

An impact assessment  
of permagardens in  
Palabek Refugee  
Settlement, northern Uganda

JANUARY 2020

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**AFRICAN WOMEN RISING'S**  
permagardens and resilient homesteads intervention

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In addition to learning about the work of AWR, the assessment provided an opportunity to hear the stories of some of the refugees. In a just world, these stories would be routinely shared by the world's media. That they are not is a sorry reminder that Africa's youngest country is largely forgotten, that its political leaders have failed to realise the hope associated with independence and that the people's wait for peace continues.

# Acronyms

**AWR** African Women Rising

**CESVI** Cooperazione e Sviluppo Onlus and also known locally as Cooperation for Development – an Italian non-governmental organisation

**FFH** Freedom from Hunger

**IGA** Income generating activities

**LRA** Lord's Resistance Army – led by Joseph Kony

**PG** Permagardens

**PRS** Palabek Refugee Settlement

**R&D** Research and Development

**SAC** Send-A-Cow

**UNHCR** United Nations High Commissioner for Refugees

**UPDF** Uganda Peoples Defence Force

**VSLA** Village Savings and Loan Associations

**WFP** World Food Programme of the United Nations

# EXECUTIVE SUMMARY

African Women Rising (AWR) was launched in 2006 to empower women displaced by the Lord's Resistance Army (LRA) in the 20-year war in northern Uganda. In 2017, AWR began work in Palabek Refugee Settlement (PRS) in Lamwo District, northern Uganda that is home to 50,000 South Sudanese displaced by conflict. On arrival, refugees are allocated a 30 x 30m plot for food production.

A pioneer of permagardens in northern Uganda, AWR received funding from Cooperazione e Sviluppo Onlus (CESVI) and Trócaire to assist 4,500 South Sudanese refugees develop permagardens on their plots. To assess the impact of this intervention, AWR commissioned a participatory impact assessment (PIA) that was carried out from 20th November – 4th December 2019, to address two key questions: 1) what are the primary benefits and 2) what are the specific benefits, associated with permagarden ownership?

The methodology used in the assessment included a range of participatory exercises: natural resource mapping, personal histories, pair-wise food preferences, scoring and ranking of primary and secondary benefits, and transect walks. During the assessment, the team met with 24 groups comprising 453 AWR beneficiaries – 320 women and 133 men – and interviewed key informants.

**The assessment found that increased food availability was the primary benefit associated with permagarden ownership, followed by increased income through the sale of fresh vegetables. As a result of increased food availability, dependence on food aid was reduced and the refugees also reported improvements in household nutrition. Permagarden ownership also resulted in a 60 percent decrease in the number of households consuming only one meal a day and a 179 percent increase in the number of households eating three meals a day.**

**The assessment team also learned that permagardens were the primary sources of dry season household income**, through the sale of leafy green vegetables in local markets and that the permagarden training had resulted in an increase in knowledge, skills and a sense of wellbeing.

The transect walks however revealed that not all permagardens are well maintained and that more than 30 percent of CESVI and 15 percent of Trócaire funded permagardens appeared to be abandoned. Similarly, 40 percent of CESVI and slightly under 20 percent for Trócaire funded permagardens were non-productive. More positively, 36 percent of CESVI and 50 percent of Trócaire funded permagardens scored high or average levels of productivity and it is these gardens that are having a positive impact on household resilience and wellbeing.



The personal histories reveal something of the trauma that refugees have experienced, and that building and sustaining resilience gains and improved wellbeing in such a challenging environment will inevitably be hard won. **Despite the challenges, AWR has partnered with the refugee community and is delivering tangible improvements in food availability, household income and self-reliance. Not surprisingly, many refugees are appreciative of AWR's work and support. However, not all permagardens are maintained and productive**, the result of: changing weather patterns – the delayed onset and cessation of the rains which has delayed the harvest and cultivation of permagardens for dry season vegetable production; the divergent needs and interests of different refugee households; and poor coordination of humanitarian actors involved in gardening interventions for improved resilience and wellbeing.

# INTRODUCTION

African Women Rising (AWR) was launched in Santa Barbara, California and Uganda in 2006 at the end of the 20-year war between the Lord's Resistance Army (LRA) and the Uganda People's Defense Force (UPDF).<sup>1</sup> AWR's mission is to empower women after war by providing technical skills and support for success via education, agriculture, and micro-finance training.<sup>2,3</sup> Starting its work in Gulu district with 11 groups, AWR has benefited more than 8,000 mainly women in 270 groups. AWR is currently working in 6 sub-counties of Gulu, Lamwo and Omoro districts.

In October 2017, Cooperazione e Sviluppo Onlus (CESVI) contracted AWR to provide permagarden training and technical and monitoring support to 100 refugee groups in Palabek Refugee Settlement (PRS). CESVI subsequently awarded AWR contracts for 2018 and 2019, to provide follow-up technical assistance and to support an additional 80 groups. Throughout, CESVI has retained administrative responsibility including procurement, while AWR provides the training and monitoring.



In 2018, AWR secured Trócaire funding that was first routed through CESVI. In 2019, AWR received the funding directly, and now delivers: phase 1 and 2 training of 4 days each<sup>4</sup>; inputs, costed at around US\$50 per permagarden – fencing, seeds, seedlings, tools including a treadle pump for water lifting and imported soil amendments; and intensive follow-up. In addition, Trócaire supports homestead resilience building and organic food production training, tailored to boost food production on the 30x30m plots allocated to the refugees by Government through the United Nations High Commissioner for Refugees (UNHCR).

The number of gardens developed with CESVI and Trócaire funding is presented in Table 1.

## AWR SUPPORTED PERMAGARDENS

TABLE 1

DONOR	2017	2018	2019
CESVI	2,600	-	900
Trócaire	-	500	540
<b>Cumulative Total</b>	<b>2,600</b>	<b>3,100</b>	<b>4,540</b>

Following two years of implementation, AWR commissioned this participatory impact assessment (PIA) of its permagarden intervention. The assessment was carried out from 20th November to 4th December 2019 and a copy of the author's itinerary is presented in Annex 1.

<sup>1</sup> More than 25,000 mainly women and children were killed and more than 2 million displaced. An extremely rare Interview with Joseph Kony (2006). <https://www.youtube.com/watch?v=scMHLWzGOd0>

<sup>2</sup> AWR website. <https://www.africanwomenrising.org>

<sup>3</sup> A recent article in the Economist, November 16th 2019, 'Do-gooders and do-besters' (p71), presents the study findings from the Copenhagen Consensus Centre that measured the benefit of different policy choices on poverty reduction in sub-Saharan Africa. The five highest ranked policies were: family planning, women's self-help groups, agriculture R&D, rotavirus vaccination and preschool education. AWR supports the second, third and functional adult literacy.

