding self-reliance, with just 21.6% of Kigeme camp residents and 35.4% of Nyabiheke camp residents reporting having such plans. In contrast, host communities demonstrate considerably higher levels of forward planning, with 68.2% in Kigeme and 49.0% in Nyabiheke indicating clear strategies for developing self-reliance.

Table 28: Plans for the Future for Self-Reliance

	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Participants having clear plans for the future	21.6%	68.2%	35.4%	49.0%	38.6%
Reasons for not having clear plans for the future					
Unstable living conditions/housing	31.1%	7.7%	40.1%	9.8%	25.7%
Limited access to enough working capital	58.2%	43.6%	75.5%	66.7%	58.8%
Limited knowledge and skills to run a business	31.8%	31.4%	52.1%	21.6%	35.7%
Limited access to certain national services	14.5%	2.3%	29.7%	5.9%	14.2%
Limited community connections and integration	2.4%	0.5%	4.7%	2.0%	2.4%
Others	34.7%	50.5%	17.7%	35.3%	35.0%

Source: Author Field Data

"We have dreams, but turning them into plans is another story. Some of us want to open shops or start tailoring, but there's no capital, no training, and no space. Without those things, your plans remain just ideas in your head." *FGD participant from the refugee community, Gatsibo.*
"Even when I have an idea for a small business, I can't move forward because I don't have the right documents to access loans or to register it. It's like having energy but no tools; you're ready to work, but the system doesn't allow you." *FGD participant from the refugee community, Nyamagabe.*

"In our community, we always think about the future. We plan for planting seasons, joining cooperatives, or saving for our children's education. Maybe that's why we feel more hopeful that we can make decisions and act on them." *FGD participant from the refugee community, Gatsibo.*

The barriers preventing refugees from formulating concrete plans are predominantly related to unstable living conditions, limited financial resources, and inadequate knowledge or skills to run a business. Unstable housing affects 31.1% of Kigeme refugees and 40.1% of Nyabiheke refugees, while a lack of sufficient working capital is reported by 58.2% in Kigeme and 75.5% in Nyabiheke. Additionally, over half of the Nyabiheke refugees (52.1%) cite limited knowledge and skills as a major hindrance to planning for the future. Other challenges include restricted access to national systems and services, which affect 14.5 % of Kigeme refugees and 29.7 % of Nyabiheke refugees, further limiting their ability to envision or implement self-reliance strategies.

The data on approaches and supports needed for self-reliance illustrate a strong commitment among both refugee and host communities to enhance their economic independence, though refugees in Kigeme and Nyabiheke camps face greater challenges and demonstrate slightly different priorities. Across camps, the majority of participants view developing income-generating activities as central to achieving self-reliance, with 58.2% of Kigeme refugees and 87.0% of Nyabiheke refugees identifying this as a key approach. Engagement in community-based savings and lending groups is also widely recognized, particularly among Nyabiheke refugees (82.3 %), reflecting the importance of collective financial strategies in resource-constrained settings.

"Joining savings groups has been life-changing for many of us. Even when you start with just 500 francs a week, it gives you a sense of control. We support each other, lend small amounts, and it helps you believe that you can build something." *FGD participant from the refugee community, Gatsibo*

"In our savings group, we mix refugees and hosts. It helps us learn from each other how to manage money, how to invest. But sometimes we struggle because the amounts we save are too small to make a big difference." *FGD participant from the refugee community, Nyamagabe.*

Working with financial institutions to improve working capital is a more commonly cited approach among refugees in Nyabiheke (68.2%) than in Kigeme (27.6%), indicating regional differences in access to or reliance on formal financial systems. Employment engagement and effective utilization of financial support are less prevalent strategies, although still significant among certain groups, particularly the Nyabiheke refugees, who report higher engagement in employment opportunities (64.1%) and utilization of financial support (27.1%).

The supports needed to advance self-reliance highlight both structural and capacity-related gaps. Refugees identify community agricultural programs as a priority, with 92.7% in Nyabiheke and 54.5% in Kigeme advocating for programs that strengthen collective agricultural productivity. Financial literacy capacity development is also emphasized, particularly among Nyabiheke refugees (74.0%), demonstrating a recognition that skills and knowledge are critical for sustainable economic activity. Market linkages and employment creation are seen as equally essential, while improvements in infrastructure, such as roads and networking facilities, are highlighted as necessary for expanding economic reach and market access.

Table 29: Approaches and Supports Needed to be Self-Reliant

	Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Participants' Approaches to Self-Reliance					
Developing income-generating activities	58.2%	69.5%	87.0%	80.4%	69.0%
Participating in community-based saving and lending groups	46.8%	65.5%	82.3%	88.2%	62.3%
Working with financial institutions to improve working capital	27.6%	46.4%	68.2%	52.9%	43.3%
Engaging in the available employment opportunities	36.8%	47.7%	64.1%	51.0%	46.7%
Effective utilization of the financial support received	23.4%	10.9%	27.1%	17.6%	20.6%
Others	25.5%	16.8%	3.1%	2.0%	16.7%
Support Needed to be Self-Reliant					
More market linkages	31.1%	46.4%	59.9%	52.9%	42.9%
More financial literacy capacity development	45.5%	53.6%	74.0%	58.8%	54.9%
Promote community agricultural programs	54.5%	65.0%	92.7%	88.2%	68.0%
Improve roads and other networking facilities	11.3%	19.1%	37.5%	29.4%	20.4%
Create more employment opportunities	55.0%	35.5%	65.1%	52.9%	52.1%
Facilitate access to national systems (subsidized services)	21.1%	13.6%	31.3%	25.5%	21.7%
Others	20.8%	15.5%	1.6%	3.9%	14.0%

Source: Author Field Data

"If we could get access to land or join farming cooperatives with local people, we would produce enough for ourselves and even sell the surplus. Right now, we depend on buying everything, which is too expensive." *FGD participant from the refugee community, Gatsibo.*
"We don't just need money, we need training. When someone gives you capital without showing you how to manage it, you end up with nothing. We want to learn about budgeting, saving, and running small businesses." *FGD participant from the refugee community, Nyamagabe.*

"Our biggest challenge is infrastructure. The roads are in poor condition, and transportation costs are high. Sometimes we grow vegetables or make crafts, but we can't sell them far away. Improving roads would really change our situation." *FGD participant from the host community, Nyamagabe.*

These findings demonstrate that while both refugees and host communities pursue self-reliance through multiple approaches, refugees face more pronounced barriers. This emphasizes the need for integrated interventions combining financial literacy, market access, community agricultural programs, employment creation, and infrastructure development to support sustainable self-reliance across both populations.

