



## Baseline Report

# Accelerating Recovery and Resilience in South Sudan (ACCESS) Project-Upper Nile State, South Sudan

USAID/BHA Multi-Year EFSP

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World Vision South Sudan

Prepared by:



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We acknowledge all the relevant stakeholders including the project participants and partners notably; WFP, IOM, the National, State and County officers, Payam leaders, Boma chiefs, local leaders, men, women, girls, boys and youth. We thank and acknowledge them for their participation and contributions without which this report would not be possible.

We cannot forget the community members in Upper Nile State in particular those in the Counties of Renk, Melut, Baliet, Ulang and Nasir for letting us share their personal lives and for their willingness to participate in a study of such sensitive nature.

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To you all whom we might have not mentioned, we kindly request that you accept our sincere message of appreciation and God's blessings.

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## ii. Affirmation

Except as acknowledged by the references in this paper to other authors and publications, the study process, findings, interpretations, conclusions and recommendations consist of work carried out by Infoscope Consulting Ltd on behalf of World Vision South Sudan to inform project design in terms of strategies based on the lessons learnt and emerging needs, aspirations and priorities of World Vision South Sudan and also to inform program management on decisions for program implementation and monitoring as well as management and assessment.

This baseline survey is part of the organizational effort towards continuous learning, and garnering evidence on recovery and resilience in South Sudan to better serve the most vulnerable populations of South Sudan. Findings from this baseline will establish benchmarks for project performance indicators against which project success will be measured. The baseline measurements will be used to calculate change in these indicators and undertake a statistical test of differences in the indicators at completion of the project.

All Primary quantitative and qualitative information collected throughout the baseline process remains the property of the communities and families described in this document. Information and data must be used only with their consent.

April, 2021

### iii. Glossary

ACCESS	Accelerating Recovery and Resilience in South Sudan
BHA	Bureau for Humanitarian Assistance
CBO	Community Based Organization
CHEW	Community Health Extension worker
CDCs	Community Development Committees
CNA	Child No Adult
CLTS	Community Led Total Sanitation
CoP	Chief of Party
COVID	Corona Virus Disease
CU5	Children under five
DME	Design Monitoring & Evaluation
Doz	Dozen
DRM	Disaster Risk Management
EFSP	Emergency Food Security Program
FNM	Female No Male
FAO	Food & Agriculture Organization
FIES	Food Insecurity Experience Scale
FCS	Food Consumption Score
FGD	Focus Group discussion
GBV	Gender Based Violence
GoSS	Government of South Sudan
HH	Household
HDC	Humanitarian and Development Consortium
ICL	Infoscope Consulting Limited
IDPs	Internally Displaced Persons
IGAs	Income Generating Activities
INGO	International Non-Governmental Organization
IPC	Integrated Food Security Phase Classification
HHS	Household Hunger Score
KII	Key Informant Interview
M&F	Male and Female
MHPSS	Mental Health and Psychosocial Support
NGO	Non-Governmental Organization
MNF	Male No Female
NH	Nile Hope
NO	National Office
ODK	Open Data Kit
PLW	Pregnant and Lactating women
PMB	Population Movement Baseline
PPS	Probability Proportionate to size
SME	Small & Medium Enterprise
SOPs	Standard Operating Procedures
SPSS	Statistical Package for Social Sciences
SSP	South Sudan Pounds
rCSI	Reduced Coping Strategy Index
SWEMWBS	Short Warwick- Edinburgh Mental Well-being Scale
S4T	Saving for Transformation
SO	Support Office
TOR	Terms of reference

UNICEF	United Nations Children's Fund
UNS	Upper Nile State
USD	United States Dollar
USAID	United States Agency for International Development
WASH	Water Sanitation & Hygiene
WUA	Water Users Association
WFP	World Food Program
WV	World Vision
WVSS	World Vision South Sudan
WVUS	World Vision US



## I.0 EXECUTIVE SUMMARY

World Vision has been awarded a three-year (36 month) project that seeks to meet the immediate life-saving food assistance needs of **25,198** vulnerable households. The project will run from **December 2020 – December 2023**. WV will support vulnerable communities to promote and sustain their resilience to acute shocks and chronic stresses by building their absorptive, adaptive and transformative capacities<sup>1</sup>.

Prior to implementation, WVSS commissioned Infoscope Consulting Limited to conduct a baseline survey in the target counties to establish benchmarks for project outcome/impact indicators against which project successes will be measured at the end of the project. The baseline measurements will be used to calculate change in these indicators and undertake a statistical test of differences in the indicators at completion of the project. The baseline study was conducted using both participatory quantitative and qualitative approaches consisting of a documentary review and a primary field data collection and analysis employing: review of secondary documents; Household Survey questionnaire; Focus group discussions with project participants; Key Informant Interviews with project participants and stakeholders and Observations (field visits using checklist).

*The following are summarized key findings.*

### Socio-demographic profile

- Majority of the respondents (59.2%) were IDPs; 35.6% were residents/host while 5.3% were returnees.
- On gendered household type, Male & Female (71.9%); Female No Male (23.2%), Male No Female (4.7%) while Child No Adult was a paltry 0.3%.
- 85.3% of the respondents were married.
- Overall literacy level of respondents in the project area is still below average at 49.6% (males-34%; female-66%);

### Purpose 1: Strengthened household livelihoods, agricultural productivity, and nutrition.

- 59.2% of the households have a poor FCS (0-28), 17.4% at the borderline of the FCS (28.1-42) and 23.4% within the acceptable range (above 43).
- 82.7% of the households experience moderate hunger, while 17.3% little or no hunger.

### Outcome 1.1: Improved household food production and storage

- 26.8% of the households have applied improved agricultural management practices or technologies.
- A total of 1,411 hectares was under improved management practices or technologies.
- A total of 1,663 individuals in the households reportedly applied improved management practices of technologies, of whom, 846 (53.5%) were male and 817 (46.5%) were female.

### Outcome 1.2: Increased household income & economic empowerment of vulnerable group 1,500 HHs

- 32.1% of households are participating in group based savings, micro-finance or lending programs.
- 32.2% women and men in a union earned cash in the 12 months preceding the survey.

### Outcome 1.3: Strengthened nutrition and IYCF interventions and integrated WASH services

- 36% of children (6-36 months) with minimum dietary diversity, higher than the national average of only 15 percent. Disaggregated by gendered household type as follows; M&F (73.6%), FNM (20.2%), MNF (5.8%) and CNA (0.4%).

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<sup>1</sup>ToR WV South Sudan EFSP Baseline SOW-Final, January, 2021

- 16.3% (male-49.9%; female-50.1%) of the children age 0-5.99 months were exclusively breastfed compared to the national average of 69%. Disaggregated by gendered HH type (M&F- 75.2; FNM- 22.6%; MNF-2.2% and CNA-0.0%).
- 12.7% of the households use improved sanitation facilities compared to the South Sudan national average of 17%.
- 5.7% of the households surveyed had access to basic drinking water services compared to 50% national average.
- 27.5% of the households surveyed had soap and water at a hand washing station.

#### Purpose 2: Strengthened community cohesion through improved disaster risk management, protection and mental health psycho-social support (MHPSS) services.

- The baseline survey recorded a rCSI of 40.6. On disaggregation by Gendered Household: Female and Male Adults (F&M) had 41, Adult Female no Adult Male (FNM) had 37, Adult Male no Adult Female (MNF) had 42, Child no Adults (CNA) had 43.

#### Outcome 2.2: Strengthened community managed disaster risk reduction (CMDRR) systems

- The survey recorded an index score of 26, meaning reduced capacity to recover from shocks. Disaggregated by gendered HH type; M&F recorded the highest ability to recover at 34 followed by FNM at 14 and MNF at 2. Child headed HH had 0 score meaning no capacity to recover.

#### Outcome 2.3: Equitable leadership systems and communal structures supported

- Only 23.3% of the respondent households believe the government can effectively respond to shocks and stresses with the majority of such households being those with M&F (50%), followed by FNM (12.4%) and MNF at 8.8%. None of the child headed HH believed the government can respond effusively to shocks and stresses.

#### Outcome 2.4: Improved access to community based MHPSS resources and services to strengthen community cohesion

- 44.2% of the households were reportedly engaged in community collective actions.

#### Outcome 2.5: Strengthened Rapid Response (RR) capacity to save lives and alleviate human suffering during rapid onset shocks

- 33.4% of the HH reported improved capacity to respond and recover from sudden onset of shocks. On disaggregation by gendered HH type; M&F household recording the highest at 36.4%; followed by FNM at 32.5%, MNF at 29.3% and CNA at 2%.

#### Purpose 3: Strengthened coordination, systems and learning to support recovery and resilience.

- Overall social capital index of 25 with M&F households recording the highest at 34 followed by FNM at 13, MNF at 2 and CNA at 0.

#### Outcome 3.1: Improved capacity of the community to coordinate, integrate knowledge and learning on recovery and resilience.

- Proportion of households with positive mental well-being, i.e. flourishing stands at 22.7% (M&F- 30%; FNM-6.4%; MNF- 1.4% and CNA-0) meaning that generally people have a low of near negative feeling of well-being about their lives.

## Recommendations

#### Purpose 1: Strengthened household livelihoods, agricultural productivity, and nutrition.

- ✚ WV and partners to promote food diversification and promotion of maternal child care interventions.
- ✚ WV and partners to promote climate smart practices already being adopted by the community like; rain water harvesting, small scale irrigation, control of soil erosion including mulching construction of gabions and terraces, kitchen gardening and agro-forestry.

#### Outcome 1.1: Improved household food production and storage

- ✚ WV and partners to promote improved agricultural management practices or technologies in the project area.
- ✚ Infrastructure; access to markets, water for production, capital for agribusiness and inadequate land for farming calls for GoSS intervention and advocacy around resource allocation at all levels.

#### Outcome 1.2: Increased household income & economic empowerment of vulnerable groups.

- ✚ WV to consider supporting alternative livelihood initiatives coupled with micro financing in the form of S4Ts will go a long way in transitioning the community from poverty.

#### Outcome 1.3: Strengthened nutrition and IYCF interventions and integrated WASH services

- ✚ WV and partners to promote exclusive breastfeeding through increased sensitization and awareness creation.
- ✚ WV and partners to promote optimal IYCN practices among PLW.
- ✚ WV and partners to promote education of expectant mothers on proper nutrition provision of diversified diets for children including assorted fruits and vegetables that are locally available.
- ✚ WV to rally partners to increase investment in water infrastructure development e.g. pipeline system extension to further reduce walking distance for women and girls who are mostly involved in water collection.
- ✚ WV to rally all partners in identification of most appropriate water technologies for surface water.
- ✚ WV to rally all partners to invest more resources and efforts to increase access to improved sanitation. The Community-Led Total Sanitation (CLTS) approach and design for behavior change should be adopted.
- ✚ WV to rally all partners to introduce more innovation on simple, affordable but quality adoptable improved sanitation structures for HH using sanitation led marketing approaches.
- ✚ WV and partners to capacity build water committees on governance issues to ensure proper water management that will guarantee sustainability.
- ✚ WV and partners to build capacity of CHEWs, WUAs, CBOs and other community structure groups to integrate and sensitize communities on proper hygiene practices at household level.

#### Purpose 2: Strengthened community cohesion through improved disaster risk management, protection and mental health psycho-social support (MHPSS) services.

- ✚ WV will work closely with community disaster management and peace committees to document early warnings for both conflict and natural disasters.

#### Outcome 2.2: Strengthened community managed disaster risk reduction (CMDRR) systems

- ✚ WV and partners to support capacity building trainings on DRM, cushioning them from potential disasters.
- ✚ GoSS and partners to support cross sector and multi stakeholder coordination and linkage.
- ✚ All stakeholders to support peace activities like; Peace Committees and Peace Clubs DPRC meetings, women leader's peace meetings, youth leaders meetings, elders dialogue meetings, Youth peace tournament, peace committee meetings and community resource committees to bring lasting peace in the area.
- ✚ GoSS to undertake disarmament exercise to rid the area of illegal arms among civilians.

