UGANDA CHANGE AGENT ASSOCIATION (UCAA)

THE CLIMATE INNOVATIONS FOR RESILIENCE IN KARAMOJA AND KYANGWALI (CLIRK) PROJECT

FINAL REPORT

AGNES ATYANG and CAXTON ETII

March 2024

Table of Contents

Acronyms and Abbreviations

CBO	Community-Based Organizations
CC	Climate Change
CLIRK	Climate Innovations for Resilience in Karamoja and Kyangwali
CRM	Climate Risk Management
CSO	Civil Society Organization
DCP	District Contingency Plan
DLG	District Local Government
DMCs	Disaster Management Committees
DRM	Disaster Risk Management
FAO	Food and Agriculture Organisation of the United Nations
FGDs	Focus Group Discussions
GBV	Gender-Based Violence
KIIs	Key Informant Interviews
MFIs	Microfinance Institutions
NFA	National Forestry Authority
OPM	Office of the Prime Minister
SACCO	Savings and Credit Cooperatives
UCAA	Uganda Change Agent Association
U-Learn	Uganda Learning, Evidence, Accountability and Research Network
UNHCR	United Nations High Commissioner for Refugees
VSLA	Village Saving and Loan Associations

List of Figures

List of Tables

1. Introduction

Kotido and Karenga districts are located in the Karamoja subregion, in Northeastern Uganda. This is a semi-arid area with one rainy season and an intense hot and dry season, normally from October to April. The region has long suffered the impact of climate change. As a result, water scarcity and poor pastures have forced pastoralists to move from place to place in search of water and pasture leading to land conflict and animal theft. The scarcity of water has also resulted in a high price for water collection (heavy burden and sexual abuse) borne by women and girls. The cutting down of trees for fencing homesteads to protect against enemies has continued to contribute to massive deforestation. In addition, Karamoja has high poverty level at 65.7 percent, compared to the national average of 20.3 percent. This is characterized by low asset value ownership, few coping mechanisms and very low resilience to shocks and stresses. This indicates that the population is economically vulnerable which has led to negative coping mechanism, resulting in environmental degradation. For example, Charcoal burning has been responsible for massive deforestation in Karamoja. Low productivity of the land has resulted in food insecurity, low income and high poverty. Bush burning, a common phenomenon aimed clearing old pastures to allow new grass to germinate for livestock, has resulted in soil degradation with serious implications for the livelihood of the Karamojong women, farmers and pastoralists. Climate change is one of the major drivers of poverty as it adversely affects natural resources and food and socioeconomic systems, and subsequently human health and welfare. This has heightened the risk to gender-based violence (GBV) as food insecurity, scarcity of water and economic hardship contribute to conflict and increased incidents of violent behavior in households and community. As such, there is a high prevalence of gender-based violence in the region, demonstrating a link between climate change, poverty and GBV.

The Kyangwali Refugee Settlement, located in Western Uganda, has during the last couple of years, experienced a considerable influx of refugees from 36,000 in 2017 to more than 120,000 in 2020. By February 2024 the population had grown to 135,207, representing about 33 percent of Kikuube District population. The high population has put enormous pressure on natural resources in the settlement, particularly wood for cooking and constructing houses. This has led to increased deforestation and loss of tree cover in the areas surrounding the refugee settlement. There is therefore need for strengthening the resilience and adaptive capacities of poor and vulnerable people most of whom are women and girls to the effects of climate change and to promote their meaningful participation in sustainable natural resources governance.

UCAA in partnership with CARE International in Uganda intends to implement the *Climate Innovations for Resilience in Karamoja and Kyangwali (CLIRK) project* to contribute to:

1) Enhanced capacity of local Disaster Risk Management (DRM) structures to address disasters and impacts of climate change at the community level;
2) Improved disaster resilience and climate change adaptation capacity of women,

youth, farmers and pastoralists in Karenga district through the promotion of commercially viable and sustainable use of available water resources including valley dam scapes for production (animals, crops and pasture);

3) Increased awareness about climate change and participation in innovative climate change adaptation and mitigation measures.

The project will be implemented in Kapedo Sub-county in Karenga District, Maaru Sub-county in Kotido District and Kyangwali Sub-county in Kikuube District. In Kyangwali, the project will target both the host community and refugees in the refugee settlement.

1.1. Objectives of the study

The purpose of the assignment is to generate baseline data that will provide a benchmark to facilitate monitoring of progress towards meeting project objectives. It will, therefore, ascertain the status of the beneficiaries before the implementation of the project.

1.2. Specific Objectives

The specific objectives include the following.

a) Identify the status of knowledge, attitude and practices on disaster risk reduction, resilience building, and associated Gender-based Violence.
b) Assess the capacity of local organizations and structures to address disasters and impacts of climate change at community level
c) Identify the climate-resilient technologies available and accessible and the level of use by the population to improve food and income security.
d) Establish the level of awareness of climate change and associated Gender-based Violence, their impact on development and ways to prevent and respond to them.
e) Identify and document lessons learned and evidence-based best practices
f) Assess local participation in sub-national, national, regional, and global climate discourses
g) Assess the use of local action to influence policy, legislation and strategies
h) Review the district hazards and risk profiles and come up with action plans
i) Assess the capacity of CSOs to advocate for green and just solutions and to better respond to localized community adaptation needs.

2. Methodology

2.1. Study Population

The study population included district production officers, district disaster management committee members, non-governmental and faith-based organisations engaged in livelihoods, environment, climate change, and disaster preparedness, among others. At community level, the consultant engaged with community leaders, refugee and host

communities, farmers and agro-pastoralists. The team ensured the participation of men, women, female and male youth and persons with disabilities.

2.2. Data collection

The consultant employed both qualitative and quantitative methods to collect data. The qualitative methods included the following:

i) Focus Group Discussions (FGDs) with community members including men, women and youth.

ii) Key Informant Interviews (KII) with district technocrats, and representatives of non-governmental and civil society organizations.

Interview guides were used for both the FGDs and KIIs and questionnaires for the household survey for quantitative data collection.

Data was collected in Kikuube District where both refugee and host communities were interviewed. The team visited Karenga (Kapedo sub-county) and Kotido (Maaru sub-county) districts in Karamoja.

The interviews were conducted by trained enumerators, through face-to-face administration using a convenience sampling frame. Enumerators used a structured questionnaire which included both open and closed-ended questions. The survey and FGDs were targeted at households across the project sites.

2.3. Data analysis

The data obtained from the survey was entered into Microsoft Excel and then exported to the Statistical Package for the Social Sciences (SPSS 26) Version 26 for analysis. Open-ended responses were coded to arrive at clusters to tabulate percentage responses. The data was analyzed primarily through frequency tables and cross-tabulations to filter the required information.

3. Key Findings

3.1. Socioeconomic Characteristics of Households

3.1.1. Characteristics of respondents

Most respondents in both Kikuube (55%) and Karamoja (70%) were female (

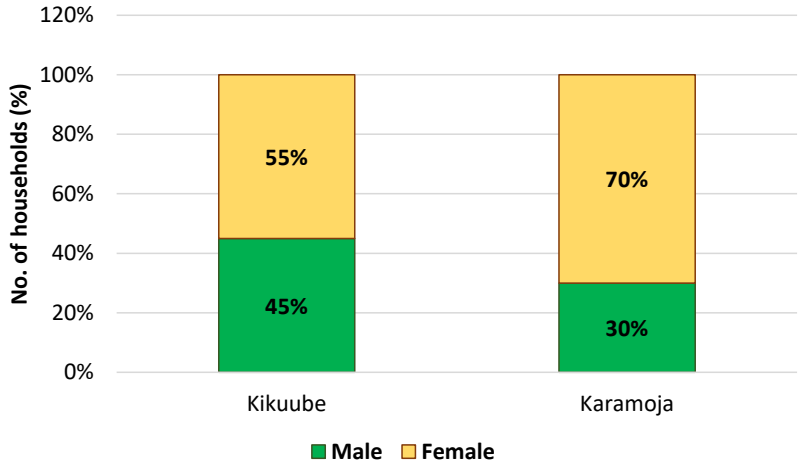

Figure 1). As the study was conducted in the dry season in Karamoja, most men were out of their homes in search of income-earning opportunities for their households in nearby trading centres and main towns.

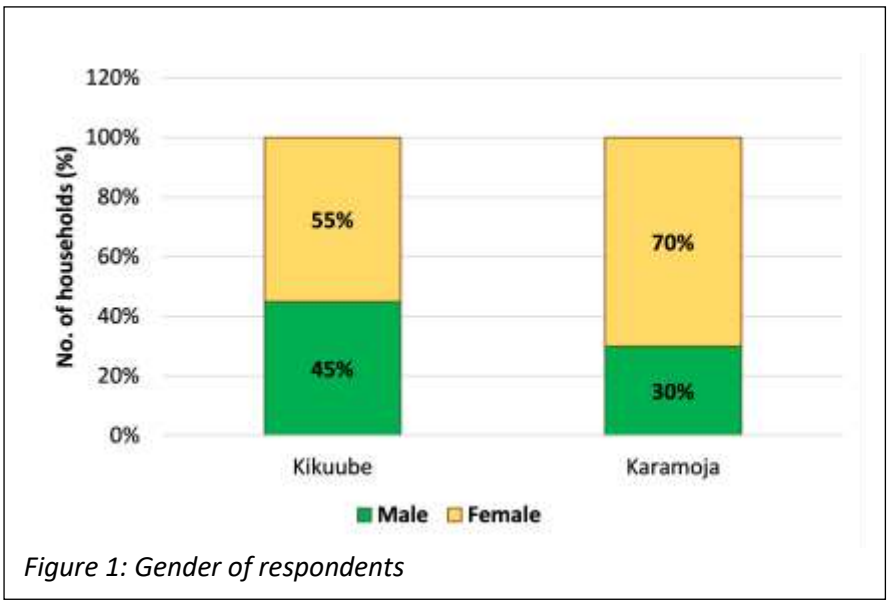

Figure 1: Gender of respondents

Table 1: Age of respondents

Age range (Years)	Kikuube	Karamoja
20-30	25%	55%
31-40	30%	10%
41-50	15%	25%
51-60	10%	5%
above 60	20%	5%
Total	**100%**	**100%**
Average	**41.6**	**36.1**

The majority of the respondents (55%) in Kikuube were aged between 20 and 40 years while 10% were middle-aged (51-60 years) and 20% were elderly (more than 60 years). On the contrary, the majority of respondents (55%) in Karamoja were young adults (20-30 years) and very few were either middle-aged or elderly (Table 1). The average age was 42 and 36 years in Kikuube and Karamoja, respectively.

An analysis of the relationship between the respondents and the household head shows that the majority of the respondents were household heads, accounting for 65% in Kikuube and 50% in Karamoja. The spouses constituted 35% and 40% of the respondents in Kikuube and Karamoja, respectively.

No dependents of household heads were interviewed in Kikuube and only 10% in Karamoja (Figure 2). This shows that information was obtained from reliable persons hence confidence in the data collected.

