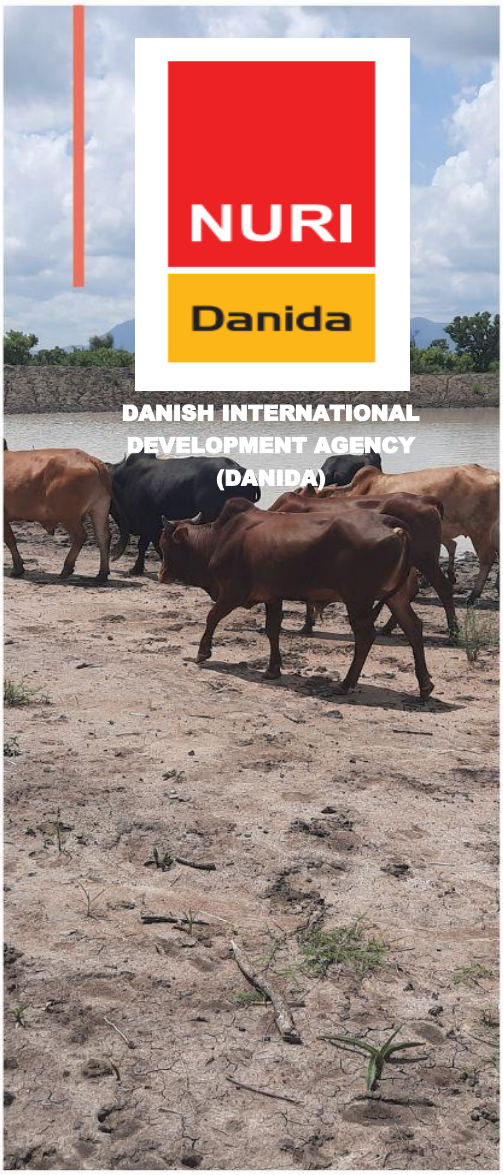

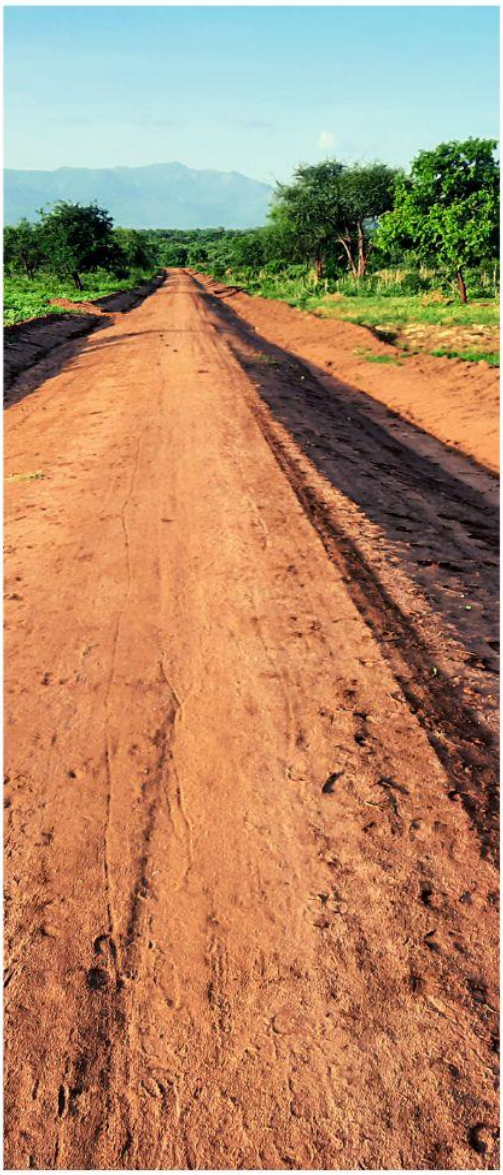

NURI/RI MONITORING SURVEY REPORT

REFERENCE NUMBER: NURI/2022.04

October 2022

ARDENT SERVICES INT LTD

ARDENT SERVICES INT. LTD

Plot 4, Ardent House, Gayaza High Avenue, P.O. Box 111680,
Gayaza-Wakiso-Uganda, Tin: 1013653797, Tel: +256773237772/706389541,
Email: ardentservicesint@gmail.com, Website: www.ardentservicesint.com

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ABBREVIATIONS/ ACRONYMS

CF	Coordination Function
CAR	Community Access Road
CSA	Climate Smart Agriculture
FGD	Focus Group Discussion
HH	Household
KII	Key Informant Interviews
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NURI	Northern Uganda Resilience Initiative
ODK	Open Data Kit
RI	Rural Infrastructure
SRSWOR	Simple Random Sampling Without Replacement
TOR	Terms of Reference
UPSIDE	Uganda Programme on Sustainable and Inclusive Development of the Economy
WRM	Water Resource Management

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EXECUTIVE SUMMARY

This Report presents the findings of the **Northern Uganda Resilience Initiative Rural Infrastructure (NURI – RI) Monitoring Survey** conducted by Ardent Services International Limited on behalf of NURI. The overall purpose of this survey was **to assess the extent of achievement of outcome and output performance indicators in 06 selected districts[1] of implementation in West Nile and Acholi sub region** (covering both the refugee settlements and the host communities).

The survey employed a descriptive cross-sectional study design using both qualitative and quantitative methods of data collection, and responses were solicited from a number of stakeholders (*community members who participated in the construction works for RI projects, the District Local Government (DLG) and Sub County staff)*. The survey reached a total of 1,280 respondents (i.e., 10 respondents more than the initial targeted number of 1270) through household interviews. In addition, a total of twelve (12) KIIs and twelve (12) FGDs were conducted. The report presents the findings of the survey with respect to the main indicators of the NURI RI projects. These are summarized in the matrix below;

Percentage (%) Increase in average annual agricultural cash income of participating households	• Sale of crops was the main agricultural source of income (reported by 34.8% of the respondents), followed by interests from VSLA savings (17.6%). • Public works projects were reported as the main source of non-agricultural related income (25.6% of the respondents). This was followed by casual work (15.9%). These percentages are to a greater extent credited to the deliberate indiscriminate involvement of both refugees and host communities in RI project activities. • Overall, the average income of households from agricultural-related sources was UGX 868,227 and the sale of crops yielded the highest average amount of income (UGX 631,807). • Overall, the majority of the respondents reported that their household income from agricultural related sources were higher than that of 2020. • Based on the respondents interviewed, the overall average of reported income from agricultural-related sources (UGX 868,227) was higher than that from non-agricultural sources (UGX 595,022) by **UGX 273,205.** There was a higher average income for refugees (UGX 314,397) than that for the host community members (UGX 148,349) for those that reported public work projects as their main source of income. Much as refugees and host communities are remunerated the same amount under NURI RI works, this may be an indication that due to limited access to land to engage in agriculture, refugees participate more in infrastructure/ public works activities (even those not necessarily under the project), leading to a contribution to their incomes.
Reduction in the number of participating households reporting periods of food insecurity	• Households consumed an average of 2 meals per day consistently in 2021 • The highest food shortage was experienced in June 2021 and July 2021, attributed to the lockdown due to the COVID-19 pandemic. • More than half of the households (57.2%) reported a reduction in food insecurity in 2021 and the percentage was lower for the refugees than the nationals. This could have been attributed to the reduction in food rations by World Food programme, in addition to the limited access by refugees to land

[1] Madi-Okollo, Nebbi, Obongi, Arua in West Nile, Kitgum and Lamwo in Acholi sub region

	for growing crops to improve food security. Respondents also reported on the long drought.
Average cumulative percentage of projects in the district investment plans completed	• For 888 approved projects in sampled districts investment plans, the completion rate was 93%. In the refugee settlement, 100% of the projects have been completed whereas in the host community, 67.1% were completed. The infrastructure projects that were still ongoing at the time of the survey were in Obongi, Kitgum, Nebbi and Lamwo districts.
Participation in rural infrastructure project construction work	• Community Access Roads construction covered an average of 27 days was opposed to the planned 25 days of work. This was mainly because of absenteeism of the group members, delays due to obstacles such as rocky locations, waiting of seedlings to be planted along the roads, land wrangles, and dropping out of some group members to go and plant their crops. • Most of the respondents (43.8%) used the cash-for-work received from construction works for buying household asset like bicycles, goats and poultry. It is worth noting that this is an indicator that the project had an impact on the ability of the beneficiaries to accumulate household assets • Overall, most of the respondents (88.4%) didn't experience challenges over the use of the money earned from the participation in construction projects. At household level more refugees (20.9%) experienced challenges than host community (10.2%). The main challenges experienced included delayed payment after work and conflict with the spouse over the use of money.
Households reporting satisfaction with completed infrastructure projects	• Satisfaction levels were high among beneficiaries for all the completed infrastructure (majority reported that they were satisfied with the completed community access road (80.3%), market projects (77.2%), spring protection (67.5%), food forest projects (76.8%), and water pond projects (65.1%)) • The area with lowest satisfaction levels was with maintenance of the community access roads (68.1%). • The percentage of respondents who were satisfied was lowest for spring protection projects as compared to other projects, and this was lower amongst the refugees (42.9%) compared to the host community (68.6%). The respondents mentioned that with the spring protection, it had a very low yield/ were dried up and some were no longer working.
Cumulative number of beneficiaries that report a reduction in time and/or cost in transporting goods to a market place	• Overall, majority (86.9%) of the respondents reported a reduction in time taken to transport goods to the market and access to other social services • There was also an increase in the percentage of respondents that reported taking an average of 2-3 hours from 58.9% before the construction of community access roads to 88.2% after • With regards to the cost, majority of the households (63.6%) reported a reduction in the cost related to transporting goods to the markets and access to other social services. • The CAR has boosted local businesses within their locations. For instance, beneficiaries are now able to transport their produce efficiently to markets in other locations. In addition, some of the locations saw an increase in brick laying, sand mining and clay mining activities, which were previously halted due to the inability of vehicles to reach some of the villages.

Community members living close to the completed infrastructure who are using it	• The use of the infrastructure was reported higher for community access roads (by 49.9%) of the respondents. • A higher percentage of sampled refugees (73.4%) reported that they were using the community access roads. However, a lower percentage of sampled refugees reported that they were using markets (1.6%), water ponds (2.3%) and spring protection (1.6%)[2]. With regards to the water ponds, it is worth noting that some of the livestock of the farmers were using these infrastructures.
Completed infrastructure projects constructed in accordance with agreed standards	• The overall completion rate for the planned infrastructure projects constructed in accordance with agreed standards was 80%. The highest completion rate was in the refugee settlements of Palabek Refugee Settlement (100%) in Lamwo district followed by Rhino Camp Settlement (91%) in Terego District. Completion according to agreed standards at district level was highest in Terego (97%), followed by Arua (96%). The completion rate according to agreed standards was lowest in Lamwo at 43%. The study established that most of the projects in Lamwo were still ongoing and/ or pending final inspection and commissioning.
Percentage of participants for infrastructure works who are youth	• The overall percentage of youth (18-28) participation targeted by the project is 60%. Review of documents showed progress being made towards this target (the average youth participation is 56.04%). Youth participation was higher in spring protection and Community Access Roads, and lowest in water ponds infrastructure activities.

In conclusion, this study noted a high completion rate for infrastructure projects, and inclusion in terms of community involvement. The findings showed that the utilization of the infrastructure projects translated into a number of benefits for the community. For instance, the overall reduction in time and cost to transport goods to the market and access to other social services. Furthermore, participation in these projects came out as the main off-farm livelihood activity, providing households with incomes, that were mainly used in accumulation of assets. The support to rural infrastructure was seen to positively contribute to livelihoods of the targeted groups, and to enhance these benefits, this report also provides areas of learning and recommendations that should be adopted to improve the results, which among others include;

1. The programme should continue to enhance capacity of user committees so as to strengthen operations and maintenance of RI projects, especially water ponds and protected springs.
2. There should be continued advocacy to District Local Governments (DLGs) to allocate funding for the operations and maintenance of community access roads constructed by the programme.
3. The project beneficiaries should be engaged further on implementation arrangements, roles and responsibilities in order to aid ownership and sustainability of the infrastructure projects.
4. Inclusive planning processes with land owners and/or local communities should be scaled further to minimize cases of land wrangles that continued to affect the implementation of infrastructure projects. There is still need for additional community dialogues with land owners
5. The period of community sensitisations prior to implementation of the project should be made longer to allow for participation of especially the youth. In addition, more than one channel should be used to pass on information of projects (through leaders, community leaders and radio).

[2] This percentage was affected by sample distribution (the low sample size of refugees involved in these project areas that were targeted); More beneficiaries of the CAR and Food Forest projects were included into the sample compared to any other RI project

6. There is need to have reliable supply mechanisms for seedlings and construction materials to minimize delays in completion of infrastructure projects and food forests projects.
7. There was higher percentage of refugees who did not have any source of income which affected their financial inclusion through VSLA. The programme should explore more ways of empowering the refugees economically.
8. Timely payments should be made to the groups that complete projects. This will limit frustrations and deserting of projects by community members.

1.0 INTRODUCTION

1.1 Introduction

This Report presents the findings of the **Northern Uganda Resilience Initiative Rural Infrastructure (NURI – RI) Monitoring Survey** conducted by Ardent Services International Limited on behalf of NURI.

1.2 Background of The Northern Uganda Resilience Initiative (NURI)

The Northern Uganda Resilience Initiative (NURI) is one of the three engagements under the "*Uganda Programme on Sustainable and Inclusive Development of the Economy*" (UPSIDE), which is one of the two thematic programmes of the Danish Country Programme for Uganda 2018-2022, for which a Memorandum of Understanding (MoU) has been signed between the Government of Denmark and the Government of Uganda. The programmes development objective is to enhance resilience and equitable economic development in Northern Uganda, including for refugees and host communities, by supporting 1) Climate Smart Agriculture (CSA), 2) Rural Infrastructure (RI), and 3) Water Resources Management (WRM).