<sup>4</sup> Permaganen training includes: site surveying; the design, capture and storage of rainwater run-off; deep digging and use of soil amendments; fencing and live fencing; planting; mulching; and pest control.

The PIA methodology was pioneered by the Feinstein International Center of Tufts University to help capture the impact of humanitarian and development interventions, be they positive or negative and intended or unintended, including in areas where baseline data is scarce. By including project beneficiaries in the learning process, improvements can be made to programme delivery.<sup>5</sup>

In order to understand any impact-related differences between AWR's donors, which fund different levels of inputs and training, groups were purposively selected: 9 CESVI and 11 Trócaire funded groups. In addition, contextual information was collected from an additional 4 groups. In total during the assessment the team met

with 24 groups comprising 453 AWR beneficiaries – 320 women and 133 men. In addition, interviews were held with seven key informants including representatives from CESVI, Freedom from Hunger (FFH), Send-A-Cow (SAC) and Trócaire.

The assessment was preceded by a half-day PIA methodology training and was followed by a pre-test of the assessment methodology. This resulted in the modification of some exercises. The overall length of each group discussion was timed to be a little over 2 hours, in order to keep the disruption to a minimum. Full details of the methodology are presented in Annex 2. General information on the sample groups is presented in Annex 3.

## BACKGROUND

With ever more South Sudanese crossing into Lamwo district, northern Uganda from Eastern Equatoria in late 2016, PRS was opened in April 2017. The majority of refugees were displaced by hostilities in Equatoria between the Government of South Sudan and rebel forces. Discussion with refugees also confirms that South Sudanese secondary school students are keen to access Uganda's better schooling opportunities. PRS is currently home to more than 50,000 South Sudanese refugees, including 15 ethnic groups, and in 2019 the settlement was expanded into neighbouring Kal sub-county. A map of Lamwo district is presented in Figure 1

Gulu district receives 1,500mm mean annual rainfall and is one of the most fertile districts in Uganda, with farmers producing two main crops annually. In contrast, Lamwo district receives 900mm and farmers produce a single crop annually. In 2019, normal rainfall patterns across East Africa were disturbed



**Figure 1** Map of Lamwo District - Uganda

by one of the strongest Indian Ocean Dipole episodes in the last 70 years.<sup>6</sup> Not only was the onset of the rains delayed by two months, to late May, but the rains continued well after the normal cessation date of mid-October, to the end of November. As a result, the harvest was similarly delayed and at the time of the assessment, crops were still maturing in the fields.

The permagarden method combines components of permaculture – an agricultural approach using natural design principles – and bio-intensive agriculture, to maximize production on small amounts of land. The permagarden method is designed to be productive in both rainy and – because of the improved management of seasonal rains and soil health – dry seasons. It is therefore a production method that is designed to assist households to make full use of locally available resources to build both soil health build household resilience.<sup>7</sup> A photograph of a permagarden – already productive ahead of the delivery of final fencing materials – is presented in Figure 2.



**Figure 2** A Productive Permaganarden

<sup>5</sup> Catley, A., Burns, J., Abebe, D. and Suji, O. Undated. Participatory Impact Assessment: a guide for practitioners. Feinstein International Center, Tufts University, Boston

<sup>6</sup> Indian Ocean Dipole spells flood danger for East Africa. 2019. Environment and Disaster News. The New Humanitarian. <https://www.thenewhumanitarian.org/news/2019/10/22/Indian-Ocean-Dipole-flood-danger-East-Africa>

<sup>7</sup> TOPS Permaganarden Toolkit. 2017. The TOPS Program, Mercy Corps. <https://www.fsnnetwork.org/tops-permagarden-toolkitt>

This section presents findings on contextual and impact indicators collected from groups, supplemented by information collected from key informants.

## CONTEXTUAL INFORMATION

As has been noted, the assessment team collected contextual information from four groups (n= 72 people - 53 women and 19 men) including through the facilitated development of resource maps, personal timelines and food preference matrixes.

## RESOURCE MAPPING

Resource maps were developed with each of the four groups on patches of bare ground and features marked by locally available materials: stones, sticks, leaves and ash. The map developed with the Mone Race group is presented in Figure 3. This and the other maps that were generated by the other three groups, provided useful information on the refugee settlement's infrastructure: roads, health facilities, water, schools, churches, market, video hall, together with directions to rented fields and areas where firewood collection is permitted. In contrast to resource maps typically developed by smallholder farmer groups, the resource maps developed by refugees were very settlement focussed. This helped confirm refugees' self-perceptions that they are living far from home and in an 'artificial world'.



**Figure 3** Mapping with the Mone Race Group

Assessment team members worked with the same groups to develop a series of personal histories and two examples are presented in Figure 4 below.

FIGURE 4

## PERSONAL TIMELINE L\*\*\*\*\* Victoria

- 1981** I was born in Sudan
- 1998** War broke out again in South Sudan. When the rebels came to the village, I escaped to the bush safely each time
- 1998** It was getting too dangerous to stay in Sudan, so I came to Uganda for the first time. I stayed in Acol Pii settlement in Pader district
- 2001** [back in Sudan] I was married but God has not blessed me with children
- 2016** Hostilities again broke out near my home in Obor
- 2017** I came back to Uganda and to Palabek settlement

**“ I think my future is bleak as I don’t have children. I do however help my brother’s children here in Palabek. We share the same plot. We are dependent on food aid. This month we have not received beans. They say there are no beans in the market. But I have seen there are. ”**

## PERSONAL TIMELINE Rhoda A\*\*\*\*\* Ma\*\*\*

- 1949** I was born in Sudan. I did not ever attend school
- 1981** I was married and had 8 children but 5 died. Four of them died in Sudan at a place call Yirou
- 2005** When the war started, I hid in the bush for three days. I then walked slowly to the border. We had no food. This was the first time I came to Uganda. I stayed in Koboko settlement. I then returned to Sudan
- 2017** The war again came to my home area, but this war also brought hunger
- 2018** I lost my husband in the war. I escaped to Uganda using transport that I paid for with the food and belongings that I sold. I came with my 3 children. The children are in school now. I have no relatives in the settlement

**“ I feel safer in settlement. I will not return to South Sudan until there is a real peace, no matter how long that takes. ”**

Information on food preferences was collected from four groups (n=72 - 53 women and 19 men) using pair-wise ranking<sup>8</sup> and the findings are presented in Table 2. As can be seen, food aid is preferred to food obtained through daily labour<sup>9</sup>, by all groups, while food aid was preferred to food obtained from markets by three groups, with one group preferring purchased foods. The reasons given by the group that preferred food from the market is that people can purchase the food that they want. Food aid is preferred to other sources of food, solely because it is free.