5. Conclusions

Conclusion 1: Strong social cohesion and integration between refugee and host communities provide a solid foundation for inclusive development.

- → The analysis revealed exceptionally high levels of social integration across both Kigeme and Nyabiheke, with nearly all participants reporting meaningful relationships across refugee host lines.
- → Cooperative participation, commercial partnerships, and shared savings groups reinforce these positive dynamics, creating social capital that can support joint development.
- → However, these community ties are not yet institutionalized through formal mechanisms that promote shared decision-making and equitable participation in local governance or development planning. Strengthening inclusive frameworks can ensure that this cohesion translates into durable development outcomes.

Conclusion 2: Persistent economic disparities and limited financial access constrain refugee self-reliance despite strong social integration.

- → Despite widespread social inclusion, refugee households remain economically disadvantaged compared to host communities. Only 7.9 % and 13.0 % in refugee camps consider themselves self-reliant, compared to 25–51 % among hosts.
- → The main challenges include limited income-generating opportunities, low access to capital, and reliance on humanitarian aid.
- → Economic interventions must therefore shift toward resilience and self-sufficiency, complementing humanitarian assistance with livelihood and market-based programs.

Conclusion 3: Refugees' limited access to financial capital, business skills, and national systems undermines their ability to plan and achieve self-reliance.

- → Only one in three refugees has clear plans for achieving self-reliance, largely due to insufficient capital, unstable housing, and lack of business or vocational skills.
- → Limited access to national systems and regulatory frameworks further inhibits participation in formal labor markets or business environments.
- → Addressing these institutional and capacity barriers is key to enabling refugees to transition from dependency to productive participation in local economies.

Conclusion 4: Refugees and hosts share strong aspirations for self-reliance, but structural and infrastructural barriers restrict the realization of this potential.

- → The majority of participants across both groups aspire to self-reliance, particularly through entrepreneurship, savings groups, and agricultural programs.
- → However, inadequate infrastructure, limited access to financial institutions, and weak market linkages continue to impede progress.
- → Investments in roads, markets, and financial systems, combined with skill-building and cooperative strengthening, are essential to unlock this shared potential.

Conclusion 5: Integrated, multi-sectoral approaches are required to sustain refugee–host inclusion and transition from coexistence to resilience.

- → Current livelihood and social programs by DUHAMIC-ADRI, UNHCR, and local authorities have improved cohesion but remain fragmented and under-resourced.
- → A holistic strategy that combines livelihood promotion, financial inclusion, climate-smart agriculture, and community infrastructure will be critical for sustainable outcomes.
- → Such integration aligns with the Government of Rwanda's refugee inclusion strategy and the Global Compact on Refugees, promoting shared prosperity and resilience.

6. Recommendations

Recommendations	Corresponding Conclusions	Responsible Lead Entity	Anticipated Timeframe
Recommendation 1: Strengthen refugee economic independence through targeted income-generating initiatives, entrepreneurship, vocational training, and cooperative-based enterprises. Facilitate access to working capital via microfinance, savings groups, and partnerships with financial institutions, while advocating for legal frameworks enabling refugee participation in formal labor markets.	Conclusions 2,3	DUHAMIC-ADRI (Lead), in collaboration with UNHCR, MINEMA, and financial institutions	12–18 months
Suggested Action 1.1: Develop and scale up business-skills training, vocational programs, and entrepreneurship coaching for refugee and host youth and women.		DUHAMIC-ADRI, UNHCR Livelihoods Unit	12 months
Suggested Action 1.2: Establish partnerships with microfinance institutions and cooperatives to expand access to affordable loans and working capital for small-scale enterprises.		DUHAMIC-ADRI, Financial Institutions	12–18 months
Suggested Action 1.3: Advocate for inclusive national labor policies that formally recognize refugees' right to work and run businesses within host communities.		MINEMA, UNHCR Policy Division	18 months
Recommendation 2: Expand agricultural productivity and climate resilience through community-based programs promoting climate-smart practices (soil conservation, irrigation, drought-tolerant crops, post-harvest management). Enhance access to inputs, extension services, and machinery for refugee and host farmers.	Conclusion 5	DUHAMIC-ADRI (Lead), in collaboration with MINAGRI, Local Authorities, and FAO	12 months
Suggested Action 2.1: Conduct joint refugee–host farmer training on CSA techniques and soil fertility management.		DUHAMIC-ADRI, MINAGRI Extension Department	9 months
Suggested Action 2.2: Facilitate access to agricultural inputs and shared equipment through cooperative-based lending schemes and community warehouses.		DUHAMIC-ADRI, Cooperatives	12 months
Suggested Action 2.3: Integrate CSA practices into ongoing community agricultural programs and ensure linkages with environmental protection and watershed management.		DUHAMIC-ADRI, Local Environmental Authorities	12 months
Recommendation 3: Improve food security and nutrition by diversifying diets, increasing protein and fruit intake, and ensuring consistent food access throughout the agricultural cycle. Integrate humanitarian food support with livelihood programs to reduce dependency.	Conclusion 2, 5	DUHAMIC-ADRI and UNHCR (Joint Lead), in partnership with WFP and local health authorities	6–12 months
Suggested Action 3.1: Implement nutrition awareness and dietary diversification programs targeting vulnerable refugee and host households.		DUHAMIC-ADRI, WFP	6 months
Suggested Action 3.2: Link food assistance programs with income-generating projects such as backyard gardening and poultry production.		DUHAMIC-ADRI, UNHCR	12 months
Suggested Action 3.3: Establish nutrition-sensitive monitoring systems to track food security outcomes across refugee and host populations.		DUHAMIC-ADRI, Local Health Departments	12 months