NURI is designed to support Uganda's progressive refugee policy and the nexus between development and humanitarian action, and as such, refugees and host communities are among the target beneficiaries. Geographically, the programme covers 13 districts in West Nile and Acholi Sub Regions of Northern Uganda. These districts are; Agago, Kitgum and Lamwo in Acholi sub region and Arua, Madi-Okollo, Terego, Pakwach, Nebbi, Zombo, Moyo, Adjumani, Obongi and Koboko in West Nile sub region. Besides targeting nationals in these districts, NURI works with refugee settlements within some of the selected districts. The RI was implemented in a total of 9 settlements; 1 settlement in Terego and Madi- Okollo district, 1 settlement Imvepi in Terego district, 1 settlement in Obongi District, 1 settlement in Lamwo district, and 5 settlements in Adjumani district.

The implementation of NURI RI started in May 2019 and will run until the 31st of December 2022. Specifically, the implementation of the construction activities under RI is now in its third year with results trickling in from completed projects. Prior to this study, 59% of planned infrastructure projects were reported to have been completed and were in use, with an anticipated effect on outcomes and outputs of the programme.

1.3 Purpose of the Monitoring Survey

The overall purpose of the monitoring survey was **to assess the extent of achievement of outcome and output performance indicators of the NURI programme in selected districts of implementation in West Nile and Acholi sub region**. The assessment covered both host communities and refugees in the selected districts.

Table 1 *Objectives of the monitoring survey*

1) To review and understand the indicators of assessment as stipulated in the programmes M&E framework
2) To review the existing data collection tools and make contributions for improvement
3) To refine the survey design, approach and methodology
4) To identify and assemble the data collection team
5) To conduct the monitoring survey exercise in the selected districts

6) To write the monitoring survey report for the programme and make comparisons to the baseline situation.

1.4 Scope of the Monitoring Survey

The survey was conducted in 06 selected districts of NURI implementation in West Nile and Acholi sub region. The assessment was limited to activities implemented under **Output 2 of the programme (Rural Infrastructure) under 2020 and 2021 investment plans.** The selected districts were Madi-Okollo, Nebbi, Obongi, Arua in West Nile, Kitgum and Lamwo in Acholi sub region. Both refugees and host communities were targeted.

Data collection was restricted to community groups that participated in the construction work under RI. The target was 1,270 community members, who participated in the construction works for RI projects in the selected districts of survey. This monitoring survey managed to achieve the planned sample size with an extra 10 project beneficiaries; thus, a total of 1280 respondents were reached. This coverage was spread across the six selected districts.

The assessment areas were limited to the performance indicators specified in the M&E framework however attempt was made to capture some important general issues.

2.0 METHODOLOGY OF THE SURVEY

2.1 Design of the Survey

The survey used a descriptive cross-sectional study design using both qualitative and quantitative methods of data collection *i.e., Literature review, Key Informant Interviews (KIIs), Household Interviews, Focus Group Discussions (FGDs), and Observations among others.*

a) **Study Area:** The Monitoring Survey was specifically conducted in the six districts of Kitgum, Lamwo, Nebbi, Madi-Okollo, Obongi and Arua where the project is implemented. These districts for the monitoring survey activities are shown on the map below;

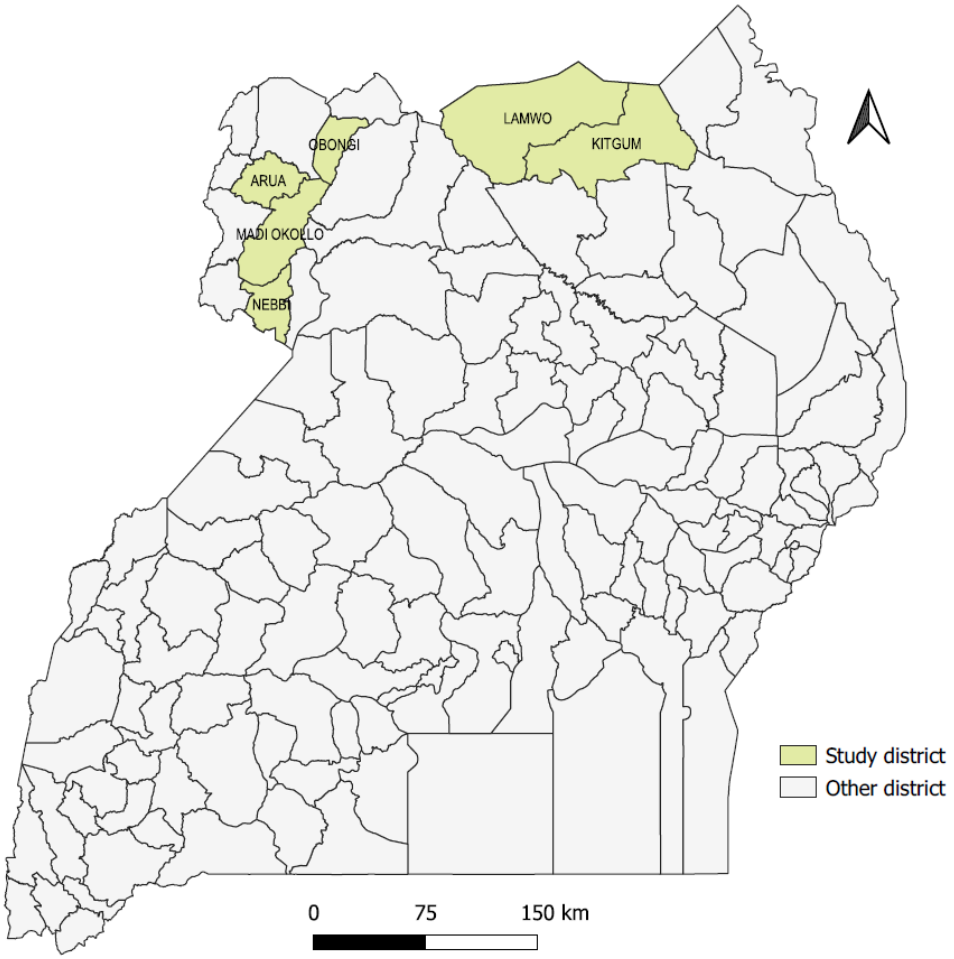


Figure 1 Map of Uganda showing the districts where the monitoring survey activities will be conducted

b) **Targeted Respondents:** The monitoring survey activities focused on soliciting responses from relevant key stakeholders that included but not limited to *community members who participated in the construction works for RI projects in the selected districts of survey, District Local Government (DLG) and Sub County staff in the project areas* among others. *Project beneficiaries who participated in RI projects;* Community access road, Markets, Food forests, Water ponds, and Protected spring *were targeted and included into the survey.*

2.2 Sampling Procedures

2.2.1 Sampling Method

The survey used both probabilistic and non-probabilistic methods of sampling to determine the sample of respondents to participate in the survey. Non-probabilistic methods i.e., purposive sampling was used in determining the key informants and participants of the Focus Group Discussions (FGDs). For probabilistic methods of sampling, stratified random Sampling was used to determine respondents for the household survey. The target respondents were beneficiaries from project RI projects; Community access road, Markets, Food forests, Water ponds, and Protected spring as selected from a sampling frame provided by NURI CF.

2.2.2 Sample size determination

The sample size for the monitoring survey was predetermined by NURI CF at 1,270 households, both Host community members and refugees from 6 project implementation districts of Northern Uganda and West Nile. This sample size was reached after a number of considerations – including statistical representativeness based upon the population of project beneficiaries reached in the target districts of project implementation activities and the available time & other resources. The proposed sample size of 1,270 households was appropriate and gave reliable and valid results to answer to the indicators of study.

Table 2: Sample size for the household survey as determined by the NURI CF

District	Category	Selected sample size for study Households (HHs)
Arua*	Host community	250
	Refugees	0
Obongi	Host community	150
	Refugees	90
Madi-Okollo (Rhino Camp)	Host community	0
	Refugees	90
Nebbi (WRM)	Host community	200
	Refugees	0
Kitgum	Host community	200
	Refugees	0
Lamwo	Host community	200
	Refugees	90
Total		**1,270**

**Parent district includes 50 host community households previously assigned to Terego*

2.2.3 Sample of Respondents

i) Stratified cluster random sampling for project beneficiaries

NURI CF provided lists of all project beneficiaries to be used for generating a sampling frame for the monitory survey. The lists of project beneficiaries provided by DRC were combined into a single master list to act as the sampling frame for the monitoring survey. All the variables in the master list were kept. This was helpful to support procedures for respondent selection through stratification, proportionate allocation and simple random sampling without replacement (SRSWOR).

The sample sizes at the district level were predetermined by NURI CF as shown in **Table 2** above. The district-based sample was allocated proportionately to the different project types available in a given district as indicated in **Table 3**. The main criteria adopted was to deliberately allocate 40% of the sample to CAR and Food Forest beneficiaries and the remaining 60% to the rest of the project types – while constraining a minimum allocation to a give project type at 10.0%. Necessary additional adjustments to the proportion were made for districts where certain project types had little or no coverage as reported in **Table 3**. These constraints were introduced into the sample allocation procedure in order to at least target a bare minimum

for accurate project type-based inferable size overall or at regional level.

At least 3 sub counties were selected per district based upon a probability proportional to their size (PPS) in in terms of the number of beneficiaries. Target respondents were then selected out of the selected sub counties without consideration for other administrative levels. The list of selected respondents is included under **Appendices A5**. It was however expected that some beneficiaries would have relocated or might not be available due to other reasons for face-to-face interview engagements; thus, for project type, additional 5 possible respondents were sampled and included in a replacement sample for contingency purposes. The replacement sample was maintained together with the main sample as they were drawn as one with the above procedure.

Table 3: Proportionate Sample allocation to cater for the different project types, and the reached population

Target						
District	**CAR**	**Food Forest**	**Market**	**Spring Protection**	**Water Pond**	**Total**
Arua	61	39	90	50	10	250
Kitgum	60	60	20		60	200
Lamwo	121	39	43	11	78	290
Madi Okollo	34	56				90
Nebbi	37	43	20	60	39	200
Obongi	184	41		15	7	247
Total	**497**	**278**	**173**	**136**	**194**	**1278**[3]
Achieved						
District	**CAR**	**Food Forest**	**Market**	**Spring Protection**	**Water Pond**	**Total**
Arua	62	41	94	46	11	254
Kitgum	49	57	21		46	173
Lamwo	120	64	42	20	82	328
Madi Okollo	33	57				90
Nebbi	96	92	20	42	33	283
Obongi	171	55	0	8	8	242
Total	**498**	**309**	**177**	**116**	**180**	**1280**
% Achieved						
District	**CAR**	**Food Forest**	**Market**	**Spring Protection**	**Water Pond**	**Total**
Arua	101.6%	105.1%	104.4%	92.0%	110.0%	101.6%
Kitgum	81.7%	95.0%	105.0%		76.7%	86.5%
Lamwo	99.2%	164.1%	97.7%	181.8%	105.1%	113.1%
Madi Okollo	97.0%	102.0%				100%
Nebbi	259.5%	214.0%	100.0%	70.0%	84.6%	141.5%
Obongi	92.9%	134.1%		53.3%	114.3%	98.0%
Total	**100.2%**	**111.2%**	**102.3%**	**85.3%**	**92.8%**	**100.2%**

NOTE: The survey targeted a total of 1270 beneficiaries and reached 1280 respondents from across the different project types as shown in Table 3 above. The overall sample size achievement was 100.2%

i. Purposive Sampling

For other data collection methods (FGD, KII), the survey used purposive sampling procedure. Once NURI provided the frame for all authorities that had been relevant during the implementation of activities in the respective districts and sub counties, we proposed a representative sample size for these qualitative interviews. A total of 12 Key Informant Interviews were conducted.

The study team conducted 2 FGDs per district in 2 selected parishes as shown in **Table 4** below. The cluster team leaders were in charge of arranging for these FGDs but were supported by the team leader fieldwork.

[3] An additional 8 respondents were added over the 1,270 to improve the sample of Spring protection beneficiaries in Obongi district

Depending upon the population dynamics, the teams were keen to include appropriate numbers of both males and female refugee and host. Each FGD had a maximum of 15 and a minimum of 8 participants.

Table 4: *Locations/parishes where the FGDs will be conducted*

District	Settlement	Sub county	Parish	# Of FGDs
Kitgum		Labongo Akwang	Lugwar	1
Kitgum		Mucwini	Pubech	1
Lamwo		Agoro	Lopulungi	1
Lamwo		Gem Settlement	Anaka	1
Obongi		Aliba	Ewafa	1
Obongi		Itula	Waka	1
Arua		Adumi	Omachi	1
Arua	Rhino Camp - Settlement	Omugo	Bura	1
Madi Okollo	Rhino Camp - Settlement	Rigbo	Aliba	1
Madi Okollo	Rhino Camp - Settlement	Rigbo	Ocea	1
Nebbi		Ndhew	Adolo	1
Nebbi		Nebbi	Koch	1
Total				**12**

Focus Group Discussions were carried out while following the Standard Operating Procedures set by the Ministry of Health to control the spread of the COVID-19. Among others, these included; maintaining social distancing, use of sanitizers and masks, etc.

2.3 Ethical Considerations

The following research ethical considerations were adopted from NURI and instilled to the enumerators.

3.0 FINDINGS ON DEMOGRAPHIC CHARACTERISTICS

3.1 Sex Disaggregated Data

Survey data was collected from a total of 1,278 respondents. The exclusion criteria for the survey data analysis dropped responses from 30 beneficiaries and thus 1,248 observations were entered into the analysis. Of the 1,248 respondents who were included into the analysis, 650 (52.1%) were males and 598 (47.9%) were females. The disaggregation according to refugee and nationals is presented in the table below;

Gender	Refugee	National	Overall
Male	13.9 (90)	86.2 (560)	650
Female	12.5 (75)	87.5(523)	598
Total	**13.2 (165)**	**86.8 (1083)**	**1248**

3.2 Age of Respondents

The overall average age of the 1,248 respondents interviewed was 35.6 years of age. The average age was higher for females (36.6 years) as compared to males (34.6 years). The average age of the (18-28 years) was 24 (SD=2.9). It is worth noting that the higher percentages of respondents were between the ages of 18 and 39 as shown in the table below.