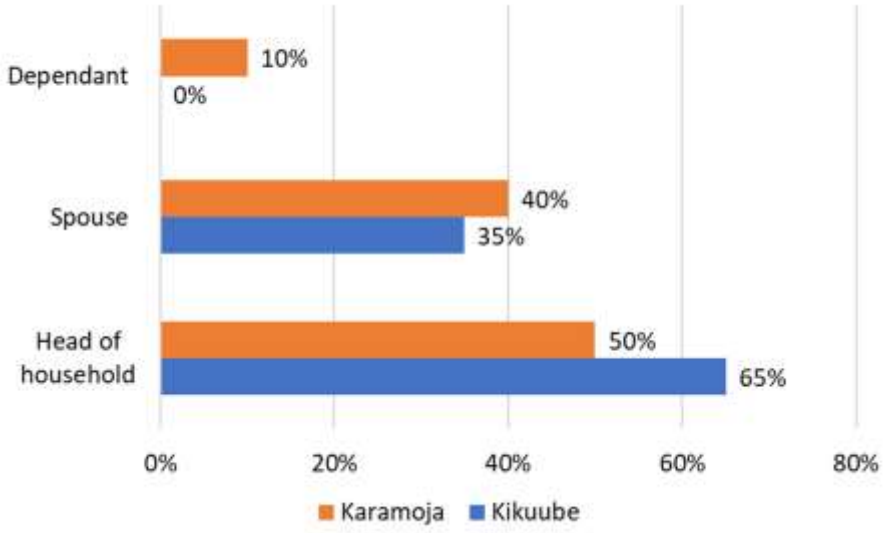

Figure 2: Relationship between respondent and head of household

3.1.2 Characteristics of Household Heads

Nearly all the heads of households in Karamoja are male (95%) but only 75% in Kikuube (Figure 3). This is a reflection of the demographics in the Kyangwali refugee settlement where, according Office of the Prime Minister Refugee Statistics for December 2023, there are more adult females than males.

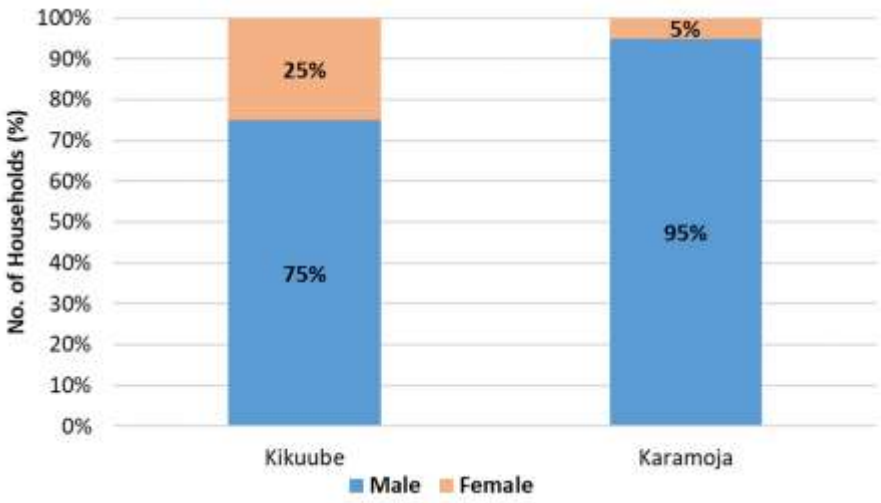

Figure 3: Gender of household head

The main reason a person was considered the head of the household in Kikuube was because they were the breadwinner or man of the house. In Karamoja, it was because they were the decision maker, breadwinner and/or man of the house (**Error! Reference source not found.**).

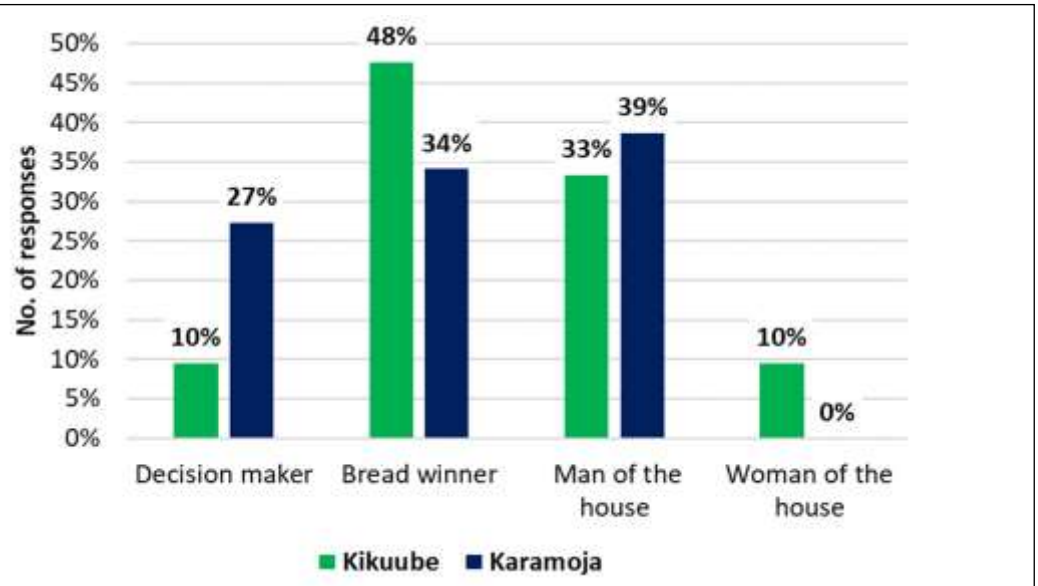

Figure 4: Reasons for consideration as the household head

The majority of the household heads in Kikuube were aged between 20 and 40 years with equal proportions in the older age groups. The household heads in Karamoja were mostly young adults (20-30 years) and a significant proportion were mature adults (Figure 5). Only 5% of them were elderly (more than 60 years). The average age of the household heads in

Kikuube was 43 years compared to about 38 years in Karamoja.

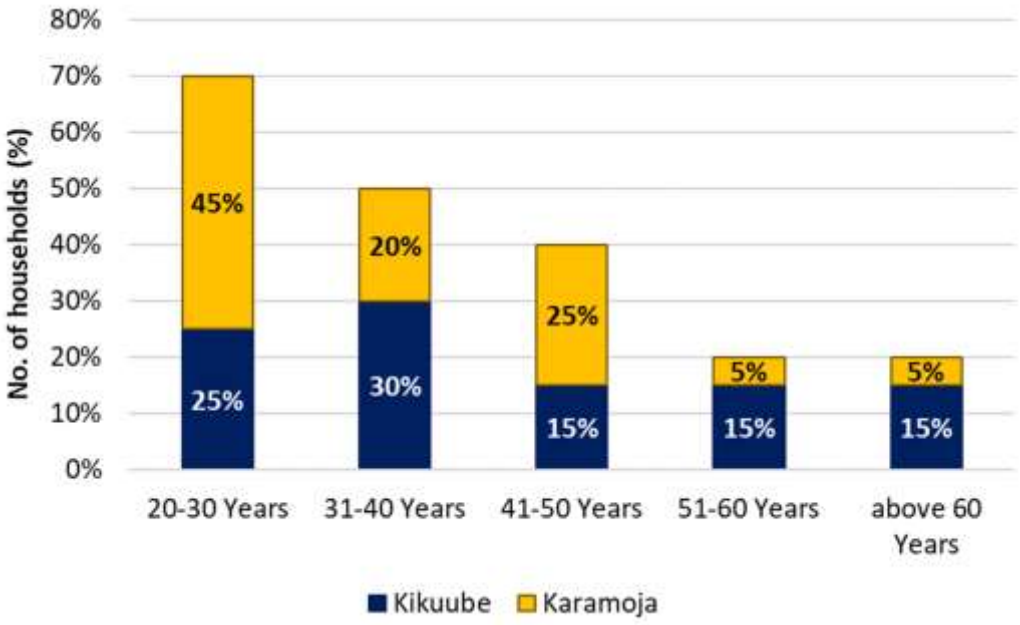

Figure 5: Age of household heads

The household heads in Karamoja are less educated than their counterparts in Kikuube. Those in Karamoja have on average completed only three years of formal education compared to seven years in Kikuube. The majority of household heads completed up to three years of formal education while in Kikuube that is slightly higher at up to seven years, reflecting low school completion rates typical in the Karamoja region (Table 2).

Table 2: Years of formal education of household head

Years	Kikuube	Karamoja
0-3 Years	25%	65%
4-7 Years	35%	20%
8-11 Years	20%	10%
More than 11 Years	20%	5%
Total	**100%**	**100%**
Average	**6.95**	**2.95**

An analysis of the marital status of the household heads shows that 50% and 95% of the household heads in Kikuube and Karamoja, respectively, were married. In Kikuube, 10% of the household heads were divorced/separated, 30% cohabiting and 5% single. A minority of household heads (5%) were widows(ers) in both Kikuube and Karamoja (Figure 6).

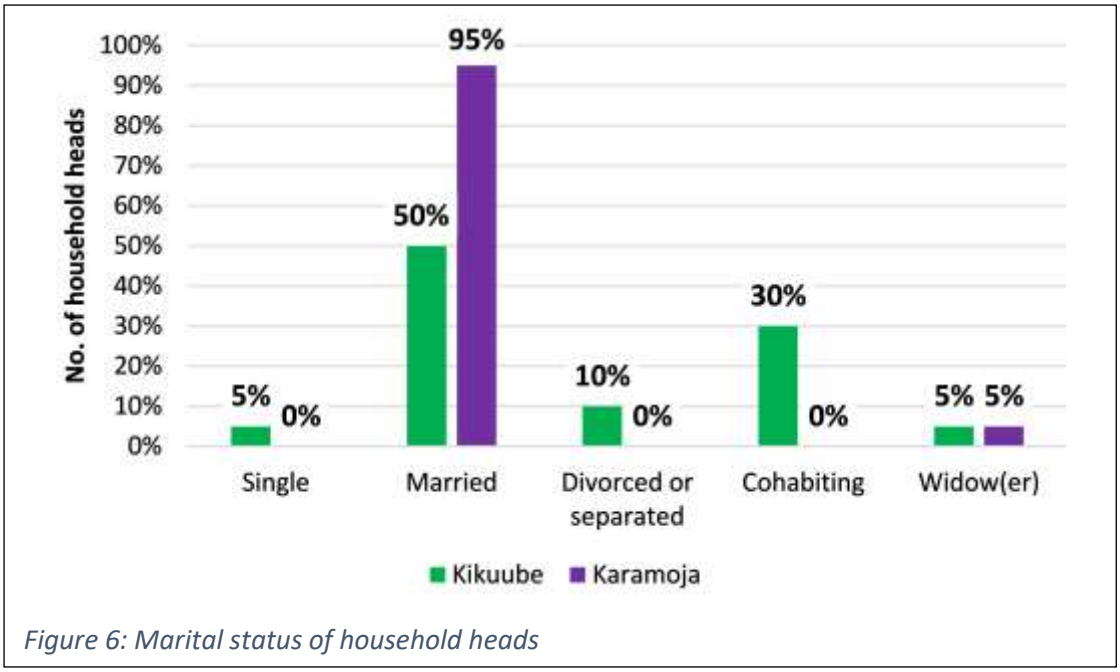

Figure 6: Marital status of household heads

A significant number of household heads (15%) are disabled in both Kikuube and Karamoja and 20% were chronically ill in the former compared to 5% in Karamoja. It is important that during project implementation, such households are not left out of activities in line with national and global development commitments not to leave anyone behind. Nonetheless, the majority of household heads are able-bodied (Figure 7).