## 2.0 Emergency Background

Despite slight improvements in crop production, high levels of food insecurity still persist throughout South Sudan with an estimated 6.48 million people classified as in Crisis (IPC Phase 3) or higher<sup>2</sup>. Household assets and coping strategies continue to erode due to the protracted nature of the crisis, leading to the weakening of HH resilience to future shocks, with, 66% of HHs resorting to emergency or crisis coping strategies<sup>3</sup>. In October 2019, the GoSS declared a disaster emergency in 27 counties due to catastrophic flooding, acutely felt in Upper Nile state (UNS), resulting in widespread displacement and loss of productive land, affecting over 1 million people<sup>4</sup>. Nearly 7.5 million persons need humanitarian assistance of which 54% are children in desperate need of protection<sup>5</sup>. Of the 78 counties affected, 45 counties are in extreme need – 30 percent of which are in UNS. Armed military conflict has exacerbated communal conflict, contributing to the breakdown of protective social norms and traditional mechanisms of mediation<sup>6</sup>.

Even though more than half of all females aged 15-24 have experienced some form of gender-based violence (GBV), cases remain under-reported by survivors due to fear of stigma or re-victimization and reliance on traditional justice structures<sup>7</sup>. Despite the emergence of gender equality legislation and increased women engagement in public and private spaces, men continue to lead power and decision-making processes<sup>8</sup>. Harmful traditional practices are widespread in South Sudan, inclusive of early and forced marriage (EFM) including levirate marriage and marriage following cattle raids, alongside polygamy, and women/girls' lack of access to financial resources/property. Widespread acceptance of violence against women (another form of gender-based violence [GBV]), by both women and men, is indicative of its socialized tolerance<sup>9</sup>. Intimate partner violence regularly comprises at least half of all reported GBV incidents<sup>10</sup>.

The mental health and well-being of the population is severely affected following high rates of exposure to other distressing events<sup>11</sup>. A study conducted in eight states of South Sudan reveals that up to 81% of people have been exposed to a traumatic event, with 40% having developed Post Traumatic Stress Disorder (PTSD) as a result<sup>12</sup>. An increase of suicide and suicide attempts has been recorded, especially among young adults between 19 and 35 years, in the Malakal PoC site and Malakal town, due to lack of socioeconomic opportunities and feelings of helplessness and hopelessness<sup>13</sup>.

## 2.1 Context in Upper Nile

Upper Nile State is one of the states of South Sudan most negatively affected by the crisis, with 53% of its population (735,000 people) facing Crisis or worse food insecurity during the upcoming lean season<sup>14</sup>. All 12 counties in UNS face critical levels of acute malnutrition, with Renk showing persistently critical levels of acute malnutrition for the fourth consecutive year<sup>15</sup>. According to the IPC Acute Malnutrition scale, Baliet and Renk are classified as Serious (GAM 10-14.9%), likely to deteriorate further during the lean season with Baliet, Melut, Ulang, Nasir and Renk counties projected to be in Critical (GAM 15-29.9%)

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<sup>2</sup> FEWSNET Outlook. June to September 2020

<sup>3</sup> WFP VAM. Food Security and Nutrition. July 2019

<sup>4</sup> <https://reliefweb.int/map/south-sudan/south-sudan-seasonal-floods-analysis-maps-october-2019>

<sup>5</sup> Humanitarian Needs Overview, 2020

<sup>6</sup> Stabilization and Local Conflicts: Communal and Civil War in South Sudan, Jana Krause, 2019

<sup>7</sup> UNICEF South Sudan Country Office, "Gender-Based Violence," (January 2019).

<sup>8</sup> [https://www.southsudanpeaceportal.com/wp-content/uploads/2018/03/Gender\\_final.pdf](https://www.southsudanpeaceportal.com/wp-content/uploads/2018/03/Gender_final.pdf)

<sup>9</sup> <https://conflictandhealth.biomedcentral.com/articles/10.1186/1752-1505-7-4>

<sup>10</sup> [https://www.sida.se/globalassets/sida/sve/lander/krisanalyser/hca\\_south\\_sudan\\_crisis\\_2020.pdf](https://www.sida.se/globalassets/sida/sve/lander/krisanalyser/hca_south_sudan_crisis_2020.pdf)

<sup>11</sup> <https://plan-international.org/publications/girls-crisis-south-sudan>

<sup>12</sup> Ng, Lopez, Deng, D, 2017

<sup>13</sup> HNO, 2020

<sup>14</sup> <http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152422/?iso3=SSD>

<sup>15</sup> Ibid

levels. Nine out of 12 counties in UNS will face IPC Emergency Phase 4 food insecurity in the Jun-Sept. period, with the remaining three counties (Renk, Melut, and Fashoda) still in persistent Crisis Phase 3 levels<sup>16</sup>.

Excessive flooding from late 2019 to March 2020 affected crop production and livestock in the Sobat Corridor. A joint assessment by WV Veterinary staff and Department of Veterinary Services in the State Ministry of Agriculture (MOA) reported an average number of 1,092 livestock lost due to floods with 17 cases of livestock diseases reported in Renk and Melut Counties. Crop pests, such as the Fall Army Worm, black beetles and grasshoppers, also affected crop production in UNS in the last production season<sup>17</sup>. The loss of livestock due to floods, disease outbreaks and conflict, further diminishes the community's livelihoods base making them more vulnerable and food insecure. Most IDPs and host communities reported slaughtering and eating their livestock as a coping strategy, while others opt to sell their herds to meet their immediate food need<sup>18</sup>.

South Sudan recorded its first COVID-19 case in March 2020. Due to travel restrictions and border closures intended to reduce the spread of the virus, the pandemic could have huge impact on food availability or prices. This situation could hinder household's ability to afford adequate food for consumption, particularly among returnee HHs, as income from casual labor and market disruptions combined with rising food prices reduce HH purchasing power<sup>19</sup>.

The current national conflict has escalated the ethnic divisions between Dinka, Shiluk and Nuer groups within Sobat Corridor while violence and frequency of cattle raids have increased, particularly in Ulang and Nasir. Human insecurity is intrinsically linked with food insecurity in South Sudan, with inter-communal clashes accounting for the majority of security risks, resulting in disruption of livelihoods, loss of lives and displacement<sup>20</sup>. Key drivers include disputes over grazing lands, cattle raids, revenge killings, and proliferation of arms, especially in areas hosting IDPs and returnees. The **lack of economic opportunities for young people** and other vulnerable groups is also a cause of insecurity<sup>21</sup>.

GBV, abuse and exploitation remain the greatest **protection risks to women and girls**, due to a deeply patriarchal society which sustains gender inequalities and discrimination. GBV is linked with poor nutrition outcomes for women and children, poor livelihoods productivity, and high rates of psychological and protection needs<sup>22</sup>. Men and women alike have been socialized to tolerate GBV, and it is widely viewed as acceptable within families. Intimate partner violence comprises at least half of all reported GBV incidents<sup>23</sup>.

To address the above issues, WV South Sudan was awarded \$15,000,000 by USAID through BHA to implement a 36-month project dubbed "**Accelerating Recovery and Resilience in South Sudan (ACCESS) in Upper Nile State**". The project will support vulnerable communities to promote and sustain their resilience to acute shocks and chronic stresses by building their absorptive, adaptive and transformative capacities.

## 2.2 Description of the project

World Vision has been awarded a three-year (December 2020 – December 2023) project that seeks to

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<sup>16</sup> South Sudan IPC Technical Working Group: IPC Acute Food Insecurity & Acute Malnutrition. October 2020 - July 2021

<sup>17</sup> <http://www.fao.org/ag/locusts/common/ecg/75/en/200414updateE.jpg>

<sup>18</sup> [https://fscluster.org/south-sudan-rep/documents?f%5Bo%5D=field\\_document\\_sources%3A104](https://fscluster.org/south-sudan-rep/documents?f%5Bo%5D=field_document_sources%3A104)

<sup>19</sup> WVSS FY20 Final Technical Narrative Proposal, August 2020

<sup>20</sup> South Sudan Protection Cluster. Guidance Note on Strengthening Social Cohesion. November 2019

<sup>21</sup> Ibid

<sup>22</sup> HNO 2019

<sup>23</sup> HNO, 2020

address the erosion of food security in Upper Nile State by integrating essential complementary interventions to accomplish the **Project Goal** of **accelerating recovery and bolstering resilience in UNS**. This suite of coordinated and complementary interventions will result in the following **purposes** being achieved: **(1)** Strengthened household livelihoods, agricultural productivity and nutrition; **(2)** Strengthened community cohesion through improved disaster risk management, protection and Mental health and psychosocial support (MHPSS)<sup>24</sup> services; and **(3)** Strengthened coordination, systems, and learning, to support recovery and resilience.

The project is prioritizing hard-to-reach and most vulnerable households in Renk, Melut, Baliet, Ulang and Nasir counties of UNS. The project is targeting 25,198 households (151,188 individuals) either in IPC Phase 3 or Phase 4 food insecurity,

Participants will be identified through existing WFP and FAO caseloads in the targeted counties to ensure that essential complementary activities “wrap-around” to enhance and leverage the existing emergency pipeline for achieving greater resilience of the targeted communities. Table I below shows the list of Payams targeted under the ACCESS project per County.

**Table I: List of Payams to be targeted under the project**

County	Payam	Current WV Programming
<b>Renk</b>	Northern Renk, Chemedi, Gerger Southern Renk & Jelahak	<b>FAO</b> (main & dry season response); <b>FAO</b> Livelihoods Resilience of Pastoral and Agro-Pastoral Communities Program, <b>WFP</b> (cash-based and GFD+)
<b>Melut</b>	Bimachuk (Pariak), Paloich, Wunamum, Goldora, Melut, Thangrial & Panomdit	<b>OFDA</b> (with FAO inputs); <b>FAO</b> (main and dry season response, <b>FAO</b> Livelihoods Resilience of Pastoral and Agro-Pastoral Communities Program); <b>WFP</b> (school feeding, lean season GFD), <b>UNICEF</b> (nutrition)
<b>Baliet</b>	Adong, Abwong, Rom, Wunthow, Nyongrial, Nyongkuach, Kuel, Gel Achiel, Akotweng & Akoka	<b>OFDA</b> (with FAO inputs); <b>WFP</b> (school feeding, lean season GFD)
<b>Ulang</b>	Doma, Kurmuot, Ulang & Yomding	<b>WFP</b> GFD+
<b>Nasir</b>	Nasir, Roam, Maker, Mading, Dingkar, Jikmir, Kiech Kuon & Kuerenge-Ke	<b>WFP</b> GFD+

### 2.2.1 Implementation Approach

The project implementation is adopting WV’s **Fragile Context Programmatic Approach (FCPA)** reflecting a multi-sectoral, layered approach to resilience, supporting communities to cope with shocks along a resilience trajectory. The FCPA provides a pathway for WV to address the root causes of fragility and deepen sustainable impact of work in these contexts. At the heart of the framework is the agility to work across the humanitarian, development and peace-building Nexus. This means WV can constantly adapt to the changing context, shifting seamlessly from meeting immediate humanitarian needs (**survive**) to addressing root causes to transform communities (**thrive**), through agile, multi sectoral, community based, risk informed programming (**adapt**).

Project participants will be selected from the WFP food assistance programs that are ongoing in the targeted locations. WV will select households that have access to farmland to participate in agricultural production activities. Households with knowledge and skills in fishing will be targeted for interventions in fisheries. Households with pregnant and lactating mothers and children under age five will be eligible for

<sup>24</sup> MHPSS includes any support that people receive to protect or promote their mental health and psychosocial wellbeing

participation in nutrition interventions. Households with no access to latrines will be selected to participate in WASH interventions. WV will target women, girls, boys and men in protection and GBV interventions. Those identified to have experienced infringement of their rights will be targeted for MPHSS and IGA interventions. WV will use WFP Scope beneficiary lists to verify registered beneficiaries. WV will work with food distribution committees conduct physical verification of selected beneficiaries.

