Evaluating Outcomes of the *Climate Adaptation and Mitigation (CAMP+) Project in Kikuube District*

Kyangwali Refugee Settlement

PROGRAM GOAL: *To create durable, sustainable, and scalable solutions to the livelihood and environmental challenges for the 126.000 displaced refugees and host communities of the Kyangwali Settlement.*

Endline Evaluation Report

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Kaddu Zachary
Team Leader / Lead Consultant
For Jeeva Consult International

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Abbreviations

CAMP	Climate Adaptation and Mitigation Project
CDRN	Community Development and Resource Network
CLIRK	Climate innovation for Kyangwali and Karamoja Project
DANIDA	Danish International Development Agency
DRC	Democratic Republic of Congo
ECD	Early Childhood Development Center
FHHH	Female Headed Households
FSNA	Food Security and Nutrition Assessment
IPCC	Intergovernmental Panel on Climate Change
MHHH	Male Headed Households
OPM	Office of the Prime Minister Uganda
UCRRP	Uganda Country Refugee Response Plan
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
WASH	Water Sanitation and Hygiene
WFP	World Food Programme

Executive Summary

Background

The Climate Adaptation & Mitigation Project (CAMP+ Phase II), supported by the Novo Nordisk Foundation and Innovation Norway through CARE Denmark, completed its run in the Kyangwali refugee settlement, Kikuube district, Southwest Uganda. Initially set for two years, the project aimed to make the world's first sustainable refugee settlement. As it wrapped up, CARE International in Uganda launched an Endline evaluation to measure the project's success against expected outcomes detailed in its project log-frame. This evaluation provided crucial insights and recommendations that will guide future projects, improving strategic and methodological approaches.

Evaluation Purpose and Objectives

The purpose of the evaluation for the CAMP+ II project was to conduct an independent assessment against its expected outcomes, as outlined in the log frame, and to evaluate the project's overall achievements, documenting key lessons and recommendations for future initiatives. The objectives were twofold: firstly, to evaluate the relevance, effectiveness, efficiency, impact, and sustainability of the project's outcomes and strategies according to OECD criteria. Secondly, to identify and analyse any unintended outcomes, establish best practices, and gather specific insights and recommendations that CARE could apply to similar future projects.

Evaluation Methodology

The CAMP+ Phase II project evaluation employed a mixed-methods and participatory approach, incorporating both qualitative and quantitative techniques to ensure a thorough analysis of the project's impact across the Kyangwali Refugee Settlement. This comprehensive methodology involved engaging a wide array of stakeholders through key informant interviews, focus group discussions, and in-depth surveys that were carefully designed to capture diverse perspectives and detailed insights. Data was collected from 232 sampled respondents, ensuring a representative and statistically reliable analysis. Interview with district officials, refugee settlement officials, project partners and project staff we also conducted. FGDs were equally conducted with some of the beneficiaries to qualify the statistics and provide their perspective on the project achievements, successes and challenges. Extensive review of project related documents was also done to further support the analysis and triangulate the findings of the evaluation.

Demographics

A beneficiary questionnaire was administered to a total of 232 beneficiaries, majority of whom were female (61.2%). A considerable proportion (44.8%) of the interviewed beneficiaries were aged between 20-30 years. Nearly all the respondents interviewed were refugees from DR Cong (90.5%). A considerable proportion of the respondents interviewed indicated having lived in the community for less than 10 years. In regard to marital status, slightly more than half indicated being married and living with their spouse. Education-wise, slightly more than half (59.5%) of the interviewed respondents had attended and completed some form of education. About 39.7% of the respondents were participating in agriculture activities as main livelihood source.

Project Relevance

Overall, the evaluation noted that the CAMP+ Phase II project interventions were moderately relevant to the needs of target beneficiaries. The project successfully implemented alternative and sustainable energy sources, notably through community and school solar-powered cooking and phone charging solutions. This initiative primarily addressed the critical need for safe and accessible cooking energy, as beneficiaries previously relied on firewood from distant and unsafe locations. The establishment of community kitchens in strategic areas like Maratatu B Health Center and Kagoma Reception Centre and the institutional solar-powered kitchen greatly provided an alternative and sustainable cooking solution. Similarly, Kinakyeitaka Primary School and biogas at COBRUWAS Secondary School were very critical in improving the school cooking practices. Hence, the communal and institutional solar-powered innovations also presented a core

strategy to mitigate the environmental degradation caused by over-reliance on firewood and the limited access to hydroelectric power in refugee settings.

The project's interventions around waste management through the establishment of the Plastic+ initiative demonstrated a strategic response to environmental degradation and lack of livelihood opportunities, and even though it faced some challenges, these were innovatively addressed by performing adaptive management during the project implementation period

The project's innovative approach aimed at creating a multi-faceted impact—addressing not only environmental degrading activities of firewood energy but also partly enhanced the livelihood challenges of the refugee and host community members thereby creating sources of livelihood. The synergy between different solutions, such as combining energy-efficient cooking technologies with efforts to boost agricultural productivity and waste management, was commendable. The implemented solutions directly responded to the critical need for sustainable energy sources, reflecting a thoughtful approach to reducing reliance on biomass and with a long-term impact of improving health outcomes.

Project Effectiveness

Achievement of Intended Outcomes and Outputs.

Outcome 1: Increased use of alternative and sustainable energy for cooking, by refugees and host communities. The project was able to record a total of 2,689 (94.3%) beneficiaries using solar powered communal kitchens which was slightly below the target of 2,850. In addition, the project was able to see 110 beneficiaries supported with solar-powered solutions at Kinakyeitaka Primary School while 156 households benefited from solar-powered solutions. About 65 households benefited from biogas clean cooking solutions while about 447 children and teachers benefited from the biogas clean cooking solution at COBRUWAS Secondary School. In total, the project was able to benefit a total of 3,467 individuals through the communal, institutional and household clean-energy cooking solutions. The results demonstrate a positive and significant achievement for the project providing alternative and better cooking solutions compared to the traditional use of biomass (firewood) which was the common by the start of the project. This also demonstrates that the solutions were adaptable and acceptable to the target groups of people and shows a more welcoming attitude for future replication if considered.

The impact of communal kitchens was significantly less than that of school kitchens due to low adoption driven by socio-cultural beliefs. Many households were reluctant to embrace communal cooking, preferring traditional methods instead. Additionally, communal cooking stoves were primarily used for boiling foods, which did not meet the comprehensive cooking needs of households. This led families to alternate between the provided solutions and biomass to fully satisfy their cooking requirements. In contrast, the school kitchen offered a complete clean cooking solution, eliminating the need for biomass alternatives. This not only maximized the utilization of the school kitchen but also significantly reduced the school's biomass consumption. The success of the school kitchen model has sparked interest from other institutions, such as Sanyu Babies Home and Budo Primary School, demonstrating its effectiveness and potential for broader adoption.

Outcome 2: Capacity for greening food systems increased among refugees and host community households. Initially, the project aimed to improve the usage of greening food systems among Kyangwali refugee and host community households, with a target of causing the increase among 70% beneficiaries. The project was only able to register a 48.7% adoption rate of sustainable agricultural practices. The project however made changes in this specific outcome, and it was moved to a sister project CLIRK to further deliver on the intended benefits. Nonetheless, the evaluation findings showed that some of the beneficiaries reported adapting greening food system practices like intercropping (92%), Seed banking (49.6%), Composting (38.9%), Nitrogen-fixing trees (26.6%) and live fencing (18.6%). The results of this outcome will be measured under the CLIRK project to provide a deep analysis as not much was achieved under the CAMP+ project.

Outcome 3: Plastic Waste recycling and contribution to livelihood opportunities. The CAMP+ project considerably surpassed its targets in plastic waste recycling. It successfully collected and repurposed 8.12 tons of plastic waste, exceeding the weekly target by averaging 1.58 tons, largely due to the effective integration of Ecoplastile Wastepays system which streamlined the collection process. The project on-boarded 102 agents onto the Wastepays system, was able to create 14 green jobs (including the project officer, agent acquisition intern, a super-agent and micro agents), and close to 100 youth and women are on waitlist to start *recycling as a business*. Therefore, the project was able to promote *recycling as a business* among the refugees and host communities, thereby providing an alternative livelihood to the agents who in return are able to earn an average of $100 in form of commission on a monthly basis.

Outcome 4: CAMP+ concept promoted for replication, among humanitarian stakeholders. The projects comprehensive approach to building sustainable community infrastructure, coupled with strategic partnerships and community involvement, has set a precedent for similar initiatives globally. The partnership with DANIDA through CARE Denmark and the co-investment with Ecoplastile U Ltd showcased the project's adaptability and its practical application in real-world settings. These initiatives successfully demonstrated the project's viability and potential for broader adoption, although it fell short of the initial replication target as of the time of this evaluation, the CAMP+ concept is continuingly being promoted for replication and further expansion of existing solutions under the CAMP+ project through other funding streams and stakeholder engagement in other geographical contexts. Based on the CAMP+ models, private sector partners are taking steps to independently replicate solutions in other contexts (i.e., ECOCA school kitchens and the plastic recycling model that are now in process of replication in other settings like schools), though these are not humanitarian stakeholders, this was an "unintended outcome" that emphasized the potential for humanitarian-private partnerships to serve as a catalyser of further investments in humanitarian solutions by the private sector.

Effectiveness of Private Sector Collaborations:
The CAMP+ project's collaboration with private sector entities like Ecoplastile Ltd and ECOCA EA Ltd showcased moderate levels of successful collaborations with the private sector. Key to the success were flexibility, effective communication, working in partnership to solve challenges and joint community engagements, which allowed the two parties to adapt and overcome operational challenges, which demonstrated that working with the private sector is an effective way of delivering on a humanitarian project.

Factors influencing the achievement or non-achievement of the intended results:
The evaluation noted that factors for successful achievements included collaborative engagement with local leadership of the settlement which increased community buy-in and tailored interventions; adaptability and flexibility in project design, allowing for real-time adjustments to better meet community needs; and targeted awareness and capacity building, which fostered acceptance and utilization of new technologies. The major factors against achievement were cultural and social resistance, particularly towards communal cooking which impeded user uptake.

Project Impact.

The CAMP+ project influenced social, environmental, and economic aspects of the Kyangwali Refugee Settlement and the host community. Socially, it fostered community cohesion and integration through communal facilities like community and school solar-powered and biogas kitchens, which also served as hubs for cultural exchange and social interaction. Economically, the project spurred job creation and diversified income sources for some of the beneficiaries engaged in plastic recycling as a business which created an alternative livelihood and source of income. Environmentally, the introduction of sustainable energy solutions such as solar -energy and biogas energy cooking solutions notably reduced reliance on biomass fuels, leading sustainable environmental management and created lasting use of clean energy solutions.

Project Sustainability.

The CAMP+ project successfully implemented a range of sustainable interventions within the Kyangwali refugee and host community settings, demonstrating considerable potential for long-term impact. The

project fostered noteworthy spill-over effects, improving social cohesion and reducing environmental impacts through the introduction of biogas and solar-powered kitchens at community and institutions. These initiatives not only reduced reliance on non-renewable biomass fuels but also promoted communal engagement and resource conservation. Strategically, the project focused on building sustainable systems for resource utilization, incorporating flexible and culturally relevant technologies, and engaging with local enterprises to develop robust local markets and value chains. This holistic approach ensured the project's interventions were sustainable and could be scaled, as evidenced by the adoption of its models by external stakeholders and the replication in other settings.

Conclusion and Recommendations.

The CAMP+ Project effectively addressed the complex needs of the Kyangwali refugee settlement through innovative, community-oriented initiatives, achieving notable social, environmental, and economic impacts. While facing challenges such as cultural resistance and logistical constraints, the project's adaptive strategies and strong stakeholder engagement have laid a foundation for sustainable development, promising long-term benefits for the community. The evaluation team recommends several strategies to increase the effectiveness and sustainability of future projects similar to the CAMP+ Project:

- Initiate targeted marketing campaigns, implement reward systems, and regularly collect community feedback to increase acceptance and usage rates of solar-powered and biogas-powered kitchens at community and institutional levels.
- Establish regular maintenance schedules for kitchen facilities and involve the community in decision-making to ensure the services meet their needs.
- Conduct in-depth community consultations to adapt the project's features to local cultural and practical preferences.
- Combine kitchen facilities with other community services, form community management committees, and explore small business incubators within the kitchens.
- Promote local markets for recycled products and engage the community in both supplying and consuming these products.
- Provide clear guidelines and training for proper preparation and separation of recyclable materials.
- Disseminate success stories, forge key partnerships for project replication, and establish mobile training units for widespread and accessible agricultural training.
- The institutional solar kitchen demonstrated high uptake and commercial viability compared the community one given the context in which the school solar cooking was implemented under CAMP+ II.

1. Introduction

1.1 Project Overview.

The Climate Adaptation & Mitigation Project (CAMP+ Phase II), funded by the Novo Nordisk Foundation and Innovation Norway through CARE Denmark, has concluded its implementation in the Kyangwali refugee settlement and surrounding host communities in Kikuube district, Southwest Uganda. Originally a two-year project, it was extended for an additional six months at no extra cost in order to complete the remaining project activities as per the approved workplan. As the project concluded, CARE International in Uganda commissioned an endline evaluation to independently evaluate the achievements relative to its anticipated outcomes, as outlined in the project's log frame. This evaluation scrutinized the project's implementation and achievements based on the DAC evaluation criteria in meeting its goals, capturing valuable lessons and recommendations for future initiatives. The insights from this evaluation will inform strategic planning and foster improvements in programmatic and methodological approaches for future similar projects.

1.2 Contextual Background.

1.2.1 Refugee Context in Uganda.

Uganda is currently (as of January 2024) hosting the largest number of refugees in the region with over 1,626,056refugees and asylum seekers (1,584,489 refugees; 41,567 asylum seekers)[1], primarily from South Sudan, DR Congo, Somalia, Eritrea, Burundi, Rwanda and Sudan. Women & Children constitute up to 80% (1,306,163) and nearly all the refugees (91%) stay and live in 13 refugee settlements across the country. All the refugees rely and solely depend on the Food/Cash Assistance to survive and meet their dietary needs.

In 2023, about 99,052[2] refugees and asylum seekers arrived in Uganda, and a total of 245,811 persons arrived since 2022. This continuous influx, combined with a natural population growth (at 3% annually) in Uganda, puts significant pressure on the limited health, WASH, and education infrastructure in hosting districts. Refugees primarily live in settlements within twelve districts[3], alongside host communities, resulting in economic and environmental challenges. Currently, urban refugees represent 8% of the total registered refugee population in Uganda.

The refugee population has increased steadily in recent years and this trend is expected to continue with ongoing conflict in the DRC, Sudan and South Sudan. For Uganda, hosting the largest number of refugees in Africa has put pressure on basic service provision and has decreased access to livelihoods as well as resources, such as land and commodities, including wood fuel. These demands have the potential to profoundly affect social cohesion between refugees and the communities which host them. The rapid deforestation occurring in Uganda will likely have further consequences for climate, soil health, and the ability for populations to withstand environmental hazards. Worse poverty, education and employment rates are found amongst refugees in Uganda, where 40% of refugee heads of HHs do not have any formal education, with a weak labour participation rate and high unemployment.[4]

[1] GoU and UNHCR (2024), Uganda- Population Dashboard: Overview of Refugees and Asylum-seekers in Uganda
[2] GoU and UNHCR (2024)
[3] Adjumani, Isingiro, Kamwenge, Kikuube, Kiryandongo, Koboko, Kyegegwa, Lamwo, Madi Okollo & Terego, Obongi and Yumbe
[4] T. Beltramo, J. Fix, and I. Sarr. "Uganda Knowledge Brief: Using Socioeconomic Data to Promote Employment Solutions for Refugees in Uganda". UNHCR. 2021.

Key barriers driving poor livelihood outcomes across locations and refugee groups include poor access to land, formal financial services, and markets.[5] Land plays a critical role in the earning potential and stability of refugees, in their household consumption, and in their ability to ascend out of poverty. The agricultural sector in many localities is the primary source of earnings through sale of produce and/or wage labour.[6] Access to land is a substantial barrier to realizing self-reliance for (active or aspiring) agriculturally oriented refugee households. Refugee households on average reported having access to 0.5 acres compared to two acres among host community households.[7]

The 2022 Food Security and Nutrition Assessment (FSNA) found that across all locations, almost half (45%) of refugee households had 'borderline' or 'poor' food consumption score (FCS), and 55% of refugee households were classified as 'moderately' or 'severely food insecure', more broadly classified as 'food insecure'. This has worsened compared to the December 2020 FSNA, where 36% of the refugee households were classified as food insecure. Furthermore, 67% of refugee households were 'very significantly', and 26% 'significantly negatively affected' by reductions of WFP assistance in 2022 (with no major deviation across gender heads of HHs or location), leading to 76% of households reducing meal portions/quantities, relying on poorer diets (38%), and reducing non-food expenditure (22%).

The refugee Gross Enrolment Rate (GER) indicates 44% attending Early Childhood Development (ECD), 95% in primary school, and 10% in secondary school. This is in addition to 212,395 learners within the host community (i.e., 31% of all learners) who access education in the settlement locations. Enrolment at post-primary and tertiary levels remains low, which is similar to trends within the national education system. In some localities, 39% of urban refugee households and 32% of settlement-based refugee households have at least one school aged child not enrolled or regularly attending school.[8]

Access to safe sources of drinking water remains a challenge for more than 50% of households in the dry and wet season.[9] Certain settlements (notably Kyangwali, Kyaka, and Nakivale) have large proportions of refugee households (up to 44%) that use unprotected sources of water for drinking and cooking, compared to 9% across all settlements.[10] Among refugee households, large proportions (greater than 50% in certain settlements) across all settlements have latrines, whether communal or within the household, that are in a bad state and/or in need of rehabilitation.