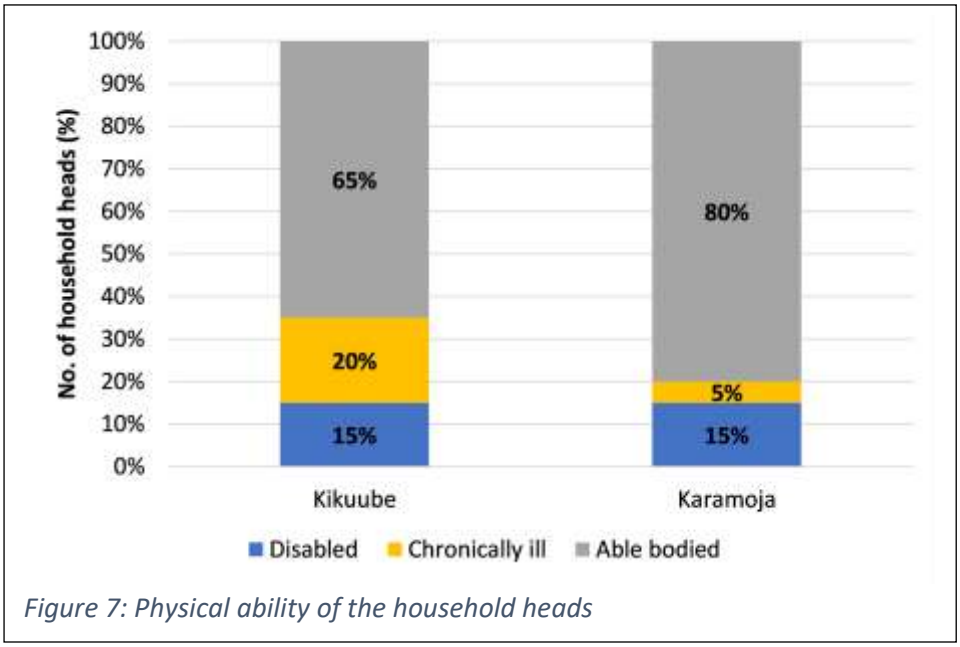

Figure 7: Physical ability of the household heads

3.1.3 Characteristics of households

The average household in Kikuube has seven members with the majority female. In Karamoja, a household has eight members with an equal proportion of male and female albeit with more adult males (Table 3).

Table 3: Household composition

Age group	Kikuube			Karamoja		
	Total	Male	Female	Total	Male	Female
5 years or younger (baby)	1	0	1	2	1	1
6 to 12 years (child)	1	0	1	2	1	1
13 to 17 years (teen)	2	1	1	1	0	1
18 to 59 years (adult)	3	1	2	3	2	1
60 years or older (elderly)	0	0	0	0	0	0
Total	**7**	**2**	**5**	**8**	**4**	**4**

Analysis of the period of residence in the current villages showed that the majority of the households have lived in their current villages for more than five years in both Kikuube District and Karamoja project areas. In Kikuube, 45% of the households have lived in the villages for more than 10 years and 30% for 6-10 years. Only 5% of the households have lived in the villages for up to a year. Meanwhile, in Karamoja, 45% of the households have lived in their current villages for more than 10 years and 40% for a period of 6-10 years. A small proportion of households (15%) had resided in the villages for up to five years (Figure 8).

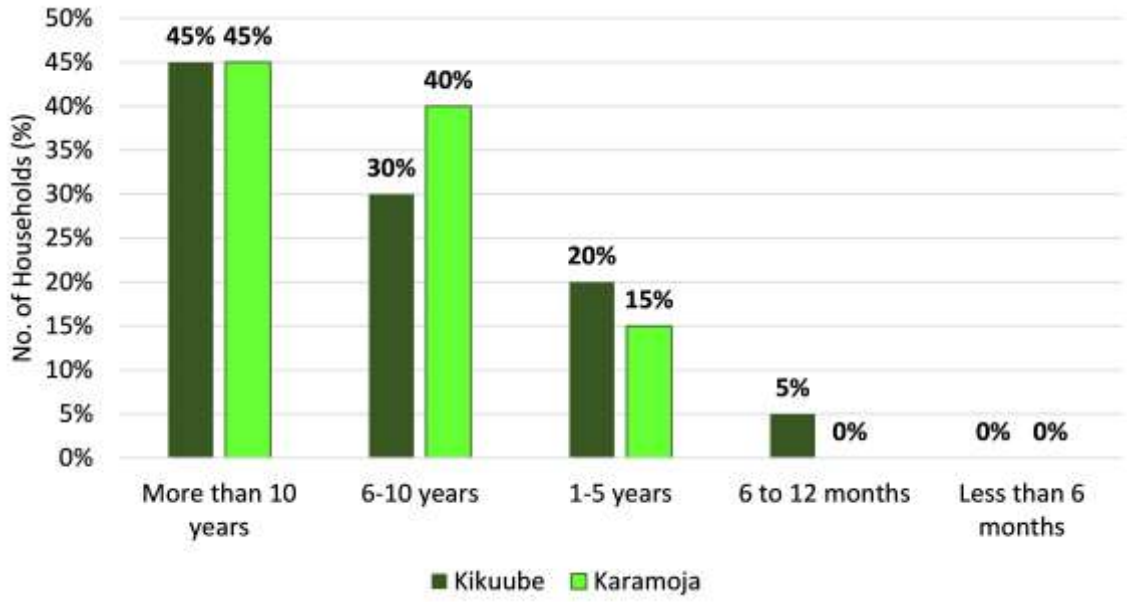

Figure 8: Period of residence at the current location

Climate change can be a driver of migration whether temporary, seasonal or permanent. More households in Kikuube (40%) had at least one member who had migrated to another location in the last six months compared to 25% in Karamoja. Even then, only one member of the household migrated. The main type of migration in both regions was temporary. Of the households with a migrant, the majority in Kikuube were males (75%) compared to Karamoja where most migrants were females (58%). None of the migrants in Karamoja was a household head but 22% of those in Kikuube were (Table 4).

Table 4: Migration characteristics of households

Indicator		Kikuube	Karamoja
Households with a member who migrated		40%	25%
Average number of migrants in a household		1	1
Type of migration	Temporary	100%	100%
	Seasonal	0%	0%
	Permanent	0%	0%
Gender of migrant	Male	75%	42%
	Female	25%	58%
A migrant is a Household Head	Yes	22%	0%
	No	78%	100%

The main destination for the migrants in Kikuube was another district within the subregion (50%) and one of the bordering countries (38%), in this case, the Democratic Republic of Congo. Only 13% of the migrants moved to another sub-county within the district. The majority of the migrants in Karamoja went to another district within the sub-region (40%) or another sub-county within the district (40%). A minority of migrants (20%) temporarily moved to another parish within the sub-county (Figure 9).

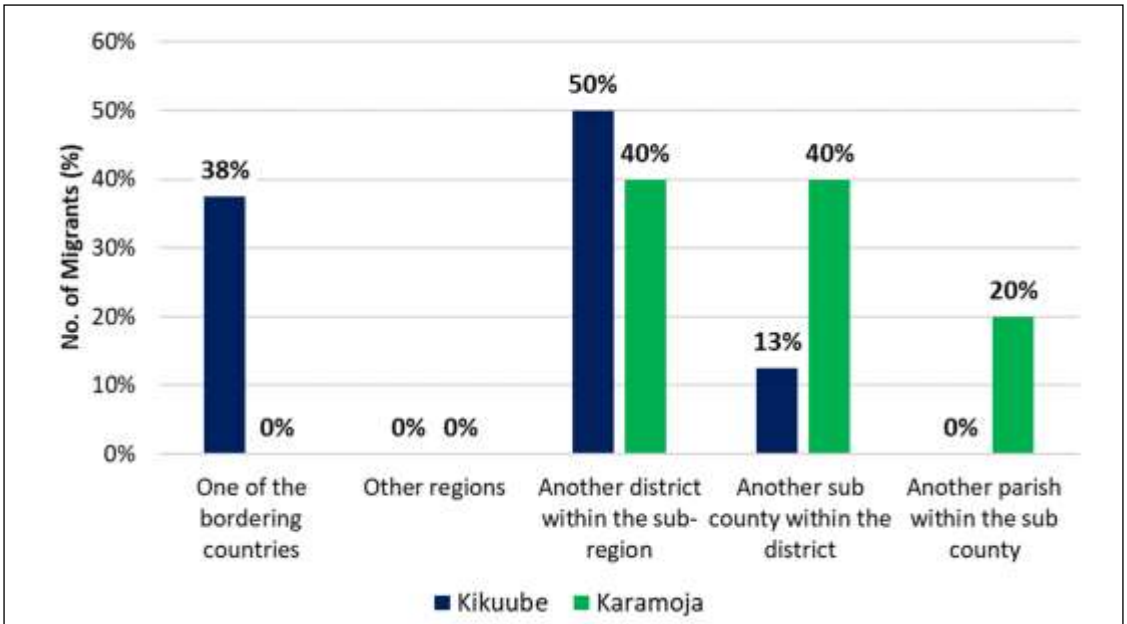

Figure 9: Most important migration destination

The main reason for migration to Karamoja was to search for food due to poor harvests and subsequent food insecurity. This was attributed to prolonged dry spells. Meanwhile, in Kikuube, the drivers of temporary migration were to search for jobs/work (67%) to earn income and to find land to grow food (22%) to supplement rations obtained in the Kyangwali refugee settlement (Figure 10).

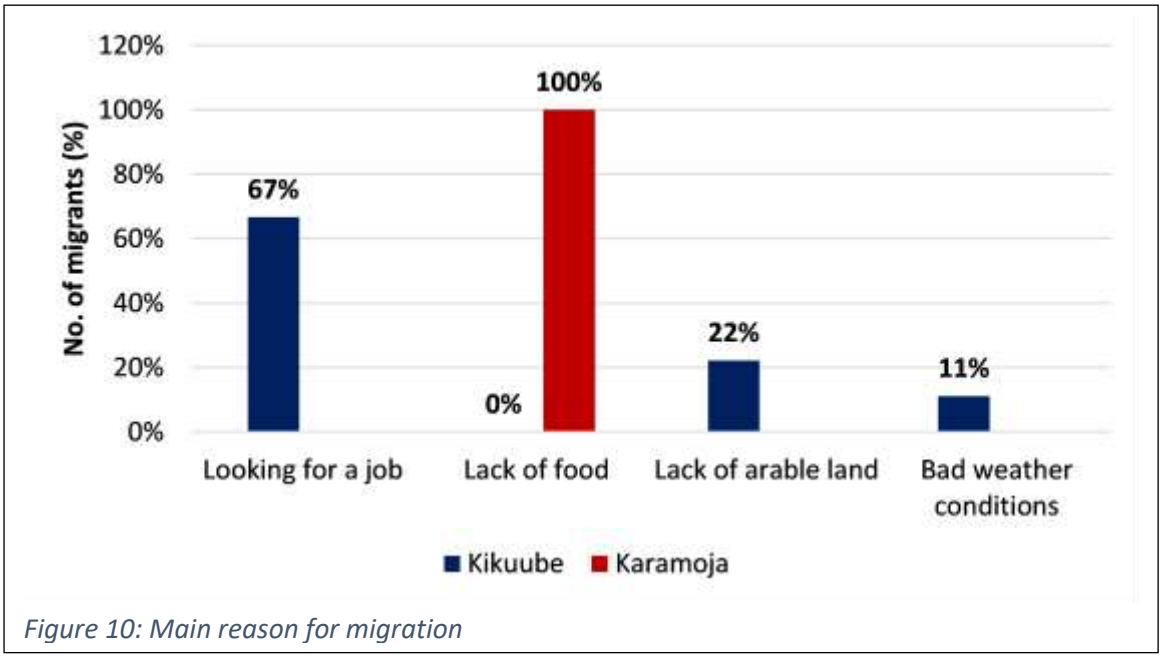

Figure 10: Main reason for migration

3.2 Knowledge, Attitude and Practices on Climate Risk Management

3.2.1 Knowledge of Climate Risk Management (CRM)

All respondents in Kikuube and Karamoja acknowledged hearing of the term climate change. When asked whether climate change is affecting their community, 95% of the respondents in Kikuube indicated that it was with only 5% not sure. In Karamoja, all the respondents indicated that climate change was affecting their community (Figure 11).