Food obtained through daily labour and markets was ranked evenly with two groups each. The reasons given included that food obtained through labour is typically the same type of food they would purchase in the markets. In contrast, food produced on the homestead (30x30m plots) including permagardens was ranked higher than food for work and markets as it is immediately available, is of preferred crops and vegetables and is fresh. Two groups however ranked food aid higher than home-produced food, as it is more dependable, and again it is free.



## “PAIR-WISE RANKING” FOOD PREFERENCES

TABLE 2

FOOD SOURCE	FOOD AID	FOOD FOR WORK	MARKETS	HOMESTEAD
Food Aid		Food Aid (x4)	Food Aid (x3) Market (x1)	Food Aid (x2) Homestead (x2)
Labour			Food for work (x3) Market (x2)	Homestead (x4)
Markets				Homestead (x4)

<sup>8</sup> The groups are asked to list the main sources of food and these are listed on separate cards. Pairs of cards are then compared, and preferences recorded.

<sup>9</sup> On local farms for which refugees are typically paid in millet and sorghum. Some is eaten at home and some sold in local markets

Information against impact indicators and the transect walks was collected from 20 focus groups: 9 were CESVI funded (n=180; 125 women and 55 men) and 11 were Trócaire funded (n= 201; 142 women and 59 men). The focus group discussions addressed two key questions: 1) what are the primary benefits and 2) what are the specific benefits, associated with permagarden ownership? Issues of attribution were also addressed.

## KEY QUESTION 1

### What are the primary benefits associated with permagarden ownership?

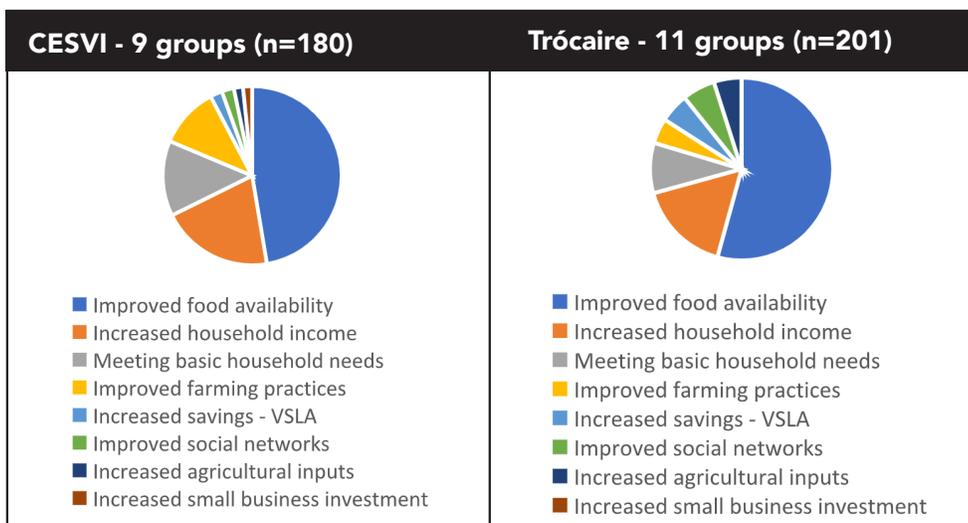
To answer this question, the assessment team asked the groups to list and then score the primary benefits associated with permagarden ownership, using 100 counters. The counters were either seeds collected from a local tree or beans carried by the assessment team. The findings are presented in Figure 5.

**As indicated, increased food availability was recognised as the most important benefit followed by increased income from sales of fresh vegetables.** The importance of income is however somewhat blurred as groups also separately scored expenditure: purchase of household items, savings, income generating activities, education and medical fees. If the expenditure scores were added together with increased household, the scores for the CESVI and Trócaire funded groups would total 749. This total however still falls a long way short of the combined CESVI and Trócaire funded group scores for improved food availability of 1,028.

During this exercise, the assessment team noted down observations and statements and some are presented in Text Box 1.



**FIGURE 5**  
**PRIMARY BENEFITS DERIVED FROM PERMAGARDENS**



## TEXT BOX 1

### Participant observations on the main benefits of permagarden ownership

- We are all very happy with the permagarden training we received from AWR
- Fencing materials and inputs should be provided to all beneficiaries equally and everyone should receive seeds twice a year
- We are now entering the dry season and chickens and goats will be searching for food and attracted to the permagarden. We need new fencing materials to keep livestock out
- AWR should provide all groups with the same inputs – pumps, watering cans, hoes and rakes
- Since I came to Uganda in 2017, training in permagardens has helped change my life
- Permagarden is both a source of food and income. And with the income, I can buy food for my family
- Why do different groups get different inputs? This is not good, and it is not fair
- Through the knowledge gained from AWR training, we have increased capacity to survive
- We are very happy because of the tree seedlings distributed by AWR



## KEY QUESTION 2

What are the specific benefits associated with permagarden ownership?

To answer this question, the assessment team used participatory exercises to collect details of the impact of permagarden ownership on food availability, income and self-confidence. A photograph of a group involved in 'before' and 'after' dry season food availability scoring is presented in **Figure 6**.