Table 5 Age category by gender of respondents

Age category	Male % [n]	Female % [n]	Overall % [n]
18-28	37.5 [244]	28.6 [171]	33.3 [415]
29-39	32.6 [212]	34.8 [208]	33.7 [420]
40-50	19.1 [124]	25.8 [154]	22.3 [278]
50+	10.8 [70]	10.9 [65]	10.8 [135]

3.3 Level of Education

The highest level of education of respondents is upper-level primary (0.5-p.7) (41.5%). A higher percentage of males (44.2%) had this level of education as compared to females (38.6%). Only 2% of the respondents had university level of education and these were all males. A higher percentage of females (22.7%) than males (3.7%) had no formal education.

Table 6 Level of education disaggregated by gender

Level of education	Male % [n]	Female % [n]	Overall % [n]
No formal education	3.7 [24]	22.7 [136]	12.8 [160]
Attended lower-level primary education (P.1 – P.4)	10.5 [68]	26.4 [158]	18.1 [226]
Attended upper-level primary education (P.5 – P.7)	44.2 [287]	38.6 [231]	41.5 [518]
Attended O-level (S1-S4)	32.6 [212]	11.4 [68]	22.4 [280]
Attended A-level (S5-S6)	2.8 [18]	0.5 [3]	1.7 [21]
Tertiary Institution	6 [39]	0.3 [2]	3.3 [41]
University Education	0.3 [2]	0 [0]	0.2 [2]

The youth (18-28) have higher levels of education than the other age groups. Only 1.9% of the youth had no formal education at all.

Table 7 Level of education disaggregated by age groups

Level of education	18-28 % [n]	29-39 % [n]	40-50 % [n]	50+ % [n]
No formal education	1.9 [8]	11.2 [47]	23.7 [66]	28.9 [39]
Attended lower-level primary education (P.1 – P.4)	10.6 [44]	19.8 [83]	23 [64]	25.9 [35]
Attended upper-level primary education (P.5 – P.7)	49.9 [207]	40.5 [170]	35.3 [98]	31.9 [43]
Attended O-level (S1-S4)	33.3 [138]	21.2 [89]	13.3 [37]	11.9 [16]

Attended A-level (S5-S6)	1.5 [6]	2.9 [12]	1.1 [3]	0 [0]
Tertiary Institution	2.7 [11]	4.3 [18]	3.6 [10]	1.5 [2]
University Education	0.2 [1]	0.2 [1]	0 [0]	0 [0]

A higher percentage of refugees had no formal education (23.0%) as compared to nationals (11.3%).

Table 8 Level of education disaggregated by nationality

Nationality	No formal education	Attended lower level	Attended upper level	Attended O-level (S1-	Attended A-level (S5-	Tertiary Institution	University Education
Refugee	23.0% (38)	17.6% (29)	24.9% (41)	29.7% (49)	2.4% (4)	1.2% (2)	1.2% (2)
National	11.3% (122)	18.2% (197)	44.0% (477)	21.3% (231)	1.6% (17)	3.6% (39)	0% (0)

3.4 Main Occupation of Respondents

Majority (79.7%) of respondents were engaged in farming as their main occupation. A higher percentage of males (81.4%) were engaged in this occupation than females (77.9%).

Table 9 Main occupation of respondents and gender

Main Occupation of respondent	Male % [n]	Female % [n]	Overall % [n]
Farming	81.4 [529]	77.9 [466]	79.7 [995]
Trading	5.9 [38]	12.7 [76]	9.1 [114]
Housewife	0.2 [1]	3.5 [21]	1.8 [22]
Unemployed	3.2 [21]	0.8 [5]	2.1 [26]
Teacher	1.5 [10]	0.2 [1]	0.9 [11]
Other civil servant	0.6 [4]	0.2 [1]	0.4 [5]
Other salaried Job	0.6 [4]	0.2 [1]	0.4 [5]
Other[4]	6.6 [43]	4.5 [27]	5.6 [70]

Much as farming was the main overall source of income, the percentage of youth that mentioned it was lower (75.4%) compared to other age groups.

Table 10 Main occupation of respondents by age groups

Main Occupation of respondents	18-28 % [n]	29-39 % [n]	40-50 % [n]	50+ % [n]	Overall % [n]
Farming	74.5 [309]	77.6 [326]	85.6 [238]	90.4 [122]	79.7 [995]
Trading	9.2 [38]	10.7 [45]	8.3 [23]	5.9 [8]	9.1 [114]
Housewife	2.2 [9]	2.4 [10]	1.1 [3]	0 [0]	1.8 [22]
Unemployed	4.3 [18]	1.2 [5]	0.4 [1]	1.5 [2]	2.1 [26]
Teacher	0.7 [3]	1.2 [5]	1.1 [3]	0 [0]	0.9 [11]
Other civil servant	0.2 [1]	0.7 [3]	0.4 [1]	0 [0]	0.4 [5]
Other salaried Job	0.2 [1]	0.7 [3]	0.4 [1]	0 [0]	0.4 [5]
Other	8.7 [36]	5.5 [23]	2.9 [8]	2.2 [3]	5.6 [70]

3.5 Household Categories/Types

Majority of the respondents (82.9%) were from male adult headed households. This was followed by 15.5% who were from female headed households.

	Freq.	Percent
Male adult headed	1,035	82.9
Female adult headed	193	15.5
Female managed	6	0.5

[44] Masonry work (builders), alcohol brewing and mechanics

Male child headed	7	0.6
Female Child Headed	1	0.1
Other	6	0.5
Total	**1,248**	**100.0**

3.6 Household Size

Overall, the average household size of respondents was 7. The average household size was the same for both male headed and female headed households. This disaggregation is shown in the table below.

Table 11 Average household size of respondents

variable	Category	Average
Overall	**Males**	
	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	1
	Total males	4
	Females	
	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	1
	Total females	3
	Total household members	**7**
By household types		
	Males	
Male adult headed	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	1
	Total males	4
Female adult headed	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	0
	Total males	3
Other household category	Children (0-17 years)	1
	Adults (18 – 28 years)	1
	Adults (29+)	0
	Total males	3
Male adult headed	**Females**	
	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	1
	Total females	3
Female adult headed	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	1
	Total females	4
Other household category	Children (0-17 years)	2
	Adults (18 – 28 years)	1
	Adults (29+)	1
	Total members	
Male adult headed		7
Female adult headed		7
Other household category		6

4.0 FINDINGS ON INDICATORS OF THE STUDY

4.1 Immediate Objective 1: To enhance resilience and equitable economic development in supported areas of Northern Uganda, including for refugees and host communities

4.1.1 Percentage (%) Increase in average annual agricultural cash income of participating households

a) Main sources of annual agricultural cash income

Overall, a higher percentage (34.8%) of the respondents were engaged in sale of crop produce as a main source of agricultural related income. This was followed by those obtaining incomes from interests from VSLA savings (17.6%). It is worth noting that the percentage of respondents whose main source of agriculture-related income was from sale of crop produce and from interests from VSLA was higher for the host community households (82.2% and 57.0%) as compared to the refugee households (57.0% and 21.8%). The former is attributed to the challenges faced by refugees in access to land for agricultural purposes. As compared to the host community (5.2%), there was also a higher percentage of refugees, who did not have any source of income (26.7%). This also affected their participation in VSLA.

Table 12 Agricultural related income sources by household type and household nature

Agricultural-related income source	Overall	Household nature	
		Refugee	Host Community
Sale of crop produce (including cuttings and vines)	34.8	57.0	82.2
Sale of cuttings and vines, tree seedlings	1.2	1.8	2.9
Sale of vegetables	15.6	24.2	36.8
Sale of animals (cattle, goats, pigs, sheep)	9.8	9.7	24.0
Sale of poultry (chicken, ducks, turkey)	13.3	12.7	32.8
Sale of or hire of land (asset)	1.3	0.0	3.3
Hire of oxen and Ox-plough	2.0	0.0	5.2
Interest from VSLA savings	17.6	21.8	42.5
Fishing	1.0	1.8	2.2
Other[5]	3.5	26.7	5.2

Each income source was assessed independently (multiple responses)

Interests from VSLA was mentioned to a higher percentage by the females (45.3%) as compared to males (34.6%), and also female headed households (40.9%) as compared to male headed households (39.6%). Female headed households (10.9%) and other types (child headed and female managed) (10%) had a higher percentage reporting that they did not have any sources of agricultural related income.

Table 13 Agricultural related income sources by gender and type of household

Agricultural-related income sources	Gender		Types of Households		
	Male	Female	Male adult headed	Female adult headed	Other[6]
Sale of crop produce (including cuttings and vines)	79.1	78.6	79.7	75.1	70.0
Sale of cuttings and vines, tree seedlings	2.9	2.5	3.0	1.0	5.0
Sale of vegetables	28.2	42.8	35.5	34.2	30.0
Sale of animals (cattle, goats, pigs, sheep)	24.5	19.6	23.4	17.6	0.0
Sale of poultry (chicken, ducks, turkey)	29.4	30.9	31.1	26.4	15.0
Sale of or hire of land (asset)	2.9	2.8	3.1	1.6	5.0
Hire of oxen and Ox-plough	4.9	4.0	5.0	2.1	0.0
Interest from VSLA savings	34.6	45.3	39.6	40.9	35.0
Fishing	3.2	1.0	1.8	2.6	15.0
Other	8.9	7.0	7.4	10.9	10.0

Each income source was assessed independently (multiple responses)

5 These were mostly respondents that did not have any agricultural related income

6These are composed of Female managed. Male child headed and Female Child Headed

The data on the participation in different income sources is relatively consistent across age groups as shown in the table below;

Table 14 Agricultural related income sources by age categories

Agricultural-related income sources	Age			
	18-28	29-39	40-50	50+
Sale of crop produce (including cuttings and vines)	78.6	76.9	80.9	81.5
Sale of cuttings and vines, tree seedlings	2.4	2.9	2.9	3.0
Sale of vegetables	30.6	37.1	38.9	35.6
Sale of animals (cattle, goats, pigs, sheep)	16.9	21.9	25.5	31.9
Sale of poultry (chicken, ducks, turkey)	25.8	29.8	36.3	31.9
Sale of or hire of land (asset)	3.9	1.9	3.2	2.2
Hire of oxen and Ox-plough	1.9	5.5	6.8	4.4
Interest from VSLA savings	33.5	43.6	46.0	34.1
Fishing	3.6	1.9	1.1	0.7
Other	8.0	10.5	5.8	5.2

Each income source was assessed independently (multiple responses)

b) Main sources of annual Non-agricultural cash income

Overall, public works projects were reported as the main source of non-agricultural related income (25.6% of the respondents). This was followed by casual work (15.9). These percentages are to a greater extent credited to the deliberate involvement of both refugees and host communities in RI project activities. It was also noted that more refugee households (36.4%) were engaged in casual work than host community (27.2%). Similarly, more refugee (23.0%) were involved in other income sources (entertainment) than their host counterparts (11.0%). As shown in the table below, there was no involvement of refugees in activities like Sand, murram and stone quarrying. This could be linked to dynamics around land ownership by host communities in which these resources are extracted from. Land possession dynamic could also clarify more refugees' involvement in activities like casual work, entertainment, sale of firewood, and receiving of gifts than the host community.

Table 15 Non-agricultural related income sources by household type and household nature

Non-agricultural related income sources	Overall	Household nature	
		Refugee Household	Host
Public works projects	25.6	38.2	47.2
Casual work	15.9	36.4	27.2
Petty trade (Awaro, abicamo kani, komase)	10.9	3.6	22.1
Brewing local alcohol	10.3	4.9	20.6
Other	7.0	23.0	11.0
Brick laying	6.9	3.0	13.9
Charcoal burning	5.9	4.2	11.5
Boda-boda riding	4.7	3.6	9.1
Businesses -kiosks, shops, drug shops, salons	4.2	5.5	7.9
Sale of firewood	3.4	7.3	5.9
Formal job (security guard, teaching, LC leadership)	2.8	2.4	5.5
Sand, murram and stone quarrying	1.2	0.0	2.5
Gifts (bride-price, friends, relatives)	1.2	5.5	1.7

Each income source was assessed independently (multiple responses)

Based on gender, a similar participation of females (46.5%) and males (45.5%) in public works projects was observed[7], and on the contrary more male adult headed households (47.1%) than female adult headed (39.4%). Besides, more males and male adult headed households (30.5% and 29.1%) than females and female adult headed households (26.3% and 25.4%) were engaged in casual work. Also, other households (child headed and female managed) were mainly involved in public works projects (55.0%) and casual

[7]This is consistent with the 50male:50female recommended involvement in the project design

work (25.0%). Generally, these results suggest that the initiative by the Northern Uganda Resilience Initiative (NURI) to support the development of rural infrastructure projects like water ponds, food forests, spring protection, markets and community access roads was a great source of income for the community members who were engaged in Cash for Work.