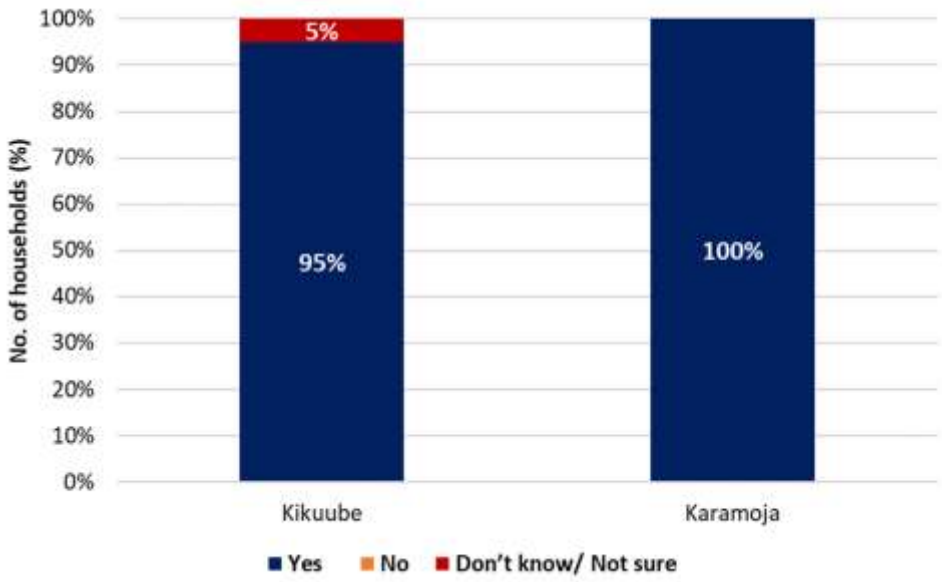

Figure 11: Perception of whether climate change is affecting the community

Climate change is mainly associated with change, or lack thereof, in rainfall amounts patterns, and seasons in both Kikuube and Karamoja. Of the respondents who have lived in the villages for more than 10 years, the majority in Kikuube indicated that they have experienced stable rainfall seasons, adequate rains and reliable onset of rainfall. Nonetheless, a significant number of households indicated otherwise. Climate change was perceived to have had a more adverse effect on rainfall distribution, onset and reliability in Karamoja and associated increases in flooding or drought. Even then, there is a significant proportion of the population that either does not know or is not sure about the effect of climate change (Table 5).

Table 5: Perception of climate change

Indicator	Kikuube			Karamoja		
	Yes	No	Don't Know/ Not sure	Yes	No	Don't Know/ Not sure
Stable rainfall seasons (wet and dry)	89%	0%	11%	0%	89%	11%
Adequate rainfall amount	67%	33%	0%	0%	78%	22%
Well distributed with uniform rainfall intensity seasons	56%	44%	0%	0%	78%	22%
Poorly distributed rainfall with inconsistent intensity	56%	33%	11%	89%	0%	11%
Unreliable onset of rainfall	44%	56%	0%	44%	56%	0%
Increased flooding or drought	11%	22%	67%	78%	22%	0%

As Figure 12 shows, there is a need to raise awareness of climate change issues as this is important for the majority of the population. This is critical in increasing knowledge, improving attitudes and adoption of climate risk management practices and empowering stakeholders to advocate for appropriate climate change adaptation and mitigation interventions.

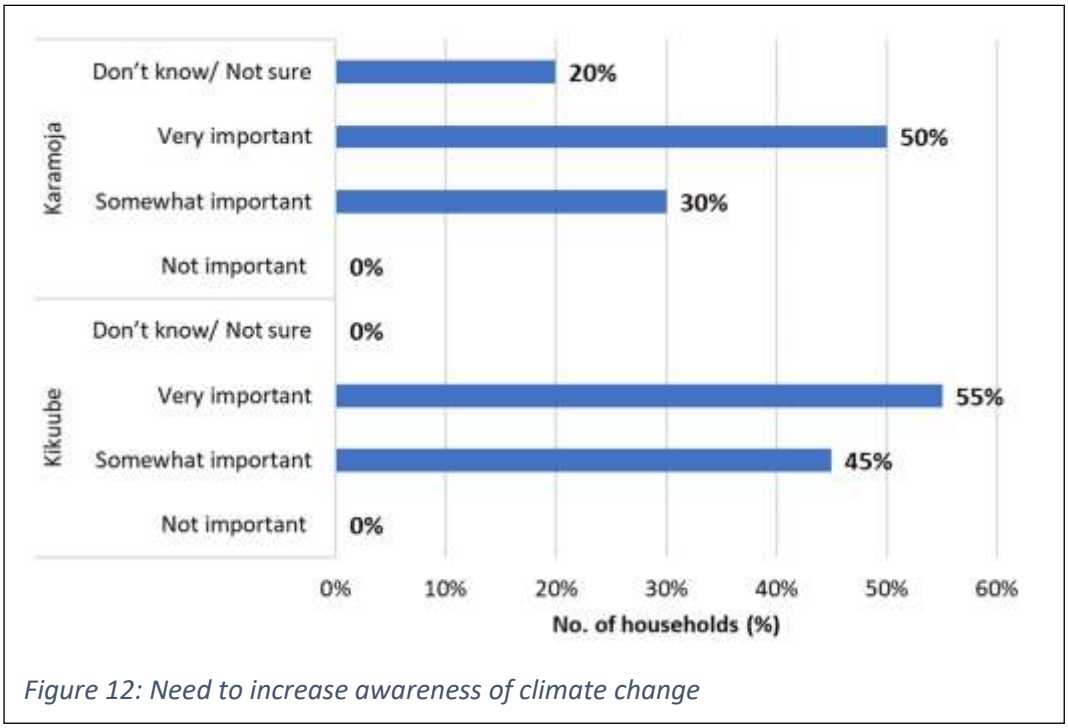

Figure 12: Need to increase awareness of climate change

3.2.2 Attitude towards CRM

To gauge the attitude towards taking action to address climate change, the majority of respondents in Kikuube (65%) and Karamoja (85%) agreed or strongly agreed that there was nothing they could do about it (Figure 13).

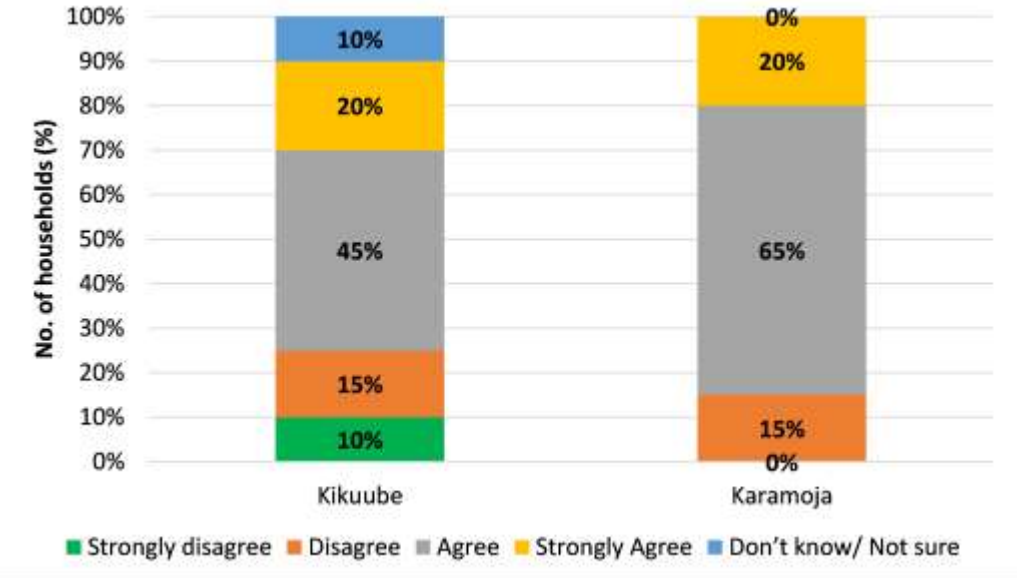

Figure 13: Attitude towards not taking action

This indicates that there is a high appetite for actions to reduce the impact of climate change in Karamoja which shows willingness to participate in activities addressing climate risk. This may be linked to their experience with climate change as flooding and droughts have increased and rains become more unreliable (as indicated in Table 5) and subsequent impact on livelihoods and food security.

3.2.3 Practices on CRM

When asked if the community had undertaken any activities to reduce the impact of climate change, 80% of households in Kikuube indicated they had with only 10% stating otherwise. Another 10% were unsure if the actions they had taken were climate change-oriented (Figure 14).

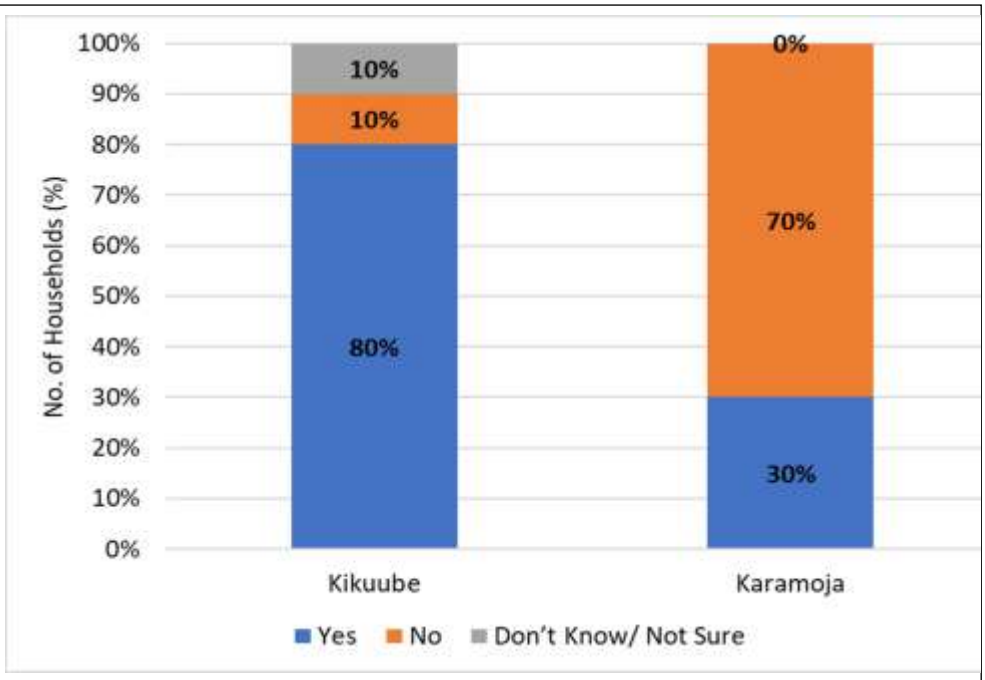

Figure 14: Undertaking activities to reduce the impact of climate change

All those who indicated actions were taken stated that they planted some trees and adopted energy-saving cooking stoves. In Karamoja, the majority of households (70%) indicated that they had not taken action to reduce the impact of climate change on their community. This was attributed to various factors including hunger/food insecurity, insecurity due to raids, poverty, and lack of awareness and knowledge on what actions to take, among others.