Prior to implementation, WVSS commissioned Infoscope Consulting Limited to conduct a baseline survey in the target counties to establish benchmarks for project outcome/impact indicators against which project success will be measured at the end of the project.

### **2.3. Survey purpose**

The purpose of this baseline survey was specifically to establish benchmarks for project outcome/impact indicators against which project success will be measured. The baseline measurements will be used to calculate change in these indicators and undertake a statistical test of differences in the indicators at completion of the project. The focus will be on changes in the indicators pre- and post- implementation, but no conclusions about attribution or causation.

#### **2.3.1 Survey objectives**

Specifically, the baseline survey served the following purposes:

- Determine the base values for the project outcome and impact indicators;
- Validate and strengthen project targeting and implementation approach;
- Describe the vulnerability context of the targeted community in relation to socio-economic, natural/environmental, and health.

The baseline survey sought to answer the following questions/topics:

- General status of targeted households – Source of food, number of household members, main income sources; hunger at HH level, WASH status (access to clean water, access to basic sanitation facilities and hygiene practice at HH level), and HH ability to recover from shocks, etc.
- The status/availability of community assets and their utilization.

## **3.0. METHODOLOGY**

### **3.1. Survey Design**

The baseline study was conducted using both participatory quantitative and qualitative approaches consisting of a documentary review and a primary field data collection and analysis involving;

- Review of secondary documents.
- Household Survey questionnaire.
- Focus group discussions with project participants.
- Key Informant Interviews with project participants and stakeholders.
- Observations (field visits using checklist).

### **3.2. Sampling methods**

#### **3.2.1 Quantitative sampling methodology**

The survey sampling targeted the Payams with WFP registered participants in the targeted counties as the sampling frame. The HH survey employed stratified two-stage cluster sampling design with Probability Proportional to Size (PPS) for household quantitative survey respondents. This was to ensure that households in the different clusters (Payams) have the same probability of selection. Therefore, more households were selected from Payams with more WFP registered participants than those with lower WFP participants (Table 2). The first stage of sampling involved sampling clusters (clusters) that were to

serve as the primary units for the survey. The second stage of sampling involved sampling households from the selected clusters (Payams) using systematic random sampling.

**Table 2: Sample size**

County	Population	WFP participants	Sample size
Renk	189,061	15,909	143
Melut	126,691	11,632	105
Baliet	56,348	8,816	79
Ulang	137,691	27,410	246
Nasir	286,628	19,655	177
<b>Total</b>	<b>796,419</b>	<b>83,420</b>	<b>750</b>

### 3.2.2. Sample Size Calculation

The formula for calculating sample size for the baseline was predetermined as:

$$n_{initial} = D_{est} \left[ \frac{z_{1-\alpha} \sqrt{2P(1-P)} + z_{1-\beta} \sqrt{P_{1,est}(1-P_{1,est}) + P_{2,est}(1-P_{2,est})}}{\delta} \right]^2$$

Where:

$n_{initial}$  = is the initial sample size required by the surveys for each of the two time points

$\delta = P_{1, est} - P_{2, st}$  = minimum effect size to be achieved over the time frame specified by the two surveys

$P_{1, est}$  = represents a survey estimate of the true population proportion  $P_1$  at baseline [If such an estimate is not available from prior surveys, 0.5 will be used]

$P_{2, st}$  = represents a survey estimate of the true population proportion  $P_2$  at end line

$$\underline{P} = \frac{P_{1,est} + P_{2,est}}{2}$$

$z_{1-\alpha}$  is the value from the normal probability distribution corresponding to a confidence level  $1-\beta$ . For  $1-\beta = 0.95$ , the corresponding value is  $z_{0.95} = 1.64$ .

$z_{1-\beta}$  is the value from the normal probability distribution corresponding to a power level of  $1-\beta$ .

For  $1-\beta = 0.80$ , the corresponding value is  $z_{0.80} = 0.84$ .

$D_{est}$  is the estimated design effect (DEFF) of the survey.

The values to be used in calculating FCS and HHS sample size for multistage sampling are:	
$P_{1,est}$	50% (0.5)
$P_{2,est}$	40% (0.4)
$z_{1-\alpha}$	95% (1.64)
$z_{1-\beta}$	80% (0.84)
$D_{est}$	2
$n_{initial}$	610
Non-response adjustments	10%
$n_{final}$	671
<b>Adjusted sample size</b>	<b>750</b>



### 3.3. Qualitative sampling methodology

#### 3.3.1 Focus Group Discussions

In addition to the household survey, a total of fifteen (15) Focus Group Discussions (FGDs) were held after preliminary analysis of the quantitative data. The FGDs were selected through purposive sampling methodology. The FGDs were conducted with groups of registered WFP participants through the collection of a range of opinions and perceptions. To reduce the spread of Covid-19 during FGDs sessions, the FGDs were limited to 6 participants and took a maximum 1 hour.

Every FGD was composed of men, women, and youths (boys and girls) randomly selected among the registered WFP participants in the project area. The groups were gender-mixed or gender-segregated and included; farmers (men/women), PLW with children U5; youths (boys and girls) and female-headed households. The topical issues ranged from; resilience and livelihood (SMEs, fishing, vocational training, etc); agriculture productivity, IYCF/nutrition, WASH, IGAs, GBV, SMEs, DRM and social cohesion.

For purposes of plural investigation, the exercise was conducted with a broad range of representation within the community to enable triangulation of findings and incorporate wide - ranging perspectives. Typically, the FGDs were conducted by a facilitator and a note taker using pre-determined, distinct focus group guides with relevant themes. The FGDs also served to validate information/data generated by the household survey, key informant interviews and observations.

To reduce the spread of COVID-19 during FGDs sessions we ensured the participants wore face masks and were not in close contact with one another for a prolonged period by sitting a distance of at least 1 meter between each other. In addition, we ensured they washed their hands with soap and water before and after the interviews and also avoided shaking hands and touching each other. Table 3 shows the number of Focus Group Discussions held per County.

Table 3: Number of Focus Groups conducted

County	Number of Focus Group	Target
Renk	3	men, women, Youth (boys and girls)
Melut	3	men, women, Youth (boys and girls)
Baliet	3	men, women, Youth (boys and girls)
Ulang	3	men, women, Youth (boys and girls)
Nasir	3	men, women, Youth (boys and girls)
<b>Total</b>	<b>15</b>	

#### 3.3.2 Key Informant Interviews

The survey planned and conducted twenty seven (27) Key Informant Interviews (KIIs) during field data collection exercise. The entire key stakeholders that will be involved in the ACCESS project implementation were involved in the study. The interviews were conducted by the consultant team of experts utilizing mainly face-to-face and in some instances virtually through phone calls to reduce the risk of spreading COVID-19. The KIIs were recorded during the interview process and later transcribed.

Those interviewed comprised: County Commissioners, focal staff from WFP, FAO, UNICEF, IOM, WV, County officials, camp and Payam leaders. Others reached with interviews were; directors of line State ministries (Agriculture, Health and Water Resources, Livestock and Fisheries), County/State government officials, RRC/ROSS Coordinator at County level and Community representatives including; Boma chief, Community Development Committees (CDCs) and representatives of food distribution committees at Payam level (Table 4).

Table 4: Number of key informants per County

County	Number of key informants
Renk	6
Melut	5
Baliet	5
Ulang	5
Nasir	6
<b>Total</b>	<b>27</b>

### 3.4. Ethical considerations

The below ethical considerations were adhered to during the survey process:

- Participation in the survey was voluntary.
- Informed consent was sought before data gathering and consent forms signed by respondents.
- Anonymity, confidentiality and safeguarding of survey data was guaranteed.
- Quantitative data was obtained from a randomly selected representative sample.
- There were no risks and benefits for individual participants.
- The culture, norms and traditions of study populations were respected.
- Views and opinions of the different survey subjects were respected.
- Prior permission was received for taking and use of visual still/moving images.
- Abide by the “Do No Harm” principle especially in the context of COVID-19 was employed.
- Data collection was conducted in conformity to the COVID-19 directives issued by WHO and GoSS Ministry of Health (MOH).

### 3.5. Field data collection

Quantitative survey data was captured realtime using android phones installed with ODK app platform using open data server. Data were captured offline and later uploaded to WV servers at the end of each day where possible. Due to the current COVID-19 outbreak, the survey relied on both in-person or face-to-face means, and in some cases remote/phone interviews for selected key informants who were physically inaccessible due to security or other reasons.

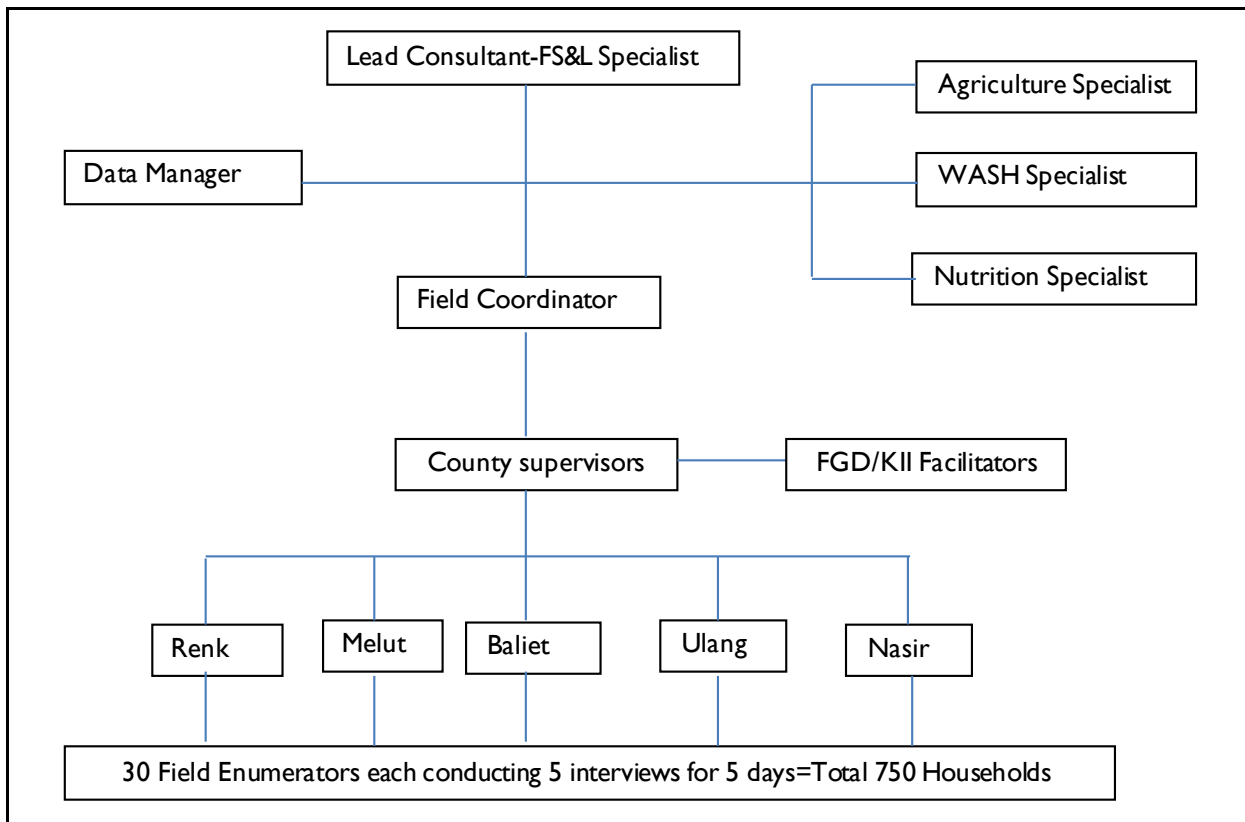
The interviews and discussions were conducted mainly in Arabic or in other language preferred by the respondents, then translated back to English. Typically, the FGDs were conducted by a facilitator and a note taker using pre-determined, distinct focus group guides with relevant themes. To reduce the spread of Covid-19 during FGDs sessions, the FGDs were limited to 6 participants and took a maximum 1 hour. Key informant interviews were conducted mainly using phone calls to reduce the risk of spreading COVID-19. The interviews were conducted using a predetermined guide with open ended questions for specific informants.