**Figure 6** 'Before' and 'After' Exercise - Dry Season Food Availability

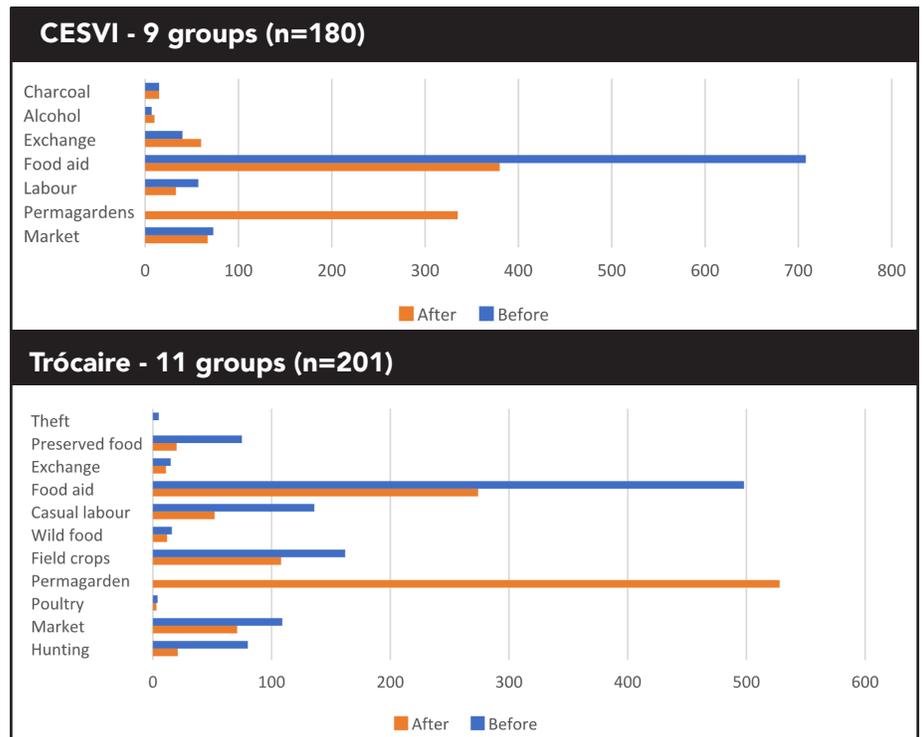
### A. Food availability

Information on food availability was collected using a 'before' and 'after' exercise, both for primary food sources and the numbers of meals consumed daily. 'Before' and 'after' information for primary food sources was collected using 100 counters and the overall group totals are presented in Figure 7. While information was collected for both wet and dry seasons, only information for the dry season is presented, as it was found that permagardens are primarily used in the dry season when green vegetables are in scarce supply. This is therefore when producing green vegetables can make the biggest contribution to household food availability and also income, as there are markets. Information on 'before' and 'after' numbers of meals consumed daily was collected by a simple show of hands.

As indicated, CESVI and Trócaire funded groups reported significant 'before' and 'after' improvements in food availability, the result of developing permagardens. The improvement in food availability is however statistically significantly stronger in the Trócaire funded groups. **As a result of the improvement in food availability, dependence on food aid was reduced significantly across all groups. In addition to improving food availability, group members also ascribed nutritional improvements to permagardens, as they are able to source fresh leafy vegetables in the dry season.**

Information was also collected on the 'before' and 'after' changes in the number of meals per day in the dry season, and the findings are presented in Table 3. **Overall, there was a 61 percent reduction in the number of households eating one meal a day. Additionally, there was a 179 percent increase in the number of households eating three meals a day.**

**FIGURE 7**  
**'BEFORE' AND 'AFTER' PRIMARY FOOD SOURCES - DRY SEASON**



## 'BEFORE' AND 'AFTER' DAILY MEALS DRY SEASON

**T A B L E 3**

	MEALS PER DAY	1 MEAL A DAY	2 MEALS A DAY	3 MEALS A DAY
CESVI (n=113)	Before	62 (55%)	47 (41.5%)	4 (3.5%)
	After	26 (23%)	76 (67%)	11 (10%)
Trócaire (n=186)	Before	45 (24%)	121 (65%)	20 (11%)
	After	16 (9%)	114 (61%)	56 (30%)

During this exercise, team members also recorded observations made by group members as they scored 'before' and 'after' changes and a selection of comments is presented in Text Box 2.

### T E X T B O X 2

#### **Participant observations on changes in food availability**

- My family is having a good diet as a result of permagarden and so are others in my group
- I am able to achieve fruit and vegetable production throughout the year
- My household is now food secure
- There is constant production of food and fruits all year long
- I can feed my family now without waiting for World Food (World Food Programme)
- There is a variety of fresh food in my house and I can cook what I want at any time
- Food availability in many households has improved because of permagardens
- Women spend less time looking for wild food
- I now eat a balanced diet that includes fresh greens and my family enjoys meals more
- Vegetables are now available all year round
- Permagardening has improved household diets
- Through the knowledge and techniques of permagardening, group members are more food secure
- The availability of fresh vegetable has improved throughout the year
- I no longer exchange food aid for vegetables with the host community

## B. Household Income

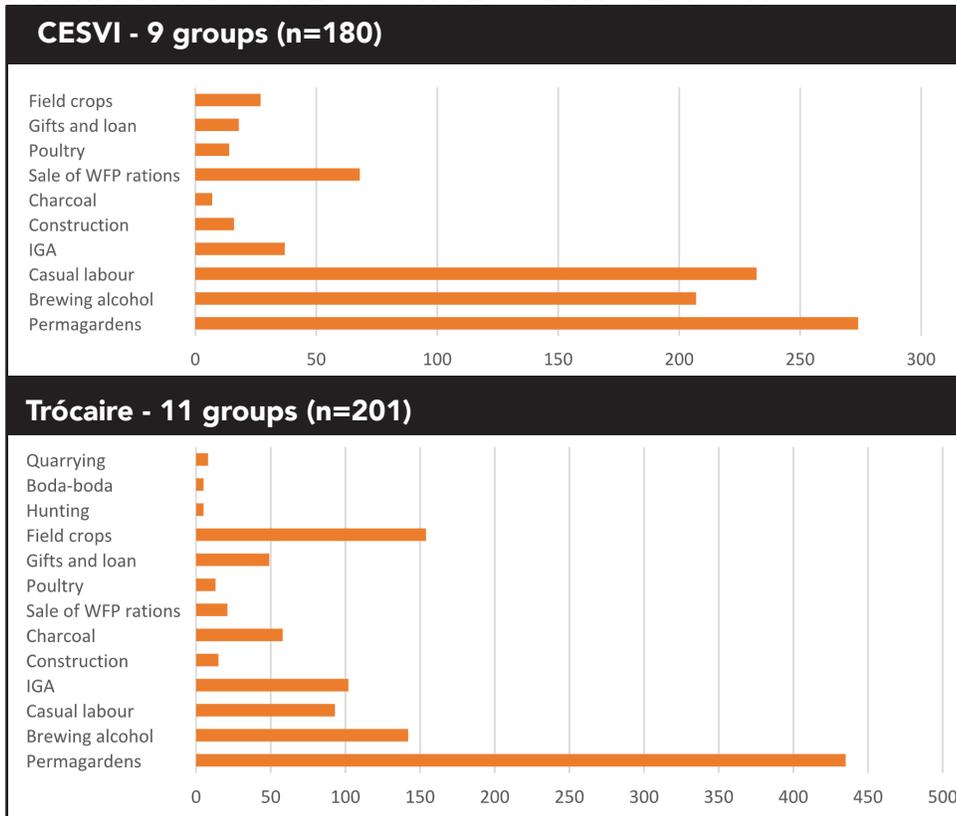
The assessment team also collected information on primary sources of household income, using 100 counters and the findings are presented in Figure 8. Again, information was collected for wet and dry seasons, but only the findings for the dry season are presented.