The actions the communities are taking to address climate change include planting trees, off-season vegetable growing using improved methods and diversifying livelihoods, among others.

3.2.4 Barriers to communities taking climate change actions

The following factors were identified through KIIs, FGDs and household survey as reasons for communities not taking action to lessen the impact of climate change.

Kikuube

- Limited land in the refugee settlement to grow trees
- Inadequate sensitization and knowledge of what actions can be taken
- Impunity of leaders in cutting down trees
- The inability of leaders to follow the by-laws they enacted

Karamoja

- Hunger and food insecurity-community is focused on meeting their food needs and they indicated that "when you are hungry, you cannot think of anything else".

- Insecurity in the community due to livestock rustling
- Uncertainty of rains/changing rain seasons
- Lack of knowledge of the actions to take
- Poverty means no resources available for activities other than meeting the immediate needs of the household.
- Lack of volunteerism to take collective action for the good of the community as people want to be paid for all activities they undertake
- Rampant theft in the community
- Inadequate access to water particularly for human consumption
- Inadequate or piecemeal interventions which do not show results so no motivation to take actions
- Low diffusion of interventions as some actors work with very few farmers
- The cost of investment in some technologies is high e.g. irrigation
- Few off-takes to make the high-cost technologies viable/sustainable
- Water scarcity especially in the dry season
- Ineffective agricultural extension services at the community level
- Weak linkage and coordination with various complementary programmes such as timing of disbursement of Parish Development Model money which would otherwise provide resources to access the various CRM technologies available.

Communities agree that local leaders participate in climate risk management actions (Figure 15). However, they indicated that more needs to be done, particularly in complying with by-laws and mobilizing communities for action.

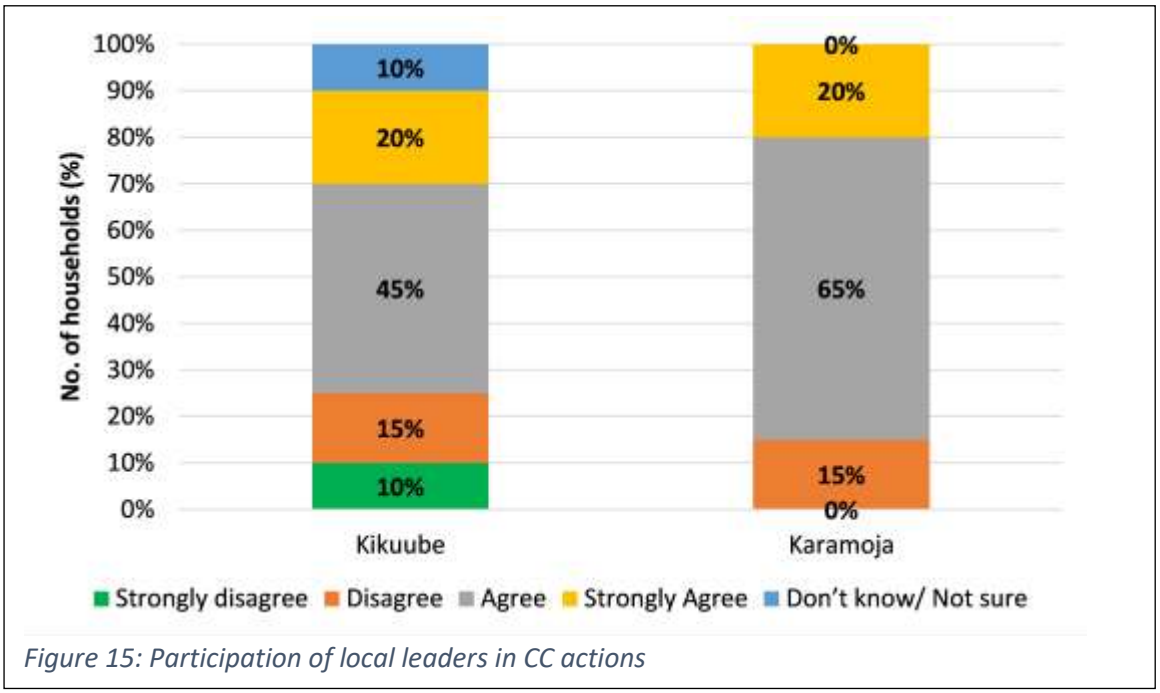

Figure 15: Participation of local leaders in CC actions

3.3 Availability of Climate Resilient Technologies

The following climate-resilient technologies available were identified through KIIs and FGDs and team observations:

- Drought tolerant and highly productive cattle in Karamoja. However, the promotion and adoption are still in the infancy as very few farmers have improved cattle.
- Vegetable growing (kitchen gardens) and irrigation are available but adoption is still limited due to distance from water sources.
- Valley tanks and dams store water mainly for livestock consumption, especially during the dry season or drought.
- Whereas briquettes are available in Kikuube refugee areas, the quality is very poor and respondents reported not using them.
- The use of Lorena stoves is readily available and well-adopted in Kikuube and is slowly being adopted in Karamoja.
- Irrigation using water from valley dams and tanks
- Drought-tolerant crop varieties in Karamoja and nutrient-dense crops such as orange flesh sweet potatoes and iron-rich beans are readily available in Karamoja.
- Diversification and restoration of livelihoods to include apiculture, poultry (women), making livestock salt licks
- Improved cook stoves which are energy efficient
- Rehabilitation of rangelands through re-seeding for better pasture management
- Livestock health management through community animal health workers
- Farmer-managed regeneration of tree cover, fruit tree growing

Whereas these technologies are available, their use by the communities is extremely low and underscores the low resilience to climate change and disasters, particularly in Karamoja.

3.4 Awareness of Climate Change and associated Gender-based Violence

Whereas all respondents in Kikuube and Karamoja indicated that they were aware of climate change, the level of concern about it is higher in Karamoja with 95% indicating they were very concerned (Figure 16). This is because, unlike Kikuube, Karamoja is climatically drier with one cropping season so poor rains (i.e. onset, distribution, and amounts) and/or drought, as associated with climate change, are more adversely impactful on livelihoods and wellbeing of the communities.

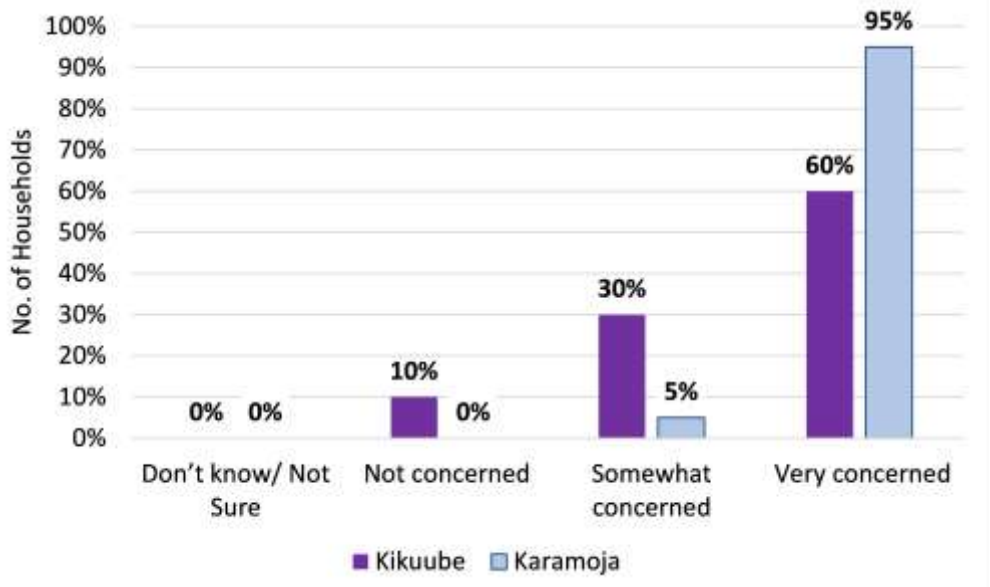

Figure 16: Level of concern about climate change

Climate change can be a driver of gender-based violence (GBV) in the communities because of its impact on livelihoods in communities as it affects food and income security in households. The level of GBV is higher in Karamoja with 45% of the households experiencing medium to high levels compared to 20% in Kikuube (Figure 17). Fewer households (30%) in Karamoja reported very low levels of GBV compared to Kikuube (55%).

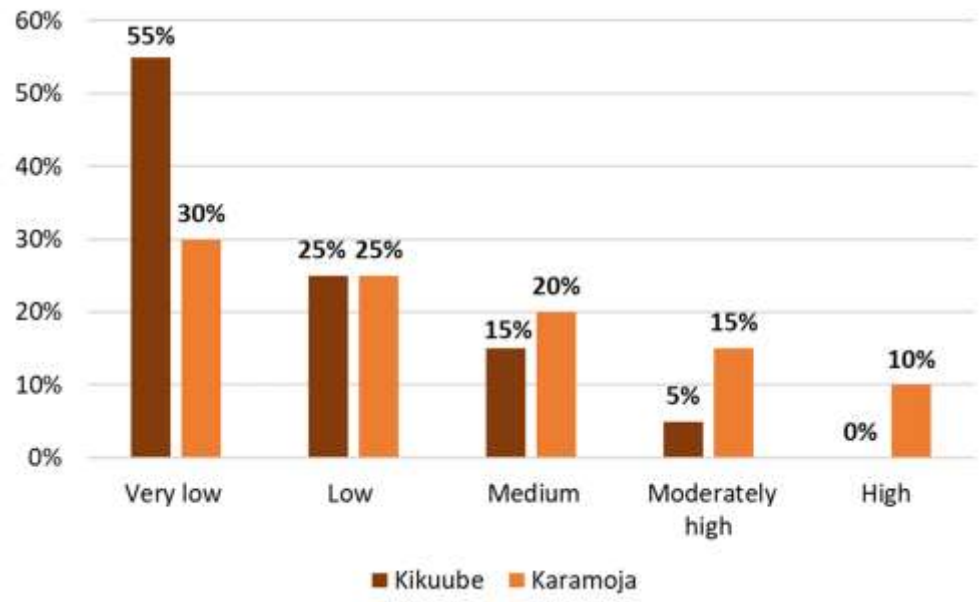

Figure 17: Level of GBV in Communities

The impact of climate change has increased the risk of GBV in Karamoja (95%) but has no change for the majority of households in Kikuube (Figure 18). This is because climate change is a driver of GBV as it creates chronic and acute stressors which exacerbate preexisting GBV risk factors for women and girls, such as poverty, rigid gender roles, and personal and

community conflict, among others. In addition, this may result in food insecurity and scarcity of resources such as water and pasture which further contribute to conflict in households and the community. In Karamoja, women and girls walk increasingly longer distances (20-25 Km) to get firewood and potable water (about 5 Km) which increases their risk of GBV en route. It also leaves them unable to respond to domestic demands promptly which increases tensions in the household that may result in violence.