The baseline survey team also observed people’s physical condition and activities; asked questions; visited homes/shelters/IDP camps etc.; observed children, sanitation facilities, water sources, handwashing station, food sources; observed daily lives of women; observed services; make sketches and took photographs.

### 3.6. Data quality control

The consultants took cognizance that quality output at every stage is fundamental to the success of the entire survey system. Emphasis was on making every team member in this survey a part of the quality control processes and methodologies to deliver high standard data according to research standards and ethics. The overall role of ensuring quality output during fieldwork and data processing fell under the docket of the Lead Consultant, supported by array of staff including Associate Consultants, Data Manager, Field Coordinator, County supervisors and Enumerators (Figure 1). The survey recruited 30 Enumerators

and planned to cover 750 HHs in 5 days across the 5 counties during fieldwork. To ensure that the survey yielded credible and high-quality data, the consulting team endeavored to limit chances of errors both during data collection and data processing.



**Figure 1: Organization of Fieldwork**

A range of approaches were used to ensure quality and validity. Solid descriptive data is presented so that there is enough internally coherent information in order that others can attach their own interpretations. A systematic process of respondent selection was ensured and for transparency, the analytical procedures and processes are reported as fully and truthfully as possible. The participatory approach also promoted the involvement of a wide range of stakeholders, while employing methods that encourage equal expression of views.

Granted the survey findings could be affected by threats to internal and external validity, care was taken to mitigate the threats. To ensure validity of research instruments this study adopted content validity to assess how relevant the instruments captured specific study questions. To minimize random error the study ensured that all items accurately addressed the questions. To ensure validity, the instruments were pre-tested based before the actual study commenced.

The methodologies were also designed to deliver high standard data according to research standards and ethics. The enumerators’ training emphasized the importance of ethical practice, care and attention to detail in interviewing and recording responses.

Strict supervision, guidance and backstopping was done by the Lead Consultant and the entire team. During fieldwork, daily reporting meetings were organized to address any data gaps and quality concerns.

The work of the interviewers was regularly checked and any problems were thus rectified in the field. Daily data quality checks were done at the end of the day to address quality lapses. Further cleaning with logical checks was carried out on the completed data sets prior to analysis.

### **3.7. Training of Research Assistants, Piloting/Pre-Test and Finalization of Tools**

The enumeration team was taken through a detailed training session facilitated by the consultants in strict conformity with the WHO and GoSS guidelines on COVID-19. During the training on the survey objectives, approach and the standard data collection procedures to be implemented during the survey were reviewed in detail. The instruments review did not only entail the reading and discussing of each of the questions, but also included plenary mocking sessions by the enumerators to assess the flow, consistency and appropriateness of the phrases and terms used therein.

The other issues covered during the training included the general background of the project, why the survey is being undertaken in the identified target areas, the survey samples (target respondents, sample points and sizes), the survey timelines, client expectation of the data collection team, the communication protocol during the survey, data quality control during the survey, modalities for handling challenges and related issues, logistical plan in the survey, payment terms, and the applicable contracts.

Pretesting was done externally covering Payams not targeted for support under ACCESS project before debrief with all the participants to review the observations, experiences and challenges that might be encountered. This exercise informed the final changes made in the data collection tools and/or approach implemented during the actual data collection phase.

### **3.8. Data processing and analysis**

Both descriptive and inferential analysis of data from the survey was carried out by use of SPSS and MS Excel for quantitative data. Data analysis, whenever appropriate, has been segregated by location and sex.

The collected data has therefore been collated, analyzed and interpreted in a coherent and systematic manner, using detailed data / information analysis method(s). All the indicators under investigation were analyzed on gendered consideration as per USAID/BHA guidelines i.e. Male & Adult HH – M&F, Adult Male no Adult Female – MNF, Adult Female No Adult Male household – FNM and Child No Adult Household - CNA. The qualitative data collected through discussions and key informant interviews were coded first before content analysis. Information from the desk review, interviews, discussions, observations and survey findings were integrated using question by answer matrices method to facilitate comparisons. Responses were coded and analyzed for themes and compared to validate quantitative results and identify any possible findings not included in the quantitative results.

The quantitative data obtained from the ODK were exported to both Excel and the Statistical Package for Social Sciences (SPSS) version 22.0. The analysis using SPSS software involved summary, presentation (tabulation and charts) and descriptive statistics (means, standard deviations, and frequencies). Frequencies and percentages were calculated to describe the basic characteristics of the data.

Cross tabulations has been used to show the relationship between two or more survey questions. In this survey, a combination of several research methods were utilized to get the wide view of the labour market and thus triangulation was a significant tool. Triangulation facilitated validation of data through cross verification from two or more sources.

## **4.0. LIMITATIONS**

In spite of the multiple methods utilized and the data explored in execution of this baseline survey, the following limitations are acknowledged:

- ✦ The survey had initially sampled 750 HHs, but only 739 HHs were reached due to insecurity and difficult context in some Payams along the “Sobat corridor” (Nasir, Ulang & Baliet Counties). The sample size further reduced to 730 after data cleaning, which was still within the range.
- ✦ There was an incident of revenge killings in Ulang County on the second day of data collection, which resulted in data halting of fieldwork for 2 days to monitor the situation. Fieldwork nevertheless resumed but some locations could not be accessed for fear of repeat of such incident.
- ✦ All field locations in Nasir are only accessible by river transport which is extremely slow, and this delayed data collection.
- ✦ Ethnic animosity between the communities residing in the study locations meant that some enumerators were not welcome to work in certain locations.
- ✦ COVID-19 pandemic also posed a challenge to face-to-face interviews in some instances hence the survey had to rely on virtual phone interviews.

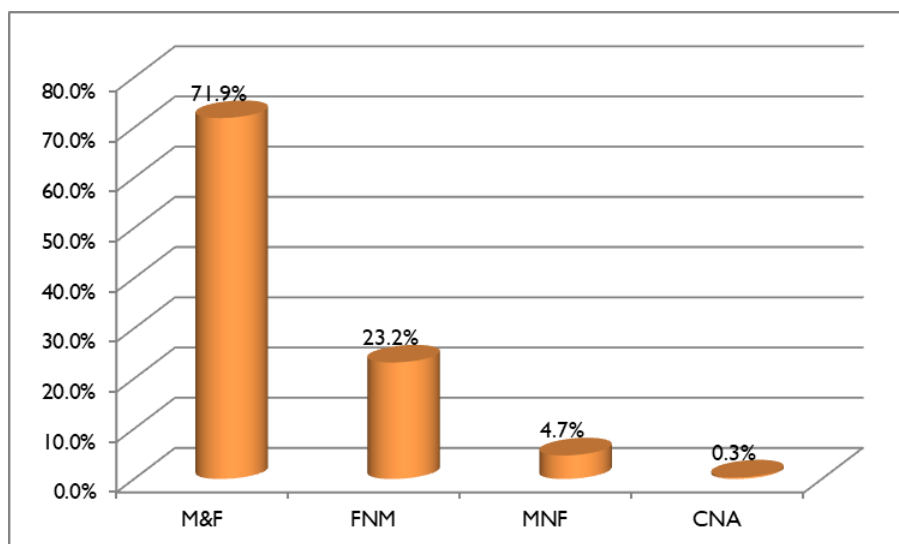
## 5.0 FINDINGS

### 5.1 Introduction

The Baseline Study was for the “Accelerating Recovery and Resilience in South Sudan (ACCESS) project” funded by USAID/BHA implemented by World Vision South Sudan in collaboration with two sub-grantee partners namely NH and HDC in Upper Nile State, South Sudan. The study sampled and interviewed 730 households drawn from 5 Counties namely: Nasir, Ulang, Baliet, Melut and Renk. In addition, 15 focus group discussions and 27 key informant interviews were held subsequently. This section presents the baseline survey findings based on analysis of both quantitative and qualitative data.

### 5.2 Socio-demographic profiles of households

About 20% of the respondents were both household head, as well as the caregiver. On gender, the majority (91.1%) of caregivers were female, while only 8.9% were male. There were 212 orphaned children (male-111; female-102) living in the households as at the time of the survey. On resident status; the majority (59.2%) of respondents were IDPs; 35.6% were residents/hosts, while only 5.3% were returnees. On gendered household type, the majority was composed of male & female (71.9%); followed by female no male (23.2%), Male No female was only 4.7% while Child no adult was a paltry 0.3%. Figure 2 presents the findings.



**Figure 2: Gendered household type**

The age categories of household members surveyed is presented in Table 5 below, where those below 18 years of age comprised the majority (45%); those 18-49.5 years were 21.6%, while those above 50 years were 27.1%.

**Table 5: Age categories of household members**

Description	N	%
Male child (0-23 months)	569	5.4
Female child (0-23 months)	532	5.1
Male child (24-59 months)	763	7.3
Female child (24-59 months)	822	7.8
Male youth (5-17.9 years)	1,050	10.0
Female youth (5-17.9 years)	988	9.4
Male adult (18-49.5 years)	1,285	12.2
Female adult (18-49.5 years)	1,640	15.6
Male above 50 years	1,298	12.4
Female above 50 years	1,543	14.7
<b>Total</b>	<b>10,490</b>	<b>100.0</b>

### 5.2.1 Marital status of respondents

On marital status; 85.3% of the respondents were married, with Nasir County accounting for the majority of those who were married (91.4%), followed by Renk (89.8%); Melut (84%); Ulang (81.9%) and Baliet (75.9%) in that order. Widows/widowers accounted for 7.9% of the respondents interviewed while those separated and divorced accounted for 4.1% and 1.4% respectively. Only a paltry 1.2% were not married. Table 6 presents the findings.

**Table 6: Respondents marital status**

Marital Status	Nasir		Ulang		Baliet		Melut		Renk		Total	
	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%
Married	139	91.4	208	81.9	44	75.9	100	84.0	132	89.8	623	85.3
Widow/er	6	3.9	22	8.7	9	15.5	11	9.2	10	6.8	58	7.9
Divorced	5	3.3	1	0.4	1	1.7	1	0.8	2	1.4	10	1.4
Separated	1	0.7	18	7.1	3	5.2	6	5.0	2	1.4	30	4.1

Marital Status	Nasir		Ulang		Baliet		Melut		Renk		Total	
	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%
Not married	1	0.7	5	2.0	1	1.7	1	0.8	1	0.7	9	1.2
Total	152	100	254	100	58	100	119	100	147	100	730	100

### 5.2.2 Literacy level

The overall literacy level of respondents in the project area is still below average at 49.6% (males-34%; female-66%); meaning that a significant proportion (50.4%) could neither read nor write. Ulang County reported the highest literacy level at 61.8%; followed by Baliet (51.7%); Renk (48.3%) and Nasir (46.1%). Melut recording the lowest literacy rate at 28.6% possibly attributed to the fact that it had the highest number (43.5%) of IDPs. However it's notable that this figure is slightly higher than national average of 27% recorded for South Sudan which has the lowest literacy rate in world<sup>25</sup>. Figure 3 presents the findings.