1.2.2 Climate Change Adaptation.

While the Ugandan natural climate is moderate, the country is experiencing increased frequency and severity of extreme weather events. Uganda has contributed minimally to the build-up of human-derived greenhouse gases (GHGs) in the atmosphere[11]. Yet, according to the Notre Dame Global Adaptation Initiative (2021), out of 182 countries, it ranks 10th in terms of vulnerability to climate change and 155th for ability to leverage investments and convert them into adaptation actions. Rapid and unplanned urbanization, weak enforcement of building codes and zoning regulations, environmental degradation and lack of coordinated disaster response strategies enhance the country's vulnerability to these disruptive events (World Bank, 2021). The draft National Vulnerability and Risk Atlas by the Office of the Prime Minister identifies floods, droughts, landslides, earthquakes, lightening and hailstorms as the seven key climate risks and hazards experienced by Uganda, while the Uganda Climate Change Communication

[5] REACH, U-Learn, LRSWG. "The Realities of Self-reliance within the Ugandan Refugee Context". 2023.
[6] UNHCR. "IPE". 2021-2
[7] REACH, U-Learn, LRSWG. The Realities of Self-reliance within the Ugandan Refugee Context. 2023.
[8] REACH, U-Learn, LRSWG. "The Realities of Self-reliance within the Ugandan Refugee Context". 2023.
[9] UNHCR & IMPACT Initiatives. "2022 Participatory Assessment". April 2023.
[10] UNHCR. "IPE". 2021-2.
[11] Uganda's contribution to world's total green-house emission is estimated at 0.099% (Ministry of Water and environment, 2015a).

Strategy (2017-2021) highlights floods, droughts, landslides, sand and dust storms, heat waves, and forest fires.

According to the Intergovernmental Panel on Climate Change (IPCC, 2014), Uganda's maximum temperatures will rise between 1°C and 2.2°C by 2050, while minimum temperatures will rise between 0.8°C and 2.5°C, depending on global emission scenarios. Therefore, most models adopted by the climate science community (CMIP5) predict an increase in the intensity and frequency of extreme weather events between the current and the mid-century period. In addition, the slow-moving impact or the temperature increase is expected to affect agriculture.[12] While it is projected that precipitation will increase in some parts of Uganda, warmer temperatures will accelerate the rate of evapotranspiration, reversing the benefits of increased rainfall and reducing crop and livestock yields. Climate change damage estimates in the agriculture, water, infrastructure and energy sectors could collectively amount to US$273-437 billion (2.8-4.5% of cumulative prospected GDP) between 2010 and 2050[13].

Living conditions within the settlements are often characterized by limited resources resulting into heavy reliance on the environment. Refugee movements tend to produce uncontrolled modifications for example trees are being cut down to create space for shelter, farmland and wood fuel at the rate at which the environment cannot replenish causing the refugees, often women and children, to search increasingly further away putting them at increased risk of violent attack. In addition, land degradation, unsustainable groundwater extraction, water pollution and human waste disposal by displaced persons contaminate local groundwater and cause the spread of diseases. Degrading the environment also has an impact on these refugees including struggle, growing conflict among different groups and communities.

According to Uganda *Contribution to Refugee Protection and Management* report by UNDP (2017), the estimated expenditure amount in ecosystem loss is estimated to be at USD 90,682,169 and the costs for energy and water being estimated at USD 145,881,761. These two categories have a percentage contribution of 28% and 45% respectively to the entire refugee budget. The settlement of refugees in the country impacts on the environment in four broad ways owing to various livelihood and other activities

- Deforestation and general loss of vegetation cover.
- Water pollution and depletion of ground water resources.
- Land degradation and,
- Air pollution

Scaling up adaptation and preparedness is essential to ensure resilience of the population and the economy to extreme weather events. Uganda is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and the country intends to implement plans to foster a low-carbon development path, with an emphasis on adaptation (Ministry of Water and Environment, 2015c). The Third National Development Plan (NDPIII) recognizes that the livelihood of the people of Uganda is highly dependent on the exploitation of its natural resources and that climate change management is critical to the reduction of disaster losses. The restoration of forests, which should increase forest coverage from 14% to 21% by 2030, has so far not kept pace with the annual loss, posing risks for soil erosion and landslides during flood events.

1.2.3 Energy and Environment in Refugee Context.

Uganda has a total primary energy consumption of 0.0593 quadrillion Btu which equals 14.94 Mio. tons of oil equivalent. Biomass is still the most important source of energy for most of the Ugandan population.

[12] The Warm Spell Duration Index (the number of days in a sequence of at least six days in which the daily maximum temperature is greater than the 90th percentile of daily maximum temperature) is expected to increase by 20-50 days.
[13] Ministry of Water and Environment, (2015)

About 90% of the total primary energy consumption is generated through biomass, which can be separated in firewood (78.6%), charcoal (5.6%) and crop residues (4.7%). Electricity is contributing only 1.4% to the national energy balance while oil products, which are mainly used for vehicles and thermal power plants, account for the remaining 9.7%. Uganda has one of the lowest per capita electricity consumption rates in the world, with 215 kWh per capita per year. The average in Sub-Saharan Africa is 552 kWh per capita and the world average is 2,975 kWh per capita.

Uganda's rate of forest loss is among the highest in the world, estimated at 4% per annum, and is largely caused and accelerated by firewood harvesting.[14] In Uganda, most households depend on firewood (68%) and charcoal (28%).[15] This is having an impact on the frequency and severity of environmental shocks. Refugee reliance on firewood has also contributed to the loss and degradation of environmental resources.[16] Drought or dry spells and water shortages (the most-commonly reported shock) have hindered crop production and livestock management across the settlements.

The main environmental challenges faced in the settlements are a result of small plots of land (e.g. 30m² and 50m²) allocated to refugees which inhibits sound natural resource management. The continuous use of these plots for competing land use activities such as shelter and agriculture has led to local deforestation, household pollution, soil exhaustion, flooding, siltation and eutrophication of surrounding water bodies. Because firewood is becoming scarcer in and around settlements, refugees – especially women and children – walk on average of 4-8km and spend about 6-10 hours searching for firewood.[17] Some have even resorted to using plastic materials such as bottles for cooking which poses a serious health concern. This situation is now becoming more serious as refugees now illegally collect firewood in some neighbouring forest reserves (Zoka FR in Adjumani, Katonga FR in Rwamanja, Bugoma FR in Kyangwali; refugees in Oruchinga even cross over to Tanzania).

Wood consumption in and around the settlements surpasses natural replenishment and has consequently led to deforestation and forest degradation as well as contributing to conflict over firewood between refugees and the host community. Incidents of refugees being chased and assaulted during firewood collection have been reported.[18]

In refugee settlements, it is estimated that 20 million trees must be planted annually to keep pace with the demand for firewood.[19] Meeting the energy needs of refugee households is a significant challenge. There remains a lack of access to traditional cooking fuels (67%), lighting (64%), and improved cooking fuels (56%).[20] 41% of refugee households report facing barriers when accessing energy sources, with the highest percentages in Imvepi (67%), Lobule (61%) and Oruchinga (57%) thereby resulting in undercooking and skipping meals, selling food rations for wood, impacting overall nutritional intake.

Only 18% of refugee households across settlements have an improved stove for cooking.[21] One-fifth (20%) of refugee households do not have a source of lighting (22% among FHHH, 18% among MHHH).

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[14] UNHCR. IPE. 2021-2
[15] UBOS. National Service Delivery Survey. 2021
[16] IMPACT-REACH is conducting a remote sensing/satellite imagery analysis on change in land cover/land use. Tools/methodology can be found here, findings are scheduled to be published in Q1 2024
[17] UNHCR Uganda energy and environment assessments, (2015)
[18] UNHCR Uganda Energy and Environment Community Assessments, (2015)
[19] UNHCR. Uganda 2021 Year-End Narrative. 2022.
[20] UNHCR & IMPACT Initiatives. "2022 Participatory Assessment". April 2023.
[21] IMPACT-REACH and U-Learn are conducting a Knowledge, Attitudes and Practices study on energy use, environment and climate change. background can be found here; findings are scheduled to be published in Q1 2024.

Refugees' access to income-generating activities is supported through skills training and involvement in activities such as building energy-efficient cookstoves and heat-retaining cooking baskets, as well as briquette manufacturing. All UNHCR reception centres have access to energy-efficient cookstoves, reducing the need for firewood to prepare hot meals for the thousands of new arrivals each year. Improved cookstoves are gradually being introduced in schools (UNHCR).

1.3 Background to the Project.

The CAMP+ Phase II project was conceived with the ambition to establish the world's most sustainable and climate-positive refugee settlement. This initiative emerged in response to the critical need for environmentally sustainable humanitarian interventions, particularly in protracted crisis scenarios. As refugee situations persist, host communities often face significant strain on local resources, including land, water, and forests. This not only heightens vulnerabilities but also increases the likelihood of tensions and conflicts between refugees and host communities. Additionally, the consumption of natural resources, notably through deforestation for fuel and land conversion for agriculture, aggravates climate change by elevating carbon emissions.

In addressing these challenges, CAMP+ Phase II adopted a comprehensive approach that incorporated various components such as natural resources management planning, sustainable waste management, energy-efficient cooking solutions, and climate-smart agricultural practices. The project aimed to create beneficial synergies among these elements to propel forward more sustainable and innovative solutions.

Uganda, experiencing a substantial influx of refugees primarily from the Democratic Republic of Congo and South Sudan, served as the genesis for the CAMP+ initiative. Hosting over 1.4 million refugees, Uganda has become the African nation with the largest refugee population. The country's progressive refugee policies present unique opportunities for transformative actions. The adverse social and environmental impacts stemming from this rapid and large-scale settlement of refugees underscored the urgency and relevance of the project.

Kyangwali refugee settlement in South-western Uganda was selected as the focal point for the CAMP+ Phase II project. Initially hosting approximately 100,000 refugees, the population in Kyangwali has since grown to about 127,000. The project aimed to model an innovative approach to refugee settlement that significantly mitigates environmental impact while fostering a sustainable coexistence between refugees and host communities.

1.3 Description of the Project.

The project aimed at addressing the identified four key challenges embedded in negative cycles detrimental to livelihood and environment, and where there was a need to find new solutions:

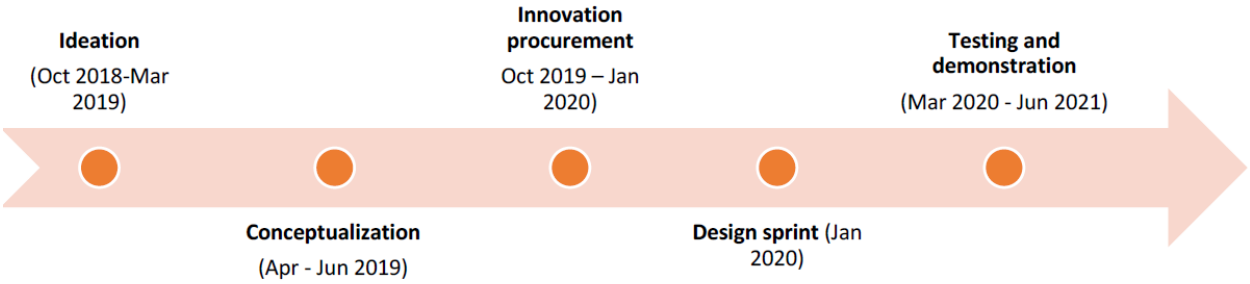
- Food is scarce and most refugees depends on the food aid of international organisations, which has been unable to fulfil their nutritional needs.
- Forest resources has been greatly depleted due to overuse and clearing for land use. Wood is being used to construct shelter and is the main source of energy used for cooking by about 87% of the population.
- Waste is not being sustainably managed. The system for handling waste consists largely of landfills, and hence there is extremely limited collection and exploitation of e.g. plastics and other non-organic waste types. This means that potentials for reuse and/or recycling of materials are not utilized.
- Space is characterised by how spatial resources are planned and used to the benefit of all. Inadequate planning leads to insufficient usage of land and potential land-use disputes e.g. more land is needed to accommodate refugees and access is limited due to insufficient infrastructure planning.

With CAMP+ II project, the aim was to show that it is possible to develop responses to displacement that both respond to basic needs, while contributing to positive transformation of the natural environment for refugees

and host communities. Having conducted a rigorous design process together with multiple partners, testing of sustainable innovative solutions in early 2020 was initiated. Specifically, the initial Innovation Norway project supported solar-powered community kitchens that could reduce the need for firewood. Here refugees could cook food for a small fee and charge their mobile phones at the same time. The solar-powered plastic recycling entity, Plastic+, had been established to turn plastic waste into new products that could be sold in or outside the settlement, creating jobs and income opportunities. The phase I project also contributed to increased food and nutrition security by supporting more sustainable food production on the small plots that refugees were allocated, reducing dependency on food aid and giving refugees improved livelihood opportunities.

This was supported by demonstrating a new way of conducting spatial planning in the refugee settlement, which would optimize land use and allocation practices. The project supported a process of re-greening the refugee settlement and the surrounding forest areas by assessing the important natural resources in the area, setting up management committees of both refugees and host-communities and supporting by-laws to support improved governance of natural resources areas. Therefore, the CAMP+ project was built on the solutions already tested, consolidate the operational models, developed, and tested the appropriate scaling and diffusion plans, and then support scaling up solutions.

The overall process of the project followed the below overall timeline, although with demonstration practices related to inclusive forest management being initiated earlier (Oct 2019) as the partner had already been identified.



The ideation phase included several ideation workshops with partners, which then led to a conceptualization phase that included a field assessment in Uganda together with partners. Specific intervention areas identified during the field assessment were then prioritized into 5 components: Sustainable Cooking, Repurposing Plastic, Inclusive Forest Management, Sustainable Food Production, and Spatial Planning. This necessitated a revision of the original outputs of the project. Some of the original outputs were combined, including output 4 and 5 focusing on sustainable energy and clean cooking. Outputs 7 and 8 related to GPS tracking of illegal forest practices and measuring climate smartness were not considered a priority, also considering that both inclusive forest management and sustainable food production were already included, and efforts were therefore reoriented towards the sustainable food production component.

1.3.1 The Three Solutions of the CAMP+ Project.

The project prioritized three solutions for scaling and diffusion: Community Kitchens, Plastic+ and Sustainable Food Systems. Other solutions related to re-greening of the settlement and surrounding forest areas and spatial planning were included as part of the CAMP+ learning and dissemination outcome. For spatial planning, scale up depended on support and buy-in from the Office of the Prime Minister (OPM) that is responsible for refugee settlements, and therefore this is awaiting commitment to test new practices.

a. **The Community Kitchens** were developed based on a business model with anticipated costs and revenue streams from user fees. The scaling strategy focused on consolidating the operational model, defining the operational, service and maintenance partners and then scaling up based on the defined model and partnership. In addition, the solution was adapted to a school kitchen model, which would

provide a new scaling pathway. There was a data-logger in each of the 10 cooking units in the Community Kitchens, monitoring the exact usage. This data was gathered and was to form the basis for calculations of usage into carbon-factors. As an integral element in the further development of the business model was the establishment of a carbon credit-based system with the purpose of increasing revenue stream for community kitchens and reducing initial capital investment of the establishment of additional community kitchen units, as well as enabling viable price points for household solar powered cooking units sold from the community kitchens. The main commercial partner was PESITHO, who was to provide solar powered cooking solutions and co-developed the community kitchen solution.

b. **The Plastic+ unit** was also based on a self-sufficient business model with revenues from selling plastic products or shredded plastic being able to meet the operational costs of the recycling unit. The scaling strategy focused on consolidating the operational model, streamlining production processes, and scaling up production capacity. This would then allow the team to define a scale-up model that describes the operational set-up, and external service and equipment providers. Enabling the establishment of additional plastic+ units in other locations. The main partners included Lendager Group who co-developed the solution with the Ugandan company TakaTaka Plastic providing local operational support.

c. **The Sustainable Food Systems solution** was based on the premise that enabling local food production would be more sustainable, contribute to re-greening, enhance food and nutrition security and be better value for money than e.g. traditional food aid. The solution was to be described in a training manual that could be rolled out by refugees with the appropriate support. The route to scale was therefore one of diffusion through demonstration, documentation and dissemination of results and learning, which would support further uptake by other humanitarian actors. In that sense, the Sustainable Food Systems solution was to be different from the other two solutions, and focus was put on adapting and scaling up the initial tests, allowing for documenting the approach with sufficient data and evidence to support uptake. This would also include scaling outside the refugee settlement by developing a lease-to-grow model where refugees lease land outside the settlement. Initial partners included SLA & LLa-Bioeconomy who co-developed the solution, and Community Development and Resource Network (CDRN) as implementing partner. New collaborations would include World Agroforestry Centre who had a shared agenda and subject knowledge as well as the local agriculture research institution that could support quality seed production and knowledge transfer. Diffusion is likely to be through other humanitarian actors and through advocacy efforts addressing greening of refugee responses.

1.3.2 Overall Purpose of CAMP+ II project.

To create durable, sustainable, and scalable solutions to the livelihood and environmental challenges for the 126.000 displaced refugees and host communities of the Kyangwali Settlement.

1.3.3 CAMP+ Project Outcomes.

The project was premised on 4 outcomes namely.

1. Increased use of alternative and sustainable energy for cooking, by refugees and host communities.
2. Capacity for greening food systems increased among refugees and host community households.
3. Plastic waste recycling reduce waste and contribute to livelihood opportunities.
4. CAMP+ concept promoted for replication, among humanitarian stakeholders.

1.3.3 CAMP+ Project Outputs.

- **Output 1.1** Community kitchens developed into a scalable self-sustaining model for replication with other partners.
- **Output 1.2** Community kitchens scaled up in additional locations within Kyangwali refugee settlement.