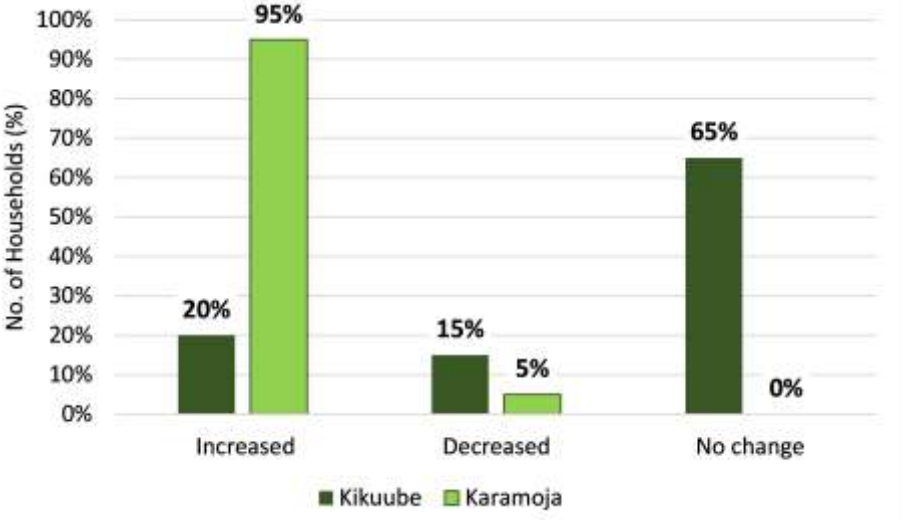

Figure 18: Change in risk of GBV with the impact of climate change

3.5 Documentation of lessons learned and evidence-based best practices

A good practice is not only one that is good but has been proven to work well and produce good results. It has been tested and validated through its various replications and is therefore recommended as a model and deserves to be shared so that a greater number of people can adopt it. Therefore, documenting good practices allows organizations to develop knowledge management solutions and tools to support the dissemination of climate risk management interventions. This entails drawing lessons from experiences to identify and understand good practices that will improve the implementation of interventions in CRM. Sharing knowledge gained from programmes and projects offers opportunities to share success and lessons learned to improve practices and their implementation.

The following FAO[1] criteria were used to identify and document good practices in Climate Change Resilience and Humanitarian Action for the Building Resilience and Integrating Climate Change in Karamoja (BRICK) Project.

a) **Effective and successful:** A "good practice" has proven its strategic relevance as the most effective way to achieve a specific objective; it has been successfully adopted and has had a positive impact on individuals and/or communities.

[1] FAO, 2013. *Good practices at FAO: Experience capitalization for continuous learning*. External Concept Note. FAO Rome

b) **Environmentally, economically and socially sustainable:** A “good practice” meets current needs, in particular the essential needs of the world’s poorest, without compromising the ability to address future needs.
c) **Gender-sensitive:** A description of the practice must show how actors, men and women, involved in the process, were able to improve their livelihoods.
d) **Technically feasible:** Technical feasibility is the basis of a “good practice”. It is easy to learn and to implement.
e) **Inherently participatory:** Participatory approaches are essential as they support a joint sense of ownership of decisions and actions.
f) **Replicable and adaptable:** A “good practice” should have the potential for replication and should therefore be adaptable to similar objectives in varying situations.
g) **Reducing disaster/crisis risks:** A "good practice" contributes to disaster/crisis risk reduction for resilience.

Based on the above criteria, the following practices were identified and documented:

Name of the Best Practice: Building Household Resilience through Access to Credit using Village Saving and Loan Associations (VSLAs)	
Introduction	Formal banking institutions have a very poor penetration in Karamoja. A few banks, microfinance institutions (MFIs) and Savings and Credit Cooperatives (SACCOs) operate in Karamoja. However, some districts like Karenga do not have any. Whereas bank agents may be available, they are difficult to reach due to long distances. Poor access to banking and credit facilities in Karamoja means the majority of the population is not banked with formal banking institutions. Reducing risk to shocks and stresses requires access to financial services which enable individuals to invest in adaptive strategies and have savings that allow for recovery. Loans allow households to cushion themselves against climate risks by enabling them to invest in income-generating activities and accumulate income and assets. Village Savings and Loan Associations (VSLAs) attempt to overcome the difficulties of offering credit to the rural poor by creating groups of people who can pool their savings to capitalize on a source of lending funds. Members make savings contributions to the pool fund and can also borrow from it at a modest interest rate. Typically, a VSLA is composed of 20–30 members.

Location	Karamoja
Stakeholders	Communities, NGOs, and District and Lower Local Governments
Methodological approach	• Mobilise the community to form groups. • Elect leaders of the group, typically a five-person management committee. • Register the group with the local district administration (sub-county). • Train the group on record keeping and group dynamics. • Groups meet weekly and members save through the purchase of shares at a price decided and fixed by the group at the beginning of the 12-month saving cycle. • Savings are maintained in a loan fund from which members can borrow in small amounts, typically up to three times their savings and repaid in installments over a period of three months. Loans are borrowed at a modest rate, typically 10 percent. • Each group should have a strong box to keep the money, ledger and passbooks. The strong box is locked with three padlocks and keys held by three members of the group who are not members of the management committee to ensure that there can be no manipulation of records. • At the end of every cycle, the accumulated savings and earnings from the loans are shared amongst the members according to the amount each member has saved. • After the share-out, members who do not wish to continue may leave the group and new members may be invited to join. Members who plan to continue to the next cycle may all agree to use some of their savings to make a contribution to the loan fund for the next cycle.
Result	Farmers mobilize resources to meet their basic needs, smoothen income and invest in local income-generating activities to diversify their income sources. Within a period of two years, the number of households without a third source of income had dropped from 42 percent to 9 percent. Household income and asset value also more than doubled, including female-headed households, which was partially attributed to VSLAs.

Impact	• The financial inclusion of households that belong to a VSLA has improved. • Access to credit has enabled farmers to invest in micro and small-scale businesses such as produce and livestock marketing, mobile phone charging, petty trade, and brewing local brew, among others. • Alternative sources of income have reduced reliance on firewood and charcoal sales to obtain cash. This has contributed to lessened stress on the environment. • VSLAs have fostered social networks which are useful in times of stress.
Innovation and success factors	• Allowing members to mobilize resources amongst themselves as seed capital instead of relying on donor funds • Training members on cash management and group dynamics • Mentoring VSLAs members
Challenges	• If not well managed, fraud by the group leaders or members may occur. • It takes 9 – 12 months for VSLA groups to become well-established and during this period they require continuous support, back-stopping and encouragement
Sustainability	The sustainability of the VSLAs depends on good management, mentoring throughout the first saving cycle, and members using their resources for start-up capital instead of a donor seed fund. Also, members are encouraged to borrow from the group and the interest charged enables the savings fund to grow.
Re-applicability	VSLAs are easily replicated as demonstrated in refugee settlements in Northern Uganda.
Additional sources	District Local Governments Training Manual https://rb.gy/lehhfn http://www.vsla.net/aboutus/vslmodel

Name of the Good Practice: Greening Humanitarian Response Through Establishment of Woodlots	
Introduction	Trees support refugees and host communities as a source of energy, shelter, food and livelihood opportunities. Fuel is not included in food distribution or cash assistance provided to refugees so they resort to collecting firewood

	from the local surroundings. Refugees compete with the host communities for the same wood resources and often own the land from which refugees collect firewood, which can become a source of tension. Refugees have, therefore, added to existing pressures on the environment and accelerated the rate of degradation and loss of tree cover within and around the settlements due to increased demand for wood, particularly for cooking. Woodland and bushland in areas surrounding the refugee settlements and nearby villages are the main sources of the wood, while cropland represents an additional source of firewood for the host communities. Refugees in Kyangwali have encroached on the nearby Bugoma Central Forest Reserve to collect firewood and timber. It is estimated that between 2001 and 2018, 10-13 percent of the tree cover in Kyangwali was lost in Kyangwali, which is significantly high. The average daily consumption of firewood by the refugees is estimated at 1.6 kg per person and among host communities is 2.1 kg, about 30 percent higher[2]. The rate of consumption of wood is much higher than tree growth, about four times in refugee settlements, resulting in environmental degradation. Between 2001 and 2018, the tree cover loss in Kyangwali was 10-13 percent. This has adverse effects on the environment, livelihoods and food systems and increases vulnerability to climate change. The increasing firewood scarcity is a challenge which results in women and girls walking long distances to collect firewood and exposing themselves to more risks such as sexual and gender-based violence. Firewood is typically collected from between 4-10 km away from individual homes. As such, woodlots can provide an ongoing source of wood fuel, easing the availability of wood fuel and timber and conserving the environment to enable communities to adapt to climate change.
Location	Kyangwali Refugee Settlement

[2] World Bank and FAO. 2020. Assessment of Forest Resource Degradation and Intervention Options in Refugee-Hosting Areas of Western and Southwestern Uganda. World Bank, Washington, DC, USA.