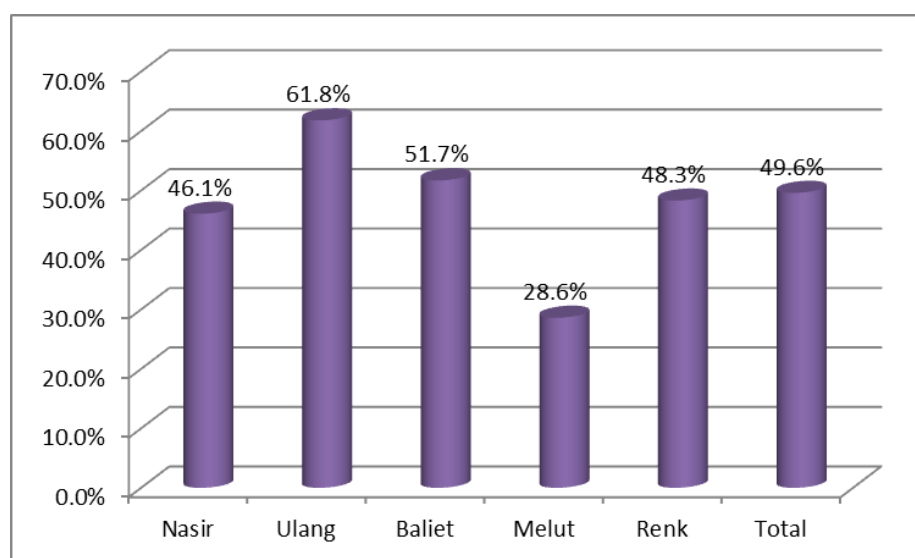


Figure 3: Literacy level of respondents

Of those who ever attended school the results show that 41.4% never completed primary school (male-18%; female-82%); 20.2% completed primary school while 17.7% completed secondary school (male-34.2%; female-65.8%). Only 7.2% (male-43.3%; female-56.7%) and 1.1% (male-25%; female-75%) had completed University and vocational training respectively. Table 7 below presents the level of education of respondents.

Table 7: School attendance

Education level	Nasir		Ulang		Baliet		Melut		Renk		Total	
	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%
Incomplete Primary	27	38.6	72	45.9	2	6.7	11	32.4	38	53.5	150	41.4
Completed Primary	14	20.0	21	13.4	8	26.7	17	50.0	13	18.3	73	20.2
Incomplete Secondary	8	11.4	10	6.4	3	10.0	2	5.9	6	8.5	29	8.0
Completed Secondary	7	10.0	32	20.4	11	36.7	4	11.8	10	14.1	64	17.7

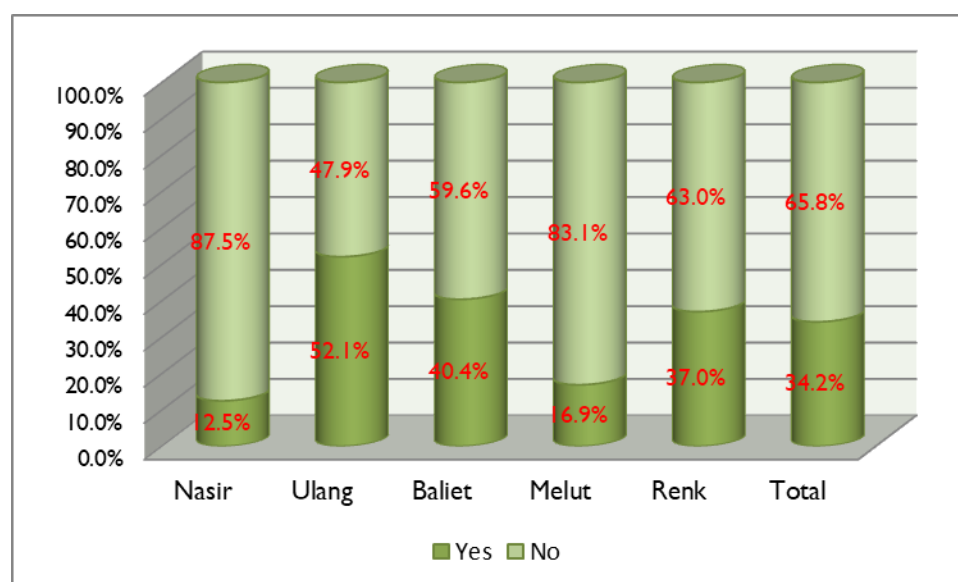
<sup>25</sup>

<https://www.google.com/search?q=south+sudan+literacy+rate&oq=South+sudan+literacy+rate&aqs=chrome.0.014j0i22i30i4.12255j0j7&sourceid=chrome&ie=UTF-8>

Education level	Nasir		Ulang		Baliet		Melut		Renk		Total	
	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%	Count (N)	%
Incomplete University	1	1.4	9	5.7	6	20.0	0	0.0	0	0.0	16	4.4
Completed University	11	15.7	12	7.6	0	0.0	0	0.0	3	4.2	26	7.2
Vocational Training	2	2.9	1	0.6	0	0.0	0	0.0	1	1.4	4	1.1
Total	70	100	157	100	30	100	34	100.0	71	100.0	362	100

### 5.2.3 Main sources of income

The baseline survey sought to establish whether the households earned any income from their livelihoods in the previous 12 months preceding the survey. From the finding; a total of 34.2% of the households reportedly earned income; with Ulang recording the highest proportion of those who earned some income from their livelihoods (52.1%). Deeper analysis shows this is attributable to the fact that Ulang has a variety of livelihood sources (Table 8). For example, it recorded the highest from sale of agricultural crops (43.2%); besides other incomes from sale of livestock products, fishing and trade. The rest of the counties recorded below average as presented in Figure 4 below.



**Figure 4: Did you and/or your spouse earn any net income from your livelihoods in the last 12 months?**

On sources of income sale of cereals and other crops (34.1%); sale of firewood/poles (10.6%), sale of livestock and livestock products (9.5 %) sales of fish (9.1%) and sale of charcoal (7.4%) were the main source of income for the households. Ulang County recorded the highest income from the sale of agricultural crops (43.2%), Table 8 present the findings.

**Table 8: Household sources of income**

Sources of income	Nasir		Ulang		Baliet		Melut		Renk		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Agriculture and sales of cereals	106	25.3	139	32.3	19	11.9	57	33.9	65	18.2	386	25.2
Agriculture and sales of other crops	54	12.9	47	10.9	10	6.3	14	8.3	12	3.4	137	8.9
Livestock and sales of livestock	90	21.5	31	7.2	9	5.7	5	3.0	10	2.8	145	9.5
Sale of animal products	27	6.4	15	3.5	4	2.5	11	6.5	18	5.0	75	4.9



Casual labour related to agricultural activities	7	1.7	12	2.8	6	3.8	4	2.4	20	5.6	49	3.2
Casual labour related to construction	2	0.5	7	1.6	7	4.4	1	0.6	20	5.6	37	2.4
Skilled labour	13	3.1	7	1.6	11	6.9	0	0.0	17	4.8	48	3.1
Salaried work	2	0.5	9	2.1	4	2.5	5	3.0	21	5.9	41	2.7
Sale of firewood/poles	22	5.3	45	10.5	20	12.6	19	11.3	57	16.0	163	10.6
Sale of charcoal	16	3.8	17	4.0	18	11.3	12	7.1	50	14.0	113	7.4
Sale of grass	15	3.6	42	9.8	16	10.1	10	6.0	34	9.5	117	7.6
Fish and sale of fish	49	11.7	41	9.5	18	11.3	15	8.9	16	4.5	139	9.1
Other petty trading	1	0.2	4	0.9	1	0.6	1	0.6	0	0.0	7	0.5
Kinship/gifts from family friends	5	1.2	1	0.2	3	1.9	0	0.0	0	0.0	9	0.6
Sale of food assistance	4	1.0	1	0.2	8	5.0	1	0.6	1	0.3	15	1.0
Bricks and sales of bricks	0	0.0	1	0.2	1	0.6	0	0.0	0	0.0	2	0.1
Trade (commercial activity)	2	0.5	6	1.4	3	1.9	1	0.6	4	1.1	16	1.0
Cash-based transfer	0	0.0	1	0.2	1	0.6	0	0.0	0	0.0	2	0.1
Services (hairdressing, catering)	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	1	0.1
Transport (Bodaboda)	0	0.0	0	0.0	0	0.0	1	0.6	1	0.3	2	0.1
No income source	4	1.0	4	0.9	0	0.0	10	6.0	11	3.1	29	1.9
Total	419	100.0	430	100.0	159	100.0	168	100.0	357	100.0	1533	100.0

#### 5.2.4. Non-productive and productive assets

The type and combination of assets may be used as a proxy indicator for household wealth and is therefore related to household food security. Some assets (e.g., radio) are non-productive and relate to living standards, whereas others (e.g., bicycle and motorbike) are productive as they may generate income. Efforts to establish ownership of consumptive assets (Table 9) revealed that the households in the area owned the following assets; chairs (25.2%); tables (24.7%); beds (19.1%).

**Table 9: Consumptive assets in the households**

Consumptive assets	Nasir		Ulang		Baliet		Melut		Renk		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Table(s)	64	28.3	123	22.7	45	19.8	85	27.4	140	25.8	457	24.7
Chair(s)	69	30.5	158	29.2	45	19.8	78	25.2	115	21.2	465	25.2
Bed(s)	44	19.5	83	15.3	42	18.5	82	26.5	101	18.6	352	19.1
Cupboard(s)	3	1.3	9	1.7	14	6.2	12	3.9	32	5.9	70	3.8
Radio	14	6.2	42	7.8	23	10.1	15	4.8	72	13.3	166	9.0
TV	1	0.4	11	2.0	4	1.8	3	1.0	21	3.9	40	2.2
Telephone	28	12.4	106	19.6	26	11.5	24	7.7	38	7.0	222	12.0
Bicycle	1	0.4	2	0.4	15	6.6	9	2.9	14	2.6	41	2.2
Motorcycle	0	0.0	0	0.0	8	3.5	0	0.0	5	0.9	13	0.7
Car/Truck	0	0.0	0	0.0	0	0.0	1	0.3	3	0.6	4	0.2
Other (specify)	2	0.9	7	1.3	5	2.2	1	0.3	2	0.4	17	0.9
<b>Total</b>		<b>100.0</b>		<b>100.0</b>		<b>100.0</b>		<b>100.0</b>		<b>100.0</b>		<b>100.0</b>

The Theory of Change (ToC) for asset ownership begins by hypothesizing that the ultimate impact of assets on poor people's lives would be improvements in well-being. It then describes the outcomes that

poor people strive to achieve through asset ownership, namely increased resilience and increased opportunities to improve well-being. Next, it identifies the preconditions necessary for achieving these outcomes, including having the ability to prepare for risks, recover from shocks, invest, and access markets. Finally, it describes the specific interventions that can create these preconditions<sup>26</sup>. The most commonly owned productive assets included; hoe/Maloda (23.6%); Machete (Panga) at 17.7%, axe (20%), oxen plough at 20.5%. Table 10 below illustrates the assets that are owned by respondents.