Table 16: Non-agricultural related income sources by gender and type of household

Non-agricultural related income sources	Gender		Types of Households		
	Male	Female	Male adult headed	Female adult headed	Other
Participation in public works projects	45.5	46.5	47.1	39.4	55.0
Casual work	30.5	26.3	29.1	25.4	25.0
Brick laying	17.5	6.9	13.7	4.7	20.0
Petty trade (Awaro, abicamo kani, komase)	13.2	26.6	20.0	17.6	20.0
Boda-boda riding	13.1	3.3	9.7	0.5	20.0
Other	12.2	13.0	12.0	15.5	15.0
Charcoal burning	10.6	10.4	11.2	6.7	10.0
Brewing local alcohol	8.0	29.9	16.5	28.5	25.0
Businesses -kiosks, shops, drug shops, salons	7.9	7.2	7.7	6.2	10.0
Formal job (security guard, teaching, LC leadership)	5.9	4.2	5.9	1.0	0.0
Sale of firewood	3.7	8.7	6.1	6.2	5.0
Gifts (bride-price, friends, relatives)	2.5	1.8	1.6	5.7	0.0
Sand, marram and stone quarrying	1.9	2.5	2.4	1.0	0.0

Each income source was assessed independently (multiple responses)

A higher percentage of the youth (50.1%) mentioned that public works projects was their main source of non-agricultural farm income, as compared to other age categories. This can be connected to the rural infrastructure projects under the NURI interventions which purposely targeted about 60% youth involvement during formation of groups that undertook these public works projects. Largely, moderate participation in different income sources was consistent across the age groups as showed in the table below;

Table 17: Non-agricultural related income sources by age categories

Non-agricultural related income sources	Age			
	18-28	29-39	40-50	50+
Public works projects	50.1	41.9	44.6	48.9
Casual work	29.6	28.3	28.8	24.4
Petty trade (Awaro, abicamo kani, komase)	18.6	20.7	21.2	16.3
Brick laying	13.7	14.1	10.8	6.7
Brewing local alcohol	13.3	21.0	21.6	20.7
Other	13.3	13.3	8.6	16.3
Boda-boda riding	11.3	9.3	5.0	3.7
Businesses -kiosks, shops, drug shops, salons	9.2	8.8	6.5	0.7
Charcoal burning	7.7	11.0	13.3	11.9
Sale of firewood	4.6	6.2	7.6	7.4
Formal job (security guard, teaching, LC leadership)	4.3	5.5	5.4	5.2
Gifts (bride-price, friends, relatives)	2.9	1.4	1.8	3.0
Sand, murram and stone quarrying	2.4	1.2	2.9	3.0

Each income source was assessed independently (multiple responses)

c) Average amount (UGX) earned from agricultural-related household income sources in 2021

Overall, the average income of households from agricultural-related sources was **UGX 868,227**. The average income for males (UGX 500,000) was higher than that of the females (UGX 400,000), and for male adult headed households (UGX 500,000) than female adult headed households (UGX 280,000). Refugee households had less than half (UGX 130,000) of the overall average income of the host communities (UGX 500,000). This is largely because the means of production like land (that is needed to engage in crop growing) is mainly owned by the host communities.

Table 18 Income from agricultural related sources by nature of household and nationality

Agriculture Related income source	Amount of money in UGX				
	HH head			Refugee status	
	Male adult headed	Female adult headed	other	Refugee	Host
Overall	500,000	280,000	300,000	130,000	500,000

Sale of crops, which was also the main source of income yielded the highest average amount (UGX 631,807). This was followed by the sale of/ hire of land (assets) (UGX 572,917)[8].

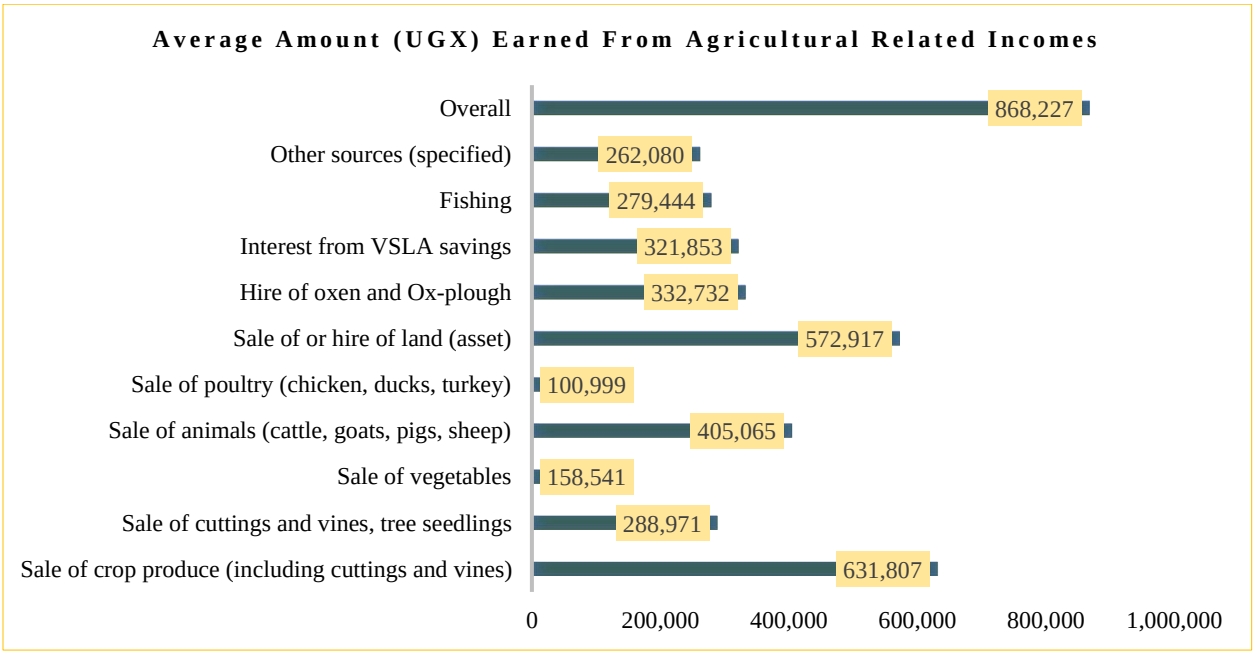


Figure 2 Average amount (UGX) earned from agricultural related income sources

It is worth noting that the lowest income was earned from sale of poultry (UGX 100.999). According to the respondents, poultry was affected by diseases.

c) Comparison of total annual agricultural cash incomes between 2021 and 2020

Overall, the majority (50.3%) of the respondents reported that their household income from agricultural related sources were higher than that of 2020. The data was consistent across the different disaggregation as shown below;

[8] Refugee participation in this income source is zero, as they do not have ownership of land.

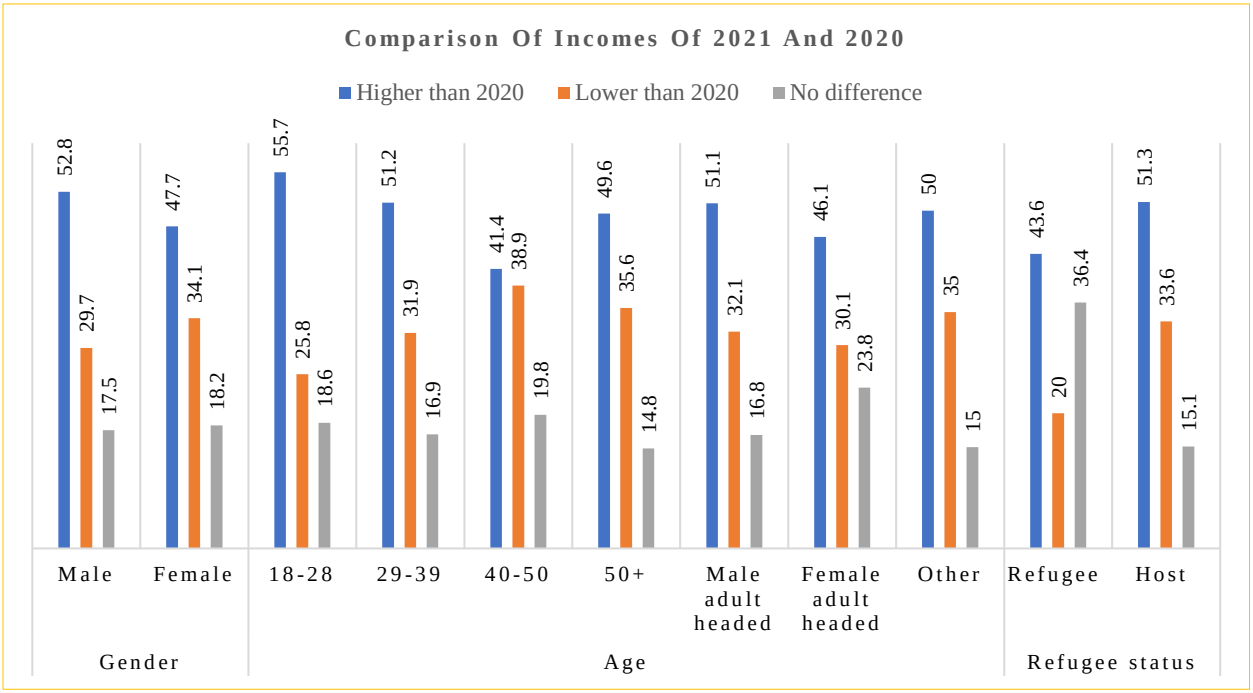


Figure 3 Comparison of incomes from agricultural related sources between 2021 and 2020

A slightly higher percentage (31.8%) reported that their income was lower than that of 2020, and 17.9% reported that their incomes did not change. The respondents that reported lower incomes in 2021 indicated the cause as bad weather conditions (such as prolonged droughts and flooding in some places like Lamwo)[9], as well as, the frequent changes in prices of agricultural inputs and outputs.

According to the data collected, the most reliable source of income was from sale of crops. This was most reliable across all categorizations (gender, age group, household type and household nationality). The second most reliable income source was interest from VSLA (14.7%) and the sale of vegetables (11.8%).

Table 19 Most reliable income sources by gender and age group

	Gender		Age Group			
Agriculture Related income source	Male	Female	18-28	29-39	40-50	50+
Sale of crop produce (including cuttings and vines)	54.3	50.3	56.9	48.1	51.8	53.3
Sale of cuttings and vines, tree seedlings	0.5	0.5	0.2	0.7	0.4	0.7
Sale of vegetables	8.9	14.9	10.8	12.9	12.2	10.4
Sale of animals (cattle, goats, pigs, sheep)	7.9	4.9	4.8	6.7	6.1	11.1
Sale of poultry (chicken, ducks, turkey)	5.2	4.5	6.0	3.6	4.7	5.9
Sale of or hire of land (asset)	0.3	0.0	0.2	0.2	0.0	0.0
Hire of oxen and Ox-plough	0.5	0.5	0.0	0.2	1.1	1.5
Interest from VSLA savings	12.2	17.6	11.6	16.9	18.0	11.1
Fishing	2.6	0.7	2.7	1.7	0.7	0.7

Table 20 Most reliable income source by household type and nationality

	Household Type			Nationality		
Agriculture Related income source	Male adult headed	Female adult headed	Other	Refugee	Host	Overall
Sale of crop produce (including cuttings and vines)	53.4	47.7	45.0	35.8	54.9	52.4
Sale of cuttings and vines, tree seedlings	0.5	0.5	0.0	0.6	0.5	0.5

[9] Agricultural activities, especially crop farming usually is usually affected by weather and climatic patterns

Sale of vegetables	11.6	13.0	10.0	13.3	11.5	11.8
Sale of animals (cattle, goats, pigs, sheep)	6.7	5.7	0.0	4.2	6.7	6.4
Sale of poultry (chicken, ducks, turkey)	5.0	4.2	5.0	3.0	5.2	4.9
Sale of or hire of land (asset)	0.1	0.0	5.0	0.0	0.2	0.2
Hire of oxen and Ox-plough	0.5	0.5	0.0	0.0	0.6	0.5
Interest from VSLA savings	14.5	16.1	15.0	17.0	14.4	14.7
Fishing	1.4	2.1	15.0	1.8	1.7	1.7

Sale of crops was reported as the most reliable due to the availability of ready market, and the ease of acquiring the needed capital due to the involvement of community members in rural infrastructure projects which offered Cash for Work. With sale of vegetables, respondents mentioned that there were good and stable market prices and higher yields. VSLA as an income source was reported to be an inclusive and available channel through which respondents could even borrow money to support other livelihood activities.

Sale of / hire of land (asset), hire of oxen and Ox-plough was less reliable as only a small percentage of respondents owned these assets. None of the refugees mentioned these as reliable sources.

d) Average amount (UGX) earned from Non-agricultural related household income sources in 2021

Overall, the average income of households from non-agricultural-related sources was **UGX 595,022**. The highest average earning was from formal jobs (UGX 949,365), followed by boda-boda riding (UGX 874,105) and businesses (UGX 601,255). It is important to note that the results provided an exhaustive list of earnings from non-agricultural sources since none of the respondents earned income from any other source.

Table 21 Average amount (UGX) earned from non-agricultural related sources in 2021

Non-agriculture Related Income Source	Average Amount of money in UGX
Formal job (security guard, teaching, LC leadership)	UGX 949,365
Boda-boda riding	UGX 874,105
Businesses -kiosks, shops, drug shops, salons	UGX 601,255
Brick laying	UGX 583,367
Petty trade (Awaro, abicamo kani, komase)	UGX 371,259
Gifts (bride-price, friends, relatives)	UGX 310,926
Brewing local alcohol	UGX 269,626
Casual work	UGX 231,648
Sand, murram and stone quarrying	UGX 230,593
Charcoal burning	UGX 210,136
Participation in public works projects	UGX 166,574
Sale of firewood	UGX 147,368
Overall	**UGX 595,022**

Each income source was assessed independently (multiple responses)

Comparatively, the overall average income from agricultural-related sources (UGX 868,227) was higher than non-agricultural sources (UGX 595,022) by **UGX 273,205.**

There was a higher average income for refugees (UGX 314,397) than host communities (UGX 148,349) for those that reported public work projects as their main source of income. Much as refugees and host community members are remunerated the same amount under NURI RI works, this maybe an indication that due to limited access to land to engage in agriculture, refugees participate more in infrastructure/ public works activities (even those not necessarily under the project), leading to a considerably higher contribution to their incomes.