Recommendation 4: Expand market access and value-chain integration by linking farmers and cooperatives with buyers and formal markets. Support market information systems and transparent contractual frameworks that ensure equitable participation and fair pricing.	Conclusion 4, 5	Government of Rwanda (MINICOM), DUHAMIC-ADRI, and Private Sector Partners	12–24 months
Suggested Action 4.1: Facilitate creation of farmer-market linkages through trade fairs, cooperatives, and public-private partnerships.		MINICOM, DUHAMIC-ADRI	12 months
Suggested Action 4.2: Develop digital market information platforms to provide real-time data on prices, demand, and logistics.		DUHAMIC-ADRI, ICT Ministry	18 months
Suggested Action 4.3: Encourage contract farming models linking refugee and host farmers with private agribusinesses.		MINAGRI, PSF	18–24 months
Recommendation 5: Promote social cohesion and inclusive development by formalizing joint community initiatives, such as mixed cooperatives, agricultural projects, and financial groups. Ensure equitable representation of refugees and hosts in community decision-making and resource allocation.	Conclusion 1, 5	Local Authorities (Lead), with support from DUHAMIC-ADRI and UNHCR	6–12 months
Suggested Action 5.1: Establish inclusive governance structures within cooperatives, ensuring gender and refugee–host representation. |		DUHAMIC-ADRI, Cooperative Agency	6 months
Suggested Action 5.2: Support peacebuilding and social integration activities (dialogue forums, joint community projects).		Local Authorities, UNHCR	9 months
Suggested Action 5.3: Develop communication and feedback mechanisms that promote transparency in shared resource management.		DUHAMIC-ADRI, Local Leadership	12 months
Recommendation 6: Strengthen human capital for sustainable self-reliance through capacity-building in financial literacy, business management, and cooperative governance. Parallel investments in rural infrastructure (roads, markets, communication networks) should complement skills development to expand livelihood opportunities.	Conclusion 3, 4, 5	DUHAMIC-ADRI (Lead), MINEMA, MINAGRI, and Development Partners	12–24 months
Suggested Action 6.1: Implement targeted capacity-building in entrepreneurship, cooperative management, and financial literacy for refugees and hosts.		DUHAMIC-ADRI, MINEMA	12 months
Suggested Action 6.2: Upgrade rural infrastructure (roads, market sheds, storage facilities) in refugee-host areas to stimulate local trade.		MINAGRI, Local Authorities	18–24 months
Suggested Action 6.3: Integrate refugee self-reliance programs into national development and employment strategies.		MINEMA, UNHCR	24 months

Bibliography

- **DUHAMIC-ADRI & UNHCR (2024).** *Climate Smart Agriculture and Market Development Project Phase II – Project Proposal and Logical Framework.*
- **FAO (2023).** *Climate-Smart Agriculture Country Profile – Rwanda 2023.* Rome: Food and Agriculture Organization.
- **FAO. (2022).** *Gender, climate change and agriculture. Food and Agriculture Organization of the United Nations.*
- **ILO (2024).** *Decent Work Opportunities in Refugee-Hosting Communities in Rwanda.* Geneva: ILO.
- **MINAGRI (2023).** *Strategic Plan for Agriculture Transformation (PSTA 5), 2024–2029.* Kigali: Ministry of Agriculture and Animal Resources.
- **MINEMA & UNHCR. (2023).** Rwanda refugee response plan. Kigali**.**
- **MINEMA (2024).** *Livelihoods Support Framework in Refugee Hosting Districts.* Kigali: MINEMA.
- **National Institute of Statistics of Rwanda (NISR). (2018).** *EICV5: Rwanda Poverty Profile Report, 2016/17. Kigali: NISR.*
- **National Institute of Statistics of Rwanda (NISR). (2021).** *Labour Force Survey Annual Report, 2020. Kigali: NISR.*
- **NISR (2023).** *EICV7 Thematic Report on Agriculture and Rural Livelihoods.* Kigali: NISR.
- **REMA (2024).** *National Adaptation Plan Implementation Strategy.* Kigali: REMA.
- **UN Women (2023).** *Gender Analysis in Refugee and Host Communities: Empowerment through Livelihoods.* Kigali: UN Women.
- **UNHCR & MINEMA (2023).** *Joint Strategy on Economic Inclusion of Refugees and Host Communities in Rwanda (2021–2024).* Kigali: UNHCR Rwanda & MINEMA.
- **UNHCR (2024).** *Annual Livelihoods and Self-Reliance Report: Kigeme and Nyabiheke Camps.* Kigali: UNHCR.
- **UNHCR (2024).** *Mid-Year Operational Update: Refugee Livelihoods and Food Security.* Kigali: UNHCR.
- **UNHCR (2025).** *Final Evaluation Report of Phase I Climate Smart Agriculture and Market Development - Enhancing Livelihoods of Refugees and Their Host Communities in Rwanda (2022–2024).* Kigali: UNHCR.
- **UNHCR. (2023).** *Global trends: Forced displacement in 2022. UNHCR.*
- **UNHCR. (2024).** *Livelihoods and economic inclusion strategy. UNHCR.*
- **UNHCR. (2025).** *Rwanda operational update. UNHCR.*
- **United Nations. (2018).** *Global Compact on Refugees. UN General Assembly.*
- **WFP & UNHCR (2023).** *Food Security and Nutrition Study in Refugee Camps.* Kigali: WFP/UNHCR.
- **World Bank (2024).** *Building Resilience in Refugee-Hosting Areas in Rwanda: Lessons from Climate-Smart Agriculture Pilots. Washington, D.C.: World Bank Group.*
- **World Bank. (2022).** *Forcibly displaced: Toward a development approach supporting refugees and host communities. World Bank.*

Annexes

Annex 1: Terms of Reference

DUHAMIC-ADRI

MINEMA

UNHCR
United Nations High Commissioner for Refugees
Haut Commissariat des Nations Unies pour les réfugiés

TERMS OF REFERENCE (ToR) FOR HIRING A CONSULTANCY FIRM/INDIVIDUAL CONSULTANT TO CONDUCT A RAPID BASELINE SURVEY ON THE LIVELIHOODS SITUATION OF REFUGEES IN KIGEME AND NYABIHEKE CAMPS AND THEIR HOST COMMUNITIES UNDER THE CLIMATE-SMART AGRICULTURE PROJECT

1. Introduction:

Since July 2024, DUHAMIC-ADRI has partnered with the United Nations High Commissioner for Refugees (UNHCR) through a signed Partnership Framework Agreement (PFA) to implement Phase II of the Climate-Smart Agriculture and Market Development for Enhancing Livelihoods of Refugees and their Host Communities in Rwanda.

The Climate-Smart Agriculture initiative aims to improve food security and self-reliance for 2,036 beneficiaries (732 refugee and 1,304 host community households, including 1,091 women and 945 men). By 2026, this project will benefit over 7,851 family members through climate-smart agricultural practices and a market development approach.

Specifically, the partnership focuses on contributing to achieving the following outcomes of the project: Outcome 1: Increased Agricultural Productivity and Outcome 2: Increased Household Income.