**Table 10: Productive assets in the households**

Productive assets	Nasir		Ulang		Baliet		Melut		Renk		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Hoe/Maloda	118	29.4	139	20.8	45	23.4	70	21.4	101	24.3	473	23.6
Machete/Panga	91	22.6	131	19.6	26	13.5	48	14.7	56	13.5	352	17.6
Boat/canoe	42	10.4	5	0.7	18	9.4	31	9.5	18	4.3	114	5.7
Fishing equipment	66	16.4	94	14.1	13	6.8	40	12.2	34	8.2	247	12.3
Plough (oxen/donkey)	1	0.2	6	0.9	4	2.1	2	0.6	16	3.9	29	1.4
Axe	58	14.4	130	19.4	46	24.0	67	20.5	100	24.1	401	20.0
Rake	13	3.2	68	10.2	17	8.9	23	7.0	38	9.2	159	7.9
Watering can	3	0.7	28	4.2	15	7.8	27	8.3	23	5.5	96	4.8
Treadle foot pump	0	0.0	4	0.6	1	0.5	1	0.3	3	0.7	9	0.4
Shovel/spade	0	0.0	46	6.9	1	0.5	6	1.8	8	1.9	61	3.0
Tractor	1	0.2	1	0.1	0	0.0	3	0.9	0	0.0	5	0.2
Ox/donkey	0	0.0	4	0.6	1	0.5	2	0.6	9	2.2	16	0.8
Track	1	0.2	0	0.0	1	0.5	0	0.0	1	0.2	3	0.1
Wheelbarrow	5	1.2	1	0.1	4	2.1	5	1.5	5	1.2	20	1.0
Sewing machine	2	0.5	2	0.3	0	0.0	0	0.0	1	0.2	5	0.2
Others	1	0.2	10	1.5	0	0.0	2	0.6	2	0.5	15	0.7
Total	402	100.0	669	100.0	192	100.0	327	100.0	415	100.0	2005	100.0

### 5.2.5. Energy source for the household

Table 8 shows the main sources of cooking energy in the project area where wood fuel (71.6%; followed by charcoal (28.2%). The other sources like kerosene, gas etc. was insignificant. Table 11 presents the finding.

**Table 11: Which is the main form of cooking energy used in the household?**

Productive assets	Nasir		Ulang		Baliet		Melut		Renk		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Wood fuel/straws	129	84.9	203	79.0	42	73.7	88	74.6	61	41.8	523	71.6
Charcoal	23	15.1	53	20.6	15	26.3	30	25.4	85	58.2	206	28.2
Other (specify)	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	0.1
Total	152	100.0	257	100.0	57	100.0	118	100.0	146	100.0	730	100.0

## 5.3. Food Security

### 5.3.1 Sources of food for the households

The baseline investigated the different sources of food for the households during the last 30 days preceding the survey. It was evident that own crop production was the major source of food for majority (26.6%) of the households, followed by fishing (19.2%) and own livestock production (14.4%). To exemplify the food

<sup>26</sup> Assets Matter to Poor People, Sai Krishna Kumaraswamy, Max Mattern, and Emilio Hernandez, 2020

insecurity situation; 10.8% of the households relied on food assistance; 7.2% relied on wild foods (plants and fruits), while 7.8% relied on market purchase (Table 12).

**Table 12: What have been the sources of food for your household in the last 30 days?**

Sources of food	Nasir		Ulang		Baliet		Melut		Renk		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Own crop production	101	28.5	125	28.9	20	11.4	46	24.7	59	21.4	351	26.6
Own livestock production	90	25.4	60	13.9	11	6.3	17	9.1	12	4.3	190	14.4
Labor (paid in food)	4	1.1	13	3.0	22	12.5	5	2.7	22	8.0	66	5.0
Fishing	83	23.4	67	15.5	35	19.9	40	21.5	28	10.1	253	19.2
Wild foods (plants, fruits)	21	5.9	41	9.5	12	6.8	3	1.6	18	6.5	95	7.2
Hunting (wild animals)	21	5.9	7	1.6	7	4.0	2	1.1	11	4.0	48	3.6
Gifts, kinship support	13	3.7	5	1.2	3	1.7	3	1.6	3	1.1	27	2.0
Food assistance/aid	7	2.0	32	7.4	31	17.6	44	23.7	28	10.1	142	10.8
Seed stocks	0	0.0	4	0.9	8	4.5	4	2.2	11	4.0	27	2.0
Borrow/taken on credit	1	0.3	31	7.2	3	1.7	13	7.0	16	5.8	64	4.8
Bartered	0	0.0	30	6.9	4	2.3	2	1.1	21	7.6	57	4.3
Market purchase	14	3.9	15	3.5	20	11.4	7	3.8	47	17.0	103	7.8
Other (specify)	0	0.0	2	0.5	0	0.0	0	0.0	0	0.0	2	0.2
Total	355	100.0	432	100.0	176	100.0	186	100.0	276	100.0	1320	100.0

The months of March 2021, April 2021, February 2021 and January 2021 in that order were cited as the most difficult in terms of accessing food by the majority of the households in the project area (Table 13). North Eastern Cattle and Maize livelihood zone 10 is located in Upper Nile State, along the Nile's eastern flood plain, covering Nasir County and extending southwards along the River Sobat and its tributaries and northwest from Nasir to Melut. In this Livelihood Zone, the harvest of maize and other crops is carried out from September to October<sup>27</sup>.

**Table 13: Starting from March last year, is there month (s) that you had a difficulty in accessing food?**

Month	Nasir		Ulang		Baliet		Melut		Renk		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
January	65	13.4	37	5.0	13	11.1	23	17.4	56	15.0	194	10.5
February	76	15.6	66	8.8	15	12.8	18	13.6	43	11.5	218	11.7
March	62	12.8	178	23.8	13	11.1	13	9.8	56	15.0	322	17.3
April	54	11.1	151	20.2	17	14.5	7	5.3	55	14.7	284	15.3
May	34	7.0	82	11.0	10	8.5	2	1.5	28	7.5	156	8.4
June	33	6.8	86	11.5	8	6.8	11	8.3	21	5.6	159	8.6
July	21	4.3	54	7.2	11	9.4	9	6.8	13	3.5	108	5.8
August	12	2.5	18	2.4	6	5.1	22	16.7	21	5.6	79	4.3
September	31	6.4	18	2.4	7	6.0	14	10.6	22	5.9	92	5.0
October	45	9.3	29	3.9	9	7.7	11	8.3	23	6.1	117	6.3
November	33	6.8	16	2.1	5	4.3	1	0.8	19	5.1	74	4.0
December	20	4.1	12	1.6	3	2.6	1	0.8	17	4.5	53	2.9
	486	100.0	747	100.0	117	100.0	132	100.0	374	100.0	1856	100.0

**Box 1: - Key Informant – Melut County Agriculture department**

The months of February, March, April and a bit of January are the most difficult since the harvest of maize, sorghum and other crops is carried out from September to October in this area. So by January they still have a little stock left, but from February food now become scarce.

Crop failure (55.3%) and low off-farm income (23%) were cited as the main reasons for difficulty in meeting

Main reason for difficulty	County											
	Nasir		Ulang		Baliet		Melut		Renk		Total	
Crop failure	66	43.4	175	68.1	46	80.7	65	55.1	52	35.6	404	55.3
Sale of farm produce after harvest	24	15.8	7	2.7	3	5.3	11	9.3	11	7.5	56	7.7
Low off-farm income	22	14.5	44	17.1	5	8.8	34	28.8	63	43.2	168	23.2
Insecurity/conflict	17	11.2	28	10.9	1	1.8	3	2.5	0	0.0	49	6.6
Outbreak of livestock parasites & diseases	4	2.6	0	0.0	1	1.8	2	1.7	18	12.3	25	3.3
Outbreak of livestock parasites & diseases	19	12.5	2	0.8	0	0.0	0	0.0	2	1.4	23	3.3
Others, specify	0	0.0	1	0.4	1	1.8	3	2.5	0	0.0	5	0.7
<b>Total</b>	<b>152</b>	<b>100.0</b>	<b>257</b>	<b>100.0</b>	<b>57</b>	<b>100.0</b>	<b>118</b>	<b>100.0</b>	<b>146</b>	<b>100.0</b>	<b>730</b>	<b>100.0</b>

the household food needs in the project area. Other minor reasons were sale of farm produce immediately after harvest to meet other household needs (7.7%), and insecurity due to conflict (Table 14).

**Table 14: Main reason for difficulty in meeting household food needs**

This finding was corroborated during focus group discussions with lead farmers in the project area which revealed that the main reasons for food insufficiency at the household level were; crop failures, lack of seeds for planting, late rainfall, floods, high food prices in the markets and the general economic crisis in the country. According to Lead Farmers in Melut County, some of the difficulties household face in meeting their food needs include shortage of relief food in IDP camps, coupled with late distribution of food rations, damage to crops in the fields by floods, birds eating mature crop seeds in the fields, while rats eat ing stored crops.

**Box 2: - Key Informant – FS&L Officer at the County Agriculture in Renk County**

The main challenges in agricultural based livelihood that impact on household food availability and access include lack of rains, lack of farming tools, lack of crops and vegetable seeds for planting, cattle rustling, floods, population displacement due to conflict and inter-communal violence and crop pests and diseases.

**5.4. Purpose 1: Strengthened household livelihoods, agricultural productivity, and nutrition.**

**5.4.1. Indicator E2: Percentage of targeted households with poor, borderline, and acceptable Food Consumption Score (FCS)**

The Food Consumption Score (FCS) is a composite score based on dietary diversity, food frequency, and the relative nutritional importance of different food groups. It is a proxy indicator for food intake. A questionnaire is used to ask respondents about the frequency of their households' consumption of nine food groups over the previous seven days. To calculate the FCS, the consumption frequencies are summed and multiplied by the standardized food group weighted. Households are then classified into three groups based on their weighted scores--poor, borderline, or acceptable—using the World Food Program's [1] recommended cutoff points (or approved, country-specific cutoff points).

The food consumption score is a proxy indicator of household caloric availability. A brief questionnaire was used to ask respondents about the frequency of their household's consumption of nine different food groups over the previous seven days. To calculate the FCS from these results, the consumption frequencies are summed and multiplied by the standardized food group weight (see the food groups and corresponding weights below). Households were then further classified as having "poor," Poor "borderline," or "acceptable" (> 43) food consumption by applying the WFP's recommended cut-offs to the food consumption score.

Findings from the survey (Table 15) show that 59.2% of the households surveyed have a poor FCS (0-28), 17.4% at the borderline of the FCS (28.1-42) and 23.4% within the acceptable range (above 43). Nasir County had the highest proportion of those with poor FCS at 80.3%, followed by Melut (66.9%); Ulang (58%); Baliet (47.4%) and Renk (28.5%) in that order. Mean FCS is (SD=) range 0-99.

**Table 15: Food Consumption score by category**

		FCS Category			p-value	Median	Mean	SD
		Poor	Borderline	Acceptable				
Caregiver sex	Male	170 (66.1)	42 (16.3)	45 (17.5)	<0.0001			
	Female	250 (52.3)	88 (18.4)	140 (29.3)				
Caregiver Age category	17-50 years	379 (57.2)	115 (17.3)	169 (25.5)	0.834			
	Above 50 years	41 (53.9)	15 (19.7)	20 (26.3)				
Gendered Household	Male & Female	291 (54.9)	94 (17.7)	145 (27.4)	0.228	18.0	22.3	20.1
	Female No Male	106 (62.7)	28 (16.6)	35 (20.7)				
	Male No Female	22 (64.7)	8 (23.5)	4 (11.8)				
	Child No Adult	1 (50.0)	0 (0.0)	1 (50.0)				
County	Nasir	122 (80.3)	18 (11.8)	12 (7.9)	<0.0001			
	Ulang	149 (58.0)	41 (16.0)	67 (26.0)				
	Baliet	27 (47.4)	9 (15.8)	21 (36.8)				
	Melut	79 (66.9)	9 (7.6)	30 (25.4)				
	Renk	43 (28.5)	53 (35.1)	55 (36.4)				
Level of education	Incomplete Primary	53 (35.3)	38 (25.3)	59 (39.4)	0.002			
	Completed Primary	41 (56.2)	9 (12.3)	23 (31.5)				
	Incomplete Secondary	18 (62.1)	2 (6.9)	9 (31.0)				
	Completed Secondary	37 (57.8)	10 (15.6)	17 (26.6)				
	Incomplete University	13 (81.2)	1 (6.3)	2 (12.5)				
	Completed University	17 (65.4)	2 (7.7)	7 (26.9)				

	Vocational Training	3 (75.0)	0 (0.0)	1 (25.0)				
<b>TOTAL</b>						<b>17.0</b>	<b>21.73</b>	<b>19.86</b>

Further analysis showed a significant difference in FCS between Counties (Chi square <0.0001 at 95% CI); Sex of caregiver (Chi square <0.0001 at 95% CI) and education level of the caregiver (Chi square 0.002 at 95% CI).