Stakeholders	Refugee and host communities, District Local Government, Non-governmental Organisations, National Forestry Authority (NFA), Office of the Prime Minister (OPM), and landlords.
Methodological approach	• Mobilize and sensitize relevant stakeholders and organize beneficiaries into groups to encourage and promote tree planting. • Where the refugee settlement is on government land, request land allocation from the OPM. Otherwise, refugee groups could acquire other communal land with the support of OPM. • Assess the suitability of the identified sites and demarcate for the establishment of woodlots. • Identify the appropriate tree species to be planted and the tree nurseries that will supply them • Prepare the planting sites (with consideration of soil conservation measures) • Plant the seedlings and ensure the physical establishment of plantations and adherence to quality standards • Maintain the trees post-planting for at least three years to improve tree survival rates • Establish ownership agreements and user rights of the planted trees and their products. • Develop a woodlot sustainable management plan
Result	More than 600ha of woodlots established in Kyangwali
Impact	Increased availability of firewood and the short distance to collect it has reduced the cost of cooking fuel amidst a reduction in cash transfers.
Innovation and success factors	• Capacity building of communities and partners to increase the technical and managerial skills needed to establish and manage the woodlots • Planting fast-growing tree • Active participation of refugee groups
Challenges	• Establishment and management of woodlots requires adequate resourcing and multi-year funding for least three to five years to ensure adequate production capacity • Labour needed for planting and tending species for trees is particularly intense for at least the initial three

	years.
Sustainability	Proper harvesting of trees will ensure their regeneration and sustainable supply of woodfuel and timber.
Replicability	Woodlots are easily replicated and have been established in other refugee settlements.
Additional sources	Nsamizi Training Institute for Social Development, Lutheran World Federation, NFA, and DLG

Name of the Good Practice: Greening Humanitarian Response Through Fuel-Saving Stoves	
Introduction	The annual wood fuel consumption of refugees and host communities within 5 km of the four refugee settlements in western Uganda is estimated at 475,130 MT. This heavy reliance on wood fuels significantly outstrips the amount which can be harvested sustainably, resulting in loss of tree cover. It is estimated that between 2001 and 2018, 10-13 percent of the tree cover was lost in Kyangwali, which is significantly high. Most of the wood fuel is used for cooking. In Kyangwali, the traditional three-stone fire is the dominant cooking system among refugees and host communities. This system is characterized by low energy efficiency, resulting in the use of a significant amount of firewood which reinforces pressure on wood resources. The Rocket Lorena stove saves up to 50 – 60 percent of the firewood that would be consumed using the three-stone fire stove if the two-pot cavities are used properly. This saves energy and subsequently, the amount of wood fuel needed and reduces pressure on the environment. Although Rocket Lorena stove is accepted and adopted to a certain extent by refugees and host communities, more needs to be done to increase adoption to reduce on amount of fuel for cooking and environmental degradation, and increase resilience to climate change.
Location	Kyangwali Refugee Settlement
Stakeholders	Communities, NGOs, CBOs, District Local Government
Methodological approach	• Artisans were trained on how to build Rocket Lorena stoves using locally available materials • Households contract the artisans to construct the stoves for them
Result	About 62 percent of refugees and 52 percent of host community households are using Rocket Lorena stoves.
Impact	The shift to Rocket Lorena stoves has reduced demand for fuel wood, pressure on natural resources, expenditure on

	fuel, exposure of women and children to risks associated with collecting firewood, and the time needed for collecting fuel and releasing some of their time for other productive activities.
Innovation and success factors	• Training local artisans to build sturdy stoves from locally available materials. • Users need basic know-how to use the stove properly and to carry out proper maintenance.
Challenges	Regular maintenance is needed due to wear and tear especially in the fire chamber, at pot rests and in pot cavities particularly where heavy stirring is a cooking habit
Sustainability	Trained artisans live in the community and can be contracted directly by the users to build the stoves.
Replicability	Rocket Lorena stoves are easily replicable and are now used in all refugee settlements.
Additional sources	Uganda National Alliance for Clean Cooking (UNACC) Working Group on Energy and Environment (WorkGrEEn) under the Comprehensive Refugee Response Framework Joint Energy and Environment Projects (JEEP) Joint Effort to Save the Environment (JESE)

Name of the Good Practice: Building Climate Resilience Through Cash for Work	
Introduction	Karamoja has received relief assistance, particularly food aid, for decades to alleviate food scarcity. However, markets in Karamoja opened up and during periods of food stress, households depend on markets to access food. However, this is constrained by limited income-earning opportunities. Creating employment opportunities through cash-for-work activities provides income for participants during the off-farming season to enable them to address basic needs and participate in other productive investment and savings activities. Furthermore, it creates useful community assets that support livelihoods in the long term. These are important for strengthening resilience to shocks and to break the dependency on food aid. Cash for work activities varies and includes rehabilitation or construction of community access roads, valley tanks, water ponds, small irrigation systems, water systems, and environmental protection and conservation, among others.
Location	Maaru, Kotido
Stakeholders	Communities, DLG, NGOs and CBOs
Methodological approach	• Mobilize communities to create awareness, identify and prioritize projects

	• Verify the beneficiaries • Form groups and elect leaders • Training on how to execute the activity and provide necessary tools and inputs • Monitor the implementation of the activity • Make payments based on agreed terms
Result	Natiir-Longor community access road was constructed and trees were planted along the new road. Also, households earned income through participation in the work and gained skills in the execution of labour-based activities.
Impact	The new road improved road connectivity and eased access to social services. In addition, some households invested the income earned in other income-generating activities and cash injected into local markets stimulated the local economy.
Innovation and success factors	• Community mobilization and sensitization • Demand-driven interventions • Ensure effective community participation throughout the project implementation. • Inclusion of persons with disability and the elderly
Challenges	• Payment delays can discourage effective participation. • Improper management can lead to fraud
Sustainability	Sustainability depends on the availability of funds for community projects.
Replicability	Cash for work has been replicated across Karamoja under various programmes including the Northern Uganda Social Action Fund.
Additional sources	District Local Governments, Office of the Prime Minister

Name of the Good Practice: Enhancing Climate Risk Management through Micro Irrigation System	
Introduction/context	Karamoja is dependent on rain-fed agriculture and has one main harvest season. However, drought and prolonged dry spells have increased in intensity and frequency resulting in reduced crop production and food insecurity. Water scarcity is heightened during the six-month dry season from October to March. During this period, access to water to support livelihoods is very limited. This indicates that water scarcity is a major constraint to crop production in Karamoja. However, food production can be increased to smoothen food security throughout the year. Water sources in Karamoja have been harnessed for livestock production.

	These sources have also been used for other multiple uses to support activities such as small-scale irrigation. This supports crop production for food and income security and livelihood diversification, a tenet of resilience building.
Location	Kapedo, Karenga
Stakeholders	Local communities, non-governmental and community-based organisations, District Local Government, Ministry of Agriculture, Animal Industry and Fisheries
Methodological approach	• Mobilise communities to form groups of 25-30 people • Establish the micro-irrigation on a site based on community interest and the proximity to a year-round water source • Train in basic irrigation techniques and how to use the equipment • Train in good agronomic practices (GAP) of crops that groups are interested in growing • Provide support to farmers throughout one production cycle and marketing phase
Result	• Groups produced vegetables such as cowpeas, kale, tomatoes, cabbage, onion, and eggplant on land which was not regularly cultivated. • Farmers realized at least three harvests each year under the irrigation system • Household income increased significantly from the sale of vegetables.
Impact	Irrigation enabled farmers to utilise land, which was not regularly cultivated, throughout the year growing assorted vegetables. The vegetables provided nutritious food even in the dry and lean seasons and additional income from sales. This improved household food security enabled households to educate their children, purchase food and meet other needs. Furthermore, farmers invested proceeds from vegetable sales into other agricultural enterprises such as the purchase of inputs for maize, sorghum and beans. The GAPs learned were transferred to the growing of other crops, leading to improved production, Also, other community members emulated their neighbours in the groups and began practising GAPs in their gardens.
Innovation and success factors	• Training beneficiaries in basic irrigation techniques combined with GAPs

	• Providing in-kind grants for the micro-irrigation system with a community match of at least 30 percent of the market value. • Training on basic maintenance of the irrigation system
Challenges	• High initial investment for smallholder farmers • Labour burden from treadle pumps • Limited availability of micro-irrigation kits in input dealer shops
Sustainability	The farmers have since taken ownership of the systems and the management and continued growing vegetables.
Replicability	The system has been replicated in other the agricultural and agro-pastoral areas of Karamoja
Additional sources	MAAIF, DLG, NGOs

3.6 The capacity of local organizations and structures to address climate change

Civil Society Organizations (CSOs) in the districts participate in interventions designed to address the impacts of climate change such as monthly district Disaster Management Committees (DMC) meetings. However, DMC structures are inactive at the sub-county or parish level. In addition, some CSOs and technocrats in Lower Local Government have inadequate skills to address disasters and the impacts of climate change in communities. Whereas the DLGs have skills to address climate change, they cannot cascade these skills to lower levels or communities effectively. There is, therefore, a need to establish the capacity gaps and fill them through training to enhance CSOs' effectiveness.

3.7 Local action to influence policy, legislation and strategies

There is limited action among communities to influence policy at any level. This is compounded by ineffective DMCs, the main forum at lower government levels. However, the CSOs, through district fora and regular interactions with the District Local Government (DLG) technocrats can influence policy. However, this is limited by poor documentation, presentation and coordination of issues at these fora. Therefore, more actions are required to empower communities and actors at the local level to participate in activities and other discourse as they are at the forefront of the impact of climate change. In Karamoja, 85 percent of households indicated that it is important to encourage and promote community participation in climate change activities and discussions. All households in Kikuube were of the same view (Figure 19).

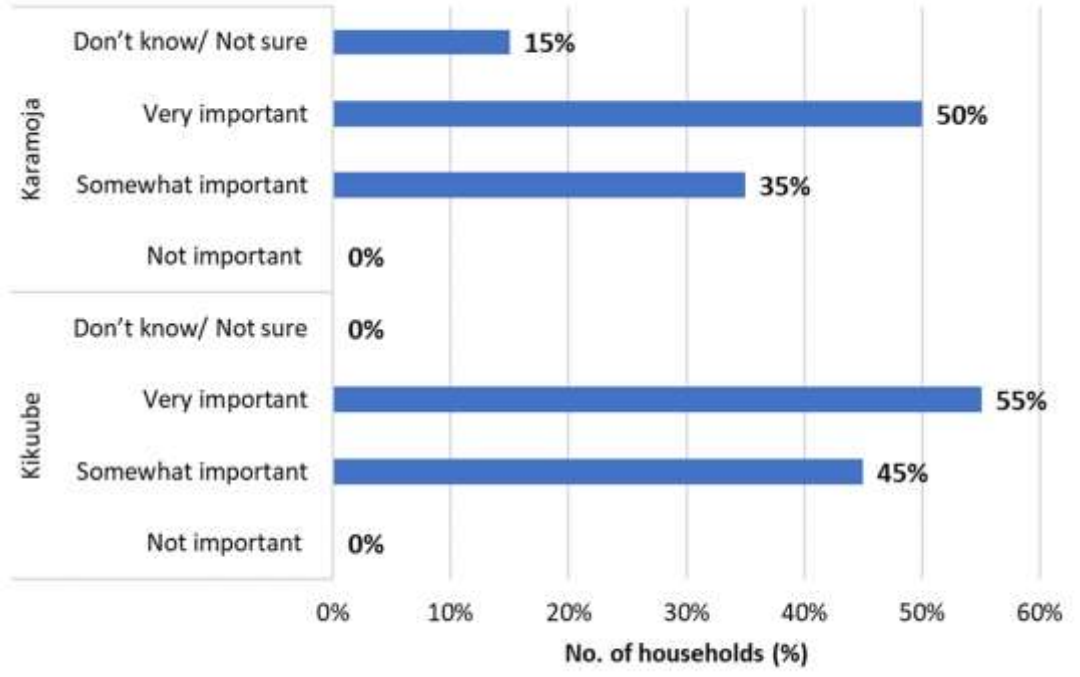

Figure 19: Need for community participation in Climate Change discourse

With support from CSOs, some communities can make their voices heard to influence policies and strategies through participation in Barazas at the District Headquarters. However, this is usually focused on service delivery and not necessarily climate change issues.

3.8 District Hazard and Risk Profiles

Kikuube and Karenga are new districts as Kikuube and Karenga were carved out of the Hoima and Kaabong, respectively. These administrative changes have necessitated the development of new hazard and risk profiles to support disaster and climate risk management in the districts. Typically, the profiles are part of the District Contingency Plans (DCPs). It was noted that all three districts have commenced the process of developing their hazard and risk profiles and DCPs. However, these are yet to be finalized and approved by district management.