- **Output 1.3** Carbon credit-based system developed to contribute to maintenance and establishment of additional solar cooking points (community kitchens and household cookers).
- **Output 2.1** Practices for greening food production systems scaled up among refugee and host community households.
- **Output 2.2** Skills for producing for the market, enhanced among both refugee and host communities' households.
- **Output 3.1** Plastic recycling unit developed into a full capacity production entity, which receives and processes plastic waste from the settlement and the host community.
    - Clear management structure, market analysis and design, and production adaptation capacities within the unit.
- **Output 3.2** Plastic unit developed into a scalable model for replication by other partners.
    - 3 separate production lines (incl. material-reception, -cleaning, processing, product manufacturing, storage and whole-selling).
- **Output 4.1** Lessons from the CAMP+ concept consolidated and disseminated.

1.4 Target Beneficiaries.

CAMP + pilot phase was executed in Kyangwali refugee settlement and host communities, specifically targeting the villages of; Kagoma, Kavule, Kilima, Maratatu B, Kinakyeitaka Nyakatehe, Katikara, Ngogoli. After pilot phase, the build on CAMP+ Phase II project was implemented in the villages of: Kilima, Kavule, Maratatu B, Kagoma, Bukinda, Kinakyeitaka, Kasonga, Kentomi, Kirokole, Kyebitaka, Mukarange, Mukunyu, Ngogoli, Waibuga in Kasonga and Kyangwali parishes, Kyangwali sub-county.

The project directly benefitted both the displaced refugees and the host communities within the Kyangwali area, focusing on inclusive planning and engagement with all critical stakeholders and impacted group. Household members, health centres, schools

The project was implemented in partnerships with the private sector actors mainly ECOCA and Ecoplastile. Key stakeholders engaged were Kikuube District Local Government, the Office of the Prime Minister (OPM) and UNHCR.

2. Evaluation Objectives and Methodology

2.1 Purpose of the Evaluation.

To undertake an independent assessment of CAMP+ II project, reflecting on progress towards the expected stated outcomes as per the project Log frame (MEAL Plan). The evaluation intended to assess the extent to which CAMP+ II was able to achieve the overall goals and expected outcomes of the project, document the lessons learned and recommendations for further innovation-projects.

2.2 Evaluation Objectives.

The evaluation was premised on the following objectives.

1. To assess the relevance, effectiveness, efficiency, impact and sustainability of project outcomes, approaches, models, and strategies (OECDA Criteria).
2. To document and analyse the unintended outcomes, best practices, lessons learned, and key specific recommendations from project implementation that CARE should consider when implementing innovation projects of CAMP+ II nature.

2.3 Methodology.

2.3.1 Evaluation Design.

The evaluation of the CAMP+ Phase II project adopted a mixed-methods and participatory approach, engaging a diverse range of stakeholders to ensure the comprehensive collection and analysis of both qualitative and quantitative data. This approach facilitated data triangulation, enhancing the validity and reliability of the findings.

Quantitative data collection centred on assessing the project's performance, specifically examining improvements in the livelihoods and living standards of both refugees and host communities in the Kyangwali area. The data was disaggregated by sex, age, location, and status (refugees and nationals) to provide detailed insights into the impact across different demographic groups. Qualitatively, the evaluation focused on the project's relevance, effectiveness, efficiency, impact, and sustainability. This was achieved through various methods including key informant interviews, Focus Group Discussions (FGD), and in-depth interviews, all structured around open-ended questions to capture detailed perspectives and insights. Tools such as pretested questionnaires were used for quantitative measures, while qualitative insights were gathered using guides tailored for key informant interviews and FGDs.

A significant component of the evaluation was an exhaustive and thorough review of relevant documents, constituting the initial phase of the assessment process. This document review helped set the stage for subsequent data collection phases, providing a foundational understanding of the project context.

Overall, the evaluation integrated the views and perceptions of beneficiaries, using both structured and participatory tools to gather data that reflected the nuanced experiences and outcomes of the project's interventions. This comprehensive approach ensured that the evaluation not only measured outputs but also deeply examined the qualitative impacts on the community's quality of life and sustainability of the project's initiatives.

2.3.2 Evaluation Scope and Population.

The evaluation was conducted across Kyangwali Refugee Settlement and its encompassing area in Kikuube district, specifically within seven zones of the refugee settlements. Interviews were carried out with a diverse group of respondents including beneficiaries from the refugee communities, district officials, representatives from the Office of the Prime Minister (OPM), and the United Nations High Commissioner for Refugees (UNHCR). This broad scope ensured a comprehensive assessment of the CAMP+ Phase II project's impact across different stakeholder groups.

2.3.3 Quantitative Sample Size of Beneficiaries.

For the evaluation, a total of 339 respondents were sampled from Kyangwali Settlement in Kikuube district using the Krejcie & Morgan (1970) formula, under specific parameters to ensure statistical reliability and cost-effectiveness. These parameters included a 95% confidence level with a 5% margin of error and an assumed population size of 2,850 beneficiaries. The chosen population proportion was 0.10, aimed at maximizing the sample size, with a degree of accuracy set at 0.05. This methodology allowed for an efficient yet thorough sampling of households for the study.

Table 1: Sample Size for Beneficiaries by component.

Beneficiary Category	Target # of Beneficiaries	Sample Size	Achieved Sample
Sustainable Cooking	235	139	79
Phone charging	213	50	53
Sustainable Food Production	420	100	100
Total		339	232

2.3.4 Sample of Qualitative Respondents.

The sample size for the evaluation was determined using a saturation point approach, whereby the sampling continued until no new information, or themes were emerging from the data collected. This decision was made after a thorough review of all project documents, including detailed information on key stakeholders involved in the project. This method ensured that the sample size was sufficient to capture comprehensive insights while reflecting the diversity and range of perspectives within the beneficiary population.

Table 2: Sample Size for Key Informants.

Respondent Category	KIIs	Achieved
CARE implementing staff	04	3
Local Government Officials	05	3
Direct beneficiaries (Refugees)	06	6
Total	15	13

2.3.5 Sampling Approach.

Data for the evaluation was collected using a non-biased, representative sample from the target project beneficiaries, achieved through simple random sampling. This technique was implemented with the assistance of beneficiary lists to ensure randomness and equity across all levels. For other stakeholders involved in the project, purposive sampling was employed to select individuals based on specific criteria relevant to the study's needs. Additionally, convenience sampling was utilized to select local government officials and project officers, streamlining the process while focusing on accessibility and relevance.

2.3.6 Data Collection.

Tools for Primary data collection.

The evaluation team used the following tools as indicated below.

1. **Questionnaire:** For the evaluation, a questionnaire was designed and employed, tailored to capture the objectives of the study and align questions with the outcome indicators. The questionnaire, a mix of open-ended and close-ended questions were included in the tool. Open-ended questions aimed to qualify some of the close-ended questions. This tool was administered face-to-face by trained enumerators to ensure accurate and reliable data collection. The questionnaire was standardized to enable comparability across both refugee settlements and host

communities in Uganda, with modifications made prior to data collection to better meet the evaluation's specific needs.

2. **Key Informant Interview Guide:** The Key Informant Interview (KII) guide was crafted to gather detailed insights from essential stakeholders including district officials, representatives from the Office of the Prime Minister (OPM), UNHCR, the CAMP+ project team, and subject matter experts. This tool facilitated in-depth discussions focused on describing and interpreting the project's outcomes and impacts. The KII guide enabled collection of valuable data directly from those who were closely involved or had significant expertise, thereby enriching the understanding of the project's effectiveness and areas for improvement in its implementation and results.

3. **Focus Group Discussion Guide:** This guide was used as a participatory tool to engage selected respondents in in-depth discussions. The FGDs primarily explored environmental and climate-related challenges, identifying key factors contributing to these issues. Additionally, the discussions captured experiences of marginalized groups, including disabled individuals, focusing on how existing systems could be improved to enhance their quality of life. This method allowed for a dynamic exchange of ideas and provided nuanced insights into the community's challenges and suggestions for system enhancements.

2.3.7 Data Collection Procedures.

During the data collection phase, several structured procedures were implemented as follows:

1. Primary data was gathered through face-to-face interviews with beneficiaries, which took place at central locations within each village.
2. Interviews with other key informants were also conducted face-to-face within the project area to collect primary data efficiently.
3. Focus Group Discussions (FGDs) involving community members were organized at central community locations, typically involving no more than ten participants per group, including the facilitator and note-taker.
4. Key Informant Interviews (KIIs) were held either at the respondents' offices, on phone or in community settings, based on what was mutually agreed upon.

2.3.8 Recruiting and Training Enumerators.

A team of 8 enumerators was recruited from within the project communities who were familiar with the local context and languages. These enumerators were supervised by a Field Supervisor who was equally selected based on their residency in the community, previous experience in community-level data collection, and proficiency in both English and the local languages. Emphasis was also placed on understanding the sociocultural dynamics of the target groups. The training for these enumerators was conducted in a one-day session at the CARE Field Offices in Kyangwali Refugee settlement in Kikuube district, covering necessary methodologies and ethical considerations.

2.3.9 Data Quality Control.

Quality assurance was maintained through a rigorous data quality control process throughout the data collection period. Enumerators were required to review each questionnaire immediately after each interview to ensure completeness, clarity, and adherence to skip instructions. Daily, the Lead Consultant collaborated with teams to scrutinize data on the tablets, identifying and correcting errors such as incomplete forms or data inconsistencies. Additionally, the Lead Consultant observed each enumerator at least once to confirm adherence to training protocols and high standards in conducting interviews. Regular consultations between supervisors, the core evaluation team, and Team Leaders allowed for ongoing adjustments to the data collection process to address any operational challenges.

2.3.10 Data Analysis.

In the evaluation, data management, cleaning, and analysis were overseen by a dedicated Data Manager/Statistician. Once data collection concluded, all data were uploaded to a secure server and analysed using Stata software (version 15). This process included creating analysis files, data dictionaries, variable and value labels, and metadata in a Stata do.file. Data imputations were performed as necessary for nonresponse items.

Quantitative analysis was robust, employing triangulated findings from survey data and interviews. Post-field visits, the team convened for an analysis day to systematically analyse all data using an evaluation matrix that aligned with predefined indicators and key questions. A gender and vulnerability lens were applied to disaggregate evaluation findings to show any variances.

Qualitative data from key informant interviews and focus group discussions were analysed using content analysis. The process began with organizing and sorting the data, followed by creating a coding schema that captured relevant themes. ATLAS.ti software facilitated coding and analysis, focusing on a selected sample of texts for in-depth examination.

Secondary data were analysed using content analysis guided by a specific checklist. The results from primary and secondary sources were then triangulated, presenting quantitative data through tables, charts, and graphs, and integrating qualitative data through narratives, case studies, and direct quotations.

2.4 Evaluation Limitations.

The study encountered several challenges especially during data collection including.

1. The communal cooking model presented significant challenges in tracking and interviewing beneficiaries, especially in areas where kitchens like those in Kavule have been closed. This difficulty arose because the kitchens serve a transient refugee population that frequently relocate to other camps or return to their home countries. Additionally, the Maratatu Kitchen, located within the Community Hospital, specifically serves patients during their hospital stay. Once these patients leave the hospital, they become difficult to track. Key informant interviews were challenging to conduct due to conflicting schedules
2. with the CAMP+ data collection timeline. This was particularly the case during significant events happening in Kikuube District such as the Population Census meetings in Kyangwali Settlement, which were chaired by the Office of the Prime Minister (OPM). Additionally, meetings organized by WFP/UNHCR, and district emergency meetings on the census, demanded the attendance of key stakeholders, including all crucial district officials. As a result, these officials were unable to allocate time for interviews.
3. The evaluation relied on the authenticity of the information in the project documents which were shared during their review to include the reported-on information. In case of any errors or omissions in the project documents, the evaluation team may not be accountable hence documents were reviewed as provided.
4. Just like any research conducted with humans, it's always subjected to social desires by the respondents to report a better picture of the outcomes and results. This evaluation also faced this limitation, and findings are analysed and presented as provided and may show a rather varied situation than what is exactly on ground.
5. The findings of this evaluation were only obtained from a representative sample and not the entire target beneficiaries hence there could be variations in the actual impact from one project beneficiary to another. Nonetheless, the findings present a representation of the situation in the target communities and beneficiaries for purposes of future programming.

3. Evaluation Findings and Analysis

This section presents the evaluation findings based on the analysed data. It includes a detailed examination of the demographic characteristics of household participants and explores the results related to various indicators across all projects and thematic areas. These findings are assessed considering the evaluation's objectives, offering understanding of the outcomes and impacts of the CAMP+ Project.

3.1 Demographic Characteristics of Respondents.

This sub-section aims to provide insights into the socio-demographic characteristics of the respondents participating in the evaluation.

A total of 232 respondents were interviewed to assess demographic characteristics and provide insight into the project's impact across different community segments. The gender distribution among respondents was majorly females, who constituted 61.2% (142 respondents), compared to 38.8% for males (90 respondents) which could be explained by the targeted sampling/selection of the respondents to be interviewed but also the availability of the refugees due to their high mobility overtime. Nonetheless, the findings provide a representation of both genders of the project beneficiaries making them valid and reliable.

In terms of age, the majority respondents were relatively young, with 44.8% (104 respondents) aged between 20 and 30 years, followed by 27.2% (63 respondents) between 31 and 40 years. This suggests that the project is engaging with a younger demographic, potentially influencing long-term community development outcomes. Smaller proportions of participants were older, with 12.1% between 41 and 50 years, 7.3% between 51 and 65 years, and only 3.0% aged above 65 years.

A significant majority of refugees, 90.5% (210 respondents) were Congolese, confirming the primary target group of the project. Other refugee groups included South Sudanese (3.0%) and Rwandese (3.9%), with nationals comprising only 2.6% (6 respondents) of the sample, reflecting the project's focus on refugee communities.

Residency duration varied, with a large number, 63.4% (147 respondents), living in the community for less than 10 years, indicating recent settlements. Fewer respondents, 23.7%, had lived there between 1 and 5 years, and a minimal 0.4% since birth.

Marital status showed that over half of the respondents (52.6%) were married and living with their spouse, whereas others were single (11.6%), widowed (10.8%), or separated (13.8%). Educationally, a substantial number of respondents had never attended school (35.8%). Those who had some formal educations were predominantly at the primary level (34.9%) and considerably fewer at secondary (20.3%) or tertiary levels (2.6%).

Employment data revealed that many respondents were engaged in agriculture/farming (37.1%), suggesting a rural agrarian community context. Other forms of livelihood included casual labour (24.6%), reliance on food distributions (25.9%), and petty trade (4.7%). A small segment (5.2%) was involved in more stable employment, such as medical practice or salaried positions in NGOs, indicating some level of economic diversification.

Table 3: Demographic Characteristics of Respondents

	Frequency n=232	Percentage (%)
Sex of the respondent		
Male	90	38.8
Female	142	61.2
Age of the household head		
Below 20 years	13	5.6
20-30 years	104	44.8
31-40 years	63	27.2
41-50 years	28	12.1
51-65 years	17	7.3
Above 65 years	7	3.0
Current Status in Country		
National	6	2.6
Refugee (South Sudanese)	7	3.0
Refugee (Congolese)	210	90.5
Refugee (Rwandese)	9	3.9
Years Living in Community		
Since birth	1	0.4
Less than 1 year	23	9.9
1 to 5 years	55	23.7
Less than 10 years	147	63.4
More than 10 years	6	2.6
Marital Status		
Married, living with spouse	122	52.6
Married, not living with spouse	26	11.2
Single	27	11.6
Widowed	25	10.8
Separated	32	13.8
Highest level of education attainment		
Attended primary	81	34.9
Attended secondary	47	20.3
Attended University	4	1.7
Attended Tertiary	6	2.6
Never attended school	83	35.8
Others (Non formal education)	11	4.7
Main occupation		
Agriculture/Farming	86	37.1
Agriculture/Livestock keeping	6	2.6
Petty trade	11	4.7
Casual labour	57	24.6
None (food distributions)	60	25.9
Others (Medical practitioner, Salaried employment with some NGOs)	12	5.2

Furthermore, the findings of the evaluation shed light on various difficulties experienced by respondents within the surveyed households. The most common challenge reported was visual impairments, affecting 43.9% of the 44 respondents that reported having a disability. Mobility issues, including difficulty walking or climbing, were also notable, reported by 9.8% of respondents. Cognitive challenges, such as difficulty concentrating on tasks, were experienced by 14.6%. Hearing difficulties were less common, affecting 9.8% of the community. Additionally, 29.3% faced challenges with listening, which include problems due to auditory processing disorders or other hearing impairments.

Table 4: Disability status of respondents (N=44)

	Frequency	Percentage (%)
Difficulty hearing	4	9.8
Difficulty listening	12	29.3
Difficulty seeing	18	43.9
Difficulty concentrating on tasks	6	14.6
Difficulty walking or climbing	4	9.8

3.2 Project Performance Assessment.

In this section, we present the key findings from the thorough evaluation of the project. These crucial insights summarize the main impacts and outcomes of the project interventions. By analysing data and reviewing different indicators, the consultancy offered a clear and concise summary of the project relevance, effectiveness, efficiency, sustainability, and the lessons learned. This analysis was designed to provide a straightforward overview that reflects the overall performance and future implications of the program's initiatives.

3.2.1 Relevance of the CAMP+ Project.

This section examines the relevance of the project, focusing on how the interventions aligned with the actual needs of the beneficiaries under the specific circumstances of the local context.

Addressing Beneficiary Needs and Stakeholder Goals.

The evaluation of the CAMP+ Phase II project revealed a complex interplay between the interventions designed and the extent to which they met the needs of the beneficiaries and goals of the stakeholders. Through a thematic analysis of the data, several key themes emerged that illuminate both the successes and limitations of the project activities.

Sustainable Energy Solutions.