#### 5.4.2. Indicator E4: Prevalence of households with moderate or severe Household Hunger Score (HHS) Household Hunger Scale (HHS).

The HHS is a food deprivation scale which estimates the percent of households affected by three different severities of household hunger. The HHS, derived directly from the HFIAS, includes only three hunger-related aspects of insecure food access, as these items were shown to be culturally invariant across multiple sociocultural contexts<sup>28</sup>, allowing for cross-county comparisons. HHS is different from the other household food insecurity indicators as it assesses only the most severe experiences of food insecurity. Each of the six questions is scored 0-2, with 0 being "did not occur," 1 being "rarely and sometimes," and 2 being "often.;" HHs categorized as "little to no hunger in the household" (0-1), "moderate hunger in the household" (2-3), or "severe hunger in the household" (4-6).

From the survey findings, the majority (82.7%) of households experience moderate hunger, while 17.3% experience little or no hunger. Ulang and Nasir Counties recorded the highest number of households with moderate hunger at 95.7% and 94.7% respectively. The study established a statistically significant difference in HHS between Counties (Chi square 0.001 at 95% CI). Table 16 presents the findings.

**Table 16: Household hunger scale**

		HHS Category			p-value	Median	Mean	SD
		Little to no hunger in the household	Moderate hunger in the household	Severe hunger in the household				
Caregiver sex	Male	41 (16.0)	216 (84.0)	0 (0.0)	0.067			
	Female	56 (11.7)	422 (88.3)	0 (0.0)				
Caregiver Age category	17-50 years	85 (12.8)	578 (87.2)	0 (0.0)	<0.001			
	Above 50 years	12 (15.8)	60 (78.9)	4 (5.3)				
Gendered Household	Male & Female	63 (11.9)	467 (88.1)	0 (0.0)	0.139	5	4.7	1.78
	Female No Male	26 (15.4)	143 (84.6)	0 (0.0)		5	4.56	2
	Male No Female	7 (20.6)	27 (79.4)	0 (0.0)		5	3.94	2.2
	Child No Adult	1 (50.0)	1 (50.0)	0 (0.0)		4	4	2.8
County	Nasir	8 (5.3)	144 (94.7)	0 (0.0)	<0.001			
	Ulang	11 (4.3)	246 (95.7)	0 (0.0)				
	Baliet	15 (26.3)	42 (73.7)	0 (0.0)				
	Melut	49 (41.5)	69 (58.5)	0 (0.0)				
	Renk	14 (9.3)	137 (90.7)	0 (0.0)				
Level of education	Incomplete Primary	11 (7.3)	139 (92.7)	0 (0.0)				
	Completed Primary	11 (15.1)	62 (84.9)	0 (0.0)				
	Incomplete Secondary	6 (20.7)	23 (79.3)	0 (0.0)				
	Completed Secondary	7 (10.9)	57 (89.1)	0 (0.0)				

<sup>28</sup> Deitchler et al., 2010

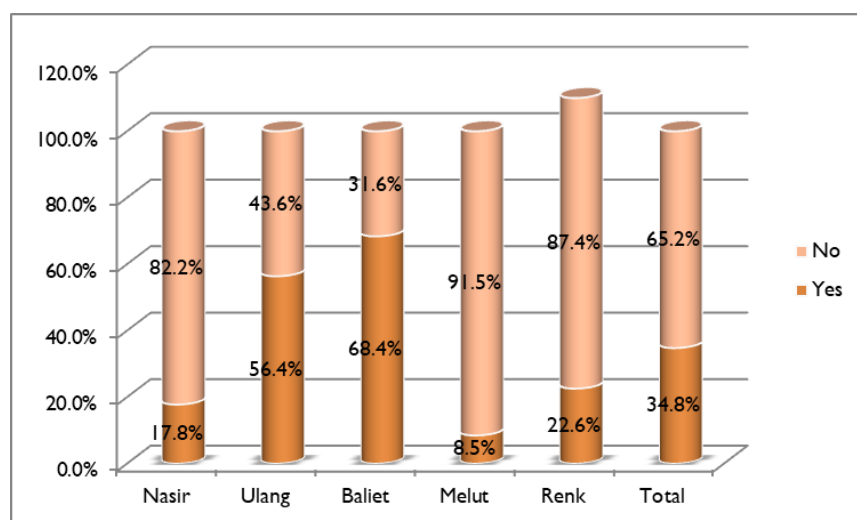
	Incomplete University	3 (18.8)	13 (81.2)	0 (0.0)				
	Completed University	5 (19.2)	21 (80.8)	0 (0.0)				
	Vocational Training	0 (0.0)	4 (100.0)	0 (0.0)				
<b>TOTAL</b>						<b>5.0</b>	<b>4.62</b>	<b>1.87</b>

The findings of KII with FSL Officer in County Department of Agriculture in Nasir County indicate that the main reasons for food insecurity are price fluctuations in the market, lack of money to buy enough food on the market, lack of income earning opportunities, intermittent population displacement, flooding and crop pests and diseases, and communal fighting and conflict. In addition, he mentioned the lack of farming tools, the lack of animal drugs, lack of crops and vegetable seeds, lack of fishing equipment, lack of fish preservation equipment and supplies and no access to pesticides and insecticides to control crop pests. All of the above factors in one way or another have negatively impacted on people access to adequate food for their households.

On food production and food insecurity in Ulang County, the findings of KII with a FSL Officer at UNKEA Field Office, indicate the constraints to agriculture and livestock production include pests and diseases destroying crops in the absence of proper plant protection management practices, not enough fishing gears and insecurity in the fishing grounds, lost fishing equipment due to constant population displacement, inadequate veterinary service as limited services are provided by VSF-Germany due to funding issues and no government veterinary services available and high livestock morbidity and mortality due to pests and disease.

### 5.5. Outcome 1.1: Improved household food production and storage.

This indicator is targeted to reach 11,831 HHs and shall be achieved by facilitating women and men farmers' access to certified seeds, training on improved farming methods, in coordination with FAO<sup>29</sup>. From the findings, the main crops grown in the project area include; sorghum, maize, beans and vegetables (pumpkins, okra, tomatoes, eggplants, amaranthus etc). According to the lead farmers the main challenges of crop production in 2020 were crop failures, insects destroying crops, floods and inter-communal conflict and violence. About a total of 34.8% of the households grew crops in the 2020 agricultural cropping season (Figure 5).



<sup>29</sup> WVSS FY20-MYE- Technical Proposal

### Figure 5: Did you grow crop in your farm last season?

On the question of access to agricultural land, the findings from 2 FGD with 9 lead male farmers in Nasir County and 8 lead female farmers in Ulang County revealed that people had access to land for cultivation and community members engaged in crop production in 2020.

On the types of livestock reared in the area, the 2 FGDs with 8 males Lead farmers and 6 females lead farmers in Baliet revealed that people rear cattle, sheep, goats and chickens. According to the participants to the FGD, the main constraints to livestock production include floods, pests and diseases, cattle raiding, limited availability of pasture during the dry season and inadequate veterinary services.

The main fishing resources for the majority of the population in the Counties are the Nile and Sobat rivers and swamps. Both men and women reportedly engage in fishing activities and according to the findings of the fishery sector is most often a secondary source of livelihood, undertaken by mainly the youth the populations along the Sobat and Nile rivers corridors as a buffer against the effects of harvest failures, agricultural product price volatility, violent conflict and other factors that threaten rural stability, economic development and food security. However, through the up-scaling of fishery practices from artisanal to commercial-orientated there is considerable potential for the fishery sector in Upper Nile State to play a greater role in the economic development and food security situation of the state and the entire country.

#### **Box 3: - Key Informant – FS&L Officer County Agriculture & Fisheries in Melut County**

Main challenges to the Upper Nile State Fishery Sector: Weak institutional capacity in terms of human resources, logistics and coordination; Inadequate information on the fishery sector, including number of fisherfolk and fish; Limited organization of fisherfolk at the community level; Limited harvest capacity due to basic fishing gears and techniques; Limited ability to transport fish products, due to a lack of motorized river transport and no road access during the rainy season; High fish post-harvest losses resulting from improper handling throughout the fishery chain; Absence of fishery infrastructure such as market stalls, storage facilities, collection points and landing sites; and Fishing season that limits the amount of fish harvested for approximately six months per year.

This was corroborated during FGD discussions with lead farmers in 3 Counties along the Sobat corridor who mentioned some of constraints to fishing among the youth and women as; lack of fishing nets, long walking distances to fishing grounds, over-fishing in the rivers and inter-communal conflict.

#### **5.5.1. BL21: Percentage of producers who have applied targeted improved agricultural management practices or technologies.**

Under this indicator the baseline study investigated whether farmers employed improved management practices or technologies in crop and livestock production. Improved agricultural management practices and technology include; crop genetics, cultural practices, livestock management, wild-caught fisheries management, aquaculture management, natural resource or ecosystem management and pest and disease management. Others are soil-related fertility and conservation, irrigation, agriculture water management-non-irrigation based, climate mitigation and climate adaptation/climate risk management<sup>30</sup>.

The survey findings reveal that 26.8% of the households have applied improved agricultural management practices or technologies as shown in Table 17 below.

**Table 17: Producers who applied improved management practices or technologies**

Category	Frequency	Percent
Male & Female	134	25.5

<sup>30</sup> USAID FFP Indicator List



Gendered Household	Female No Male	58	34.3
	Male No Female	4	11.8
	Child No Adult	0	0
	Total	196	26.8
County	Nasir	30	19.7
	Ulang	112	43.6
	Baliet	34	59.6
	Melut	12	10.2
	Renk	8	5.5
	Total	196	26.8

During FGDs with 8 Lead farmers (5 males and 3 females) in Renk County it was revealed that some farmers have been supported by FAO to implement Smart Agricultural practices on maize and vegetable production. These included the use of certified maize seeds provided by NGOs and the line planting of the crop. Similarly, a few farmers reportedly use animal manure to fertilizer their vegetable gardens.

According to the responses of Lead farmers during FGD in Melut County the main challenges of crop production include destruction of crops by domestic animals (goats, sheep and cattle), insects and crop pests and diseases, poor cultural practices, limited access to seeds and tools and inundation of crop fields by flood waters, inter-communal conflict and unreliable rainfall.

### 5.5.2. Indicator M9: Number of hectares under improved management practices or technology.

A total of 1,411 hectares was under improved management practices or technologies, with maize being recording the highest number of hectares under improved management (460 Ha), followed by Sorghum (334 Ha), Sesame (163 Ha), Lentils (193 Ha) and Cowpeas (163 Ha). On disaggregation by County; Ulang registered the highest number of hectares (762 Ha) under improved management practices, followed by Baliet (336 Ha), Nasir (159Ha) and Renk (132 Ha). Melut County recorded the lowest number of hectares under improved management practices possibly due to the high number of IDPs respondents participating in the study (Table 18).

**Table 18:- Area under improved management practices or technologies**

Crop	Area in Hectares					
	Nasir	Ulang	Baliet	Melut	Renk	Total
Maize	134	164	142	14	6	460
Sorghum	7	190	119	2	16	334
Sesame	6	195	38	2	20	261
Cowpeas	5	120	18	2	18	163
Lentils	7	93	19	2	72	193
<b>Total</b>	<b>159</b>	<b>762</b>	<b>336</b>	<b>22</b>	<b>132</b>	<b>1,411</b>

### 5.6. Outcome 1.2: Increased household income & economic empowerment of vulnerable groups

Under this indicator the project is targeting 1,500 HHs and is focusing on improving vulnerable women, men and youth capacity to save money, engage in borrowing, develop business skills, and participate in markets for on farm/off-farm products. The project is targeting poor HHs for financial success and sustainability using the WV Savings for Transformation (S4T).