Table 22 Average income from non-agricultural sources by nationality

Income Source	Refugee	Host	Overall
Participation in public works projects	UGX 314,397	UGX 148,349	UGX 166,574
Boda-boda riding	UGX 144,667	UGX 918,313	UGX 874,105
Formal job (security guard, teaching, LC leadership)	UGX 1,075,000	UGX 940,848	UGX 949,365
Sale of firewood	UGX 43,000	UGX 166,938	UGX 147,368
Casual work	UGX 98,267	UGX 258,776	UGX 231,648
Charcoal burning	UGX 140,429	UGX 214,071	UGX 210,136
Brewing local alcohol	UGX 253,751	UGX 270,198	UGX 269,626
Sand, murram and stone quarrying	.	UGX 230,593	UGX 230,593
Brick laying	UGX 153,002	UGX 597,712	UGX 583,367
Petty trade (Awaro, abicamo kani, komase)	UGX 321,667	UGX 372,504	UGX 371,259
Businesses -kiosks, shops, drug shops, salons	UGX 363,333	UGX 626,447	UGX 601,255
Gifts (bride-price, friends, relatives)	UGX 668,889	UGX 131,944	UGX 310,926
Other sources (specified)	UGX 57,097	UGX 538,120	UGX 430,842
Total	**UGX 291,849**	**UGX 641,212**	**UGX 595,022**

4.1.2 Reduction in the number of participating households reporting periods of food insecurity

Overall, a half of the respondents (50.4%) reported that their households did not experience food shortage in 2021. This percentage was higher among the female headed households (50.8%) as compared to the male headed households (49%). In addition, other types of households (Male child headed, Female Child Headed) had the highest percentage reporting food shortage in 2021 (70%). This category of households should be targeted in food forest interventions and other livelihood activities.

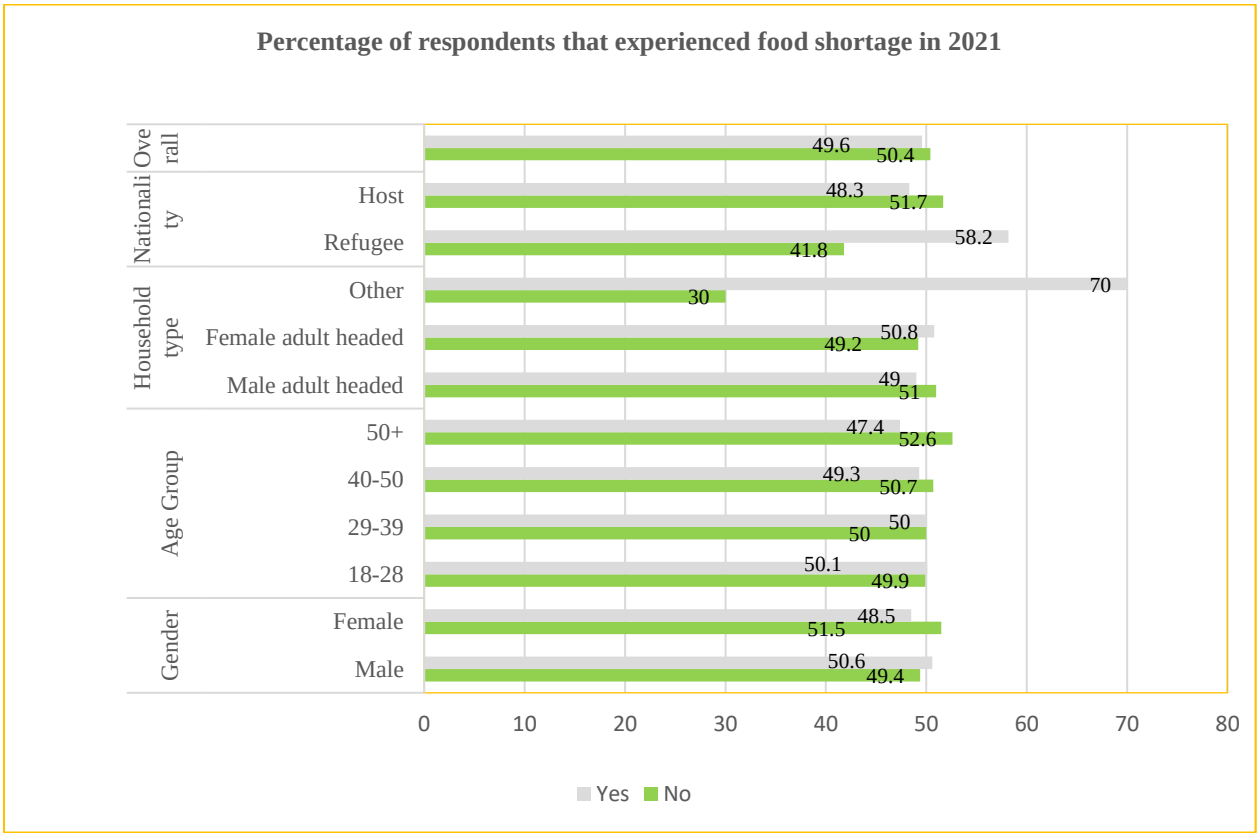


Figure 4 households that experienced food shortage in 2021

On average, households consumed 2 meals per day. This was the same across all the months of the year. The highest average number of meals per day was 5 and the lowest was 1.

Reported months of food shortage

Overall, the months reported with the highest food shortage was June 2021(76.6%) July 2021 (69.5%). During these months, Uganda was under lockdown due to the outbreak of the COVID-19 pandemic which could have affected normal participation of these household in their daily livelihood activities.

The data on the months of food shortage was consistent across all the disaggregation (gender, age and nature of household). Overall, the months reported with the lowest food shortage were November and December.

Table 23 Reported months of food shortage

	Gender		Age				Nature of household			
Month	Male	Female	18-28	29-39	40-50	50+	male adult headed	Female adult headed	Other	**Overall**
January	8.2	7.9	7.2	9.1	8.0	7.8	7.9	8.2	14.3	8.1
February	10.0	8.3	11.5	9.5	7.3	4.7	8.9	9.2	21.4	9.2
March	10.9	12.8	12.5	11.0	12.4	10.9	11.2	15.3	7.1	11.8
April	14.0	17.6	16.4	17.1	12.4	15.6	14.6	20.4	21.4	15.7
May	30.1	35.5	33.2	35.2	24.8	39.1	30.8	42.9	28.6	32.6
June	73.6	80.3	74.5	79.1	73.7	82.8	76.1	81.6	64.3	76.7
July	67.5	71.7	66.4	67.1	73.7	78.1	69.8	67.4	71.4	69.5
August	26.8	32.4	26.9	28.1	32.1	35.9	29.0	31.6	28.6	29.4
September	5.5	9.7	6.3	10.0	4.4	9.4	6.9	9.2	14.3	7.4
October	1.5	7.2	4.3	4.3	3.7	4.7	3.8	5.1	14.3	4.2
November	1.2	4.8	2.4	2.9	2.2	6.3	2.8	4.1	0.0	2.9
December	2.7	4.1	2.9	3.8	2.2	6.3	3.2	5.1	0.0	3.4

Each month was assessed independently (multiple responses)

The graph shows a similar trend among the refugees and the host community. During the months of the highest food shortage (June and July) host communities were slightly more affected than the refugees. This could be explained by the relief support that was received by refugees during the pandemic.

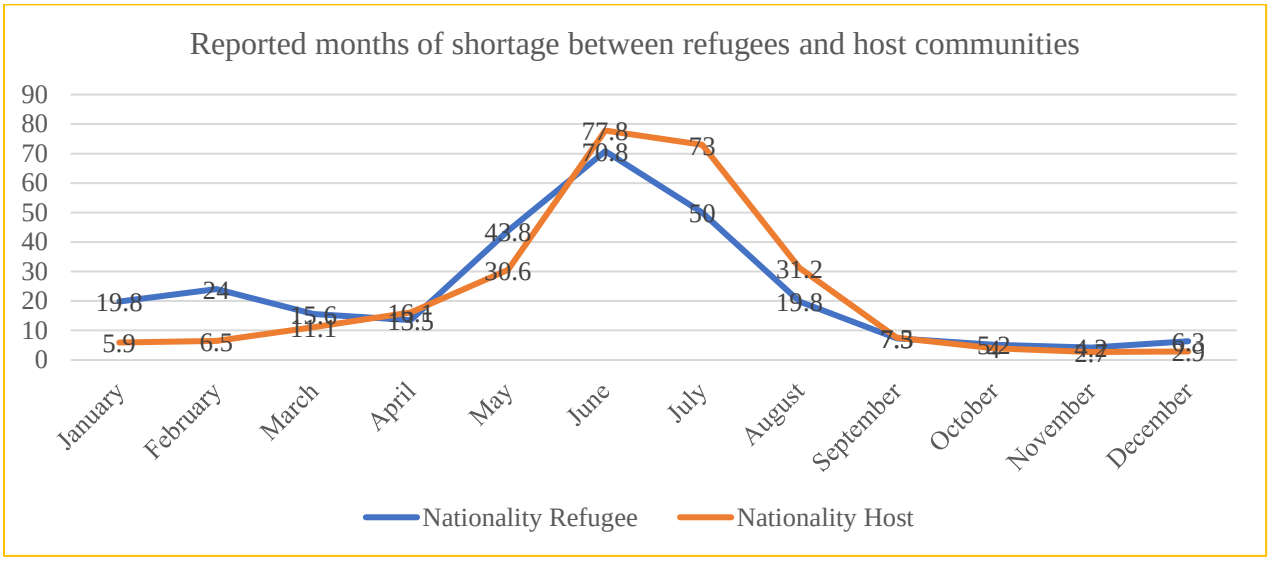
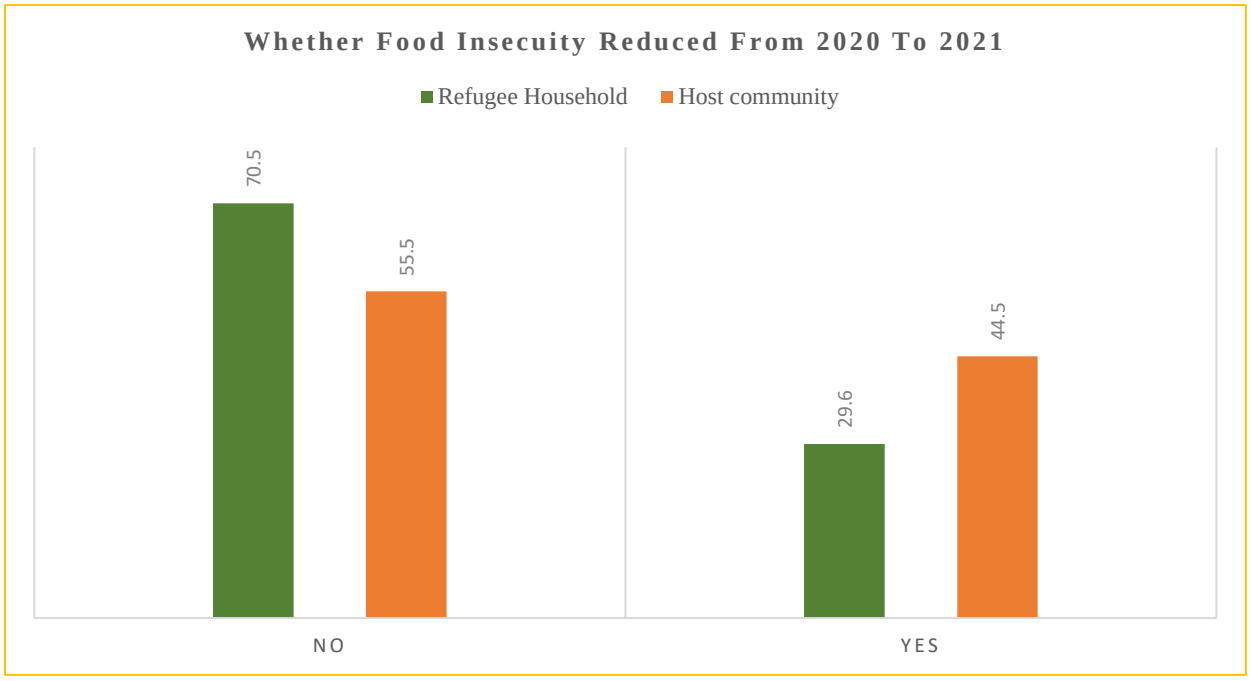


Figure 5 Reported months of food shortage by nationality

Other causes of food shortage mentioned included destruction by roaming animals, climate change and unpredictable seasons, reduction is food ration for refugees, poor planning, among others.

Comparison of food insecurity between 2021 and 2020

More than half of the households (57.2%) reported a reduction in food insecurity in 2021, whereas 42.8% reported no reduction. A higher percentage of refugees (70.5%) compared to nationals (55.5%) reported that food insecurity did not reduce. The main reason highlighted was that the land did not belong to them, thus difficulty in growing foods to improve their food security. The respondents also noted that there was a long drought period that affected crop yield.



4.1.3 Ownership of productive assets

Overall, a hoe (19.0%) was the most owned production asset followed by a panga (13.5%), a telephone (13.3%) poultry (12.6%) and a goat (10.5%). In terms of ownership by nature of the household, more host community households (98.3%) owned a hoe than refugee households (90.3%) and so was the ownership of a panga (71.2% host and 57.6% refugee). For all the production asset types, the ownership was higher for host communities than refugees. Most importantly, there was no ownership of oxen for ploughing as well as ox-plough by refugees. This points to the fact that land which is a major means of production is mostly owned by the host community households.

Table 24 Ownership of productive assets by household type and household nature

Type of production asset	Overall	Household nature	
		Refugee	Host
Hoe	19.0	90.3	98.3
Panga	13.5	57.6	71.2
Telephone	13.3	66.1	68.2
Poultry	12.6	26.7	70.5
Goat	10.5	26.7	58.0
Radio	7.0	21.8	38.0
Bicycle	5.9	15.2	32.2
Other cattle	3.4	1.2	19.9
Pig	3.4	3.6	19.4
Ox-plough	2.9	0.0	17.4
Oxen for ploughing	2.8	0.0	16.3
Motorcycle	2.4	4.9	13.1
Spray pump	1.6	3.0	9.2
Sheep	1.5	1.2	8.4
Other specify	0.3	3.6	1.5

Each income source was assessed independently (multiple responses)

Across the board, more males owned production assets than females, and also male adult headed households than female adult headed ones. Males who owned production assets were also higher compared to other types of households (female child headed and male child headed).