**As can be seen above, permagardens are the primary dry season income source for both CESVI and Trócaire funded groups,** although the importance of permagardens is statistically much stronger in the Trócaire funded groups. In contrast, CESVI funded groups continue to rely heavily on casual labour, brewing and distilling alcohol and the sale of WFP food<sup>10</sup>. The importance of brewing and distilling alcohol was confirmed by the transect walks, which identified large numbers of small-scale brewing and distilling activities and shelters used for drinking.

Team members also documented comments made by group members during this exercise and a selection of comments is presented in Text Box 3.



**FIGURE 8**  
**PRIMARY INCOME SOURCES - DRY SEASON**



<sup>10</sup> In particular oil, the proceeds of which are then used for the purchase of other cheaper staples.

## TEXT BOX 3

### Participant observations on changes in household income

- I don't have to ask my husband for money anymore and I don't ask for loans from neighbours
- Some people sell vegetables from their permagardens to get money for their VSLA groups
- I don't sell World Food (WFP) food to buy other food anymore
- Women no longer have to ask for money from men for everything
- If you work hard you can improve your diet through permagardening. You can even sell greens and buy meat once in a while
- We are very happy because we have acquired assets such as poultry through permagardens
- Families are able to have basic needs such as soap and salt and money to grind flour as a result of permagardens
- There is no more selling of food aid
- I no longer have to sell food aid to pay for grinding and other things. I sell vegetables from the permagarden

Group participants were also asked if permagardens had made a significant contribution to the purchase of household assets. Examples of assets that participants associated with income raised from the sale of vegetables produced in their permagardens, included the following:

- Poultry (pigeons and chicken)
- Goats
- Starter funds for different small businesses: selling silver fish, tomatoes, onions, cooking oil, matchsticks, salt and brewing
- Clothes and shoes
- Utensils (saucepans, plates, cups, jugs)
- Plastic chairs
- Sleeping mats
- Paraffin and solar lamps for lighting the house
- Hoes and other tools
- Jerrycans and large plastic drum for storing water
- Radio for listening to the news
- Bicycle



## C. Self-confidence

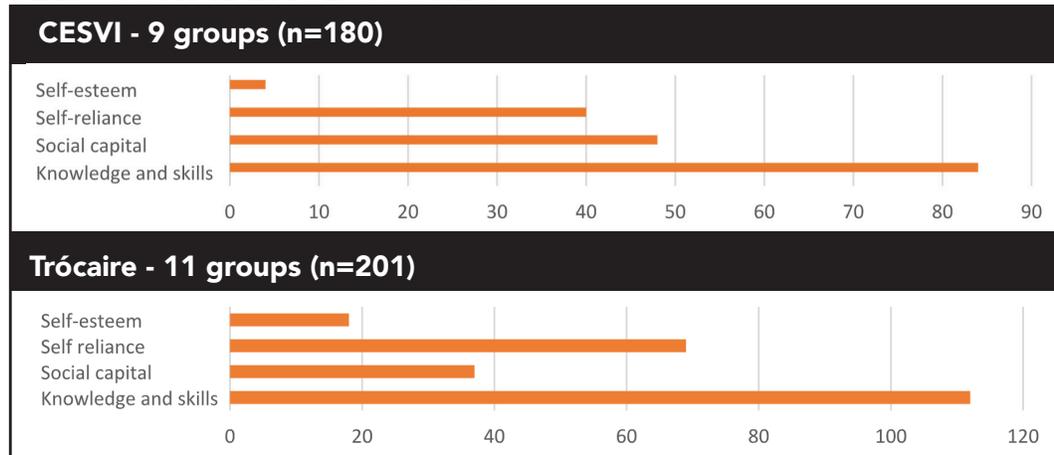
Information on self-confidence and other 'soft' skills associated with the development of permagardens was collected using a scoring exercise that again used 100 counters. The findings are presented in Figure 9. As can be seen, **all the groups recognised and valued changes in knowledge and skills, social capital, self-reliance, sense of wellbeing and self-esteem.**

As previously, team members recorded comments made by the participants during the exercise and a selection of quotes is presented in Text Box 4.



### SELF-CONFIDENCE SCORES

FIGURE 9



### TEXT BOX 4

#### Participant observations on changes in self-confidence

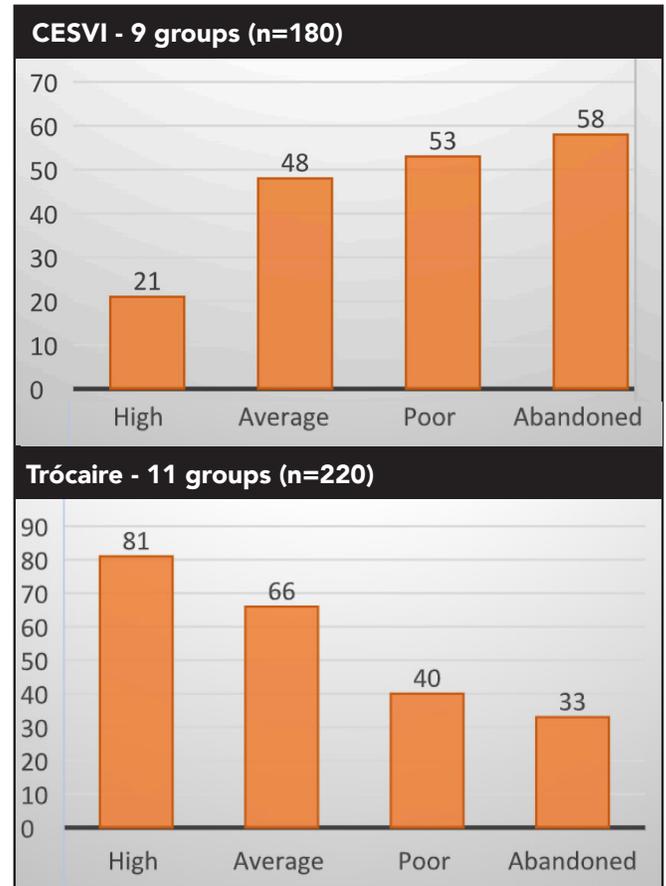
- I am trained in permagardening and am able to train others to develop their permagardens
- When living in South Sudan we grew food in the swamps in the dry season, with training on permagardens I can now capture rainwater to help produce green vegetables in the dry season
- Through the permagardens we are able to produce some seed for the next year
- I have gained skills and knowledge on permagardening and resilient agriculture design from AWR
- We have the knowledge and skills to organise permagarden training for other refugees
- I am grateful to AWR for the knowledge I gained in developing a permagarden as I can now grow vegetables through the dry season
- I joined a permagardening group and I now have more friends in the settlement
- The knowledge I've gained on permagardens I will take back to South Sudan with me one day
- With techniques of pest management taught by AWR, I no longer have pests attacking my crops
- I have even started to do seed multiplication in my permagarden
- Joining together in groups, relationships in the settlement have improved
- The knowledge of permagardening will remain with me even when AWR stops working with us

## Transect Walk

To help verify the assessment findings, team members visited 20 gardens in each of the 20 sample groups and scored each against simple maintenance and productivity measures: high, average, poor and none. The findings are presented in Figures 10 and 11. As can be seen, both maintenance and productivity charts are different for the different donors. For example, the highest scores for the CESVI funded groups were for abandoned and poor maintenance, while the highest scores for Trócaire funded groups were for high and average maintenance. While therefore 32 percent of CESVI supported permagardens were abandoned, only 15 percent – less than half the amount – of Trócaire funded permagardens were abandoned.