2. Brief description of DUHAMIC-ADRI

DUHAMIC-ADRI is a Non-Governmental Organization legally granted by Rwandan law, recognized by the Ministerial Order No. 943 of July 12, 1985, as a Local Non-Government Organization and statutes were amended and accepted by the Ministerial Order No. 025/11 of 21th March 2005 and it has fulfilled all requirements for compliance with the new law number 04/2012 of 17/02/2012 governing the organization and the functioning of national non-governmental organization.

As local Non-Governmental Organization, DUHAMIC-ADRI has General Meeting Assembly, Board of Directors, Audit Committee, Conflict resolution committee and Executive Secretariat. The Executive Secretariat is formed by the personnel of organization in different administrative and technical units.

DUHAMIC-ADRI operates in Rwanda at countrywide scale with the vision of “a rural world responsible for its self-socio-economic development” and the mission of “supporting integrated development through the initiatives of the rural population in their struggle for self-development”.

3. Objectives of the assignment

The overall objective of this survey is to establish a starting point by collecting data on the current situation at an earlier stage of project implementation in Nyabicwamba and Mushishito marshlands and providing a reference point to measure and evaluate the impact of interventions and track progress over time.

Specific objectives will be to:

- ✓ Understand the Current Situation by providing a snapshot of the existing conditions or status within project beneficiaries in both Mushishito and Nyabicwamba marshland helping to identify the starting point

- ✓ Assessing the current income levels, and sources of livelihoods of the target population.Set benchmarks with the aim to measure impact whereby data collected will be compared against future data, allowing you to measure the project's impact and progress over time in Nyabicwamba and Mushishito project.

- ✓ Identify Key Issues by highlighting the main problems and provide the actionable recommendations for refining project implementation strategies.

4. Description, timeline and coverage of the assignment

4.1. Description of the assignment:

The hired consultant will have the following key tasks to ensure the survey is conducted effectively and efficiently:

4.1.1. Designing the Survey methodology:

- Developing a comprehensive baseline methodology, including sampling techniques and data collection tools.- Create or adapt questionnaires (in both English and Kinyarwanda version) and other data collection tools to fit the specific needs of the project

4.1.2. Data Collection:

-Lead or coordinate the data collection process, which may involve training and supervising a team of enumerators.
-Ensure data is collected accurately and consistently, adhering to ethical standards and protocols

4.1.3. Data Analysis:

-Analyze the collected data to identify baseline conditions and key indicators
-Use statistical tools and software to interpret the data and generate meaningful insights

4.14. Reporting:

-Prepare detailed reports summarizing the findings of the baseline survey.
-Provide recommendations based on the data to inform ongoing project implementation

4.1.5. Stakeholder Engagement:

-Communicate with project stakeholders to ensure the survey aligns with their needs and expectations.
-Present findings and recommendations to stakeholders in a clear and accessible manner

4.1.6. Monitoring and Evaluation:

-Develop templates and tools for ongoing monitoring and evaluation based on the baseline data.
-Suggest strategies for tracking changes and measuring the impact of the project overtime

4.2. Anticipated Baseline Start and End Dates

The assignment should be completed in 60 calendar days. (April 2025 to June 2025)

4.3. Coverage of the assignment:

The survey will be carried out to 2016 households including refugees and host community members identified in KIGEME and NYABIHEKE camps as per the table below.

District	Site	Refugee households	Households in host communities	Total households
NYAMAGABE	KIGEME refugee camp	500	1070	1,570
GATSIBO	NYABIHEKE refugee camp	222	224	446
Total		**722**	**1,294**	**2,016**

5. Budget

The budget for this activity is estimated to **be 13,000,000 Rwf and will be charged on budget line 2CSA 3.3 & 3.4** entitled Rapid Baseline assessment located in the 2025 approved budget.

6. Scope of Work

- ❖ The scope of work will be to:

  - Develop a detailed survey plan including methodology, sampling techniques, and data collection tools.
  - Use both qualitative and quantitative data collection using FGD, key Informants and surveys

- Conducting field data collection through surveys, focus group discussions, and other key informant interviews in the project operation area.
- Coordinate with key stakeholders to ensure alignment of survey objectives and processes.
- Train data collectors and ensure quality control during data collection and ensure the data protection measures.
- Analyze all collected data and prepare a comprehensive baseline report.
- Present findings to DUHAMIC-ADRI, project stakeholders, and provide recommendations for project implementation.

❖ Key areas of assessment:

✓ Food security
✓ Income and employment activities
✓ Agricultural practices, climate resilience and refugee's inclusion
✓ Access to financial services and Market
✓ Gender roles and inclusiveness in livelihoods

7. Expected outputs - Deliverables

7.1. **A detailed Inception report** outlines the survey's objectives, methodologies, tools, and a detailed work plan. The inception report should also include ethical considerations, literature review showing existing findings. The approved inception report should be submitted in **15 *calendar days after signing* contract**.

7.2. Data collection, analysis and Draft report. The draft report should be submitted **30 *calendar days after inception report and must include but not limited to the following:***

A. Data collection tool: Development and validation of questionnaires, interview guides, and other instruments used for data collection.

B. Field work Report: Documenting the data collection process, including any challenges faced and how they were addressed. This should be submitted in the 1st week of data collection.

C. Data Analysis: Comprehensive analysis of the collected data, and if possible, including statistical analysis and interpretation.

D. Draft Report: A preliminary report summarizing the findings, conclusions, and recommendations based on the data collected and analyzed in Nyabicwamba and Mushishito.

7.3. Final baseline survey report should be submitted in English and should cover:

- **Research findings** from qualitative and quantitative data collected during the survey incorporating feedback from stakeholders on the draft report, including an executive summary, methodology, findings, conclusions, and recommendations. **A baseline *raw data set/untreated data in Excel format and CSV format, as well as a "do file"*** of analyzed data, preferably in Stata.
- ***A validation meeting for presentation to UNHCR*** and partners staff on main findings of the report.
- **A set of actionable recommendations** that can be incorporated into activity design and implementation to ensure effective implementation of the project.
- The approved final survey report will be submitted with the final raw dataset and final cleaned dataset with documentation in **15 *calendar days after the draft report.***

8. Key Baseline Questions (indicative, to be streamlined during the inception phase)

The key baseline questions evolve around the 3 main outcomes that the project would like to achieve, i.e. (i) Increased household income, (ii) Reduced reliance on humanitarian food/cash assistance and (iii) Increased agricultural productivity.