Table 25: Ownership of production assets by gender and type of household

Type of production asset	Gender		Type of household		
	Male	Female	Male adult headed	Female adult headed	Other
Hoe	98.2	96.3	97.6	95.9	95.0
Panga	77.7	60.4	73.7	49.2	40.0
Telephone	74.2	61.2	69.6	60.1	60.0
Poultry	65.4	63.9	67.2	52.9	50.0
Goat	55.9	51.7	55.8	45.6	35.0
Radio	42.9	28.1	39.1	19.7	20.0
Bicycle	34.2	25.4	32.3	20.2	5.0
Other cattle	20.9	13.6	19.5	7.8	0.0
Pig	17.9	16.7	19.3	7.8	5.0
Ox-plough	17.2	12.7	16.9	6.7	0.0
Motorcycle	16.2	7.5	14.0	1.6	10.0
Oxen for ploughing	15.5	12.5	16.2	4.2	0.0
Spray pump	10.5	6.2	9.4	3.6	5.0
Sheep	9.4	5.4	7.9	5.7	0.0
Other specify	1.7	1.8	1.8	0.5	10.0

Each income source was assessed independently (multiple responses)

There was a fair share of ownership of production assets across the various age groups although more youth (18-28) owned production assets compared to all other age categories.

Table 26: Ownership of production assets by Age Categories

Type of production asset	Age			
	18-28	29-39	40-50	50+
Hoe	97.4	97.6	96.8	97.0
Telephone	74.9	68.1	65.8	50.4
Panga	72.3	69.5	67.6	63.7
Poultry	70.1	59.8	63.0	66.7
Goat	54.9	48.6	57.2	60.0
Radio	38.3	38.3	29.9	32.6
Bicycle	26.3	27.4	37.1	34.8
Pig	16.9	18.3	16.2	17.8
Other cattle	15.2	14.1	22.3	24.4
Ox-plough	13.0	14.5	20.9	11.1
Motorcycle	13.0	11.4	13.3	8.2
Oxen for ploughing	11.3	12.6	20.9	13.3
Spray pump	8.0	8.3	7.9	11.1
Sheep	5.8	6.0	9.7	12.6
Other	1.7	1.7	2.5	0.7

Each income source was assessed independently (multiple responses)

The highest average number of production assets owned was poultry (9) followed by goats (5). Overall, 97.9% of the assets were acquired as household purchased, 10% through local government and 1.1% through NGO/Development partner.

Table 27: Average quantity of production assets owned

Type of production asset	Average Number owned per Household
Poultry	9
Goat	5
Hoe	3
Other cattle	3
Sheep	3
Pig	3
Oxen for ploughing	2
Panga	1
Ox-plough	1
Spray pump	1
Bicycle	1
Motorcycle	1
Radio	1
Telephone	1

4.2 Immediate Objective 2: Agriculturally-related rural infrastructure renovated and or constructed using labor intensive approach

4.2.1 Average cumulative percentage of projects in the district investment plans completed

For 888 approved projects in the district investment plans, the completion rate was 93% (a total of 830 projects[10] have been completed. In the refugee settlement, 100% of the projects have been completed whereas in the host community, 67.1% were completed.

Table 28 projects in the district investment plans that have been completed

District	Target	# Ongoing	Total Completed	% Completed
Palabek Refugee Settlement (Lamwo)	32	0	32	100%
Terego	33	0	33	100%
Arua	151	0	151	100%
Madi Okollo	86	0	86	100%
Rhino Camp Settlement	136	0	136	100%
Imvepi Settlement	81	0	81	100%
Kitgum	82	13	69	84%
Nebbi	81	12	69	85%
Obongi	118	29	89	75%
Lamwo	88	4	84	95%
TOTAL	**888**	**58**	**830**	**93%**

The infrastructure projects that were still ongoing at the time of the survey were in Obongi, Kitgum, Nebbi and Lamwo districts.

Figure 6 One of the infrastructure projects (water ponds) constructed

[10] The definition of a project varies for various interventions for example; 1 km of a community access road= 1 project, 2 acres of food forests= 1 project, 1 water pond= 1 project and 1 market= 1 project

4.2.2 Participation in rural infrastructure project construction work

a) Infrastructure projects implementation in 2020

Overall, community access road (40.4%) was the most implemented infrastructure project in 2020 followed by food forests (25.5%). On the other hand, spring protection was least implemented in the communities as they are dependent on the availability of springs to be protected in a given community.

Table 29: Infrastructure projects implementation in 2020

Infrastructure projects implemented in the communities in 2020	Overall	Household Nature	
		Refugee	Host
Community access road	40.4	66.7	46.4
Food forests	25.5	57.0	27.0
Water ponds	12.9	2.4	17.7
Markets	12.7	1.2	17.6
Spring protection	8.5	1.8	11.5

During implementation of infrastructure projects in the communities more males than females participated across all project types. Nonetheless, more female adult headed households (54.4%) than male ones (48.2%) participated in community access roads. A similar trend was observed under food forests (31.1% female headed and 30.7% male headed).

Table 30: Implementation of infrastructure projects by gender and household type

Infrastructure projects implemented in the communities in 2020	Gender		Type of the Household		
	Male	Female	Male adult headed	Female adult headed	Other
Community access road	52.5	45.3	48.2	54.4	40.0
Markets	16.5	14.4	15.9	14.0	10.0
Food forests	30.6	31.3	30.7	31.1	40.0
Water ponds	13.4	18.2	15.7	15.5	20.0
Spring protection	10.8	9.7	11.6	3.6	5.0

In terms of age categories, there was a fair distribution across the project types. A slightly higher youth participation (11.8%) in spring protection was noted than the rest of the age categories.

Table 31: Implementation of infrastructure projects by Age Categories

Infrastructure projects	Age			
	18-28	29-39	40-50	50+
Community access road	47.5	47.9	49.3	57.0
Markets	14.7	16.4	16.6	12.6
Food forests	29.9	34.1	27.3	31.9
Water ponds	15.7	13.8	18.0	17.0
Spring protection	11.8	10.0	8.3	10.4

b) Participation in construction of the infrastructure projects

Out of the respondents interviewed, markets had the highest average number of group members (32), followed by community access road (30), food forests (30), water ponds (28) and spring protection (16). These numbers were largely consistent with the design of group compositions under different rural infrastructure projects. A big difference was seen in the group composition for water ponds (28) against the planned 15 participants for 10 days and/or 15 for 20 days per group. Similarly, a slight addition of 1 member for groups under spring protection was observed. This was largely attributed to the need for different sets of skill to accomplish the construction activities.

Table 32: Average number of groups, days and hours worked during the construction work

Infrastructure projects	Average number of groups members	Average number of days	Average number of hours worked
Markets	32	25	5
Community access road	30	27	4
Food forests	30	27	4
Water ponds	28	26	4
Spring protection	16	20	5

The spring protection construction projects were all completed within the planned number of days (15 group members for 20 days). The average number of days for food forests was 27 days as opposed to the planned 22 days. Similarly, the average number of days (26) for water ponds exceeded the planned 20 days. In addition, community access roads' average of 27 days was opposed to the planned 25 days of work, and also markets had an average of 25 days against the planned 20 days. The construction activities in each infrastructure project took an average of between 4 and 5 working hours per day.

The survey found out that the overall completion of the construction works according to the planned number of work days paid for was 59.4% while 40.6% of the construction works were not completed accordingly. The completion was higher in the refugee households (80.7%) compared to the host community (58.0%).

Table 33: Completion of the construction works according to the planned number of work days paid for

Completion of construction work according to the planned number of work days	Overall	Household Nature	
		Refugee Household	Host community
Yes	59.4	80.7	58.0
No	40.6	19.4	42.0

The community access road construction works were not completed according to the planned number of days mainly because of absenteeism of the group members, delays due to obstacles such as rocky locations, waiting of seedlings to be planted along the roads, land wrangles, and dropping out of some group members to go and plant their crops. Delays in completion for food forests projects was majorly due to delay in supply of seedlings, late coming and absenteeism of group members, and land conflicts between landlords and community members. Similarly, delays in completion of construction works for markets, spring protection and water ponds were attributed to absenteeism, late supply of construction materials and interruptions during rainy days.

Analysis of data collected from the targeted respondents indicated highest average amount (UGX 349,574) reported among beneficiaries of the market projects and the lowest average amount (UGX 91,930) reported among the water ponds beneficiary respondents.

Table 34: (Reported) Average amount received by participants of the infrastructure projects

Infrastructure projects	Average
Markets	UGX 349,574
Food forests	UGX 126,384
Community access road	UGX 126,079
Spring protection	UGX 101,116
Water ponds	UGX 91,930

This table is based on reported figures by respondents

Overall, almost all the respondents (94.2%) received the money for the construction works by themselves, and this was the case at refugee households (98.8%) as well the host community (93.4%). For those who didn't receive the money by themselves, it was mainly received by PMC Chairperson (32.4%), other (group leaders or neighbors 25.0%), husband (11.8%) or other relatives (10.3%). The money was received on behalf of the participants mainly because some groups were not notified on payment date, other members

were sick at the time of payment, and for some groups an agreement was reached for the money to be received by the PMC chairperson or other group leaders while in school or away for some other reasons.

Table 35: Receiving of the construction money by individual group members

	Overall (n=1,168)	Household Nature	
		Refugee Household	Host community
Yes	94.2	98.8	93.4
No	5.8	1.2	6.6

Table 36: Persons who received money on behalf of the participants

Persons who received money on behalf of the participants	Frequency	Percentage
PMC chairperson	22	32.4
Other	17	25.0
Husband	8	11.8
Other relative	7	10.3
Mother	5	7.4
Wife	4	5.9
Child	3	4.4
Father	1	1.5
Group member	1	1.5

Most of the respondents (43.8%) used the cash-for-work received from construction works for buying household asset like bicycles, goats and poultry. It is worth noting that this is an indicator that the project had an impact on the ability of the beneficiaries to accumulate household assets. This data is consistent with findings from Focus Group Discussions conducted in all locations, whereby beneficiaries admitted to being able to afford more commodities.

"Respondent 1: I used the money I got from the project for buying food at home and I also bought a she goat which has already produced. Respondent 2: I also used my money for buying a goat and the balance was used for feeding," ***Focus Group Discussion, Madi Okollo***

The table above also shows that 31.6% of the respondents spent the money on school requirements (including fees), and 28.9% used the money on other items (food, clothes, solar panels soap etc.). More refugee households (49.7%) than host community (28.7%) spent money on school requirements including fees.

Table 37: Use of cash-for-work money received from construction work

Items	Overall	Household Nature	
		Refugee Household	Host
Household asset (bicycle, goats, poultry)	43.8	39.9	44.4
School requirements (including fees)	31.6	49.7	28.7
Other	28.9	36.8	27.6
Agricultural production	26.5	17.8	27.9
Saved in VSLA	19.1	16.6	19.5
Health	15.4	20.3	14.6
Petty trade	11.8	11.0	11.9
Construction (house/shelter)	8.0	8.6	7.9

From the money earned from cash-for-work activities, an average of UGX 76,152 was spent on household asset (bicycle, goats, poultry), UGX 73,257 was used for construction (house/shelter), and UGX 68,003 school requirements (including fees). The least average of UGX 45,576 was spent on health.

Table 38: Use of cash-for-work money received from construction work

Use of cash-for-work money received from construction work	Average
Household asset (bicycle, goats, poultry)	UGX 76,152

Construction (house/shelter)	UGX 73,257
School requirements (including fees)	UGX 68,003
Petty trade	UGX 62,058
Agricultural production	UGX 56,855
Saved in VSLA	UGX 49,118
Health	UGX 45,576

*Proportions

Overall, 91.6% of the respondents took the decision on the use of the money earned from participation in the construction projects. This was the same observation at household level.

Table 39: Decision on the use of the money earned from participation in the construction project

Decision on the use of the money earned from participation in the construction project	Overall	Household Nature	
		Refugee Household	Host community
Myself	91.6	96.3	90.8
Other person (mostly the spouse, but also group members or leaders)	8.4	3.7	9.2

Overall, most of the respondents (88.4%) didn't experience challenges over the use of the money earned from the participation in construction projects. At household level more refugees (20.9%) experienced challenges than host community (10.2%). The main challenges experienced included delayed payment after work and conflict with the spouse over the use of money.

Table 40: Challenges over the use of money earned from the participation in construction project

Whether challenges over the use of money were experienced	Overall	Household Nature	
		Refugee Household	Host community
No	88.4	79.1	89.9
Yes	11.6	20.9	10.2

4.2.3 Households reporting satisfaction with completed infrastructure projects

Satisfaction levels were high among beneficiaries for all the completed infrastructure (majority reported that they were satisfied with the completed community access road (80.3%), market projects (77.2%), spring protection (67.5%), food forest projects (76.8%), and water pond projects (65.1%)) as shown in the graph below. Satisfaction level was highest for the community access roads.

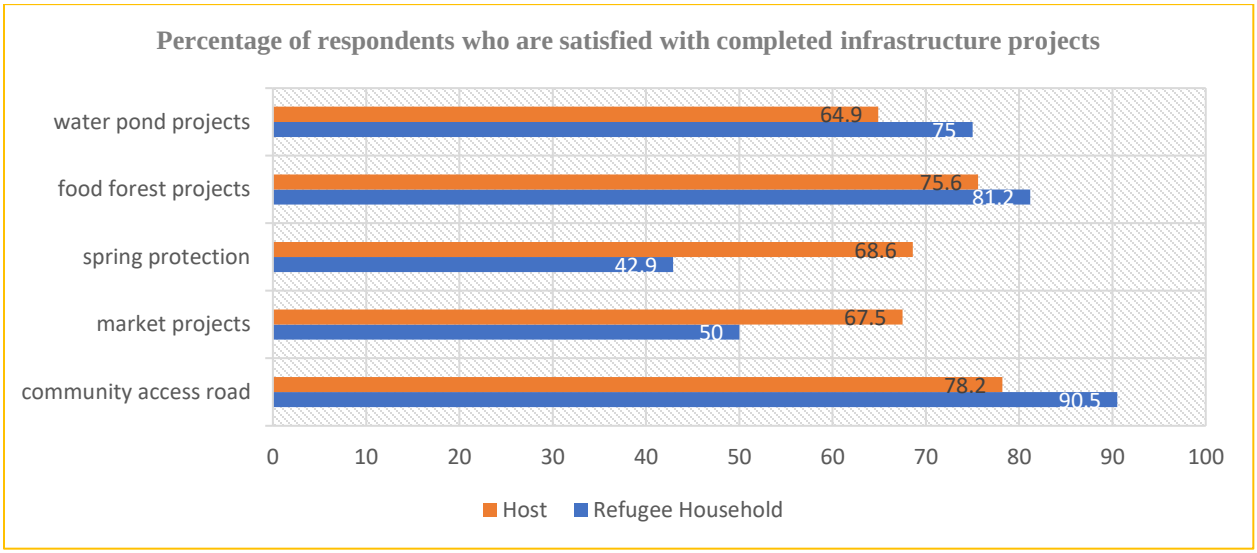


Figure 7 Satisfaction with completed infrastructure projects

The survey further investigated the areas of satisfaction with the different projects based on different parameters. With regards to CAR, satisfaction was highest with the connectivity created (98.9%) and the width (96%). (**Table 41**). This was consistent with the data from Focus Group Discussions, whereby respondents mentioned a reduction in distances to specifically health facilities and schools.