The project successfully implemented alternative and sustainable energy sources, notably through community kitchens and solar-powered cooking solutions and charging. This initiative primarily addressed the critical need for safe and accessible cooking energy, as beneficiaries previously relied on firewood from distant and unsafe locations. The establishment of community kitchens in strategic areas like Maratatu B Health Center and Kagoma Reception Centre indicated a positive shift towards safer and more sustainable cooking practices. However, the uptake was varied, with some kitchens like in Kavule and Kasonga closing due to low adoption and usage suggesting that while the project provided the infrastructure for sustainable energy, continuous community engagement and adaptation to local needs are still crucial for sustained use.

Food Security and Agricultural Innovation.

The project focused on enhancing food security through innovative agricultural practices and supporting sustainable food production systems. Initiatives included the introduction of food production models and the setup of household and institutional bio-digesters to improve soil fertility and reduce reliance on food aid. These efforts aligned with the pressing need for food sustainability amid scarce resources in and around Kyangwali refugee settlements. However, the transfer of activities to Climate innovation for Kyangwali and Karamoja (CLIRK) project and the variability in production outcomes highlighted the challenges in achieving consistent and widespread impact across the refugee settlement to address food security.

Waste Management and Environmental Sustainability.

Addressing the environmental impact of refugee settlements, the project introduced the Plastic+ waste recycling initiative. This involved the establishment of a pilot recycling plant to manage plastic waste,

turning it into reusable products, which resulted in an innovative approach to managing environmental pollutants and contributed to economic opportunities for refugees through the sale of recycled products. Despite these efforts, the initial recycling operations faced economic hurdles due to the low quality of products produced from the recycling plant and insufficient plastic waste quantities. To address these challenges, the project made some strategic adjustments to only collecting and sell the plastic through an innovation called waste pays in partnership with ECOPLASTILE. This indicated that while this project component showed that it can function as a self-sustaining business model, its economic viability and the quality of the products are concerns that hindered its scalability and broader community adoption.

The CAMP+ Phase II project made significant strides in addressing the environmental, energy, and food security needs of the refugee and host communities. Innovations in sustainable energy and agricultural practices were particularly impactful, providing alternatives to unsustainable resource use. However, the effectiveness of these initiatives varied, with some areas experiencing low uptake and others facing operational challenges. The project's approach to waste management demonstrated adaptive strategies, though economic viability and stakeholder engagement remained barriers.

Overall, the project's actions revealed a dynamic interplay between innovative solutions and the complex realities of implementing these in a humanitarian setting. While there were notable achievements in improving the living conditions and sustainability of the refugee settlement, the full extent of need fulfilment was tempered by contextual challenges including the inadequate infrastructure and equipment to cater for the cooking and charging needs of all project beneficiaries, highlighting the need for ongoing adjustments and community-centric approaches to ensure long-term success and relevance.

3.2.2 Appropriateness of the Solutions for Local Context.

The CAMP+ Phase II project aimed to address critical needs within the Kyangwali refugee settlement through innovative interventions targeting sustainability and climate change. This section evaluates the extent to which the project's activities were appropriate and effective in the local context, considering both the climate and refugee crises.

Sustainable Energy Solutions.

The project's efforts to introduce communal and institutional kitchens and solar powered infrastructure represented a core strategy to mitigate the environmental degradation caused by over-reliance on firewood and the limited access to hydroelectric power for refugees. The evaluation revealed noteworthy strides in this area, with the establishment of several communal kitchens and an institutional kitchen at Kinakyeitaka Primary School, powered by solar energy. However, the effectiveness of these kitchens varied. For example, while the Kagoma Reception Centre saw a considerable increase in uptake, the Kavule kitchen had to be closed due to low usage, suggesting that while the concept of communal kitchens is innovative, its success is highly dependent on specific local conditions such as population density and proximity to users.

The variable success rates highlight the importance of contextual understanding and the need for flexible, adaptable strategies that can be modified based on real-time feedback and evolving community needs. The project's adaptive approach, such as shifting from a low-uptake area to a busier trading centre in Kasonga, demonstrated a responsive strategy but also highlighted the challenges of achieving wide-scale acceptance and sustainability.

Waste Management and Recycling Initiatives.

The project's plastic recycling efforts, though well-intentioned, faced significant hurdles. Initially aimed at converting waste into useful products, the operation shifted to focus solely on collection and selling due to economic unviability and quality concerns. This shift reflected a practical adaptation to local economic

conditions and market capabilities. However, it also pointed to a potential oversight in the initial feasibility studies and market analyses, suggesting that deeper insights into local economic ecosystems might be required before implementing such initiatives.

Food Security and Agricultural Support.

Efforts to improve food security through sustainable agricultural practices and bio-digesters were met with mixed responses. The transition of project activities to CLIRK project and the varying success of implemented models indicated a complex interaction between intended outcomes and practical implementation. While these efforts aimed to reduce dependence on food aid and improve self-sufficiency, continuous support and engagement from local communities and stakeholders remained crucial for their long-term success.

The project's integrated approach aimed to create a multi-faceted impact—addressing not just environmental issues but also enhancing economic and social conditions. The synergy between different solutions, such as combining energy-efficient cooking technologies with efforts to boost agricultural productivity and waste management, was commendable. However, the relevance of these synergies was inherently tied to the project's ability to adapt to ever changing local realities and the specific needs of its beneficiaries, mostly refugees.

Overall, the CAMP+ Phase II project's initiatives were largely appropriate in intent and design, reflecting a strong alignment with the urgent needs of the refugee and host community populations. However, the execution and uptake of these initiatives varied significantly across different project locations. This variability highlights the need for ongoing assessments, beneficiary engagement, and flexibility in project design to ensure that interventions remain relevant and effective over time.

3.2.3 Scale and Local Ownership.

The CAMP+ Phase II project's design and implementation strategies were aimed at scaling sustainable solutions across Kyangwali refugee settlement, focusing on enhancing local ownership and addressing pressing environmental and socio-economic challenges. This section examines the extent to which the project facilitated scale and fostered local ownership through its various interventions.

Scaling of Solutions.

The project introduced innovative solutions such as solar-powered and biogas-powered kitchens and plastic recycling units with the intention to scale these interventions within and beyond Kyangwali refugee settlement. For instance, solar-powered and biogas-powered kitchens were designed to be scalable and adaptable to different contexts within the settlement, evidenced by plans to expand from initial setups to additional communal and institutional kitchens. Similarly, the plastic recycling initiative aimed at establishing a sustainable business model that could be replicated in other locations, supported by external partnerships and market-driven strategies.

However, the actual scaling encountered several challenges:

- **Community solar-powered and biogas-powered Kitchens:** Despite the high adaptability of the solar-powered community kitchen concept, its expansion faced significant hurdles due to low uptake, which was attributed to various factors including distance from users and the initial unfamiliarity and cultural preferences of the communities. This was evident in areas like Kavule, where a community kitchen was closed due to low uptake. Efforts to relocate and test kitchens in busier areas like trading centres indicate a responsive but trial-and-error approach to finding viable models for scale.

- **Plastic Recycling Units:** The plastic recycling efforts initially focused on converting waste into usable products. However, due to economic unviability and low-quality outputs, the strategy shifted to merely collecting and selling plastic waste. This pivot indicated a scaling back of original ambitions to establish a fully operational recycling facility, instead focusing on the integration of external partners to sustain operations.

Local Ownership.
Local ownership was a core aim, intended to ensure the sustainability of project interventions. This was approached by:

- **Engaging Local Stakeholders and Partners:** The project involved local communities, operational partners, and stakeholders like OPM, ECOCA EA and Ecoplastile Ltd in both the community kitchen and plastic recycling initiatives. In community kitchens, local operational partners were responsible for day-to-day management, aiming to foster local stakeholder investment in the success of these centres.
- **Adjustments to Local Needs and Contexts:** Adapting solutions to meet local needs was evident in the project's iterative approach to both community kitchens and plastic recycling units. Feedback loops involving community input were crucial, though the project's documents suggest that achieving this was complex and required continuous adjustment and realignment with local economic and cultural realities.

In conclusion, the CAMP+ Phase II project's scale and local ownership efforts reflected a complex interplay between environmental and social goals and the practical adjustments required in real-world settings. The project's experiences highlight the necessity of flexibility, local engagement, and continuous learning and adaptation to effectively scale and sustain innovative solutions in refugee settings. The ongoing adjustments and the involvement of external partners and funders will be critical in moving towards more sustainable and locally owned interventions.

3.3 Project Effectiveness.
This section evaluates the effectiveness of the CAMP+ project in achieving its intended outcomes and objectives. It specifically examines the impact of strategic project activities, the role of private sector collaborations, and how these elements contributed to the project's success or shortcomings. The analysis seeks to offer insights into the project's overall performance and operational dynamics.

3.3.1 Achievement of Intended Outcomes and Outputs.
The CAMP+ project, initiated with the aim of creating the world's most sustainable refugee settlement, was specifically designed to address significant livelihood and environmental challenges facing over 126,000 displaced refugees and host community members in the Kyangwali Settlement. The general objective of the project was to foster durable, sustainable, and scalable solutions that not only meet immediate needs but also facilitate long-term positive transformation within the community.

This section delves into the CAMP+ project's performance, assessing how effectively it achieved its outlined objectives and specific outcomes. Each project outcome and output were examined in detail to evaluate success factors, shortcomings, and the operational effectiveness of implemented solutions.

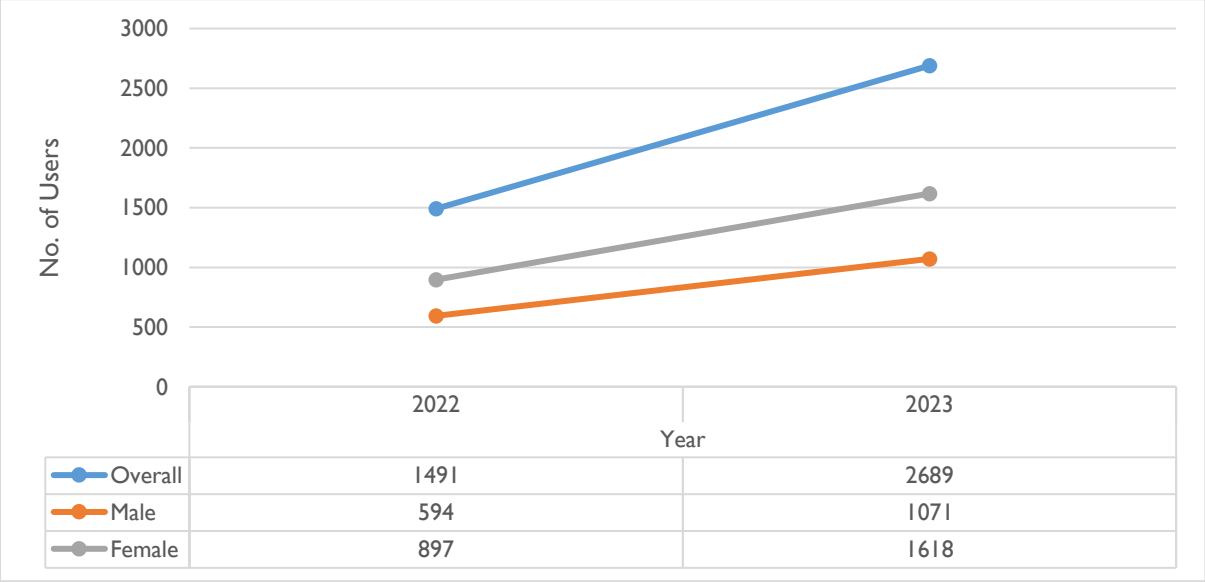
Outcome 1: ***Increased use of alternative and sustainable energy for cooking, by refugees and host communities.***
The project targeted a shift from traditional biomass fuels to more sustainable energy sources. This was achieved by promoting solar-powered community kitchens where refugees could cook food and charge

mobile phones, thereby reducing the dependence on firewood and mitigating associated environmental degradation.

# of people of all genders that have used alternative and sustainable energy solutions promoted by CAMP+ project.

The CAMP+ project aimed to promote alternative and sustainable energy solutions among the refugee and host communities of Kyangwali Settlement. The target for this initiative was to reach 2,850[22] individuals. By the end of 2023, the project had successfully engaged 2,689 people (1,071 males and 1,618 females), representing 94% by the end of the project which was very close to the target. This marked a substantial increase from 2022, where 1,491 individuals (594 males and 897 females) were reached. This progression indicates a growing acceptance and use of sustainable energy solutions such as solar and biogas technologies among the community. The year-on-year increase reflected effective implementation strategies and heightened awareness and adoption of these green technologies by the project beneficiaries. The findings indicate a positive trend towards achieving the project's energy sustainability goals, although a slight shortfall remains against the original target.

Figure 1: Usage of Alternative and Sustainable Energy Solutions by Gender Under CAMP+ Project.



	2022	2023
Overall	1491	2689
Male	594	1071
Female	897	1618

Source: Secondary Data: 2023 Annual Results Assessment Framework Report

The success was particularly notable at Maratatu HCII, which saw considerable user increase due to the introduction of a full-time caretaker whose remuneration depended on user fees, demonstrating a sustainable model for operation. Additionally, the introduction of biogas clean energy cooking solutions contributed to reaching more 50 households (21 Female, 29 Male), with the technology being installed in both residential and institutional settings such as COBURWAS secondary school.

Survey findings further revealed a high level of awareness about community kitchens among the surveyed households (n=232), with 94.8% indicating they knew about these facilities. This high awareness was consistent across gender lines, although slightly higher among males (98.9%) compared to females (92.2%). Despite this broad awareness, actual usage of community kitchens was substantially lower, with only 70%

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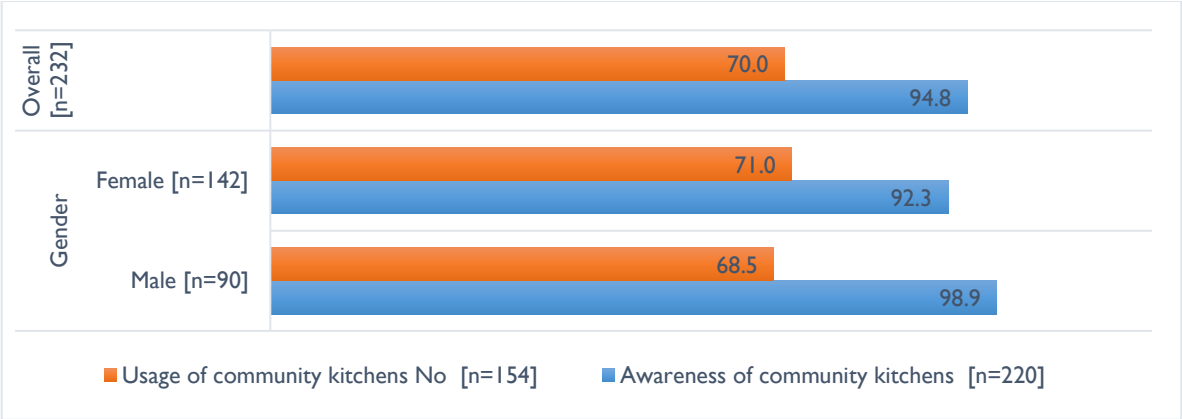
of those aware utilizing these facilities. This usage also showed a minimal gender difference, with 68.5% of males and 71% of females using the cooking facilities. This suggests that while the concept of community kitchens is well-known, a substantial portion of the community remains unable to use these facilities regularly.

Figure 2: Awareness and Usage of Community Kitchens by Gender(%yes)

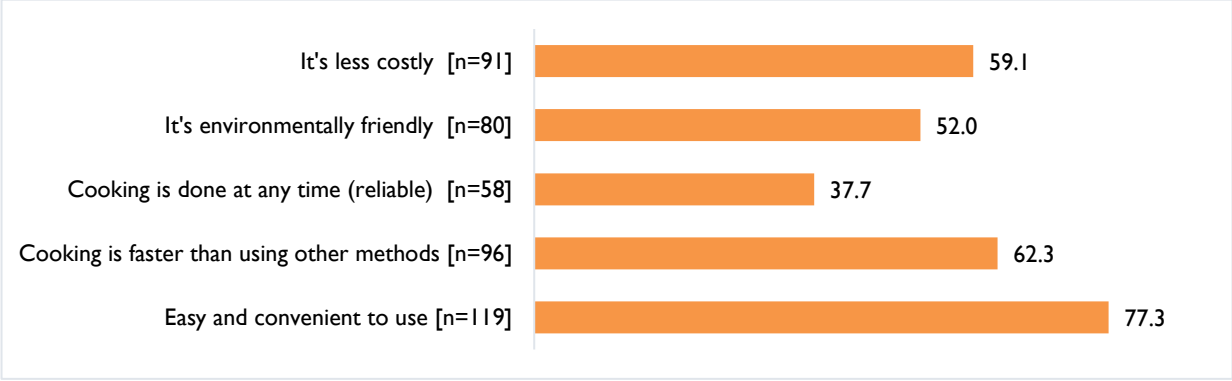


Source: Primary Data: Household Survey 2024

Attitudes towards Community Kitchens.

Furthermore, respondents expressed distinct preferences for using community kitchens, highlighting several advantages that contribute to their popularity. A significant 77.3% of the users appreciated the ease and convenience of using these facilities, making it the most favoured aspect. Additionally, 59.1% found community kitchens to be less costly compared to other cooking methods, and 62.3% noted that cooking is faster, which enhances their daily efficiency. The reliability of these kitchens, allowing cooking at any time, was valued by 37.7% of the respondents. Moreover, 52.0% of the users acknowledged the environmental benefits of using community kitchens, such as reduced deforestation and pollution. These attributes collectively highlight the functional and sustainable appeal of community kitchens in the community's daily life.