(i) Questions related to "Increased household income" outcome

1/ What is the current socio-economic status of the selected participants in the project?

Below some specific sub-questions

1.1 What are the demographics of the participants? (Age, gender, disability status, country of origin, area of residence, marital status, education, status in the household, the number of members in the HHs, the number of dependents within the HH, and years of refugee status).

1.2 What is the current median income of the participants in the project?

(ii) Questions related to "Reduced reliance on humanitarian food/cash assistance"

2/ Are the participants in the project recipients of humanitarian assistance from UNHCR or other government support for livelihoods? (besides assistance from this project)

Below are some specific sub-questions

- Are the participants food secure? (the consulting company will propose food security measurement method to use based on the complexity of the method and budget availability)
- What is the employment background and status of the participants?
- Do participants own assets? If yes, which assets do they own? (A list of assets including productive assets option will be shared)
- Do participants have access to arable land? And if yes under which conditions?

(iii) Questions related to "Increased agricultural productivity"

3/ What is the current agriculture productivity of the two marshlands? (Specifically, for maize and beans crops, chili, and chia seeds crops, as well as other two crops to be selected in conjunction with the consulting company)

Below some specific sub-questions

1.1 Do participants currently have access to production kits such as seeds, fertilizers, etc.? If yes, who is providing the production kits? (E.g., themselves, NGOs, cooperatives?)

1.2 Are participants members of cooperatives? If yes, are the cooperatives self-sustainable? What is the organizational capacity of the cooperatives? And how do they serve the needs of the members?

1.3 Are participants knowledgeable/familiar with smart agriculture techniques?

1.4 Are participants knowledgeable/familiar with entrepreneurship/business training for agri-business?

1.5 Do participants have access to markets for their agricultural produce?

1.6 Do participants have access to value chains for their agricultural produce? If yes, are they integrated into the value chain?

Other questions

4/ What is the current co-existence situation between refugees and host communities in the two districts?

5/ Do sampled participants meet the selection criteria used to select them to participate in the project (selection criteria will be shared during the inception phase)

9. Qualification requirements of the consultancy firm

9.1. General qualifications

Demonstrated experience of at least 10 years in conducting computer assisted large scale household surveys in Rwanda (essential);
Have access to experienced interviewers and data collection supervisors (essential);
Fluency in written and spoken English and Kinyarwanda (essential);
Experience in conducting surveys on hard-to-reach populations and on refugees and host communities in particular (essential)
Prior experience of working with DUHAMIC-ADRI (essential).

9.2. Specific team qualifications

- **Team leader (essential):**

- ❑ Master's degree in Rural Development, Economics, Social Sciences, Nutrition, agriculture, or relevant discipline plus a minimum of 5 years of relevant professional experience or a post-graduate degree plus a minimum of 3 years of relevant professional experience in livelihoods-related areas, socio-economic research and evaluation studies.
- ❑ Minimum of 5 years of baseline/end-line, and evaluation experience in quantitative and qualitative analysis and synthesis of livelihoods interventions in development and humanitarian settings.
- ❑ Proven track record of leading (preferable) or participating as a senior team member in an evaluation commissioned by humanitarian agency or partner
- ❑ Proven experience in successfully leading baseline/end-line/evaluation survey teams and managing fieldwork in complex environments especially in Humanitarian context
- ❑ Technical expertise in refugee context, including relevant analytical frameworks and programming approaches and standards.
- ❑ Experience in generating useful and action-oriented recommendations to management and programming.
- ❑ Proven expertise in writing professional, clear and concise statistical reports in English

- **Team member – statistician/data analyst (essential)**
- ❖ A Bachelors degree in statistics (statistical analysis) and/or agriculture economics or Agri-business is required with at least 5 years of relevant experience in quantitative data analysis.
- ❖ Proven data analysis experience with Recoding
- ❖ Proven experience in complex survey design, development, testing, and implementation, as well as analysis.
- ❖ Extensive knowledge and experience with quantitative and qualitative survey design methodologies, sampling design procedures, sample size calculations, variance estimation, compound weights, and simulation studies.
- ❖ To ensure reliable data collection, experience with data quality assurance protocols and data collection in the domains of sampling and measurement error, non-response, and coverage bias is required.

10. About the proposal preparation

- ✓ **Technical proposal**

The applicant should prepare a technical proposal for carrying out the described survey, which should include the general approach to carrying out survey as well as specific ways of dealing with challenges anticipated for the proposed survey. The methodology, as well as data collection methods and analysis tools, will be outlined in the proposal. The proposal should also describe the approach to ensuring high quality of the collected data which is critical to the survey's success. The proposal should describe the firm's staffing and organizational structure, as well as detailed proposed activity timelines. The proposal will also include plans for piloting data generation tools and training enumerators. A summary of relevant qualifications and experience with at least three good completion certificates of similar surveys should be provided. Any other technical or administrative information should be provided to increase the winning likelihood.

✓ **Financial proposal**

The financial proposal should include a breakdown of the proposed budget by relevant major activities, as well as a narrative describing the rationale for the proposed activities, as well as the corresponding timeline and budget breakdown. It is critical that the financial proposal includes a detailed description of the proposed fieldwork model, including team size and composition, modes of transportation, and any assumptions upon which the budget is based. The budget should clearly identify unit costs and quantities for each activity.

11. Payment modalities

1. Submission of the approved inception report– 30%
2. Submission of the draft quantitative report including the research findings – 40%, assuming data quality and analysis is satisfactory and the whole targeted population was achieved (this payment is only made when DUHAMIC-ADRI is satisfied that the data is to the standard expected)
3. Validation meeting conducted and final report with all deliverables submitted – 30%

These payments will be made after presentation of electronic generated invoice (EBM) opened in the company name with TIN Number of DUHAMIC-ADRI "100179321".

12. Evaluation criteria

Applications will be assessed based on cost reasonableness (30%) and technical competence (70%).