Respondents were also most satisfied with the structure of the market projects within a perimeter (99.4%) and the size of the market (94.5%).

Figure 8 Market infrastructure of the project being utilised

With regards to spring protection, satisfaction was highest with usability for domestic purposes (96.4%), as well as the structure (97.3%). Satisfaction with food forests was highest on the design (94.2%) and the

spacing between planted trees (94.9%). Usability of the water ponds were also noted as the area of highest satisfaction (95.4%).

Table 41 Parameters of completed infrastructure projects with the highest satisfaction

	Refugee household	Host	Overall
community access road			
Width (4 meters)	99.1	95.9	96.5
Mitre drains well constructed (drain water off the road)	99.1	92.3	93.6
Usable at all times	95.2	98.2	97.6
Connectivity ensured (to schools, hospitals, markets, farm land, road to road, other villages)	97.1	99.3	98.9
Maintenance is done	78.1	65.7	68.1
market projects			
Structure within a perimeter (fencing with chain links, concrete poles, metallic gate, presence of gate house)	100.0	99.4	99.4
Size of the market: 30*50meters for grade D improved, minimum 60 *80meters for grade c)	100.0	94.4	94.5
Hygiene maintenance facilities constructed (VIP latrine & water tank, waste bins)	100.0	85.2	85.4
Usability noted	100.0	87.0	87.2
spring protection			
Structure well-constructed (steps and guard rails), structure should be user friendly	100.0	97.2	97.3
Resilience design structures observed: bio swells, trees, smiling berms, grass planted on water top, fencing with barbed wire	66.7	84.1	83.6
Water colour clear, smell (odourless), taste (not salty)	100.0	95.3	95.5
Water yield (constant)	100.0	85.1	85.5
Usability for domestic purpose	100.0	96.3	96.4
Good maintenance, hygiene, user committee in place	100.0	91.6	91.8
food forest projects			
Design: 2 acres and fenced with barbed wires	92.8	94.6	94.2
Correct spacing in between trees planted, Planting done in a staggered manner – triangular shape	92.8	95.5	94.9
Resilience structures constructed on site: bio swells, smiling berms	76.8	93.8	90.0
Survival rate (85%)	79.7	72.7	74.3
Gap filling done	78.3	79.3	79.1
Seedling species	85.5	91.7	90.4
Maintenance is done	82.6	81.0	81.4
water pond projects			
Capacity/Size in cubic meters and depth	100.0	90.0	90.2
Resilience structures constructed (bio swells, smiling berms) fencing	100.0	91.3	91.5
Water retention level (does not dry up)	100.0	82.0	82.4
Usability	100.0	95.3	95.4
Maintenance is done	100.0	66.7	67.3

It is worth noting that from the table above, the area with lowest satisfaction levels was with maintenance of the community access roads (68.1%). This satisfaction was reported as lower especially by the host community. According to FGDs with respondents, there is need for the project to address some of the challenges in maintenance of CAR such as limited access to tools and water logging in certain parts of this established infrastructure which delays activities.

Figure 9 Spring protection infrastructure project

Areas of dissatisfaction

As shown in **(Figure 6)** the percentage of respondents who were satisfied was lowest for spring protection projects as compared to other projects, and this was lower amongst the refugees (42.9%) compared to host community (68.6%). The respondents mentioned that with the spring protection, it had a very low yield/ were dried up and some were no longer working.

The overall percentage of respondents who were satisfied was also low for market infrastructure projects, but lower for the refugees (50%) compared to host communities (67.5%). Much as the RI project design does not provide for sheds, stalls and stores etc, it came out from FGDs with respondents that this would be appreciated if added as a component to the infrastructure.

With regards to the Community Access Roads, a higher percentage of the host community were not satisfied (21.8%) as compared to the percentage of refugees (9.5%) **(Figure 9).** The areas of dissatisfaction among respondents were on the tedious work involved in the projects viz a viz the payment received. The respondents also shared that the roads were flooded or slippery during rainy season, some had potholes, while others had no road signage. This was consistent with the information from the KIIs conducted.

"Most of the roads are been cut off by running water. The culverts are not covered, making them impassable," ***Key Informant Interview, Parish Chief Obongi***

"Our roads are new but the quality of the CAR should be improved with more gravel/ murram. We also need more culverts as small swampy water has started emerging in parts of the road during the rainy season," ***Focus Group Discussion, Lamwo***

It was also reported that food forests were affected by land issues, destruction by roaming animals and a low survival rate leading to frequent need for gap filling. Communities also reported their main area of dissatisfaction with water ponds as being destroyed by roaming animals leading to them being often dirty/

full of mud. They also cited that the water in the ponds reduced during the dry season, while others were already too bushy to be used.

Figure 10 Image of a Community food forest

4.2.4 Cumulative number of beneficiaries that report a reduction in time and/or cost in transporting goods to a market place

a) Most common means of transport used before construction of community access roads

Overall, before the construction of the community access roads the most common means of transport included foot (44.7%), followed by use of bicycles and motorcycles (31.4% and 18.5%) respectively. Likewise, these were the most common means of transport in the refugee and host community households. Nonetheless, more refugees (12.8%) than host community (10.4%) were using vehicles.

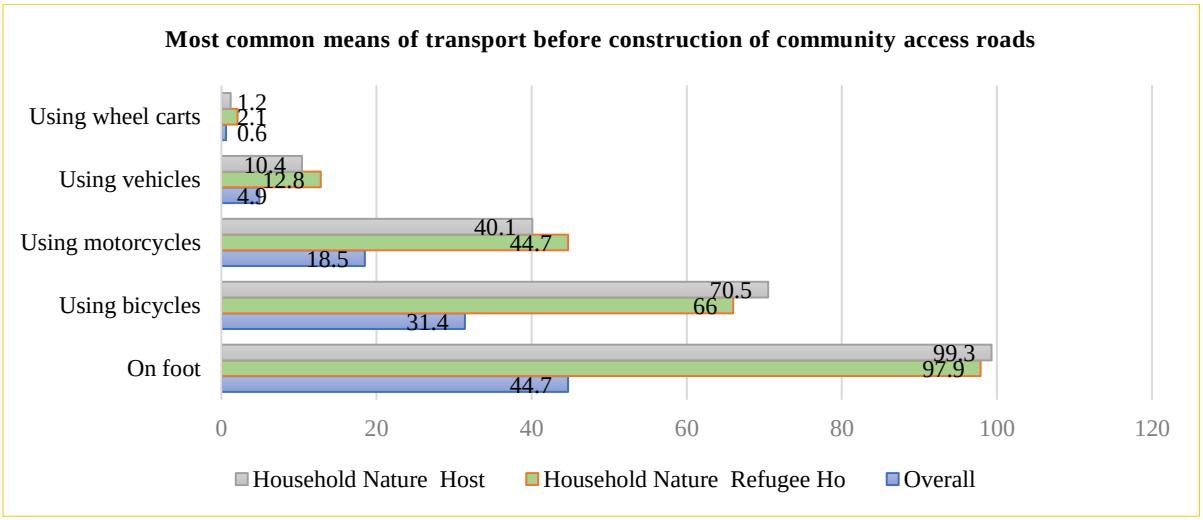


Figure 11Most common means of transport used before the construction of community access roads

There was a fair uniformity in the use of various means of transport across males and females, age categories as well as at male and female headed households.

Table 42: Most common means of transport by Gender and Type of Household

Means of transport	Gender		Household Type		
	Male	Female	Male adult headed	Female adult headed	Other
On foot	98.6	99.6	98.9	100.0	100.0
Using bicycles	73.2	65.4	70.9	62.2	83.3
Using motorcycles	43.6	37.6	40.2	42.7	66.7
Using vehicles	11.0	10.6	10.2	12.2	33.3
Using wheel carts	1.0	1.7	1.1	1.2	16.7

Table 43: Most common means of transport before the construction of the CAR by Age Categories

Means of transport	Age			
	18-28	29-39	40-50	50+
On foot	98.9	99.4	98.4	100.0
Using bicycles	66.9	73.0	65.6	76.5
Using motorcycles	41.7	42.3	39.3	38.2
Using vehicles	12.6	9.2	11.5	8.8
Using wheel carts	2.3	0.0	2.5	0.0

b) Reduction in time and cost to transport goods to the market

Overall, majority (86.9%) of the respondents interviewed reported a reduction in time taken to transport goods to the market and access to other social services after the construction of the community access roads.

The percentage was similar among the refugees (84.0% of the refugees) and the host communities (87.6% of the host communities).

According to the data, there was an increase in the percentage of respondents that reported taking an average of 2-3 hours from 58.9% before the construction of community access roads to 88.2% after the construction of community access roads. It is worth noting also that none of the beneficiaries were taking more than 6 hours as at the time of the survey, which was happening for a few beneficiaries before the construction of community access roads. This data is shown below.

Table 44 Average time taken to transport goods to the market and access other social services before and after

	Overall time taken		Refugee household		Host	
Time	Before	After	Before	After	Before	After
1-2 hours	9.3		11.7		8.8	
2-3 hours	58.9	88.2	68.1	93.7	56.9	87.1
3-4 hours	22.4	10.9	12.8	6.3	24.4	11.8
4-5 hours	6.4	0.7	5.3	0.0	6.7	0.8
5-6 hours	2.5	0.2	1.1	0.0	2.8	0.3
6-7 hours	0.4		1.1		0.2	
7-8 hours	0.2		0.0		0.2	

With regards to the cost, the data also showed that majority of the households (63.6%) reported a reduction in the cost related to transporting goods to the markets and access to other social services by the community members after the construction of the access road. The reduction was reported by 66.3% of the refugees and 63.1% of the host community.

The greatest reduction was experienced among those that used vehicles to transport their goods to the market. This was followed by those using motorcycles. As observed in the data, the costs of transportation both before and after the construction of the community access roads was higher for respondents that used motorcycles as compared to those that used bicycles or vehicles. This is because unlike vehicles, motorcycles have no cost sharing provision[11]. Also, a higher percentage of the community own the bicycles as compared to motorcycles, which justifies the low expenditure using these means.

Figure 12 Community Access Road under the RI project

[11] Vehicles are usually less expensive due to the ability to transport more people at reduced costs/ more quantity of commodities, unlike motorcycles whereby costs are incurred by one or two individuals.

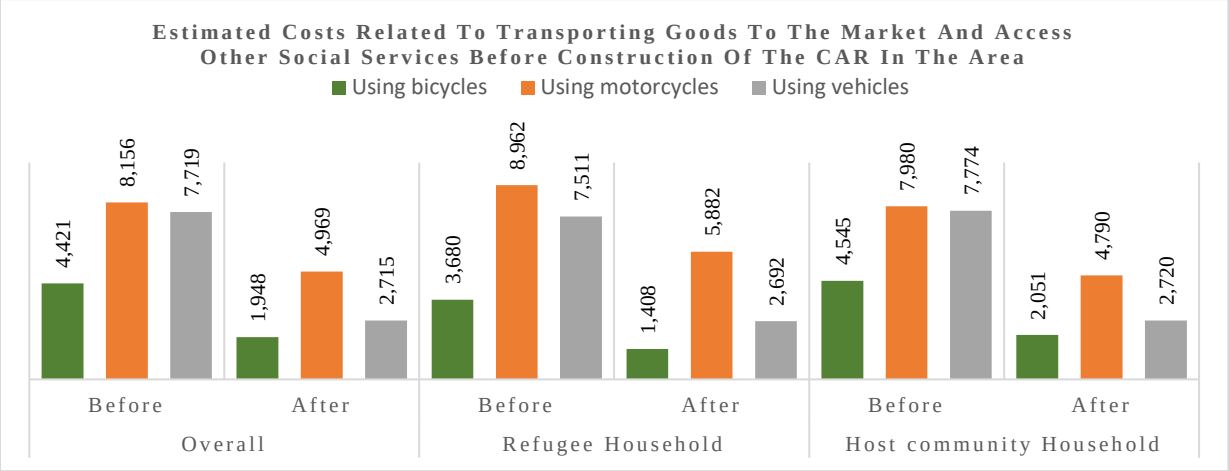


Figure 13 Estimated costs in transporting goods before and after construction of the CAR

According to the Focus Group Discussions conducted respondents, the community access roads have boosted local businesses within their locations. For instance, beneficiaries are now able to transport their produce efficiently to markets in other locations. In addition, some of the locations saw an increase in brick laying, sand mining and clay mining activities, which were previously halted due to the inability of vehicles to reach some of the villages, as explained by respondents during FGDs.

"Opening up of the road has encouraged many community members to engage in rice growing since transporting the harvest to the rice huller has been eased in terms of time and cost. This has in turn ensured the rice from the area to be milled, packed and branded as Wanyange Rice Millers and sold on the market at a higher value in Arua City and beyond," ***Focus Group Discussion, PMC- Madi Okollo***

4.2.5 Community members living close to the completed infrastructure who are using it

Majority (84.8%) of the respondents were living close to the completed infrastructure. This percentage was higher amongst the host communities (85.9%) as compared to the refugees (77.6%). The use of the infrastructure was reported higher for community access roads (by 49.9%) of the respondents. A higher percentage of refugees (73.4%) reported that they were using the community access roads.