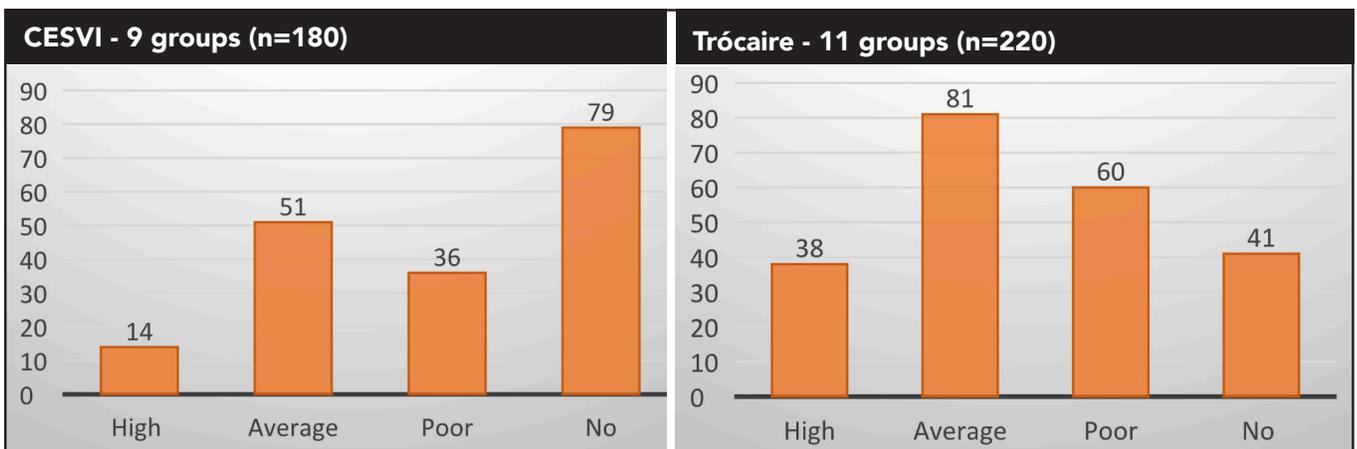
Again, more than 40 percent of CESVI funded group permagardens were not productive at the time of the assessment, while the number fell to under 20 percent for Trócaire funded group permagardens. Furthermore, the number of CESVI supported group permagardens that recorded high or average production was 36 percent, compared to more than 50 percent for CESVI funded group permagardens.

**FIGURE 10**  
**"TRANSECT WALK" MAINTENANCE SCORES**



**"TRANSECT WALK" PRODUCTIVITY SCORES**

**FIGURE 11**



AWR's permagardens and wider resilience agriculture intervention seek to build the resilience of beneficiaries, whether refugee or host community. As Levine et al note, resilience can perhaps best be defined as 'wellbeing', that includes food availability, adequate income and self-reliance. The personal histories reveal something of the trauma that refugees have experienced, exacerbated by the fact that for many this is not the first time they have fled South Sudan in search of safety. Building wellbeing in such a transitory context is inevitably challenging. Sadly too, without a significant change of political fortune inside South Sudan, the current status quo is likely to continue.

Despite the challenges, AWR has partnered with the refugee community and in a period of 30 months has delivered more than 4,500 permagardens, around 150 per month. **As confirmed through food availability, household income and self-reliance impact indicators exercises, permagardens have had a major impact for many, in particular in the dry season.** During the assessment, many refugees expressed their appreciation to AWF for their support and a range of wellbeing related improvements. Refugees however that had received Trócaire-funded assistance were particularly grateful for assistance, as the package of benefits was expanded.

Recognising that it is more likely that participants with functional and productive permagardens attend permagarden-related meetings and therefore will have participated in the assessment, the assessment team visited 400 gardens. These visits confirmed that not all permagardens are in active and productive use, and therefore that the benefits of permagardens are not universal. Possible reasons include the following

### Seasonality

Refugees reported they make increased use of permagardens in the dry season, when alternative sources of green vegetables are scarce and hence there is increased demand in local markets. It may be therefore that some will secure fencing materials and rehabilitate their permagardens ahead of the dry season;

### Complexity

Refugees are not homogenous, and their lives and livelihoods are complex and diverse. South Sudanese Acholi refugees for example with homes close to the border are able to visit their homes and fields, with relative ease. In addition, they are more able to rent fields from the local host community as they are often related. In contrast, others have acquired livestock – doves, chickens, ducks and goats – and are engaged in developing small businesses. For such refugees, options to produce food go well beyond the 30x30m plots allocated by UNHCR.

### Poor Coordination

Refugees are understandably sensitive to issues of equity, and some articulated a sense of injustice that Trócaire supported groups received a better package of benefits than CESVI funded groups. Issues of equity were further compounded by the involvement of other organisations – FFH and SAC – in the delivery of 'Mandela' or 'keyhole' gardens and 'kitchen' gardens. Each agency offers a different package of support. Not surprisingly, refugees seek to navigate between the different organisations to maximise their access to inputs. As was learned through the group work, some refugees prefer to use received seed to support their farming operations in rented fields.

Whether by accident or design, **AWR implements a suite of interventions that meets four of the five priority policies identified by The Economist that 'achieve high development assistance return rates'**. This is impressive. Permagardens are an integral part of AWR's package and reflect AWR's commitment to agricultural R&D. The bulk of this investment has however been focussed on the needs of stable farming communities in Gulu District and hence to the associated local skills, capacities, resources and agro-ecologies. It is, for example, relatively simple for such households to collect wood for permagarden fence construction and repair and, following the increase in livestock numbers, to secure manure for soil improvement.