Figure 3: Community Responses on the Benefits of Using Community Kitchens (%)

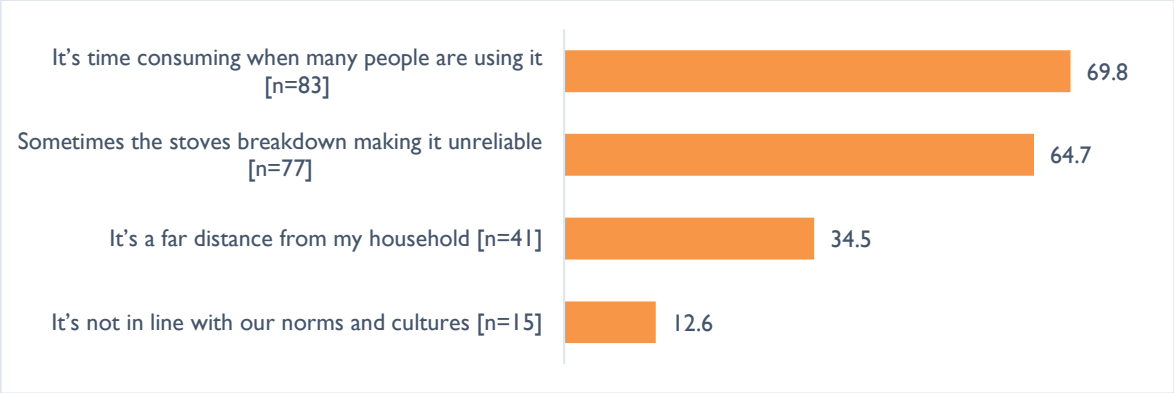


Source: Primary Data: Household Survey

However, respondents identified several challenges associated with the use of community kitchens during the evaluation. The most prominent concern, noted by 69.8% of the users, was the time consumption when the kitchens are crowded, indicating a significant impact on their daily routines. Additionally, 64.7% of respondents reported reliability issues due to frequent stove breakdowns, which disrupts their cooking activities. The physical distance of the kitchens from users' households was another significant hurdle, with 34.5% finding it inconveniently far. Cultural misalignment with community norms and traditions was the

least cited issue, but still noteworthy for 12.6% of the respondents. These drawbacks highlight the operational adjustments necessary to enhance the effectiveness and acceptance of community kitchens within the community.

Figure 4: Challenges Faced by Users of Community Kitchens



Source: Primary Data: Household Survey

Out of the 220 participants in the survey who were aware of the community kitchens, 66 respondents reported not having used the community kitchen. This is because the primary deterrents were related to accessibility and convenience. The most frequently mentioned barrier was the distance from participants' homes to the community kitchens, which was consistently described as "far" or "very far." This indicates a major logistical challenge for potential users, particularly for those with disabilities or limited mobility. Additionally, the high usage of kitchens by other community members often resulted in long waiting times and overcrowding, which discouraged usage by some of the participants. Some respondents also noted the lack of necessary cooking equipment, like saucepans, and a few mentioned breakdowns in kitchen facilities near them, which affected their reliability and appeal, deterring them from using.

Solar Energy Usage.

The evaluation revealed that 66.4% of the participants (154 out of 232) utilized the CAMP+ solar system for phone charging, indicating a substantial uptake of this service provided at the community kitchens. However, a noticeable gender difference emerged, with a considerably higher percentage of males (84.4%) using the service compared to females (54.9%). Regarding the frequency of use over the past six months, 37.2% of the users reported using the solar charging "all the time," while 47.8% did so "most times," showcasing a high reliance on this energy source for their charging needs. Only a small fraction, 11.5%, used it "sometimes," and even fewer, 3.5%, reported "rarely" using it.

Table 5: Adoption and Usage Patterns of Solar Charging Systems in the Community.

	Gender		Overall
	Male	Female	
Use of CAMP+ solar system for phone charging [n=232]			
Yes [n=154]	84.4	54.9	66.4
No [n=78]	15.6	45.1	33.6
Frequency of solar use for charging in past 6 months [n=154]			
All the time [n=57]	44.6	29.8	37.2
Most times [n=74]	50.0	45.6	47.8
Sometimes [n=18]	5.4	17.5	11.5
Rarely[n=5]	0.0	7.0	3.5

Source: Primary Data: Household Survey

These figures suggest that once adopted, the solar charging system became a regular utility for most community members, highlighting its importance in their daily lives, particularly for those who have frequent need to charge mobile devices.

Overall, while the CAMP+ II project made noteworthy strides toward its objective of increasing the use of sustainable energy for cooking and charging, the full impact was tempered by operational challenges and initial resistance to changing traditional cooking habits. The project's ability to adapt its strategies in response to these challenges, however, provides valuable lessons for future initiatives aiming to implement sustainable energy solutions in similar contexts. The ongoing engagement and training of community members, coupled with an emphasis on local ownership and the economic viability of energy solutions, will be critical in sustaining the gains made and scaling up these interventions.

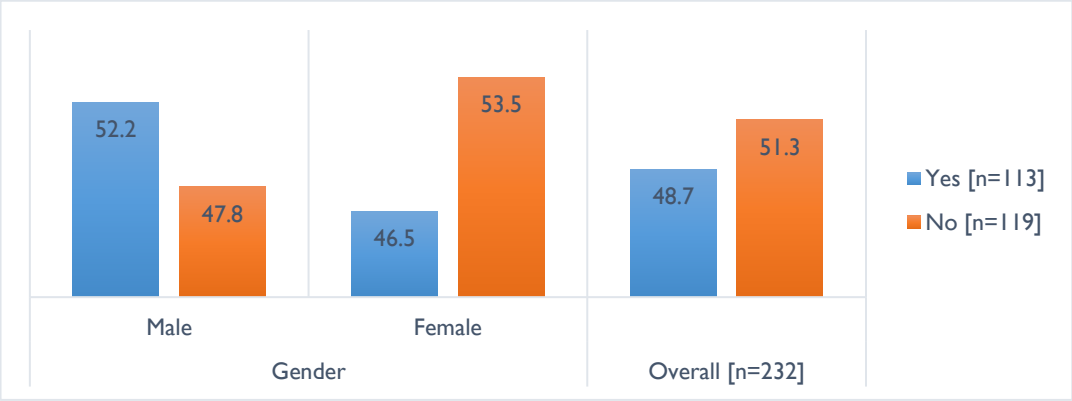
Outcome 2: ***Capacity for greening food systems increased among refugees and host community households.***

The CAMP+ project aimed to enhance the capacity of refugees and host communities to implement sustainable food production practices. This involved increasing knowledge and skills related to sustainable agriculture techniques that not only improve food security but also contribute to the ecological health of the settlement. Given the fact that this component did not fully take shape under CAMP+II since the food component was moved to CLIRK project handling food production on sustainable plots of land in Kyangwali refugee settlement, however the idea was initiated at the time of CAMP+II. Before the move of this component to CLIRK project, CAMP+ II has already supported groups with training on some of the best farming /greening practices, formed farmer's groups. Given this initial investment of CAMP+ II under this component, it was worth noting to assess the extent to which the project contributed to increasing capacity for greening food system with the farmers the CAMP+ supported. However, the component will be assessed explicitly under CLIRK in the with the new participants.

% of households that are implementing at least four of the greening practices promoted by the project.

During the evaluation, it was observed that nearly half of the participants interviewed (48.7%) had adopted the greening methods introduced by the project, slightly below the project's target of 70% by the end of the project. Findings also revealed a minor gender disparity in the adoption of these practices, with 52.2% of males and 46.5% of females reporting implementation. This indicates a moderate level of engagement with the greening techniques such as intercropping, composting, and use of nitrogen-fixing trees, among others, highlighting a growing commitment to sustainable agricultural practices within the community, though there remains room for improvement to reach the intended target.

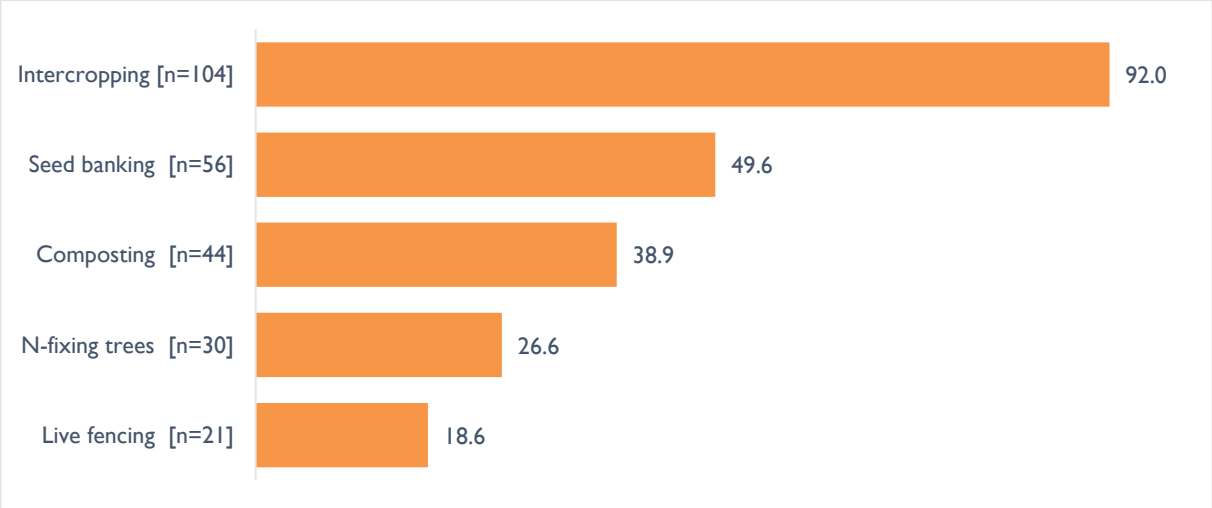
Figure 5: Practicing of Greening Methods by Gender Among Survey Respondents.



Source: Primary Data: Household Survey

Among those who adopted greening practices, the most prevalent method was intercropping, utilized by a substantial 92% of the respondents, highlighting its popularity and possible ease of integration into existing agricultural practices. Seed banking followed with 49.6% adoption, demonstrating a proactive approach to sustainability and resource management. Composting was practiced by 38.9% of the respondents, indicating a moderate uptake and understanding of its benefits for soil health. Nitrogen-fixing trees and live fencing were less common, with 26.6% and 18.6% adoption rates respectively, suggesting these methods might require more specific conditions or resources to implement effectively. This distribution of greening practices reveals a strong engagement with methods that are likely perceived as directly beneficial and less resource-intensive, reflecting a pragmatic approach to environmental stewardship among the community members.

Figure 6: Types of Greening Practices Adopted by Individuals

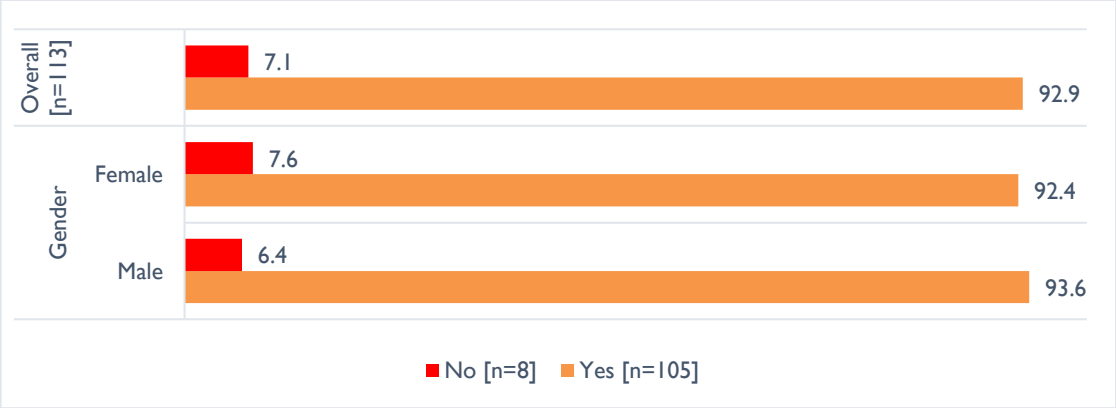


Source: Primary Data: Household Survey

Further, an overwhelming majority of participants, 92.9% overall, reported that the greening practices had positively impacted their agricultural yields. This high rate of success was reflected similarly across gender lines, with 93.6% of males and 92.4% of females affirming improved yields due to the implementation of these practices. These findings suggest a strong validation of the effectiveness of greening techniques such as intercropping, composting, and seed banking in enhancing crop productivity within the project area.

Among the 232 participants in the study, 119 reported no experience with greening methods. That's because the main issue identified was access to land or garden space, which was repeatedly mentioned as a fundamental barrier. The feedback from participants was clear in their assertion that they "lack land," "have no land for digging," or are constrained in places of residence, such as refugees living in reception centres without access to cultivable land. Also, a considerable amount of people claimed to be untrained or unaware of greening techniques. This included being absent from training, while others were not trained at all. Others pointed out they are too old to do physical gardening because of age, disability or health problems. These obstacles, when considered as a whole, highlight the difficulties that community members confront in adopting sustainable agriculture.

Figure 7: Proportion of Respondents reporting Impact of Greening Practices on Yield Improvement

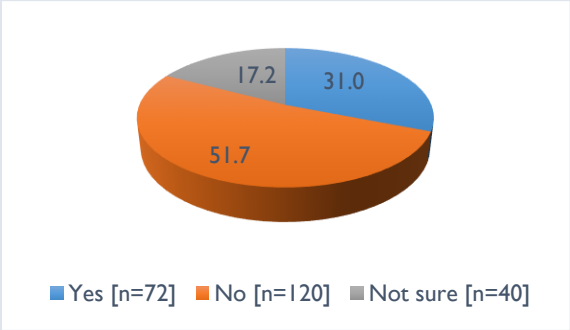


Source: Primary Data: Household Survey

% of households acknowledging an increase in their income.

The evaluation revealed that only 31% of participants reported an increase in their income over the past two years, falling short of the project's target of 50%. This increase was observed slightly more among males (34.4%) compared to females (28.9%). A significant rise in average income was recorded, with baseline (2020) figures at UGX 35,716.0 increasing to UGX 140,901.8 per month at end line, indicating a substantial improvement in economic conditions for those who experienced gains.

Figure 8: Income Changes Over the Past Two Years by Gender



Source: Primary Data: Household Survey

The slight improvement reported by the respondents was attributed to some of the new agricultural practices such as inter-cropping, and the use of manure to improve soil fertility, all contributing to increased crop yields and diversified harvests. Additionally, income diversification through engaging in multiple jobs, small business investments, and the sale of processed food products played a crucial role. Stable employment, particularly for those in formal sectors providing regular salaries and additional benefits, also significantly contributed to the reported increases in income. These factors collectively underscore a positive shift towards more sustainable and resilient livelihood strategies among the community members involved in the project.

Overall, outcome 2 of the CAMP+ project, aimed at increasing the capacity for greening food systems among refugees and host community households, achieved very moderate success. Although the adoption rate fell short of the 70% target, those who implemented these practices reported substantial improvements in agricultural yields, affirming positive impacts. Challenges such as lack of access to land and insufficient training hindered broader adoption. Nonetheless, the practices that were adopted, such as intercropping and composting, have proven effective in enhancing food security and promoting sustainable agricultural methods within the community.

Outcome 3: *Plastic Waste recycling and contribution to livelihood opportunities.*

The project introduced a plastic recycling initiative, Plastic+, which was developed to turn plastic waste into new products that could be sold, thereby creating income opportunities for the community while addressing the environmental issue of waste management.

Number of tons of plastic waste collected and repurposed.

A desk review of project documents revealed substantial achievements in the CAMP+ project's efforts to manage plastic waste. The project successfully collected and repurposed 8.12 tons of plastic waste, surpassing its target of 1.5 tons per week by reaching an average weekly collection rate of 1.58 tons by December 2023.[23] This success was largely facilitated by the integration of Ecoplastile Ltd.'s Waste Pay app, which streamlined the collection process.

However, not all collected plastics were suitable for repurposing. Approximately 80% of the plastics met the quality standards required for repurposing, while the remaining 20% were rejected due to contamination issues.

With the addition of 81 new agents to the project, there's substantial potential to further increase the volume of plastic waste collected and successfully repurposed. This scale up will enhance the project's impact on waste reduction and recycling as it moves forward.

Number of jobs created at plastic recycling entity.

During the evaluation, a noteworthy increase in employment opportunities was observed within the plastic recycling sector, managed by Ecoplastile Ltd. The project succeeded in creating 19 direct jobs (5 females and 14 males), surpassing the initial target of 12 jobs. This included roles such as micro plastic waste collection agents, an agent acquisition intern, a Waste-Pays Operations Officer, and a super-agent. These positions represented direct employment generated by the ongoing efforts to enhance plastic recycling capabilities within the Kyangwali refugee settlement.

During FGDs, community members confirmed and expressed positive views on the impact of these job creations. One participant noted,

> *"It changed our lives by helping us make money since we had no jobs to do,"* (FGD, Beneficiaries)

These findings highlighting the economic benefits brought by the recycling initiatives. However, some challenges were also mentioned regarding the initial business setup and operational aspects, such as capital for buying plastics and delays in payments, which suggests areas for improvement in future project phases. The project's success in creating new job opportunities within the plastic recycling sector not only aligns with its environmental goals but also contributed considerably to the economic empowerment of the community.

In general, outcome 3 of the CAMP+ project, which focused on reducing plastic waste and contributing to livelihood opportunities, achieved substantial success. The project surpassed its target by collecting and repurposing 8.12 tons of plastic waste, with an average of 1.58 tons collected weekly by the end of 2023. This effort was significantly aided by Ecoplastile Ltd and the introduction of the Waste Pay app, which enhanced the efficiency of the collection process. Additionally, the project created 19 direct jobs, exceeding the goal of 12, thereby substantially contributing to the economic empowerment of the community. However, challenges such as contamination of collected plastics and operational inefficiencies indicate room for improvement in optimizing the recycling process and expanding its benefits.