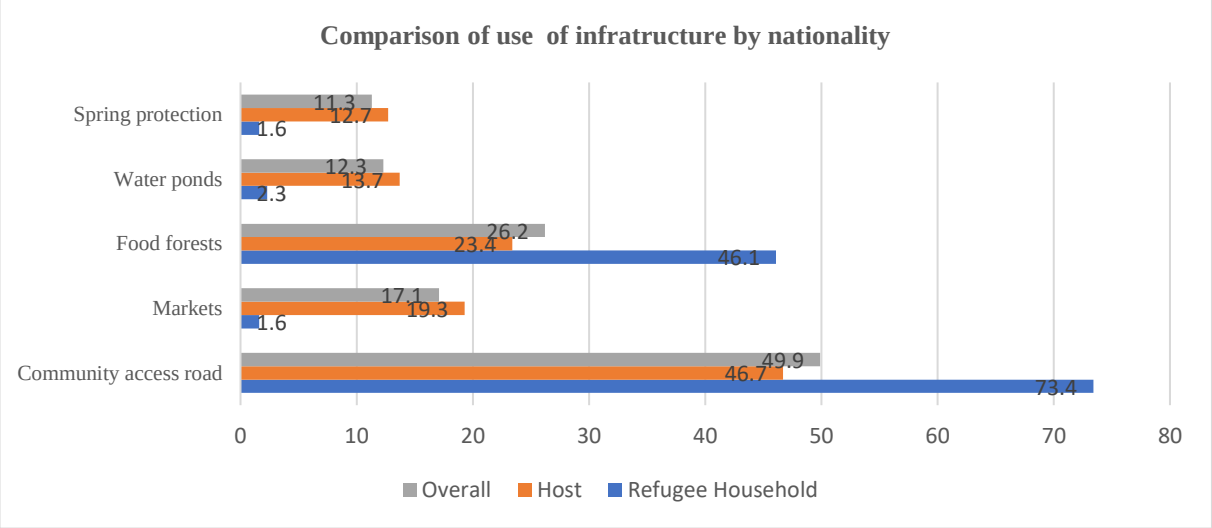


Figure 14 Use of infrastructure by nationality

A lower percentage of the surveyed refugees reported that they were using markets (1.6%), water ponds (2.3%) and spring protection (1.6%)[12] (**Figure 14**). However, for those that were using it, all of them reported that there was daily use (100% of the respondents) (**Table 45**). With regards to the water ponds, it is worth noting that some of the livestock of the farmers were using these infrastructures.

Figure 15 Livestock using one of the constructed water ponds

Community access roads and spring protection were being used daily for both refugees and host communities.

Table 45 Reported frequency of using the projects in the community

	Refugee Household	Host	Overall
Community access road			
Daily	98.9	95.6	96.2
Weekly	1.1	3.2	2.8
Bi-weekly	0.0	1.2	1.0
Markets			
Daily	100.0	76.0	76.2
Weekly	0.0	9.5	9.4
Bi-weekly	0.0	14.5	14.4
Water ponds			
Daily	100.0	88.2	88.5
Weekly	0.0	3.2	3.1
Bi-weekly	0.0	8.7	8.5
Spring protection			
Daily	100.0	95.8	95.8
Weekly	0.0	1.7	1.7
Bi-weekly	0.0	2.5	2.5

[12] This percentage was affected by the low sample size of refugees involved in these project areas that were targeted since the initial sampling distribution did not specifically take any measures for drawing estimates of this kind

4.3 Main Activities: Agriculturally related rural infrastructure rehabilitated using labor based intensive approach

4.3.1 Completed infrastructure projects constructed in accordance with agreed standards

The overall completion rate for the planned infrastructure projects constructed in accordance with agreed standards was 80%. The highest completion rate was in the refugee settlements of Palabek Refugee Settlement (100%) in Lamwo district followed by Rhino Camp Settlement (91%) in Terego District. Completion according to agreed standards at district level was highest in Terego (97%), followed by Arua (96%). The completion rate according to agreed standards was lowest in Lamwo at 43%. The study established that most of the projects in Lamwo were still ongoing and/ or pending final inspection and commissioning.

Table 46 Percentage of completed infrastructure projects constructed in accordance with agreed standards

District	Target	# Commissioned	# Inspected to be commissioned	# Completed with issues	# Ongoing	Total Completed	Total completed according to agreed standards	% Completed	% Completed according to agreed standards
Palabek Refugee Settlement (Lamwo)	32	32	0	0	0	32	32	100%	100%
Terego	33	0	32	1	0	33	32	100%	97%
Arua	151	114	31	6	0	151	145	100%	96%
Madi Okollo	86	60	21	5	0	86	81	100%	94%
Rhino Camp Settlement	136	55	69	12	0	136	124	100%	91%
Imvepi Settlement	81	0	68	13	0	81	68	100%	84%
Kitgum	82	43	26	0	13	69	69	84%	84%
Nebbi	81	39	16	14	12	69	55	85%	68%
Obongi	118	47	17	25	29	89	64	75%	54%
Lamwo	88	11	27	46	4	84	38	95%	43%
TOTAL	**888**	**401**	**307**	**122**	**58**	**830**	**708**	**93%**	**80%**

4.3.2 Percentage of participants for infrastructure works who are youth

According to the respondents, participation on infrastructure works was coordinated by leaders to ensure acceptance by the community. In addition, youth were particularly motivated due to the opportunities present to earn incomes through Cash for Work. The overall percentage of youths (18-28) participation targeted by the project is 60%. Review of documents showed progress being made towards this target (the average youth participation is 56.04%). Youth participation was higher in spring protection and Community Access Roads, and lowest in water ponds infrastructure activities.

Table 47 Percentage of participants in infrastructure works who are youth

Infrastructure projects	Youth (18-28)
Community Access Road	58.8%
Food forests	56.1%
Water ponds	50.2%
Markets	51.3%
Spring protection	63.8%
Average %	**56.04%**

Source: *Project database*

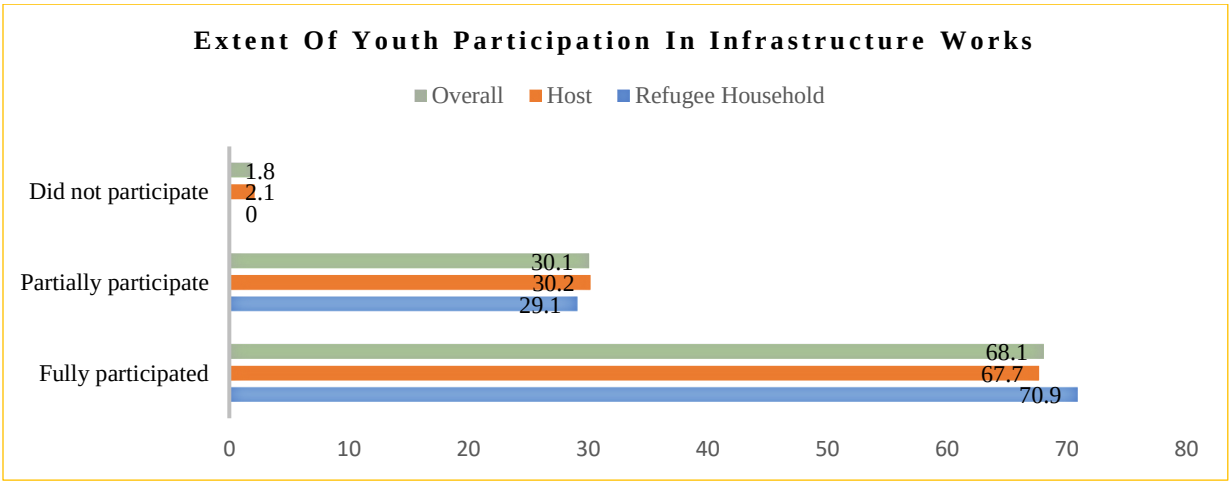


Figure 16 The extent of youth participation in implementation of infrastructure projects

The study assessed whether Youths fully or partially participated in the different RI projects implemented in the community. According to the data, 68.1% of the surveyed youths reported full participation while 30.1% reported that their participation was partial. According to FGDs conducted, among the reasons for partial participation was the delay in mobilization/ receiving prior information about activities, which led to difficulty in planning.

Participation of men and women in construction projects

There was a good involvement of both men and women in the tasks related to the various construction projects they implemented in their communities. Nonetheless, a higher number of men did the harder tasks in spring protection (25.9%) compared to women (5.2%), and likewise more in construction of markets (12.6%) than women (4.0%).

Table 48: Participation of men and women in construction projects

	All tasks shared equally	Men did the harder tasks of the project	Women did the harder tasks of the project
Water ponds	88.7	9.0	2.3
Community access road	88.1	9.5	2.5
Food forests	87.4	9.2	3.4
Markets	83.4	12.6	4.0
Spring protection	69.0	25.9	5.2

Only completed projects

4.4 Other observations during the survey

1. There were clear selection criteria for primary beneficiaries. This should be scaled further in all NURI interventions.
2. There was deliberate engagement and involvement of local governments in selection of beneficiaries, infrastructure projects and activities, monitoring, and facilitating trainings.
3. Most of the infrastructure projects were implemented according to specifications and agreed standards although maintenance remained a big challenge.
4. Capacity building was a well implemented component during infrastructure projects through designing of development plans from parish to Subcounty and District levels.
5. Access to land for the implementation of the infrastructure projects remained a big challenge. Nonetheless, the programme put a lot of effort in dialogue meetings with the involvement of local council officials and representatives of government institutions. This contributed to a high success rate in the implementation of the infrastructure projects.
6. District technical teams delayed with reports which affected timely implementation of projects. The technical teams decried of little facilitation which could account for such delays.
7. Roaming animals from the community continued to affect some of the food forests.
8. The aspect of cross cutting issues (inclusion of persons with disability in infrastructure design, and gender inclusion[13]) should be incorporated within the project activities. This is so as to eliminate negative impacts of project activities.
9. Delays in project implementation activities for example in provision of inputs and tools was highlighted by beneficiaries, which could impact on the results of the programme.

[13] There is evidence of a percentage of respondents that experienced conflict with spouses following receipt of funds. These need to be combated in order to prevent negative effects especially SGBV on the female population

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study assessed the extent of achievement of outcome and output performance indicators of the NURI programme in selected districts of implementation in West Nile and Acholi sub region. It covered both host communities and refugees in 06 districts of Madi-Okollo, Nebbi, Obongi, Arua in West Nile as well as Kitgum and Lamwo in Acholi sub region. The study was also limited to activities implemented under output 2 of the programme i.e., agriculturally related rural infrastructure renovated and/or constructed using labor intensive approach.

Overall, 93% of the planned infrastructure projects were completed and in use. The disaggregation according to refugee settlement area or host community showed the completion rate at 100% and 67.1% respectively. The study noted that the utilization of the infrastructure projects translated into a number of benefits for the community. For instance, the overall reduction in time taken to transport goods to the market and access to other social services after the construction of the community access roads was 86.9%. In addition, about 63.6% of the households reported a reduction in the cost related to transporting goods to the markets and access to other social services after the construction of the access road. This allowed for communities to have more disposable incomes that could be used for other household activities. Furthermore, the study established that participation in construction of these projects was high among the community members, justified by the involvement of leaders from the start to support the process. The findings also note that this came out as the main off-farm livelihood activity, providing households with incomes, that were mainly used in accumulation of assets. Infrastructure projects, particularly CAR also led to the improvement and growth of small businesses. The support to rural infrastructure was seen to positively contribute to agriculture sector outcomes, particularly access to markets and improving water resource management within the refugee and host community settings.

The overall percentage of households reporting satisfaction with the completed infrastructure projects was 73.4%. The satisfaction level was 80.3% for community access road, 77.2% market projects, 76.8% food forest projects, 67.5% spring protection, and 65.1% water pond projects. Most of the respondents mentioned dissatisfaction levels around maintenance.

5.2 Recommendations

1. The programme should continue to enhance capacity of user committees so as to strengthen operations and maintenance of RI projects, especially water ponds and protected springs.
2. There should be continued advocacy to District Local Governments (DLGs) to allocate funding for the operations and maintenance of community access roads constructed by the programme.
3. The project beneficiaries should be engaged further on implementation arrangements, roles and responsibilities in order to aid ownership and sustainability of the infrastructure projects.
4. Inclusive planning processes with land owners and/or local communities should be scaled further to minimize cases of land wrangles that continued to affect the implementation of infrastructure projects. There is still need for additional community dialogues with land owners
5. The period of community sensitizations prior to implementation of the project should be made longer to allow for participation of especially the youths. In addition, more than one channel should be used to pass on information of projects (through leaders, community leaders and radio).
6. There is need to have reliable and sustainable supply mechanisms for seedlings and construction materials to minimize delays in completion of infrastructure projects and food forests projects.

7. There was higher percentage of refugees who did not have any source of income which affected their financial inclusion through VSLA. The programme should explore more ways of empowering the refugees economically.
8. Timely payments should be made to the groups that complete projects. This will limit frustrations and deserting of projects by community members.

APPENDICES

A1. Household questionnaire for Rural Infrastructure, 2022 (Host & Refugee)

NURI RI Monitoring survey tool - 2022.do

A2. Key Informant Interview Questionnaire

NURI RI KII Tool 2022 survey.docx

A3. Focus Group Discussion Guide

FGD Guide RI Monitoring survey.do

A4. Document review and Observation Checklist

Community/user management agreements developed and implemented	
No. of agriculturally-related physical and natural water infrastructure constructed or rehabilitated	
Cumulative no. of micro-catchment management plans implemented	
% Of completed infrastructure projects constructed in accordance with agreed standards	
Average cumulative % of projects in the district investment plans completed (segregated by refugee settlement area or not)	

A5. Sampled project beneficiaries for household interviews

This list includes additional 5 beneficiaries per project type where available for possible replacement

Sampled respondents - NURI R