The districts indicated that they need support to finalize the profiling and DCPs, especially for stakeholder meetings. In addition, as part of the finalization of profiles and the DCPs, the DLGs should be empowered to mobilize resources for their DCPs otherwise they will remain non-operational. Lessons can be taken from other regions such as West Nile where this has been done successfully.

3.9 The capacity of CSOs to advocate for green and just solutions

At the local level, CSOs mainly advocate for a reduction in tree cutting and tree planting. As such, there is more awareness around these issues as communities in Kikuube and Karamoja indicate that it is important to comply with the environmental laws, decrease tree cutting and plant trees as they have realized these enable the community to prevent the impact of climate change (Table 6).

Table 6: Importance of selected environmental factors in reducing the impact of climate change

Factor	Kikuube				Karamoja			
	Not important	**Somewhat important**	**Very important**	**Don't know/ Not sure**	**Not important**	**Somewhat important**	**Very important**	**Don't know/ Not sure**
Comply with environmental laws	15%	60%	25%	0%	0%	55%	30%	15%
Decrease deforestation	0%	45%	55%	0%	0%	30%	60%	10%
Increase reforestation	5%	25%	70%	0%	0%	5%	85%	10%

However, the capacity of CSOs to advocate for other climate change solutions and to enable them to better respond to localized community adaptation needs is limited. This is largely due to failure/inability to document lessons learned and best practices in the implementation of their activities in the communities, and limited skills in advocacy. It is noted that the advocacy skills of the CSOs are stronger at the national than local level, underscoring inadequacy in capacity at local. This points to the need for capacity building in advocacy for CSOs and other stakeholders working at the grassroots in the project areas.

References

1. ACDI/VOCA (2016). *Micro-Irrigation and Horticulture Production in Karamoja*. ACDI/VOCA, Kampala.
2. Adele Harmer (2012). *Cash and Voucher for Work in Food Security Programmes Lessons Learned from Karamoja, Uganda*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
3. FAO and UNHCR (2017). *Rapid Woodfuel Assessment: 2017 Baseline for the Bidibidi Settlement, Uganda*. Rome, FAO, and Geneva, Switzerland, UNHCR. www.fao.org/3/a-i7849e.pdf.
4. FAO and UNHCR (2018). *Managing Forests in Displacement Settings: Guidance on the Use of Planted and Natural Forests to Supply Forest Products and Build Resilience in Displaced and Host Communities*. Rome, FAO and UNHCR. www.fao.org/3/I8309EN/i8309en.pdf.
5. FAO (2013). *Good practices at FAO: Experience capitalization for continuous learning*. External Concept Note. FAO Rome
6. Megan Täuber, Philip Sandwell and Epa Ndahimana (2023) *A Roadmap for Energy Access in Displacement Settings: Uganda*. UNITAR. Geneva, Switzerland.
7. Ministry of Finance, Planning and Economic Development (2023). *Poverty Status Report 2021*. Kampala, Uganda
8. Ministry of Water and Environment (2019). *Water and Environment Sector Response Plan for Refugees and Host Communities In Uganda*. Kampala, Uganda.
9. OPM and UNCHR (2024). *Uganda Refugee Portal*.
10. Uganda Bureau of Statistics (2023). *2022 Statistical Abstract*. UBOS, Kampala.
11. U-LEARN (2022). *Financial Services in the Uganda Refugee Response*. Kampala.
12. U-LEARN (2023). *Productive Use of Energy in Uganda's Refugee Response*. Kampala, Uganda.
13. World Bank and FAO (2019). *Rapid Assessment of Natural Resource Degradation in Refugee Impacted Areas in Northern Uganda*. The World Bank, Washington, DC, USA.
14. World Bank and FAO (2020). *Assessment of Forest Resource Degradation and Intervention Options in Refugee-Hosting Areas of Western and Southwestern Uganda.* The World Bank, Washington, DC, USA.

Annex 1: Baseline Data

1. How many people have lived here (permanently, at least for the past 6 months), in total?
   Kikuube 7 Karamoja 8

2. How many people belong to your household? (people who live under the same roof and share the same financial resources)?

Group	Kikuube	Karamoja
Male	1	5
Female	2	1
Children	4	2

3. What is the age of the respondent?

Age range (Years)	Kikuube	Karamoja
20-30	25%	55%
31-40	30%	10%
41-50	15%	25%
51-60	10%	5%
above 60	20%	5%
Total	100%	100%
Average	41.6	36.1

4. What is the sex of the respondent?

	Kikuube	Karamoja
Male	45%	30%
Female	55%	70%

5. What is the relationship between the respondent and the head of the household?

Relationship	Kikuube	Karamoja
Head of household	65%	50%
Spouse	35%	40%
Dependent	0%	10%
In-law	0%	0%
Other	0%	0%

6. What is the sex of the respondent?

	Kikuube	Karamoja
Male	45%	30%
Female	55%	70%

7. What is the sex of the head of the household?

	Kikuube	Karamoja
Male	75%	95%
Female	25%	5%

8. Why is this person considered the head of the household?

Reason	Kikuube	Karamoja
Decision maker	10%	27%
Breadwinner	48%	34%
Man of the house	33%	39%
Woman of the house	10%	0%
Other (specify)	0%	0%

9. What is the age of the head of household?

Age range (Years)	Kikuube	Karamoja
20-30 Years	25%	45%
31-40 Years	30%	20%
41-50 Years	15%	25%
51-60 Years	15%	5%
above 60 Years	15%	5%

10. Household head number of completed years of formal education

Years	Kikuube	Karamoja
0-3 Years	25%	65%
4-7 Years	35%	20%
8-11 Years	20%	10%
More than 11 Years	20%	5%
Total	100%	100%
Average	6.95	2.95

11. What is the marital status of the head of household?

	Kikuube	Karamoja
Single	5%	0%
Married	50%	95%
Divorced or separated	10%	0%
Cohabiting	30%	0%
Widow(er)	5%	5%

12. Is the head of household disabled, chronically ill or able-bodied?

	Kikuube	Karamoja
Disabled	15%	15%
Chronically ill	20%	5%
Able-bodied	65%	80%
Other (specify)	0%	0%

13. Household composition

Age group	Kikuube			Karamoja		
	Total	Male	Female	Total	Male	Female
5 years or younger (baby)	1	0	1	2	1	1
6 to 12 years (child)	1	0	1	2	1	1
13 to 17 years (teen)	2	1	1	1	0	1
18 to 59 years (adult)	3	1	2	3	2	1
60 years or older (elderly)	0	0	0	0	0	0
Total	7	2	5	8	4	4

14. How long has your household been living in this village?

	Kikuube	Karamoja
More than 10 years	45%	45%
6-10 years	30%	40%
1-5 years	20%	15%
6 to 12 months	5%	0%
Less than 6 months	0%	0%

15. How many members of your household migrated from your household to another location in the last 6 months?

Indicator		Kikuube	Karamoja
Households with a member who migrated		40%	25%
Average number of migrants in a household		1	1
Gender of migrant	Male	75%	42%
	Female	25%	58%

16. What were the most important destinations?

Destination	Kikuube	Karamoja
One of the bordering countries	38%	0%
Other regions	0%	0%
Another district within the sub-region	50%	40%
Another sub-county within the district	13%	40%
Another parish within the sub-county	0%	20%

17. What was the main type of migration?

Type of migration	Kikuube	Karamoja
Temporary	100%	100%
Seasonal	0%	0%
Permanent	0%	0%

18. What was the main reason to migrate?

	Kikuube	Karamoja
Looking for a job	67%	0%
Lack of food	0%	100%
Lack of arable land	22%	0%
Lack of pasture land/water	0%	0%
Bad weather conditions climate change (drought, flood)	11%	0%
Insecurity (violence, etc.)	0%	0%
Other (specify)	0%	0%

19. Is one of the migrants the head of household?

	Kikuube	Karamoja
Yes	22%	0%
No	78%	100%

20. Have you heard the term climate change?

	Kikuube	Karamoja
Yes	100%	100%
No	0%	0%

21. Is climate change affecting your community?

	Kikuube	Karamoja
Yes	95%	100%
No	0%	0%
Don't know/ Not sure	5%	0%

22. Has your community been affected by any of the following over the past 10 years?

	Kikuube			Karamoja		
Indicator	Yes	No	Don't Know/ Not sure	Yes	No	Don't Know/ Not sure
Stable rainfall seasons (wet and dry)	89%	0%	11%	0%	89%	11%
Adequate rainfall amount	67%	33%	0%	0%	78%	22%
Well distributed with uniform rainfall intensity seasons	56%	44%	0%	0%	78%	22%
Poorly distributed rainfall with inconsistent intensity	56%	33%	11%	89%	0%	11%
Unreliable onset of rainfall	44%	56%	0%	44%	56%	0%
Increased flooding or drought	11%	22%	67%	78%	22%	0%

23. How concerned are you about climate change?

	Kikuube	Karamoja
Don't know/ Not Sure	0%	0%
Not concerned	10%	0%
Somewhat concerned	30%	5%
Very concerned	60%	95%

24. What is the level of risk of GBV in your Household?

	Kikuube	Karamoja
High	0%	10%
Moderately high	5%	15%
Medium	15%	20%
Low	25%	25%
Very low	55%	30%

25. How has the risk of GBV changed with the impact of climate change?

	Kikuube	Karamoja
Increased	20%	95%
Decreased	15%	5%
No change	65%	0%

26. Do you think any of the following are important in helping the community prevent the impact of climate change?

	Kikuube				Karamoja			
Factor	Not important	Somewhat important	Very important	Don't know/ Not sure	Not important	Somewhat important	Very important	Don't know/ Not sure
Comply with environmental laws	15%	60%	25%	0%	0%	55%	30%	15%
Decrease deforestation	0%	45%	55%	0%	0%	30%	60%	10%
Increase reforestation	5%	25%	70%	0%	0%	5%	85%	10%
Increase awareness of climate change issues	0%	45%	55%	0%	0%	30%	50%	20%
Encourage and promote community participation	0%	45%	55%	0%	0%	35%	50%	15%
Having Disaster management plans	5%	40%	55%	0%	0%	60%	25%	15%

27. State your level of agreement with the following statements

	Kikuube				
	Strongly disagree	Disagree	Agree	Strongly Agree	Don't know/ Not sure
Community leaders are taking action to address the impacts of climate change on communities	5%	25%	35%	35%	0%
Local government is taking action to address the impacts of climate change on communities	5%	5%	65%	25%	0%
Development partners are taking action to address the impacts of climate change on communities	0%	0%	60%	40%	0%
Community members are taking action to address the impacts of climate change on the community	5%	15%	30%	50%	0%
There is nothing I can do about climate change	10%	15%	45%	20%	10%

	Karamoja				
	Strongly disagree	Disagree	Agree	Strongly Agree	Don't know/ Not sure
Community leaders are taking action to address the impacts of climate change on communities	0%	15%	65%	20%	0%
Local government is taking action to address the impacts of climate change on communities	0%	25%	40%	35%	0%
Development partners are taking action to address the impacts of climate change on communities	0%	5%	40%	55%	0%
Community members are taking action to address the impacts of climate change on the community	0%	10%	50%	40%	0%
There is nothing I can do about climate change	50%	30%	10%	5%	5%

28. Finalized hazard and risk profiles

Kikuube	No
Karenga	No
Kotido	No