Outcome 4: ***CAMP+ concept promoted for replication, among humanitarian stakeholders.***

Another essential goal of the project was to demonstrate the viability of the CAMP+ model to other humanitarian actors. The project intended to showcase innovative solutions that could be replicated in other settings, emphasizing a holistic approach to addressing the challenges faced by displaced populations.

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Number of interventions replicating the CAMP+ concept, or aspects of it.

The CAMP+ project aimed to replicate its innovative concept for managing environmental impacts and improving livelihoods within refugee and host communities. The project set a goal of five replications but ultimately achieved two significant replications by the end of the project period. These successful replications include a partnership with DANIDA through CARE Denmark, which not only took over funding the CAMP+ food component but also introduced a biogas clean energy cooking solution, thus enriching the scope of sustainable energy practices within the communities. Additionally, the project entered a co-investment with Ecoplastile U Ltd, focusing on the repurposing of plastic waste, further enhancing the project's environmental initiatives. This collaboration not only bolstered CAMP+'s original waste management strategy but also helped refine and extend its impact through practical applications, demonstrating a robust model for future implementations in similar contexts.

Outcome 4 of the CAMP+ project achieved moderate success. The project's goal was to secure five replications but managed to realize two significant ones. The partnership with DANIDA through CARE Denmark and the co-investment with Ecoplastile U Ltd showcased the project's adaptability and its practical application in real-world settings. These initiatives successfully demonstrated the project's viability and potential for broader adoption, although it fell short of the initial replication target.

In addition, based on the CAMP+ models, private sector partners are taking steps to independently replicate solutions in other contexts (i.e., ECOCA school kitchens and the plastic recycling model that are now in process of replication in other settings like schools), though these are not humanitarian stakeholders, this was an "unintended outcome" that emphasized the potential for humanitarian-private partnerships to serve as a catalyser of further investments in humanitarian solutions by the private sector.

3.3.2 Achievement of Intended Outputs.

The CAMP+ project aimed to establish a series of scalable, self-sustaining models for community kitchens and enhance the plastic recycling capacity within the Kyangwali refugee settlement and host communities. This section provides a critical analysis of the project's primary outputs against the set targets, explaining the achievements and noting any deviations from the expected outcomes.

Output 1.1: ***Community Kitchens Developed into a Scalable Self-Sustaining Model.***

This output had two indicators which were implemented.

Number of Functional Business Management Partnerships in Place.

The CAMP+ project successfully established one functional business management partnership, meeting its set target. This achievement, however, encountered challenges due to cultural biases against communal cooking and the high costs associated with operating communal kitchens. These factors limited the broader implementation of the model. In response, the project was in the process of adapting a new arrangement by transitioning the management of the Maratatu HCII kitchen to the local health facility, which plans to introduce a private service provider to enhance sustainability. Additionally, the Kagoma kitchen was set to be transferred to the management of the reception centre and linked to ECOCA for ongoing service and stove repairs. These transition plans are designed to ensure more effective and sustainable kitchen operations.

Number of Operational Guidelines Developed.

The CAMP+ project achieved its target by successfully developing one set of operational guidelines, which are essential for the management of community kitchens at Maratatu and Kagoma. These guidelines at the time of the evaluation were in the process of being finalized and will be documented in future reports. This development was crucial for ensuring that the community kitchens operate efficiently and sustainably upon their handover to new management. The establishment of these guidelines is a vital step toward

achieving the project's goal of replicating these community kitchens as sustainable units, ensuring they can be managed effectively and sustainably in different settings.

Output 1.2: ***Community Kitchens Scaled Up in Additional Locations.***

This output was implemented with a set of four indicators anchored on scaling up of community kitchens in additional locations within the settlement.

Number of Additional Community Kitchens Established.

The CAMP+ project aimed to establish five additional community kitchens by the end of the project period but managed to only establish only one, at Kasonga trading centre. This kitchen was operational for only two months in July and August 2023 before closing due to low utilization, which never surpassed 16% usage of the kitchens despite targeted efforts to increase engagement. This lack of uptake, combined with high operational costs, rendered the community kitchens unviable. The project's experience at Kavule, where a similar kitchen saw only 5% utilization and was also closed, reinforced the challenges of implementing the communal kitchen model in areas with low household concentration. Consequently, plans to expand this model to Nakivale Refugee Settlement were cancelled, highlighting significant challenges in adapting this model to various community settings within the refugee settlements.

Percentage of Community Kitchen Capacity Utilized.

The CAMP+ project targeted an 80% utilization rate for its community kitchens by the end of the project period but only achieved 37.5%.[24] This utilization rate reflects the combined average of the Kagoma and Maratatu HCII communal kitchens, where Kagoma reached 42% utilization and Maratatu only 33%. An improvement was observed at Maratatu, increasing from 20% to 33% utilization, due to new operational strategies that linked volunteer compensation directly to the promotion and marketing of the kitchen's services. Despite these efforts, the overall low utilization rate highlights a significant underutilization of the community kitchen resources, suggesting a need for better community engagement and potentially re-evaluating the services offered to enhance their appeal and increase usage. This underperformance points to broader challenges in adapting the community kitchen model to meet the needs and preferences of the refugee and host community populations.

Number of refugee-led business services and products promoted through community kitchen facilities.

The target for the CAMP+ project was to promote two refugee-led business services or products through community kitchen facilities by the end of the project. However, it achieved this with only one initiative at the Maratatu location. Here, the project facilitated the establishment of a private service managed by health unit personnel, offering tea, hot water, and phone charging services for a fee to patients. This initiative is anticipated to evolve into a sustainable business model that the health facility will manage following the handover of the kitchen. The partial achievement of this target reflects the broader challenges faced by the community kitchen model, which has not performed as expected, limiting opportunities for broader implementation of refugee-led businesses within these facilities.

Output 1.3: ***Carbon credit-based system developed to contribute to maintenance and establishment of additional solar cooking points (community kitchens and household cookers).***

The project intended to achieve one indicator under this output of ensuring that a carbon credit-based system was developed. However, due to low utilization rates in communal kitchens, investing in a carbon credit system was deemed impractical. This highlights the necessity of conducting thorough feasibility studies before initiating interventions, especially in projects where components rely on the success of

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others, as seen in the case of the carbon component, which depends on the establishment and effective use of solar cooking infrastructure

Sustainable funding stream for maintenance of community kitchens and roll-out of household cookers developed and executed.

The CAMP+ project had planned to develop a carbon credit-based revenue system to financially support the maintenance of 10 community kitchens and the rollout of 100 household cooking units. Unfortunately, this initiative was not implemented, as the project was unable to establish enough stoves and community kitchen outlets necessary to facilitate a viable carbon credit scheme. The limited number of installations reduced the feasibility of generating and trading carbon credits, which was intended to fund the ongoing operations and expansions. This shortfall highlights a significant challenge in aligning environmental initiatives with sustainable funding mechanisms, ultimately impacting the project's ability to achieve its sustainability goals for community and household cooking solutions.

However, like with the 'sustainable food systems' component, this component of the project was carried forward to the CLIRK project to test the feasibility of carbon credit-based revenue systems for biogas digesters.

Output 3.1: ***Plastic Recycling Unit Developed into a Full Capacity Production Entity.***

Three activities were implemented under this output in relation to developing a plastic recycling unity to support in reducing the plastics within the settlement.

Kilograms of Plastic Waste Material Received vs. kg of Plastic Waste Material Value-Utilized.

The CAMP+ project set a goal to achieve a 90% value-utilization rate for the plastic waste materials it received by the end of the project period. However, it achieved an 80% utilization rate. This result, while falling short of the target, still represents substantial success in repurposing received plastics. The operations were transferred to Ecoplastile Ltd, which helped streamline the recycling process. Nonetheless, the overall utilization rate was impacted by the quality issues associated with non-ideal plastics that were not suitable for repurposing. This indicates that while the initiative effectively processed a significant volume of waste, challenges related to the quality of incoming materials limited maximum value extraction from the recycling process.0

Revenue vs. Operating Expenses (Balanced OPEX).

The CAMP+ project aimed for the plastic recycling unit to become a self-sustaining business by the end of the project period, with its revenue balancing or exceeding its operating expenses. Unfortunately, this target was not achieved; the project did not establish a self-sustaining revenue model. A significant factor in this shortfall was the strategic shift from conducting recycling in-house to partnering with Ecoplastile Ltd, which took over the repurposing activities. While this partnership enhanced operational efficiency by leveraging Ecoplastile established capabilities, it also interfered with the project's ability to directly generate and control its own revenue streams, ultimately preventing the achievement of a balanced operational expense (OPEX) model. This transition illustrated the complexities and trade-offs involved in scaling environmental initiatives within community projects.

Number of Functional Business Management Partnerships in Place.

The CAMP+ project set a goal to establish two functional business management partnerships to enhance its plastic recycling capabilities. However, it achieved only one partnership with Ecoplastile Ltd, which took over the operations of the plastic recycling unit in Kyangwali. This partnership has been pivotal in managing the collection and repurposing of plastic waste, contributing to job creation at the unit. Despite this progress, the project did not meet its target, underscoring the need for additional partnerships to strengthen the recycling initiative further. The existing relationship with Ecoplastile demonstrates a

significant step forward, but the shortfall in achieving multiple partnerships points to potential areas for future growth and development in the project's scope.

Output 3.2a: ***Plastic unit developed into a scalable model for replication by other partners.***
This output was about ensuring that the plastic unit is scaled up for replication and only one activity was successfully implemented.

Number of operational guidelines produced.
The CAMP+ project successfully met its target of producing one set of operational guidelines, developed by Ecoplastile to streamline the activities of Wastepay agents. These guidelines serve as a crucial framework to ensure consistency and effectiveness in the operations surrounding the collection and processing of plastic waste. The creation of these guidelines was key in maintaining operational integrity and enhancing the efficiency of the recycling process, aligning with the project's goals of improving waste management practices and promoting sustainability within the community. This accomplishment signifies a fundamental step in standardizing practices and fostering professional conduct among those involved in the project's recycling initiatives.

Output 3.2b: ***Three (3) separate production lines (including material-reception, -cleaning, -processing, product manufacturing, -storage and whole-selling).***

Number of products certified.
The CAMP+ project set a goal to have three of its products certified, however, the project failed to get certification of its products produced at the outlet set up at Kavule of the low version of equipment installed and limited expertise. Instead, the project partnered with Ecoplastile to collect plastic which fed into existing Ecoplastile roofing tiles and other plastic processors working with Ecoplastile. These products include roofing tiles and damp-proof sheets, which are utilized in construction. The production and certification of these items fall under the management of Ecoplastile, which oversees the operations of the plastic recycling unit. While the project fell short of its initial target, the certification of these two products represents a significant accomplishment in promoting sustainable and certified construction materials within the market.

Output 4.1: ***Lessons from the CAMP+ concept consolidated and disseminated.***

Number of CAMP+ concept knowledge products disseminated.
The project aimed to disseminate five knowledge products to share insights and outcomes from its innovative concepts, but it only managed to disseminate one such product. The primary focus during the project was on addressing and rectifying various operational challenges, which diverted resources away from the creation and dissemination of knowledge products. The single disseminated product was associated with a Plastic Market Dialogue with Partners, an event aimed at discussing and expanding the recycling efforts within the project. This dialogue served as the sole piece of formal dissemination under the project's banner. Despite these efforts, the limited progress in this area indicates a need for enhanced focus on knowledge sharing in future projects to fully capitalize on the learning and developments achieved by CAMP+.

Number of stakeholders reached with CAMP+ concept.
The CAMP+ project aimed to reach 200 stakeholders with its innovative concept but achieved engagement with 57 individuals. This outreach included 14 environmental stakeholders at the Environment and Climate Change marathon and walkathon in Kampala, and 39 participants in Geneva, where the CAMP+ concept

was presented to various humanitarian agencies. Additionally, 4 staff members from the Office of the Prime Minister (OPM) visited the project site in Kyangwali. The project also participated in the Renewable Energy Conference and Expo (REC23 & expo), although the exact number of stakeholders engaged there was not specified. While the project felt short of its target, these interactions highlight significant efforts to disseminate and discuss the CAMP+ concept within various influential and relevant forums.

3.3.3 Effectiveness of Private Sector Collaborations.

The CAMP+ project embraced collaboration with private sector entities like Ecoplastile Ltd and ECOCA East Africa Ltd. Whereas the fore aimed at contributing to fostering sustainable environmental practices within refugee settlements the latter provided technical and practical support towards ensuring that the solar-powered energy solutions are maintained and serviced to serve the intended beneficiaries. These partnerships were instrumental in integrating innovative solutions, such as the Wastepays initiative for plastic recycling and sustainable solar-energy solutions for community and school kitchens.

On the part of ECOCA Ltd, it was able to undertake technical repairs of the solar-powered stoves as and when they broke down which kept the systems operating. Whereas in the initial arrangements, the project had contracted PESITHO whose technical experts were based in Denmark as the call was made in Denmark, the project made a shift to contract a locally based partner hence ECOCA Ltd which solved the challenge of working with an international partner with limited presence on ground. ECOCA Ltd was able to move a step to deploy technical experts within the settlements to handle any breakdowns in the solar-powered system which minimised and reduced on the functionality of the system. A great learning from this collaboration was that of humanitarian organisations working with locally based private partners to deliver services on one hand but also contribute to building their capacity to engage in such innovative solutions.

The collaboration with Ecoplastile, also enhanced the project's capacity to manage waste more effectively and contributed to local job creation. This partnership not only addressed environmental concerns but also provided economic benefits to the community, illustrating the potential of private sector collaboration to support comprehensive community development.

However, the success of these collaborations was not without its challenges. One significant barrier to effective collaboration was the initial misalignment of operational goals and capacities between the project and its private sector partners. For instance, the project initially struggled to manage the quality and operational demands of plastic recycling activities, leading to a strategic shift from in-house production to external processing by Ecoplastile Ltd. This transition, necessitated by operational inefficiencies and quality control issues, introduced delays and added complexity to the project's execution. On the part of ECOCA, the execution of their services greatly depended on the availability of funds which caused delays at times to repair the parts of the systems which had broken down. In addition, they preferred to make repairs and maintenance at once since they needed to make orders for spare parts from outside Uganda which caused a lot of delays keeping some of the systems non-functional.

Regardless of these challenges, several factors contributed to the successful aspects of these collaborations.

1. The flexibility and adaptability of project management were crucial in navigating the complexities of integrating new technologies and processes into the community settings. The project's ability to pivot its strategies in response to operational challenges was key to maintaining the momentum of its initiatives.
2. Strong communication and continuous engagement with private partners allowed for real-time problem-solving and adjustments, which were vital in the fast-paced environment of the project. For example, regular feedback loops with Ecoplastile enabled swift responses to issues like

equipment breakdowns and supply chain interruptions, ensuring minimal disruption to the recycling operations.

3. Community involvement and stakeholder engagement were also instrumental in the successful deployment and scaling of project initiatives. The project leveraged local knowledge and networks to facilitate the adoption of new practices, enhancing the relevance and acceptance of the solutions provided. For example, the integration of community kitchens and biogas solutions was more successful in areas where community leaders were actively involved in the planning and implementation phases.

Despite initial operational setbacks and quality challenges, the CAMP+ project's collaboration with Ecoplastile demonstrated the effectiveness of adaptable management and strong partner communication in overcoming obstacles. This partnership not only improved waste management capabilities but also fostered job creation, showcasing the potential of private sector involvement in achieving sustainable community development.

3.3.4 Influence of Project Strategies and Approaches.

This section of the report evaluates the effectiveness of the CAMP+ project by delving into the specific strategies and approaches implemented. It examines how these methodologies have driven project results, assesses their impact on achieving project goals, explores contributing factors, and discusses adjustments made in response to emerging challenges and opportunities.

The CAMP+ project employed several innovative strategies to address both environmental and socio-economic challenges within Kyangwali Refugee Settlement.

1. **Community Kitchens.**

   Community kitchens, integral to the CAMP+ project, employed innovative strategies to promote sustainable cooking practices among refugee and host communities. Key methodologies included the use of solar-powered cooking solutions to replace traditional fuels, thereby reducing deforestation and mitigating indoor air pollution. The project introduced a scalable business model, generating revenue through user fees for services like phone charging, which helped balance operational expenses. Designed inclusively, these kitchens were tailored to meet local needs, facilitating demographic, cultural, and economic adaptability. Strategically, the initial phase focused on establishing a functional model with CARE overseeing ownership while partnering with PESITHO for equipment provision and maintenance. This setup was envisioned to evolve into broader scaling through joint ventures or cooperatives. Furthermore, community kitchens were positioned as multifunctional hubs, supporting small business development and providing safe communal spaces, particularly benefiting women.

   However, the adoption faced cultural barriers, with resistance to communal cooking affecting the scalability in some locales leading to closure. But through these methodologies, the CAMP+ project not only provided immediate benefits such as safer cooking options and additional economic activities but also fostered community resilience and environmental stewardship, setting a precedent for future initiatives in refugee settings.

   > "*The introduction of community kitchens was initially met with scepticism, but over time, as we adapted the services to align with local preferences, we saw a gradual increase in acceptance and usage*" **[KII - Project Staff]**

2. **Plastic Recycling (Plastic+).**

   The Plastic+ initiative within the CAMP+ project represents a key strategy aimed at enhancing environmental sustainability and economic development through innovative waste management.

This initiative involved transforming collected plastic waste into commercially viable products using renewable energy sources. Designed to be flexible, the operational model was tailored to meet the specific needs of the local context, allowing for ongoing adjustments to align with market demands. The project employed a phased approach, initially with CARE maintaining full ownership, gradually integrating external partners for operational support and maintenance. This model was intended to ensure economic sustainability by generating revenue through the sale of recycled products, thereby covering operational costs and attracting external investment.

However, the implementation faced challenges such as technological limitations and inconsistencies in the supply chain, which initially hindered the quality and output of production. These issues necessitated strategic adjustments and improvements to improve the system's efficiency and output.