Responding to requests for technical assistance from agencies engaged with refugees in Palabek, AWR has extended its operational area to Lamwo District, through the recruitment, training and deployment of a new workforce. **While AWR has achieved impressive results and many refugees maintain productive permagardens, other permagardens are either poorly maintained or have limited production, and a number appeared to be abandoned.**

These mixed results are attributable to a range of factors: the shift from a stable community to a more diverse and fluid refugee community; a more challenging agro-ecology; a young and relatively inexperienced staff team; new humanitarian/refugee donors with different requirements than AWR's previous development donors; donor requirements to deliver 150 permagardens each month; and poor coordination among livelihood service delivery organisations operating in PRS.



## Looking forward, AWR may wish to consider the following:

- Clarify critical success factors at the household level that have facilitated higher levels of uptake of permagardens among Trócaire funded groups and, through negotiation with future donors, ensure these criteria are met by all refugee households ahead of their inclusion in further permagarden programming;
- Deploy senior AWR staff at livelihood coordination meetings at PRS with a view to achieve greater standardisation and harmonisation of livelihood interventions, that can be replicated in all refugee camps in northern Uganda;
- Streamline and simplify the permagarden monitoring system to a minimal set of impact indicators that are identified and agreed through a participatory process that includes refugee households, that focusses specifically on maintenance and productivity, and provides field staff with feedback and analysis that help them improve the permagarden delivery system;
- Through negotiation with current donors or through the commitment of AWR's own resources, increase staff – and if possible refugee representatives' – exposure to other good livelihood practice in other refugee settlements: livelihood interventions, leadership, training and capacity building that will help develop knowledge, skills, commitment and passion for AWR's work with refugees in PRS and beyond;
- Celebrate and reinforce AWR's commitment to agricultural R&D with additional resources (when available) invested in agricultural R&D with refugee communities: communal/ allotment style gardens; and 'good enough' gardens – that can be developed incrementally over a number of months and years according to proven levels of refugee household interest, skills and capacity.

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## Photo credits

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# Annex 1 Itinerary

Date	Activity
October – part days	Reading and preparation of methodology
18th November	Depart Manchester for Kampala
19th November	Travel: Kampala to Gulu. Met Executive Director
20th November	Travel to Ogili, Meeting AWR Lamwo staff, PIA training
21st November	Pre-test
22nd November	Fieldwork starts, Visit AWR tree nursery- Lale dam Return to Gulu
23rd – 24th November	Gulu
25th November	Travel to Ogili. Join mapping team - Zone 5b, Block 12, Lacan Kwo Ki Diro group
26th November	Fieldwork with Prosi and Matthew. Zone 5a, Block 2 - Atek Ki Lwak group, Attended the OPM/UNHCR's livelihoods meeting, Developed data compilation sheets. Judith starts inputting.
27th November	Fieldwork with Patrick -Zone 6, Block 1 - Pit Tek group
28th November	Fieldwork with Washington - Lacan Pe-Kun host community group
29th November	Fieldwork with Washington – Zone 5b, Block 11 – Ngom Loyo group.
30th November - 1st December	Kidepo National Park
2nd December	Fieldwork with Prosy. Host community. Dyere Ber group
3rd December	Transect walks Visit to Send-A-Cow office
4th December	Debriefing meeting in Lamwo field office Travel to Gulu
5th December	Meetings with AWR staff
6th December	Meeting with visiting CESVI and Trócaire administrative staff
7th December	Meetings with AWR staff including National Programme Manager
8th December	Report writing
9th December	Report writing Depart Entebbe
10th December	Arrive Manchester

# Annex 2 Methodology

The review of AWR's permagardens in Palabek Refugee Settlement (PRS) will include fieldwork with groups of refugees and host community farmers, and an analysis of monitoring information routinely collected and analysed by AWR field staff. The fieldwork will draw on Participatory Impact Assessment (PIA) techniques that combine qualitative and quantitative methods to produce statistically valid findings. In addition, the consultant will meet with selected key informants, including staff from other organisations working on livelihood interventions in the refugee settlement.

At the start of the review, the consultant will facilitate a half-day PIA techniques training for AWR staff that will comprise the field team. Following the training, the field team will pre-test the review methodology in two locations to ensure its appropriateness, solicits useful information and can be completed within two hours. In this way, the review will ensure participants' time is respected. Consideration will also be given in the pre-test to gender, specifically if mixed men-women groups are appropriate or if women-only groups will yield better information. As required, the methodology will be adjusted after the pre-test. The pre-test findings will not be used in the review report.

As appropriate, purposive sampling will identify groups trained in 2017, 2018 and 2019 and with funding from different donors. It is also planned to include a small sample of host community groups in order to understand differences in the uptake of the permagardening technology by refugee and host groups. AWR field staff will visit each focus group discussion a day ahead of the discussions, to outline the purpose of the review and to agree a convenient time and location. At the start of each meeting, a team member will introduce the team and restate the primary purpose of the meeting, how the collected information will be used.

The field team will collect two types of information: context information and impact indicators, with context information collected from 4 groups and impact indicator-related information from up to 20 groups. All meetings will be held under convenient shade trees. Following the completion of the focus groups, the consultant will interview Key Informants from other organisations involved in livelihood interventions in PRS, in order to triangulate the findings.

Before leaving PRS the consultant will make a short presentation of key findings. The consultant will then prepare a draft report that will be shared with AWR for review and comment. A final report will incorporate review comments and it is anticipated it will be delivered to AWR in early January 2020.

## Field Data Collection Techniques

The consultant will draw on the following data collection techniques in the review:

### 1. Context information gathering exercises

Context information gathering exercises will be carried out with two groups (two each of 10-12 women and 10-12 men) as follows:

- **Participatory resource maps:** to provide contextual information on Palabek Refugee Settlement and the wider area on key local natural, agricultural, infrastructure and cultural/ religious resources. Following the mapping, the map will be 'interviewed' to learn more about the map and key features.
- **Historical timeline:** to provide background information on the history of the refugee community and to facilitate sharing of life stories. As appropriate, timelines may include details of life in South Sudan or if too traumatic, then restricted to the time that the refugees have spent in Palabek Refugee Settlement
- **Food preference:** to provide information on food source preferences using pair-wise ranking
- **Transect walk:** of a sample of 20 gardens in each of the groups, where impact indicator exercises are carried out (see below)

### 2. Impact indicator exercises

Impact indicator exercises will be carried out with 20 focus groups of 15-20 refugees each, to assess changes in income, food availability, assets and self-perceptions of changes in any skills and confidence levels. Information will be collected from focus groups, which will address the following key questions:

# Annex 2 Methodology

## **1. What are the main benefits, the result of AWR's resilient agriculture training and capacity building support?**

- List the main benefits e.g. income, food availability, assets, self-confidence and other changes, gained from AWR's soil and water and wider resilient agriculture training and capacity building
- Rank the different changes in order of importance – use 100 counters