Criteria	Criteria description	Weight/100
Consultant's experience and qualifications.	➢ Demonstrated experience of at least 10 years in conducting computer-assisted large-scale household surveys in Rwanda (essential); ➢ Have access to experienced interviewers and data collection supervisors (essential); ➢ Experience in conducting surveys on hard-to-reach populations and on refugees and host communities in particular (essential) ➢ Prior experience of working with DUHAMIC-ADRI (essential).	30
Proven experience in conducting similar work. **Specific team qualifications**	➢ Provide at least 3 similar references from the recognized multiple development agencies, including UN Agencies, INGOs, NGOs, and Governmental agencies. ➢ Professional expertise of the consultancy firm, knowledge and experience with similar projects, a list of clients served, and consulting assignments ➢ Specific team qualification: Relevant experience, qualifications, and position with the firm; Key Team members (especially statistician - Relevant experience, skills & competencies. Commitment of availability for the team leader and other proposed technical team members.	20
Relevance and quality of the technical proposal.	➢ Proposes a reasonable, detailed, clear work plan and methodology describing how the applicant will complete the tasks outlined in point 6 of this ToR (high-sounding innovations are highly welcome). ➢ Demonstrates good report writing and communication skills as well as the ability to compose clear, compelling written documents in English. ➢ Timelines proposed must be detailed and be based on the ToRs.	20

Cost-effectiveness of the financial proposal.	Reasonableness and allowability of the proposed cost relative to the above-mentioned qualification requirements and level of assignment. Consultancies are expected to submit a detailed financial proposal, breaking down costs for: • Personnel and team costs. • Research tools and resources. • Travel and logistics (if required). • Any other relevant expenses • All taxes included (to be indicated)	30
TOTAL		**100**

13. Submission of Bid

The offers must bear the official letterhead, clearly identifying the consultant. Interested consultant with relevant experiences and who meet the above criteria should submit their technical proposal and a financial proposal detailing the professional fees, reimbursable, and VAT, by 31st March 2025, at 3:00 pm at DUHAMIC-ADRI Head Office located in Niboye Sector, Kicukiro District.

1. Submission Requirements

➢ Bidders are required to submit their offers in one main sealed envelope. This main envelope must contain two separate sealed envelopes:

A. Technical Proposal

- Understanding of the assignment and approach to conducting the impact assessment.
- Detailed methodology and work plan.
- Proposed team composition and CVs of key personnel.

B. Financial Proposal:

- Detailed budget breakdown.

C. Experience:

- 3 Examples of similar work conducted in the last five years, including 3 certificates of completion and references.

D. In addition to the above-mentioned documents, the bidder shall submit:

- Copy of the incorporation certificate (for firms);
- VAT Registration Certificate
- Valid Tax clearance certificate from Rwanda Revenue Authority (for firms);
- Copy of clearance certificate from the Rwanda Social Security Board (RSSB) (for firms).
- Valid Good Standing Certificate issued by RDB

After registration of the bid sender at the DUHAMIC-ADRI reception office, the sender will be directed to a bid box for bid submission.

2. Opening of Proposals:

Technical Proposal Opening:

✓ The technical proposals (Envelope A) will be opened first in a public session on 31st March 2025 at DUHAMIC-ADRI OFFICE, 3:30 pm.

- ✓ During this session, only the technical proposals will be evaluated based on the criteria outlined in the bidding documents, and the financial proposal will remain sealed and returned in the bid box in front of every participant.

Financial Proposal Opening:

- ✓ Only bidders whose technical proposals meet the required standards and are shortlisted will be invited to the opening of the financial proposals (Envelope B).
- ✓ The financial proposals of the shortlisted bidders will be opened in a separate public session. The date, time, and location of the financial proposal opening will be communicated to the shortlisted bidders.
- ✓ Bidders not shortlisted in the technical evaluation **(less than 70% mark)** will not have their financial proposals opened, and their financial proposals will be returned unopened.

3. Confidentiality:

- All information provided by bidders will be treated as confidential. The procurement process will be conducted in a transparent manner to ensure fairness and competitiveness.

14. Safeguarding and Anti-Corruption clauses

The consultancy firm/ consultant will be responsible for observing and respecting the DUHAMIC-ADRI code of conduct, ethical, protection, and safeguarding policies, and will hire and treat with dignity, transparency, and equity all staff and team members at different levels, including business mentors and coaches.

DUHAMIC-ADRI treats all people with dignity and respect and takes a zero tolerance on harassment, harm, sexual abuse, exploitation, child labor, and human trafficking, and any other conduct that is discriminatory or disrespectful to others. DUHAMIC-ADRI doesn't tolerate any form of corruption.

During the execution of the contract, the consultancy firm/ consultant and its staff will be bound by DUHAMIC-ADRI Values and approved polices where among which are the following:

- DUHAMIC-ADRI Safeguarding and Child Protection Policy
- DUHAMIC-ADRI Prevention of Sexual Harassment, Exploitation and Abuse at Work policy.
- DUHAMIC-ADRI Gender and non-discrimination policy.