> *"We faced several hurdles in sourcing consistent quality plastics and integrating the right technology to meet production needs, which required us to innovate continuously and adapt our approach"* **[KII – Project Staff]**

In general, the project employed innovative approaches, sustainable technologies and business models to address environmental and livelihood challenges, with significant focus on scalability and community involvement. While facing cultural and operational hurdles, these initiatives illustrate potential pathways for replication and broader impact in similar contexts.

3.3.5 Factors influencing the achievement or non-achievement of the intended results.

The project evaluation highlighted several critical factors that significantly influenced the achievement or non-achievement of intended and unintended project results. These factors are grouped into those that positively influenced achievement and those that served as barriers, affecting the project's ability to meet its goals effectively, highlighting the complexities and dynamics of implementing community-oriented environmental and sustainability projects in refugee settings.

<u>Factors that Influenced Achievement of results.</u>

The evaluation noted three critical factors which supported the achievement of project intended results and objectives.

1. **Collaborative Engagement with Stakeholders.**
   Successful aspects of the project were often underpinned by robust collaboration with stakeholders, including local government, NGOs, and community leaders. This collaboration facilitated community buy-in and supported the project's sustainability efforts. For instance, the incorporation of local input into project design and execution helped tailor interventions to meet specific community needs, enhancing their effectiveness.

   > "*The involvement of all stakeholders, including local government and community leaders, significantly boosted the project's acceptance and sustainability.*" **[District Agriculture Officer, Kikuube]**

2. **Adaptability and Flexibility in Project Design.**
   The project's ability to adapt and pivot its strategies in response to on-the-ground realities played a crucial role in achieving some of its objectives. This flexibility allowed the project to refine approaches and introduce innovations such as biogas solutions and solar energy implementations that were more aligned with the beneficiaries' capabilities and needs.

3. **Targeted Awareness and Capacity Building.**
   Effective communication and training sessions significantly contributed to the project's success, especially in areas like sustainable agricultural practices and energy conservation. Educating the community about the benefits of new technologies and practices led to increased adoption and sustained use of these innovations.

Factors Influencing Non-Achievement.

The evaluation found three key factors that affected the non-achievement of some of the project result areas and indicators.

1. **Cultural and Social Barriers.**
   Cultural resistance, particularly towards community cooking facilities, posed significant challenges in scaling up interventions like community kitchens. These cultural preferences impacted user uptake and made it difficult to achieve intended impacts in certain areas, as communal facilities did not align well with local customs and individual cooking habits.

   > *"Cultural resistance to communal cooking facilities greatly hindered their acceptance and use, particularly among women who preferred cooking within their households."* **[Project Staff, CAMP+]**

2. **Technological and Supply Chain Limitations.**
   Initial challenges with technology and material supply, especially in the plastic recycling initiative, hindered the project's capacity to produce high-quality outputs and maintain a steady flow of materials. These limitations affected the project's efficiency and the quality of its deliverables, leading to delays and reduced effectiveness.

   > *"We faced technical challenges that affected the quality of recycled products, leading to a strategic shift towards focusing solely on collection and resale."* **[Project Staff, CAMP+]**

3. **Economic Constraints and Operational Costs:** Financial limitations and the high costs associated with running and maintaining project initiatives, like the community kitchens, impacted their viability and sustainability. The economic burden of maintaining these services without sufficient revenue streams led to the discontinuation or scaling down of some project components.

3.4 Project Impact.

The CAMP+ Project has had noteworthy social, environmental and Economic impacts on the Kyangwali refugee settlement, primarily contributing to fostering unity and improving daily life for its residents. The implementation of community-based interventions like community kitchens and renewable energy solutions has played a crucial role in these changes.

1. **Improved Community Cohesion and Social Integration.**
   The project facilitated increased social interaction and cohesion among refugees and host community members through communal facilities like community kitchens. These spaces served not just as places for cooking but also as social hubs where individuals from diverse backgrounds could meet, interact, and build relationships.

   > *"The community kitchens have become more than just a place to cook; they are where we meet and bond over meals, sharing our stories and cultures."* **[FGD, Community Kitchen User]**

2. **Increased Women's Empowerment.**
   Women, in particular, benefited from the project's initiatives, especially through economic empowerment opportunities in the plastic recycling units and the use of community kitchens. These interventions provided them with roles that not only offered financial benefits but also improved their standing and influence within the community.

   > *"Working in the recycling plant has not just given some women jobs; it has given them a voice in the community."* **[FGD, Plastic+ female beneficiary]**

3. **Cultural Acceptance and Adaptation.**
   While the project faced challenges with cultural acceptance initially, especially regarding communal cooking, ongoing engagement and adaptations led to a better alignment with local traditions and practices, fostering a gradual acceptance and integration of project facilities.

   > *"At first, I was hesitant to use the community kitchen, but as they adapted it to fit our cultural ways, it became easier and more inviting to use."* **[FGD, Community Kitchen User]**

4. **Promotion of Gender Equality.**
   The project's emphasis on equitable access to resources and services contributed to promoting gender equality within the communities. Initiatives that targeted both men and women ensured that the benefits, such as training in sustainable agricultural practices and access to clean energy, were distributed fairly, empowering all participants.

   > *"The training on farming was given to both of us, men and women, making us equally skilled and capable."* **[FGD, Male Farmer]**

5. **Social Innovation and Learning.**
   The project acted as a catalyst for social innovation, introducing new concepts and practices that encouraged communities to think differently about energy, waste management, and food security. This exposure has led to a culture of learning and adaptation, essential for ongoing development and problem-solving within the community.

   > *"We've learned to look at waste not as trash but as something valuable that can give back to the community through recycling."* **[FGD, Plastic + female beneficiary]**

6. **Job Creation.**
   The introduction of community kitchens and a plastic recycling plant by the project boosted local employment. New roles were created in kitchen operations, facility maintenance, and the recycling process. This impacted the lives of participants by providing essential job opportunities. As one female beneficiary from the Plastic+ focus group discussion noted.

   > *"It changed our lives by helping us make money since we had no jobs to do."* **[FGD, Plastic + female beneficiary]**

   The jobs created not only offered financial benefits but also increased the sense of purpose and self-sufficiency among community members, contributing positively to their overall well-being.

7. **Economic Diversification.**

The project played a crucial role in fostering economic diversification by introducing new income-generating activities such as recycling. This shift reduced the community's dependency on agriculture, which is often vulnerable to environmental factors. A district official noted.

> "*Many who were solely dependent on agriculture are now involved in recycling activities, diversifying their income sources.*" **[Key Informant, District Official]**

This diversification has increased economic resilience, providing community members with more stable and varied means of livelihood, better equipping them to withstand economic fluctuations and environmental challenges.

8. **Reduction in Biomass Fuel Usage.**
The project's introduction of solar-powered and biogas cooking solutions contributed to a decrease in the community's reliance on traditional biomass fuels, such as wood, which in turn contributed to a reduction in deforestation rates and lowered greenhouse gas emissions. A female farmer from a focus group discussion highlighted.

> *"Since the community started using biogas and solar cookers, there's been less smoke and fewer trees cut down.*" **[FGD, Female Farmer]**

This reduction in smoke not only contributed to better respiratory health among community members but also contributes to environmental sustainability by preserving forests. This shift to cleaner energy sources thus improved both community health and the local ecosystem.

9. **Improved Waste Management Practices.**
The establishment of the Plastic+ initiative transformed community waste management practices by recycling plastic waste into usable products, reducing environmental pollution.

> *"We no longer see plastics littering around as before because they are now collected and turned into useful items."* **[Key Informant, Agriculture Officer]**

Without the CAMP+ project, the communities in Kyangwali Refugee Settlement would likely have continued facing escalated environmental degradation, poorer health outcomes due to air pollution from traditional cooking methods, and greater economic instability due to high energy costs. The project's holistic approach to tackling these issues simultaneously demonstrated a sustainable path forward that other regions could emulate.

3.5 Project Sustainability.

This section of the report evaluates the sustainability of the CAMP+ Project, focusing on the enduring social and environmental impacts of its interventions. It examines the creation of sustainable systems, the project's considerations for long-term viability, external adoption of solutions, and the development of local markets and value chains to ensure ongoing benefits beyond the project's conclusion.

1. **Spillover Effects.**
The CAMP+ project, designed to foster sustainable practices within refugee and host communities, has achieved significant spillover effects that benefit both social structures and the environment. By introducing alternative energy solutions like biogas and solar-powered community kitchens, the project has substantially decreased the dependence on traditional biomass fuels. This shift has led to a marked conservation of forest resources and a reduction in greenhouse gas emissions. Moreover, the establishment of community kitchens and biogas facilities

has not only conserved environmental resources but also strengthened community bonds. These initiatives have empowered local communities by involving them directly in the management and upkeep of these facilities, thereby building local capacity and fostering a sense of ownership and collaboration among the residents.

2. **Sustainable Resource Utilization Systems.**
The CAMP+ project established systems to improve the efficient use of natural resources, paving the way for long-term sustainability. Key to these initiatives was the adoption of solar energy and biogas technologies for cooking, which contributed to a reduction in the consumption of wood and other traditional biomass fuels. This shift not only aligns with global sustainability goals to protect the planet but also lessens environmental impact by promoting renewable energy sources. By reducing reliance on non-renewable, environmentally damaging fuel sources, the project has fostered a more sustainable community model that conserves natural resources and reduces pollution, contributing to a healthier environment and promoting sustainable development practices.

3. **Sustainability Considerations.**
The CAMP+ project meticulously integrated sustainability considerations throughout its execution to guarantee the durability and scalability of its interventions. This approach included the careful selection of appropriate technologies, forging partnerships with local enterprises, and deploying community engagement strategies designed to foster local ownership and build capacity. These strategic decisions were pivotal in ensuring that the project's initiatives were not only aligned with global sustainable development goals but also culturally resonant and environmentally advantageous. This holistic approach has been instrumental in embedding sustainability into the fabric of the project, making the solutions provided both viable and valuable in the long term.

4. **Sustainability of Results.**
The potential for maintaining the outcomes of the CAMP+ project beyond its official conclusion is highly encouraging, especially in the short to medium term. Notable achievements have been observed in the external adoption and scaling of the project's innovative models. For instance, the concept of community kitchens and the use of biogas technologies have been embraced and replicated by other organizations and communities. Such external validation and subsequent adoption highlight a robust basis for ongoing impact, suggesting that the project's initiatives are not only effective but also compelling enough to inspire broader implementation. This widespread acceptance and integration into other programs reflect a solid groundwork laid by the project, promising continued benefits and enhancements based on its foundational strategies.

5. **Local Markets and Value Chains.**
The CAMP+ project played a pivotal role in fostering the development of local markets and value chains by focusing on sustainable solutions. Collaborating with local enterprises such as Ecoplastile for plastic recycling and Biogas Solutions Uganda Limited for building bio digesters, the project catalysed key economic activities centred on sustainability. These strategic partnerships did more than just create local jobs; they significantly bolstered the economic resilience of the community. By diversifying the economic base and linking it with larger market systems, the project ensured that local economies could thrive and sustain themselves. This approach not only supported immediate community needs but also established a framework for long-term economic stability and environmental stewardship, demonstrating a successful integration of sustainable practices into local economic structures.

6. **Scale and Sustainability Pathways.**

Throughout its operation, the CAMP+ project implemented various strategies to expand and maintain its environmental and community-focused solutions long-term. A primary strategy was the development of community kitchens, designed as scalable models that could be replicated in various settings. This approach was aimed at boosting community resilience and promoting environmental sustainability across different regions where the strategies are replicated. Additionally, the project contributed to strengthening local economies and environmental health by incorporating local enterprises into sustainable practices, especially in waste recycling operations. These initiatives were structured to continue delivering benefits beyond the project's lifespan, ensuring lasting impacts by establishing sustainable community practices and strengthening local business capabilities in environmental stewardship.

The project's careful approach to documenting experiences and outcomes has been instrumental in laying down a solid foundation for the future. By capturing and sharing lessons learned, the CAMP+ project has provided valuable guidance for replicating and scaling its innovative solutions, offering a clear and actionable roadmap for similar initiatives worldwide. This comprehensive strategy ensures that the project's impacts are not only sustained but also serve as a springboard for further innovation and development in the field of sustainable community development.

In conclusion, the CAMP+ project has established a strong framework for sustainable development within refugee and host community settings, with significant potential for long-term impact. Its comprehensive approach to building sustainable community infrastructure, coupled with strategic partnerships and community involvement, has set a precedent for similar initiatives globally.

3.6 Lessons Learned.

The CAMP+ project has yielded substantial insights into solving refugee challenges through sustainable and innovative methods that substantively enhance daily living conditions for residents. This section encapsulates the pivotal lessons drawn from implementing diverse solutions across communal cooking, plastic and waste management, and food production components. These lessons not only reflect the successes and challenges encountered but also provide critical guidance for future interventions in similar setting.

1. **Adapting Communal Cooking to Cultural Contexts and Demographic Considerations.**
   The CAMP+ project's experience with communal cooking highlights the critical importance of aligning such interventions with the specific cultural and demographic characteristics of the target community. While the communal kitchens achieved notable success in the densely populated Kagoma Reception Centre, they faced significant challenges in the more sparsely populated Kavule area. This stark contrast in uptake rates illustrates that the effectiveness of communal cooking solutions is heavily dependent on their cultural fit and the population density of the implementation site. Tailoring these solutions to resonate with local norms and ensuring they cater to the community's practical needs are essential for fostering acceptance and achieving sustainable impact.

2. **Optimizing Cooking Technologies for Institutional Use.**
   The implementation of cooking technologies in institutional settings, as observed in the CAMP+ project, highlighted crucial design shortcomings that impacted their efficacy. Specifically, the stoves used were not conducive to the stirring practices necessary for large-volume cooking, often resulting in food being unevenly cooked or burnt. This experience underscored the importance of designing cooking solutions that are not only energy-efficient but also tailored to fit the specific culinary practices and scale of use typical in institutional environments. Ensuring that technology

meets these functional requirements is vital for its successful adoption and sustained use, thereby enhancing the overall effectiveness of feeding programs in such settings.

3. **Importance of Local Technical Support for Technology Maintenance.**
   The project's experience with cooking facilities has emphasized the critical role of local technical support in ensuring the sustainability of technology operations. Regular maintenance and timely repairs, conducted by trained local technicians, are essential to minimize operational disruptions and extend the technology's lifespan. The availability of skilled technicians on-site enables immediate troubleshooting and maintenance, which not only enhances the efficiency of the technology but also fosters a sense of ownership and empowerment among the local community. This approach ensures that technologies remain functional and effective, thereby maximizing their impact and sustainability in the long term.

4. **Economic Viability and Market Alignment in Plastic Recycling.**
   The plastic recycling component within the project highlighted the importance of economic viability and alignment with community demands. Challenges encountered, particularly related to market dynamics and product quality, highlighted the necessity for comprehensive market analysis and robust product development. To ensure the sustainability of recycling efforts, it is crucial that products generated from recycling processes meet the quality expectations and practical needs of the community. Furthermore, these initiatives must be economically viable, creating products that not only serve local needs but also generate sufficient revenue to sustain operations and improve the livelihoods of the project beneficiaries. This approach will help foster a self-sustaining recycling ecosystem that contributes positively to the community's economy and environmental health.

5. **Critical Importance of Community Engagement for Successful Innovation Implementation.**
   The implementation of innovative solutions such as solar-powered kitchens and plastic recycling units revealed a significant lesson: the necessity of robust community engagement and comprehensive sensitization. These initiatives experienced differing levels of success, largely influenced by the degree of community involvement. Effective engagement and ongoing sensitization are vital to ensure that community members understand, accept, and utilize new technologies. This process not only aids in overcoming initial resistance but also facilitates smoother integration of innovations into daily lives, enhancing their overall impact and sustainability. Engaging communities early and consistently ensures that innovations are more than just imposed solutions; they become integrated elements of community practice and development.

6. **Adaptive Project Design and Procurement is key to Responsive Innovation.**
   Another lesson from the project is the critical role of adaptable project design and procurement processes in the success of interventions. The innovative procurement strategy employed allowed for significant flexibility, enabling the project team to swiftly adapt to unexpected challenges and capitalize on emerging opportunities. This flexibility was instrumental in refining project strategies to align more closely with the actual needs of the beneficiaries. By maintaining a dynamic approach to procurement and project design, the project responded effectively to the evolving landscape, ensuring interventions remained relevant and impactful. Such adaptability is essential for the sustainability and success of projects in complex and changing environments.

7. **Practical Design and Implementation of Innovations.**
   A critical lesson from the project is the necessity of ensuring that innovations not only introduce new technologies but also align closely with the practical needs and capabilities of the users. The

introduction of solar-powered stoves and plastic recycling units showcased pioneering technology; however, their effectiveness was sometimes limited by factors such as user-friendliness and economic viability. This experience underlines the importance of designing innovations that are not only technically advanced but also practically applicable and economically sustainable for the target communities. Effective innovation should focus on user-oriented designs that integrate seamlessly into daily practices and offer real, tangible benefits to ensure broader adoption and long-term success.

8. **Strategic Adaptation from Setbacks.**
   Another essential lesson learned from the project is the importance of recognizing setbacks early and making strategic adjustments promptly. The project demonstrated a proactive approach in acknowledging the shortcomings of certain initiatives, such as specific community kitchens that did not meet expectations. This willingness to accept and learn from failures enabled the team to pivot strategies effectively, optimizing resources and refining methods to better suit the community's needs. This adaptability not only prevented prolonged resource misallocation but also fostered an environment where continuous improvement was possible, ultimately enhancing overall project outcomes.

9. **Managing the quality of input material is crucial for achieving optimal outcomes in plastic recycling projects:** The CAMP+ project highlighted the critical lesson that stringent quality control and effective material sorting are fundamental to achieving the efficiency of recycling initiatives. Achieving an 80% value-utilization rate, despite falling short of its 90% goal, highlighted the importance of high-quality inputs for optimal recycling outcomes. This experience demonstrates that even with streamlined operations through partnerships like with Ecoplastile Ltd, the quality of input materials significantly impacts the sustainability and success of recycling processes.