## **2. What are the specific changes: household income, food availability, assets, self-confidence and any other changes, the result of AWR support?**

- Assess income changes
- Assess food production changes
- Assess asset changes
- Assess self-confidence changes

### **Income**

- List income sources in the wet and dry seasons. Rank using 100 counters
- Against a nominal baseline of 10 counters in one basket, score any income change in the wet and dry season by offering another 10 counters. Ask the participants to add or subtract counters to provide information on income differences.
- Ask participants to provide household-level information on changes in assets the result of AWRs work, and record their responses

### **Food availability**

- List the main foods prior to the AWR intervention in a) the wet and b) the dry season (the same named months) and score with 100 counters. Then list the main food types after the intervention in a) the wet and b) the dry season and score with 100 counters. Compare the differences
- Ask participants to assess food availability through the months of the year – use 50 counters
- Ask participants to confirm whether they eat 1, 2 and 3 meals a day in the wet and dry seasons and the cause for any changes

### **Self-confidence**

- Against a nominal baseline, score any changes using the same technique
- Ask individuals to provide household-level information on changes in self-confidence and record their responses

## **3. Can attribution be confirmed?**

- Ask checking questions throughout to ensure attribution is given to permagardens. Throughout the focus group discussions, the team will ask probing questions, such as 'that's really interesting, why did you say ..... ' or 'why do you think this is the case'

**Ensure humour and good fun throughout all groups and interviews!**

## Annex 3 Background Information Collected from the Assessed Groups

Information collected from the groups funded through the CESVI sub-contract is presented in Table 1 and 2, while information collected from the groups supported by AWR using Trócaire funds is presented in the Table 3 and 4.

**GENERAL INFORMATION ON INTERVIEWED GROUPS – CESVI SUB-CONTRACT**

**TABLE 1**

Name of group and location	# Women Members	# Men Members	Main ethnic group	Supported by AWR since	# members trained in PG	# members with PG	# members harvesting PGs this week
Atek Ki Lwak, Zone 5A Block 2	29	3	Acholi – South Sudanese	2018	32	30	4
Lacan Lubo Kore, Zone 5B, Block 12B	27	3	Luo – South Sudanese	2018	30	29	28
Ribe Aye Teko, Zone 5B, Block 8	21	9	Acholi – South Sudanese	2017	30	30	5
Atek Ki Lwak II, Zone 5B, Block 8	15	15	Luo, Nure, Zande and Suluk	2017	30	30	11
Pit Tek, Zone 6, Block 1	22	8	Acholi – South Sudanese	2018	30	30	3
Ribe Aye Teko, Zone 5B, Block 7	21	9	Lango – South Sudanese	2017	30	30	3
Waribu Cing, Zone 5B, Block 11	23	7	Luo – South Sudanese	2017	30	30	1
Ngom Lonyo, Zone 5B, Block 11	25	5	Acholi, Lutugo, Dongotono, Lango, Toposa, Nuba	2017	30	30	5
Watimo Kicingwa, Zone 5B, Block 11	22	8	Didingka, Acholi, Lango, Pari, Nuba, and Toposa	2017	30	12	6

## Annex 3 Background Information Collected from the Assessed Groups

**NUMBER OF PARTICIPANTS INVOLVED IN THE ASSESSMENT BY GROUP**

**T A B L E 2**

Name of Group	Number of women	Number of men
Atek Ki Lwak, Zone 5A Block 2	12	3
Lacan Lubo Kore, Zone 5B, Block 12B	10	5
Ribe Aye Teko, Zone 5B, Block 8	10	2
Atek Ki Lwak II, Zone 5B, Block 8	11	11
Pit Tek, Zone 6, Block 1, CESVI	12	8
Ribe Aye Teko, Zone 5B, Block 7, CESVI	9	7
Waribu Cing, Zone 5B, Block 11	10	5
Ngom Lonyo, Zone 5B, Block 11	10	4
Watimo Kicingwa, Zone 5B, Block 11	13	3
<b>TOTAL</b>	<b>97</b>	<b>48</b>

## Annex 3 Background Information Collected from the Assessed Groups

**GENERAL INFORMATION ON INTERVIEWED GROUPS – TRÓCAIRE FUNDED**

**T A B L E 3**

Name of group and location	# Women Members	# Men Members	Main ethnic group	Supported by AWR since	# members trined in PG	# members with PG	# members harvesting PGs this week
Pebwoli, Zone 5B, Block 12,	25	5	Luo	2019	30	30	12
Step by Step, Zone 5A, Block 5A	20	10	Bari	2019	30	30	6
Dongo Lobo, Zone 5A, Block 5	23	7	Arab	2019	30	30	14
Holy, Zone 5B, Block 13	20	10	Didika	2019	30	30	4
Lacan Pe Nino, Zone 6, Block 4	15	15	Acholi	2019	30	30	7
Can Coya, Zone 5A	28	2	Luo	2018	30	30	5
Lacan Kwo Ki Lwete, Zone 5B, B12	25	5	Acholi, Didinka	2019	30	28	12
Ket Cwinyi Youth, Alimotiko West - Host	16	14	Luo	2019	30	30	15
Obed Ki Gen, Apyeta East - Host	23	7	Luo	2018	30	8	9
Ket Cwinyi Youth, Alimotiko West - Host	24	6	Acholi	2017	30	21	13
Lacan Pe Kun, Labigiryang, Kal sub-county - Host	30	0	Acholi	2019	30	30	9

**Note:** the shaded rows in the table are host gand not refugee groups

## Annex 3 Background Information Collected from the Assessed Groups

**NUMBER OF PARTICIPANTS INVOLVED IN THE ASSESSMENT BY GROUP**

**T A B L E 4**

Name of Group	Number of women	Number of men
Pebwoli, Zone 5B, Block 12, Trocaire	13	3
Step by Step, Zone 5A, Block 5A, Trocaire	15	6
Dongo Lobo, Zone 5A, Block 5	9	8
Holy, Zone 5B, Block 13	8	7
Lacan Pe Nino, Zone 6, Block 4	7	6
Can Coya, Zone 5A	10	7
Lacan Kwo Ki Lwete, Zone 5B, B12	13	3
Ket Cwinyi Youth, Alimotiko West- Host	14	10
Dyere Ber, Lanywang West - Host	9	3
Obed Ki Gen, Apyeta East - Host	24	6
Lacan Pe Kun, Labigiryang, Kal subcounty - Host	20	0
<b>TOTAL</b>	<b>142</b>	<b>59</b>