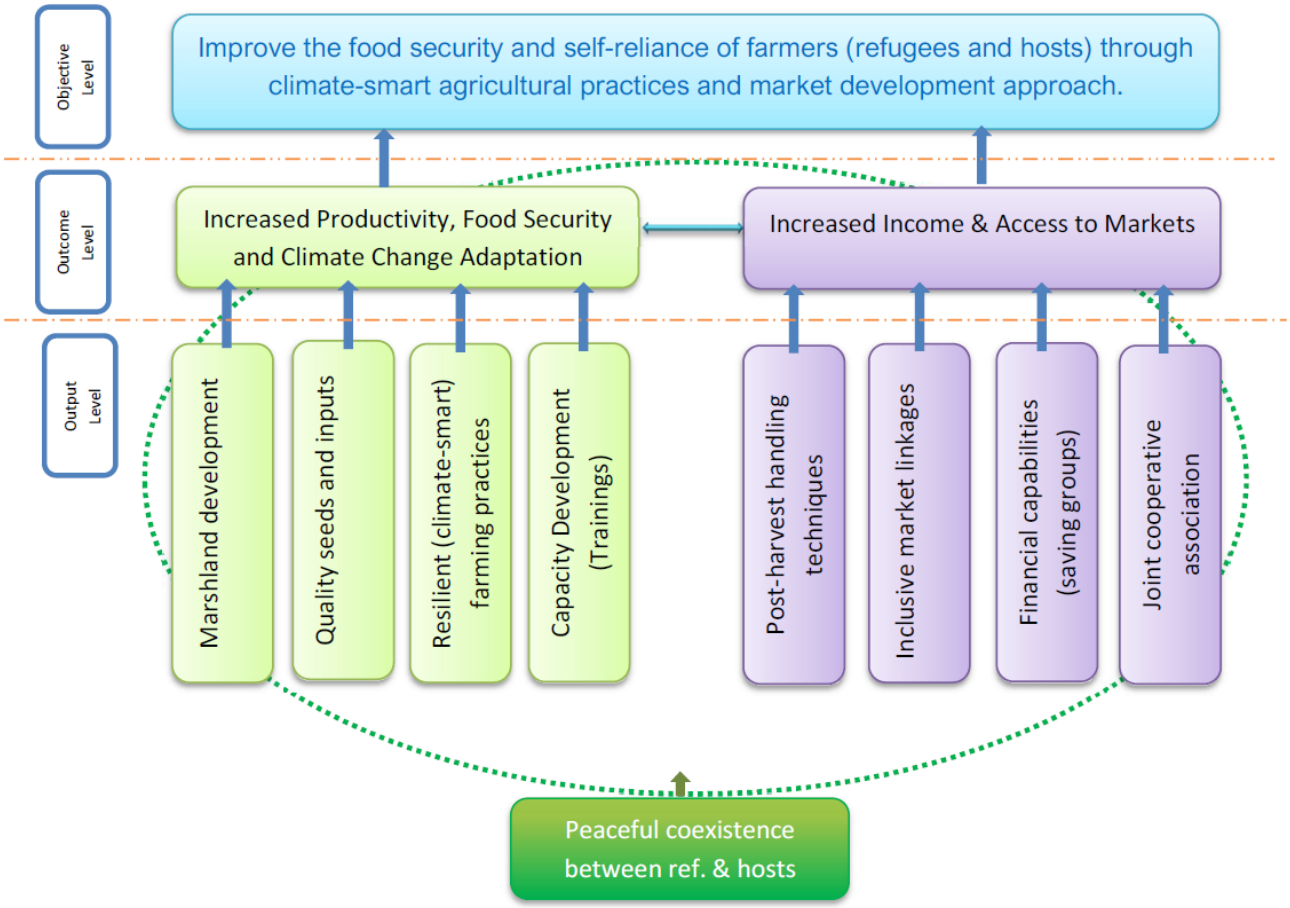
Moreover, the consultancy firm/ consultant has to ensure the regular payment of its staff to avoid complaints and the negative side effects for DUHAMIC-ADRI's image and its partners. DUHAMIC-ADRI will have rights and responsibilities to monitor and cross-check if the terms and conditions for the consultancy team members are followed and mutually respected.

At any time, DUHAMIC-ADRI has the right to check whether your organization complies with the safeguarding and protection procedures and take an appropriate action.

Done at Kigali on 14th March 2025

Prepared by	**Approved by**
RUTAYISIRE Richard Project Coordinator	HABIMANA Theogene M&E specialist

Annex 2: Theory of Change



Annex 3. List of Stakeholder Interviewed

Names	Designation
Noel UWAYEZU	MINEMA Social Affairs-Kigeme Camp
Odethe UWAMURERA	MINEMA Social Affairs-Nyabiheke Camp
Richard MUNGU AKUZWE	UNHCR Livelihoods Manager-Nyabiheke Camp
Faustin KALINA	UNHCR Livelihoods and Social Inclusion-Huye
Annet ISABANE DUSABE	DUHAMIC ADRI Agronomist
Richard Rutayisire	DUHAMIC ADRI Project Manager
Bosco MANIRAGABA	Refugee Committee President- Nyabiheke Camp
Edson Munyakarambi Sebutozi	Refugee Committee President-Kigeme Camp
Callixte Rwemalika	Village Leader-Nyabiheke
Marc NSHIMYUMUKIZA	Cell Leader-Kigeme

Annex 4. Evaluation methodology details and their application (survey instruments, sampling strategy, as applicable, list of those interviewed etc, etc).

Annex 5: Evaluation matrix

Area of Inquiry	Evaluation Questions	Indicators / How Judgment Will Be Formed	Data Sources	Data Analysis
I. Increased Household Income	1. What is the socio-economic status of project participants, and how does it vary across demographic groups?	Socio-economic categories: income levels age, gender, education, dependency ratios	HH surveys, FGDs, and KIIs	Descriptive statistics, cross-tabulations
	1.1 What are the demographic characteristics of participating households?	Age, gender, education, household size, dependency ratio,	Household surveys	Descriptive statistics
	1.2 What is the current median monthly and annual income of households, and main sources of income?	Median income per household; proportion of income by source	Surveys, KIIs	Descriptive and inferential; triangulation with KIIs
II. Reduced Reliance on Humanitarian Food/Cash Assistance	2. What proportion of households receive humanitarian assistance?	% Households receiving assistance; types of support and providers	HH Surveys, KIIs	Descriptive statistics;
	2.1 What is the current food security status and coping strategies?	Food Consumption Score (FCS), Household Dietary Diversity Score (HDDS), and coping	HH surveys, FGDs, and KIIs	Statistical scoring, thematic analysis
	2.2 What is the employment status/background of household members?	% Employed; type of employment; job stability; income from IGAs	HH surveys, FGDs, and KIIs	Cross-tabulations, descriptive
	2.3 What assets are owned by households?	% Owning productive and non-productive assets	Household surveys	Descriptive analysis, asset index creation
	2.4 What proportion of households have access to arable land, and what are usage patterns?	% With land access; average land size; tenure arrangements; land use patterns	HH surveys, FGDs, and KIIs	Descriptive statistics;
III. Increased Agricultural Productivity	3. What is the current level of agricultural productivity on marshlands?	Crop yields per hectare; cropping intensity	Agricultural assessments, KIIs	Descriptive and trend analysis
	3.1 What proportion of participants have access to production kits?	% Receiving seeds, fertilizers, tools	Household surveys, FGDs	Descriptive; qualitative triangulation
	3.2 How many participants are cooperative members, and how effective are cooperatives?	% Cooperative membership; functionality and sustainability indicators	HH surveys, FGDs, and KIIs	Cross-tabulations; thematic analysis
	3.3 What is the level of awareness and application of climate-smart practices?	% Applying water management, soil conservation, and CSA	HH surveys, FGDs, and KIIs	Descriptive analysis;
	3.4 What entrepreneurship or business training received and applied?	# Participants trained; % applying business skills	HH surveys, FGDs, and KIIs	Descriptive statistics; qualitative
	3.5 Do participants have regular access to markets, and what are the barriers?	% With market access, barriers such as pricing distance and transport	HH surveys, FGDs, and KIIs	Descriptive statistics;
	3.6 To what extent are participants integrated into value chains?	% Linked to contract farming or formal buyer arrangements	HH surveys, FGDs, and KIIs	Cross-tabulations;
IV. Social Cohesion	4. How do refugee and host community members perceive their social relationships and peaceful co-existence?	Levels of trust, collaboration, conflict, and joint participation in activities	HH surveys, FGDs, and KIIs	Thematic analysis;