10. **Shift from using traditional log frames:** adopting an innovation life cycle framework which can better accommodate the dynamic and iterative nature of innovation projects as this allows for greater flexibility, responsiveness to changing conditions, and encourages experimentation and learning throughout the project lifecycle is critical in any innovative project design.

These lessons highlight the complex interplay of innovation, cultural adaptation, economic viability, and community engagement in humanitarian projects aimed at improving the lives of refugees in a sustainable manner. Each lesson informs future initiatives, emphasizing the importance of adaptability, local involvement, and thorough planning in implementing sustainable solutions in challenging environments.

3.7 Best Practices.

The CAMP+ project offers a rich repository of interventions aimed at enhancing the resilience of refugees and host communities to climate impacts while fostering gender equality. This section delves into the effective practices attributed to the project, highlighting how these initiatives not only contribute to mitigating climate change but also promote transformative changes in gender roles and responsibilities.

1. **Solar-Powered Community Kitchens as a Sustainable Solution.**
   In an effort to minimize environmental and health impacts associated with traditional biomass cooking methods, the project deployed solar-powered community kitchens. These facilities proved most effective in densely populated settings such as the Kagoma Reception Centre, where they significantly curtailed the reliance on firewood and charcoal. This strategic shift not only mitigated deforestation and air pollution but also markedly improved respiratory health among community members by reducing their exposure to harmful smoke. Additionally, the community

kitchens fostered a communal environment that enhanced social interaction and empowerment among women, thereby promoting gender equality.

2. **Sustainable Energy Solutions in Educational Institutions.**
   The project implemented biogas and solar kitchen systems within educational settings, utilizing organic waste and solar power to fuel school cooking needs. These sustainable energy solutions provided a consistent and reliable source of energy, vital for supporting school feeding programs that help sustain student attendance and reduce dropout rates. Notably, the introduction of these systems significantly alleviated the time-consuming task of firewood collection, traditionally undertaken by girls. This shift allowed girls to dedicate more time to their studies and personal growth, thereby enhancing their educational outcomes and contributing to gender equality within the community. This initiative demonstrates a practical application of renewable energy technologies that benefits educational institutions while promoting social and environmental sustainability.

3. **Innovative Plastic Waste Recycling Efforts.**
   The CAMP+ project established a plastic recycling facility that transformed waste into valuable products, reducing environmental pollution and creating economic opportunities. This initiative not only conserved the environment by diverting waste from landfills but also provided jobs, particularly empowering women by prioritizing their employment. This strategic focus on gender equality promoted women's financial independence and enhanced their roles within the community. By integrating environmental management with social empowerment, the project demonstrated a sustainable model that can inspire similar practices in the private sector. This approach illustrates how environmental projects can foster community development and create equitable job opportunities, making it a valuable learning point for future initiatives.

4. **Enhancing Sustainability through Capacity Building and Sensitization.**
   The project implemented comprehensive training and sensitization programs aimed at disseminating sustainable farming techniques and the utilization of renewable energy sources. These initiatives boosted the skills and knowledge base of both refugees and host community members, fostering the adoption of sustainable practices across the community. A key aspect of these programs was their inclusive approach, ensuring equal participation from both men and women, refugee, and host communities. This strategy not only promoted gender equality but also empowered participants to actively engage in economic and environmental activities, thereby boosting community resilience and sustainability. This approach exemplifies best practices in community-driven development by integrating inclusive educational outreach with gender inclusivity.

The CAMP+ project's initiatives in climate adaptation and gender transformative adaptation have demonstrated substantial benefits, both environmentally and socially, by integrating gender considerations into climate resilience strategies. These practices not only contribute to mitigating the impacts of climate change but also challenge and transform traditional gender roles, contributing to more equitable and sustainable communities.

4. Conclusions and Recommendations

4.1 Conclusions.

This section of the report synthesizes the comprehensive evaluation findings of the CAMP+ project, detailing its effectiveness, efficiency, and impact on Kyangwali refugee settlement.

4.1.1 Relevance of the project.

It is evident that the interventions of the CAMP+ project were largely aligned with the local needs and priorities of the Kyangwali refugee settlement. The project's design was tailored to address the specific environmental, social, and economic challenges faced by the community, showcasing a strong understanding of the local context. Initiatives such as the introduction of community and school solar-powered kitchens and biogas cooking solutions directly responded to the critical need for sustainable energy sources, reflecting a thoughtful approach to reducing reliance on biomass and improving health outcomes.

Furthermore, the project's focus on waste management through the establishment of the Plastic+ initiative demonstrated a strategic response to environmental sustainability, though it faced economic challenges that required strategic shifts. The agricultural interventions aimed at enhancing food security were also relevant, considering the pressing food needs within the settlement. However, the varying degrees of success and adoption across these initiatives highlight the complexities of implementing projects in such diverse and dynamic settings.

The CAMP+ project's design considered the beneficiaries' conditions, aiming for interventions that were not only environmentally sustainable but also economically viable. This was evident in the project's efforts to engage local stakeholders and integrate solutions into the existing market and community structures. Nonetheless, the effectiveness of these interventions varied, suggesting that while the project was well-intentioned and appropriately designed, continuous adaptation and deeper community engagement are necessary to fully realize its objectives.

4.1.2 Effectiveness of the project.

The effectiveness of the CAMP+ project in achieving its intended outcomes and objectives varied across its diverse interventions, reflecting a complex interplay of strategic successes and operational challenges.

Community and school solar-powered Kitchens and biogas cooking solutions: These initiatives aimed to provide sustainable energy solutions and reduce reliance on biomass fuels, thereby addressing environmental degradation and enhancing community health. The implementation of solar-powered community and school kitchens was successful in areas like Kagoma Reception Centre and Kinakyeitaka P/S, where adoption rates were high. This success demonstrated the project's ability to leverage renewable energy technologies to foster safer and more sustainable cooking practices. However, the effectiveness of these kitchens varied significantly, with facilities like the one in Kavule experiencing low usage and eventual closure. This difference highlighted a critical barrier—the alignment of project interventions with community preferences and behaviours. Cultural resistance and logistical issues, such as the distance from users' homes to the kitchens, significantly hindered broader adoption, highlighting the need for a more tailored approach that considers cultural and practical realities of the target communities.

In addition, it should be noted that, whereas the impact of communal kitchen was less as compared to the school kitchen because of low uptake of communal concept due to socio cultural effects, communal cooking stoves were also limited to boiling foods and households didn't find it as a complete cooking solution. This made the households to always alternate between the offered solution and biomass to fully

satisfy their cooking needs. However, for school kitchen, it provided a 100% solution to clean cooking at the school and was utilized to maximum with no alternate to biomass options. This saved the school a considerable amount of biomass they previously used. The positive impact has been demonstrated by the interest picked by other instruments. Examples here are Sanyu Babies Home and Budo primary school.

Plastic Recycling Initiatives: The plastic recycling component initially set out to convert waste into usable products but pivoted to focus primarily on collection and resale due to economic and technical challenges. This shift, while practical, pointed to significant barriers in technology adaptation and market dynamics that restricted the project's ability to achieve a self-sustaining recycling operation. Although the initiative did succeed in contributing to a reduction in environmental pollution and creating job opportunities in Kyangwali Refugee Settlement, its full potential was curtailed by these operational challenges, suggesting a need for improved technology solutions and market analysis to enhance economic viability.

The project's overall impact was also shaped by its capacity to address and adapt to these challenges. The proactive adjustments made in response to low uptake in community kitchens and the pivot in the plastic recycling strategy illustrate the project's responsiveness to operational realities. However, these adaptations also indicated areas for improvement, particularly in pre-project planning and ongoing stakeholder engagement to ensure that interventions are appropriately scaled and aligned with beneficiary needs.

While the CAMP+ II project made significant strides towards its goals, achieving considerable success in some areas, it also encountered notable barriers that affected its overall effectiveness. These included cultural resistance, logistical constraints, technological limitations, and economic viability issues. The project's ability to adapt to these challenges was commendable and provided valuable lessons for future initiatives.

4.1.3 Impact of the project.

The CAMP+ project has markedly influenced the social, environmental, and economic landscapes of Kyangwali Refugee Settlement, offering substantial improvements across these domains through its innovative and community-focused interventions. The establishment of community and school solar-powered kitchens and biogas cooking units have significantly reduced reliance on traditional biomass, curbing deforestation and decreasing smoke-related health issues. These initiatives have not only promoted environmental sustainability but also fostered community cohesion and integration, turning communal spaces into hubs for social interaction and cultural exchange. Economically, the project catalysed new opportunities through the Plastic+ recycling initiative, which converted waste into valuable products, thereby enhancing waste management practices and providing job opportunities that were previously non-existent. This initiative particularly empowered women, giving them meaningful employment and a stronger voice within the community.

The project's approach—merging environmental conservation with socio-economic development—has established a model of sustainable community development that could inspire similar future initiatives. Overall, the CAMP+ II project, withstanding all the challenges encountered has not only addressed immediate community needs but also laid a foundation for lasting positive change, illustrating a successful integration of sustainability into refugee community management.

4.1.4 Sustainability of the project.

The sustainability of the CAMP+ Project hinges on its successful integration of environmental and social initiatives with strategic community engagement and capacity building. These efforts are designed to foster enduring benefits and support the community's self-sufficiency well beyond the project's conclusion. The

project's focus on creating sustainable systems, such as solar-powered kitchens and plastic recycling facilities, has laid a strong foundation for continuous environmental and economic improvements within the Kyangwali refugee settlement.

Key to the project's long-term impact is the substantial investment in capacity building. By equipping local stakeholders with the necessary skills and knowledge, particularly in sustainable agricultural practices and waste management, the project has empowered the community to maintain and expand upon the initiatives started. This empowerment is critical for enduring success, as it ensures that the community remains at the forefront of sustaining and adapting the implemented solutions to meet evolving needs. Furthermore, the project's collaborative approach with local enterprises and the integration into local markets and value chains have significantly enhanced the economic resilience of the project beneficiaries and the community. These partnerships have not only generated immediate economic benefits but have also established robust frameworks for ongoing economic activities linked to sustainable practices within the project intervention area. This economic integration supports the community's independence and provides a viable model for replication in similar settings, enhancing the project's broader applicability and impact.

Despite these strong foundations, challenges such as the need for continuous funding, management of technological infrastructures, and adaptation to cultural preferences could pose risks to the sustainability of the project's outcomes. Addressing these challenges effectively requires ongoing community engagement, monitoring, and adaptive management strategies to ensure that the benefits of the project continue to grow and adapt to the community's needs.
In summary, the CAMP+ Project has demonstrated a comprehensive approach to sustainability that promises to extend its benefits over the long term. The project's success in building local capacity and integrating sustainable practices into the economic fabric of the refugee and host community provides a strong basis for its continued impact, setting a benchmark for future sustainable development initiatives in refugee settings.

4.2 Recommendations.

The evaluation team makes the following recommendations that will need to be taken into account in designing future similar programmes/projects.

Identified Issue	Evidence-Based Recommendations
Acceptance and Usage Rates	• Develop targeted marketing campaigns to highlight the benefits of solar powered community and school kitchens and address specific cultural preferences. • Implement a reward system for regular users, such as discounts on kitchen usage fees, free cooking ingredients for every tenth visit, or small gifts like kitchen utensils. • Regularly solicit feedback from users and non-users to continually adapt the service to better meet community needs. This could be through suggestion boxes, and community meetings. • Partner with more local schools, women's groups, and health centres to promote the kitchens. These organizations can help disseminate information and encourage their usage.
Operational Issues	• Develop a regular maintenance schedule that includes routine checks and timely repairs of all kitchen facilities, especially the stoves, to ensure they are always in good working condition. • Involve the community in the decision-making process for any major changes, including the redesign and relocation of kitchens. This fosters a

	sense of ownership and ensures that the changes meet the actual needs and preferences of the users.
Cultural and Practical Barriers	• Conduct comprehensive community consultations to adapt kitchen designs and operational plans to better meet local cultural and practical needs.
Scaling and Sustainability of Initiatives	• Explore more opportunities to combine the kitchen facilities with other community services such as local health centres, educational institutions, or churches. This could increase foot traffic and relevance. • Establish a community management committee for each kitchen to ensure the facilities meet the local needs and are well-maintained. • Consider developing a small business incubator within the kitchen, where community members can develop and sell food products, with a portion of profits supporting kitchen operations. • The institutional solar kitchen has demonstrated high uptake and viability given the context in which the school solar cooking was implemented under CAMP+ II, this has validated a potential avenue to invest in solar cooking in institutional set up compared to communal kitchen.
Economic Sustainability	• Develop and promote local markets for recycled products by partnering with local retailers, community organizations, and government agencies to use recycled products in their operations. • Engage the community not only as a source of raw materials (collecting plastics) but also as a consumer base for the recycled products, fostering a circular economy.
Quality Control in Recycling	• Develop and distribute clear, detailed guidelines on what types of plastics can be accepted and how they should be prepared for recycling (e.g., cleaning and sorting by type). These guidelines should be easily understandable to ensure compliance from all collectors. • Conduct regular training sessions for waste collectors and community members who participate in the collection process. These sessions should focus on the importance of source separation, the basics of recyclable and non-recyclable materials, and the economic benefits of reducing contamination. • Work with local businesses that generate plastic waste to ensure they pre-sort and clean their waste before it is collected. Provide them with the necessary resources and training to do this effectively.
Achievement of Replication Goals	• Compile and distribute detailed case studies and success stories that illustrate the benefits and impacts of the project. These should include data on cost savings, environmental impact, community benefits, and testimonials from participants. • Forge partnerships with key stakeholders, such as local governments, educational institutions, and private companies that could benefit from replicating the project's models. These partnerships can provide both a platform for demonstration and a testbed for adaptation in different contexts.

Training and Access Challenges in Agriculture	• Establish mobile training units that can travel to various parts of the community, providing on-site training to ensure that more residents can participate without the need for significant travel. • Collaborate with local schools, vocational training centres, and universities to incorporate sustainable agriculture practices into their curriculum. This partnership can provide a formal training avenue for community members. • Engage in discussions with local government bodies to secure permissions or leases for unused public lands that can be used for community farming projects. This may include fallow land or underutilized spaces within or near the settlement.

Annex A: Project Indicator Tracker

Outcome /Output	Indicator	Baseline Value	Target	Endline Value
Increased use of alternative and sustainable energy for cooking, by refugees and host communities	# of people of all genders that have used alternative and sustainable energy solutions promoted by CAMP+	0	2,850	2,910
Community kitchens developed into a scalable self-sustaining model for replication with other partners	# of functional business management partnerships in place	0	1	1
	# of operational guidelines developed	1	1	1
Community kitchens scaled up in additional locations within Kyangwali refugee settlement	# of additional community kitchens established	0	5	• 3 community • -2 institutional
	# of people using the community kitchens	0	1,250	2,689
	% of community kitchen capacity utilised	0	80%	37.5%
	# of refugee-led business services and products promoted through community kitchen facilities	0	2	1
Carbon credit-based system developed to contribute to maintenance and establishment of additional solar cooking points	Sustainable funding stream for maintenance of community kitchens and roll-out of household's cookers developed and executed	0	Adequate carbon credit-based revenue for the maintenance of 10 community kitchens and roll out of 100 HH units	0
Capacity for greening food systems increased among refugees and host community HHs	% of HHs that are implementing at least four of the greening practices promoted by the project (i.e., intercropping, composting, N-fixing trees, live fencing, seed banking etc.)	0	70% [262 HH; 1,441 people]	51.3%
	# of HHs that report yield improvements	0 HH	262 HH	72 HH
	% of HHs acknowledging an increase in their income	0% 0 HH	50% [188 HHs]	31% 72 HH
Practices for greening food production systems scaled up among refugee and host community HHs	# of people of all genders trained in comprehensive CAMP+ food production modules		375 HH	
	# of people of all genders trained through matured demo sites		500	
Skills for producing for the market enhanced	# of HHs benefiting from marketing interventions		260 HH	

Outcome /Output	Indicator	Baseline Value	Target	Endline Value
among both refugee and host communities HHs	(training, bulking and market linkages)			
	# of refugee HHs accessing additional land from the host community		125 HHs	
	# of selected value-chains developed		2	
Plastic waste recycling reduce waste and contribute to livelihood opportunities	# of tons of plastic waste collected and repurposed	0	1.5 ton/week	1.58 tons
	# of jobs created at plastic recycling entity	0	12	19
Plastic recycling unit developed into a full capacity production entity, which receives and processes plastic waste from the settlement and host community	# kg. of plastic waste material received vs. # kg. of plastic waste material value-utilised (turned into new products or shredded material for on-sell)	0	90% value-utilization of received plastic waste material	80%
Clear management structure, market analysis and design and production adaption capacities within the unit	Revenue vs. operating expenses (balanced OPEX)	0	Plastic unit is a self-sustaining business	0
	# of functional business management partnerships in place	0	2	1
Plastic unit developed into a scalable model for replication by other partners	# of operational guidelines produced	1	1	1
3 separate production lines (incl. material-reception, cleaning, processing, product manufacturing, storage and whole-selling)	# of products certified	0	3	2
CAMP+ concept promoted for replication, among humanitarian stakeholders	# of interventions replicating the CAMP+ concept, or aspects of it		5	
Lessons from the CAMP+ concept consolidated and disseminated	# of CAMP+ concept knowledge products disseminated	0	5	1
	# of stakeholders reached with CAMP+ concept	0	200	57

Annex B: Data Collection Tools


Household Questionnaire for b


FGD Guide - Beneficiaries.docx


KII Guide - District officals - OPM - UNH


KII Guide - Project Staff.docx

DocuSigned by:
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