Annex 6. Project Indicators' Table

	IMPACT LEVEL		Baseline
#	**Impact**	**Indicator**	
1	Improve self-reliance of participants (overall objective of the project)	Decrease in the extreme poverty rate (EPR) (rural context)	
	OUTCOME LEVEL	**Indicators**	**Baseline**
#	**Outcomes**	**Indicators**	
1	Increased household income (to allow participants to graduate out of extreme poverty, i.e., from $400 (baseline) to $600/year/household)	% Of targeted persons of concern (POC) who self-report increased income (at hh level) by 50% (from $400 to $600/year/household)	$321.83
2	Reduced reliance on humanitarian food/cash assistance	% Of targeted persons of concern (POC) who do not rely only on food/cash assistance at the end of project support (at the household level)	11.9%
3	Increased agricultural productivity	Land productivity (yield in kg/hectare) per crop	Maize: 1283.374Kg/Ha Beans: 534.34kg/Ha Soybeans: 302.66Kg/Ha Irish potatoes: 4200Kg/Ha
			Irish potatoes:
	OUTPUT LEVEL		**Baseline**
#	**Outputs**	**Indicators**	
1	Access to agricultural production enabled (crop/livestock/fisheries)	# and % of households with access to arable land or other productive natural resources	1,937 or 96.1% of 2,016
		# and % PoC receiving production kits or inputs for agriculture/ livestock/ fisheries activities	0.0%
2	Access to training and learning is enabled (for enhancing agricultural production, farm income, and self-employment in agriculture as a business)	# and % of PoC who have completed training related to agricultural production with/without a nationally recognized certificate	1,337 or 66.3% of 2,016
		# Of PoC provided with financial literacy training for livelihood purposes	548 or 27.2% of 2016
		# Of PoC provided with entrepreneurship/business training, value chain, and cooperative management	375 or 18.6% of 2,016
		# and % of targeted PoC who are members of a cooperative association, network, or social group	1,992 or 98.8% of 2016
3	Assessments and analyses undertaken	Market survey /value chain analysis conducted	0
		Socio-economic profile and livelihood capacities of PoC defined and monitored /baseline established	0
		Environmental Assessment of land use conducted	0
		Annual MFT participatory assessments conducted	0
		Final Project Evaluation	0

Annex 7. Household Food Security Status in the Past Four Weeks

Food Security in the past four weeks		Kigeme Camp	Kigeme Host	Nyabiheke Camp	Nyabiheke Host	Total
Did you worry that your HH would not have food?		95.3%	48.6%	97.9%	68.6%	82.1%
How often did this happen?	Often (more than ten times)	26.8%	8.2%	20.8%	15.7%	19.9%
	Rarely (once or twice)	16.8%	16.8%	7.8%	13.7%	14.6%
	Sometimes (three to ten times)	51.6%	23.6%	69.3%	39.2%	47.6%
Were you not able to eat the kinds of foods you preferred because of a lack of resources?		96.1%	61.8%	100.0%	88.2%	87.5%
How often did this happen?	Often (more than ten times)	29.7%	8.6%	21.4%	17.6%	21.6%
	Rarely (once or twice)	11.8%	20.5%	6.3%	15.7%	13.0%
	Sometimes (three to ten times)	54.5%	32.7%	72.4%	54.9%	52.9%
Did you have to eat a limited variety of foods due to a lack of resources?		94.7%	52.7%	95.8%	78.4%	83.0%
How often did this happen?	Often (more than ten times)	29.2%	9.5%	18.2%	19.6%	21.0%
	Rarely (once or twice)	12.1%	16.8%	7.3%	13.7%	12.3%
	Sometimes (three to ten times)	53.4%	26.4%	70.3%	45.1%	49.7%
Did eat some foods you really did not want because of a lack of resources?		96.6%	67.7%	99.0%	88.2%	89.1%
How often did this happen?	Often (more than ten times)	38.2%	14.1%	25.5%	25.5%	28.2%
	Rarely (once or twice)	11.1%	19.1%	5.2%	11.8%	11.9%
	Sometimes (three to ten times)	47.4%	34.5%	68.2%	51.0%	49.0%
Did you eat a smaller meal because of no food?		96.3%	49.1%	99.0%	74.5%	83.3%
How often did this happen?	Often (more than ten times)	27.4%	4.1%	19.8%	15.7%	18.9%
	Rarely (once or twice)	11.6%	13.2%	5.2%	11.8%	10.6%
	Sometimes (three to ten times)	57.4%	31.8%	74.0%	47.1%	53.9%
Did eat fewer meals because of not enough food?		95.0%	45.5%	96.9%	74.5%	81.3%
How often did this happen?	Often (more than ten times)	26.6%	4.5%	19.8%	19.6%	18.9%
	Rarely (once or twice)	10.3%	14.5%	6.3%	7.8%	10.3%
	Sometimes (three to ten times)	58.2%	26.4%	70.8%	47.1%	52.1%
Was there ever no food to eat of any kind in your household because of a lack of resources to get food		75.0%	31.4%	74.5%	39.2%	61.3%
How often did this happen?	Often (more than ten times)	13.9%	2.3%	13.0%	7.8%	10.3%
	Rarely (once or twice)	10.5%	12.3%	6.3%	2.0%	9.5%
	Sometimes (three to ten times)	50.5%	16.8%	55.2%	29.4%	41.5%
Did you sleep hungry because there was not food?		78.2%	30.9%	84.4%	60.8%	66.2%
How often did this happen?	Often (more than ten times)	12.4%	1.8%	12.5%	5.9%	9.3%
	Rarely (once or twice)	17.1%	13.2%	7.8%	13.7%	13.8%
	Sometimes (three to ten times)	48.7%	15.9%	64.1%	41.2%	43.2%
Did you go a whole day and night without eating anything because of not enough food?		62.9%	20.5%	67.2%	39.2%	51.4%
How often did this happen?	Often (more than ten times)	8.7%	0.9%	10.4%	3.9%	6.8%
	Rarely (once or twice)	11.8%	10.5%	5.7%	3.9%	9.6%
	Sometimes (three to ten times)	42.4%	9.1%	51.0%	31.4%	35.0%
Average number of days spent without any meal in the past four weeks		4.12	4.12	4.12	4.12	4.12