### **5.6.1. Indicator BL31: Percent of households participating in group based savings, micro-finance or lending programs**

When asked on whether they save cash, about 32.1% (235) of households admitted doing so and the three main venues for saving of their cash were Rotating Credit Schemes (23.4%), Banks (17.0%) and Cooperatives (11.9%) as shown. With regards to credit facilities, 25.0% mentioned that they have access to credits and about 87.5% of those indicated that a member of their household borrowed money in the last 12 months. On the source of credit, Local lenders and Traders/shop keepers accounted for about 40.8% and 32.1% of the sources of the borrowed money respectively. Some of the banks operating in the project area include; Nile Commercial Bank (NCB) with branches in Renk and Malakal; Cooperative Bank of South Sudan (Malakal); Ivory bank (Renk & Malakal) and KCB Bank (Malakal).

During FGD with community members across the 5 counties, the participants mentioned that there is no functional community-based Village Loans and Savings Associations and some confessed that they have never heard of VSLA. Similarly 8 participants (4 males and 4 females) to the FGD in Jikmir, Nasir County said that they were familiar with is the Rotating saving schemes which are mostly operated by women. On the challenges of establishing and running the community-based VSLA, the participants indicated that because of the current depressed socio-economic conditions occasioned by hyper-inflation, people do not have money to establish and run VSLA and furthermore there is no money to support the VSLA box. In addition they indicated that they have no idea of how to establish VSLA and also acknowledged that they lacked technical skills on VSLA.

When asked on their access to credit, the participants to the FGD in Renk County said they have no access to credit and this is because according to them, people in the Payams are all poor and therefore, they do not have money to lend to others. In Melut County, the community members mentioned that they have limited access to credits and the main sources of credits are traders/shop keepers, relatives and friends. However, most traders are not unwilling to provide loans to clients for fear of defaulting in payments.

### **5.6.2. Indicator BL32: Percent of women and men in a union who earned cash in the past 12 months; disaggregated by sex and age.**

When asked on whether women and men in a union earned cash in the past 12 months, only about 34.2% with Ulang County recording the majority (52.1%) of those who earned cash, followed by Baliet (40.4%) and Renk (37%). Melut and Nasir recorded the lowest number of those who earned cash at 16.9% and 12.5% respectively. Figure 6 presents the findings.

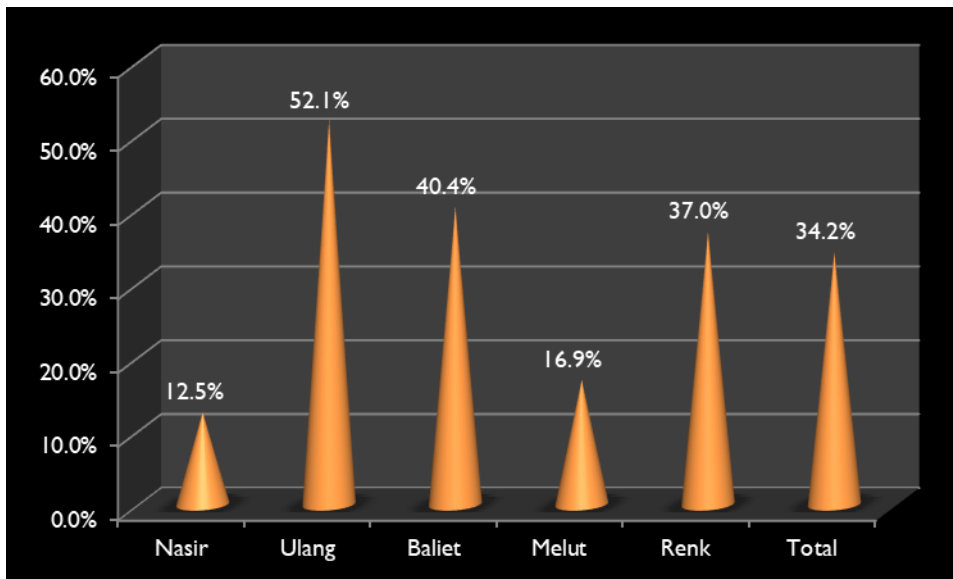


Figure 6: Percent of men and women in union who earned cash in the past 12 months

### 5.7. Outcome 1.3: Strengthened nutrition and IYCF interventions and integrated WASH services

Under this indicator the project is 151,188 individuals through provision of nutrition-sensitive interventions that is complementing the Community Based Management of Acute Nutrition (CMAM) projects supported by GAC, UNICEF and WFP, which are targeting Cu5, PLW and other vulnerable populations. M2Ms are also being supported by Community Health Workers (CHWs) in the target locations, who serve as an important referral link to the local health system for cases of acute malnutrition. In addition the project seeks to improve access to clean and safe water, dignified sanitation, and promote healthy hygiene practices by installing 2 SWAT (Surface Water Treatment) systems in the communities from the Sobat river for communities living in Nasir and another one from an earth dam that will be constructed for the communities that are living in Khor Adar far away from the River Nile<sup>31</sup>. On sanitation, the project has planned to build a total of 45 emergency latrines will be built for eligible most vulnerable people, specifically those living with disability, those who have never owned a latrine and households with above average.

#### 5.7.1. BL12: Prevalence of children 6-36 months consuming a diet of minimum diversity.

The minimum dietary diversity (MDD) score for children 6-23 months old is a population-level indicator designed by the World Health Organization (WHO) to assess diet diversity as part of infant and young child feeding (IYCF) practices among children 6-23 months old. This indicator is one of eight IYCF indicators developed by the WHO to provide simple, valid, and reliable metrics for assessing IYCF practices at the population level<sup>32</sup>.

Note that the WHO 2010 document describes 7 food groups. however based on a June 2017 expert consultation these have been updated to reflect the inclusion of breast milk as an 8<sup>th</sup> food group. Therefore the criterion for MDD changed from 4 of 7 groups to 5 of 8 groups<sup>33</sup>. So MDD is the % of children 6-23 months of age who received foods from  $\geq 5$  food groups the previous day or night. The indicator is

<sup>31</sup> WVSS FY20\_MYE Technical Proposal August 31, 2020

<sup>32</sup> WHO, 2008

<sup>33</sup> WHO/UNICEF 2017

calculated by dividing the number of children whose diet consisted of at least 5 food groups by the total number of surveyed children. Multiply the result by 100 to convert it to percentages.

In this study, the overall children (6-36 months) with minimum dietary diversity score were found to be 36%. disaggregated by gendered household type as follows: M&F (73.6%). FNM (20.2%). MNF (5.8%) and CNA (0.4%). In South Sudan only 15 per cent of children 6-23 months received minimum dietary diversity and 5 per cent receive the minimum acceptable diet.

### 5.7.2. BLI3: Prevalence of exclusive breastfeeding of children under six months; disaggregated by sex.

Exclusive breastfeeding refers to the percentage of infants of less than 6 months of age who received only breast milk with no other solids or liquids, including water during the previous day and night. Exclusive breastfeeding for the first 6 months of a baby's life is one of the most effective measures for ensuring a child's health and survival. The indicator measures the proportion of children following this recommended practice. This indicator value is calculated by dividing the number of children aged 0-59 months who were exclusively breastfed by the total number of children aged 0-5.99 months (excluding those where "does not know" answer was provided) and multiplying the result by 100.

From the survey 16.3% (male-49.9%; female- 50.1%) of the children 0-5.99 months were exclusively breastfed (M&F- 75.2%; FNM-22.6%; MNF-2.2% and CAN-0.0%). According to UNICEF exclusive breastfeeding rate in South Sudan stands at 69%, nearly one third of them under six months old are not exclusively breastfed<sup>34</sup>. Ulang County had the highest number of those practicing EB at 49% while Melut had the lowest (8.9%). Figure 7 presents the findings.

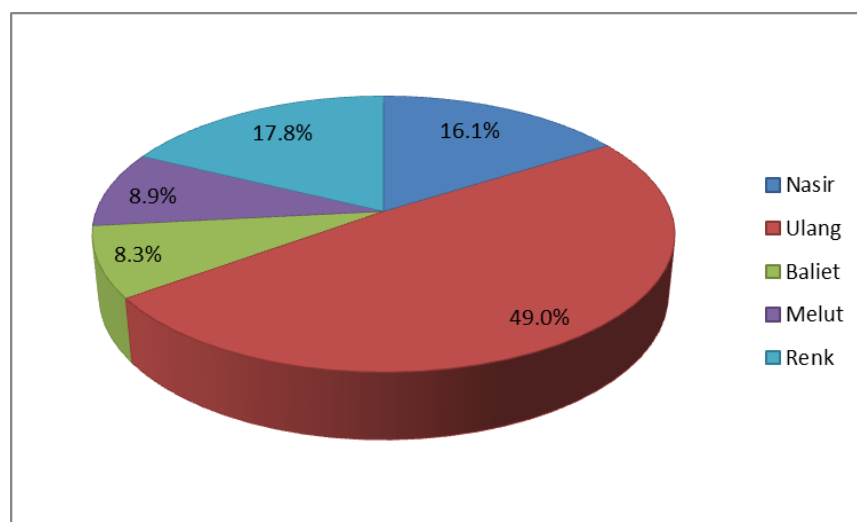


Figure 7: Prevalence of exclusive breastfeeding

FGD with PLW across the 5 counties revealed that many women do not exclusively breastfeed their children but instead supplement with cereals since they believe breast milk alone cannot satisfy a child. Key informant interview with Nutrition focal point in Renk revealed that complementary feeding is provided to children from 6-8 months, however, the diets provided are not nutritionally diverse, heavy reliance on fish and very limited vegetables and fruits consumed.

<sup>34</sup> UNICEF, August 2020.

### 5.7.3. BL27: Percent of households with access to a basic sanitation service.

Sanitation is fundamental to human development. Many international organizations use hygienic sanitation facilities as a measure for progress in the fight against poverty, disease, and death. Access to proper sanitation is also considered to be a human right, not a privilege, for every man, woman, and child. Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and feces. Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on people's health. Improvements in sanitation can reduce diarrheal disease, and can significantly lessen the adverse health impacts of other disorders responsible for death and disease among millions of children.

Diarrhea and worm infections weaken children and make them more susceptible to malnutrition and opportunistic infections like pneumonia, measles and malaria. Basic sanitation services are calculated by multiplying the proportion of the population using improved sanitation facilities by the proportion of improved sanitation facilities which are not shared among two or more households. An improved sanitation facility is one that hygienically separates human excreta from human include e.g. VIP latrines, pit latrine with slab or composting toilets and the rest are considered as unimproved.

From the survey findings only about 12.7% of the households use improved sanitation facilities compared to the South Sudan national average of 17%. About 49.6% of the sanitation facilities were being shared by other households. Table 20 presents the findings.

**Table 19: Types of sanitation facilities**

Type of sanitation facility	Nasir	Ulang	Baliet	Melut	Renk	Total
1 = Flush to piped sewer system	10.5%	19.5%	24.6%	49.2%	26.7%	24.2%
2 = Flush to septic tank	5.3%	2.7%	17.5%	11.0%	13.7%	7.9%
3 = Flush to pit latrines	30.3%	16.7%	14.0%	7.6%	6.8%	15.9%
4 = Ventilated improved pit latrine	3.9%	1.6%	5.3%	16.9%	0.0%	4.5%
5 = Pit latrine with slab	14.5%	10.9%	24.6%	7.6%	6.2%	11.2%
6 = Composting toilet	3.3%	.8%	12.3%	0.0%	4.1%	2.7%
7 = Flush to somewhere else / don't know	9.2%	1.2%	5.3%	.8%	26.7%	8.2%
8 = Pit latrine with no slab/open pit	19.1%	3.9%	19.3%	1.7%	8.2%	8.8%
9 = Bucket toilet	19.1%	0.0%	12.3%	.8%	11.6%	7.4%
10 = Hanging toilet/latrine	7.9%	1.2%	3.5%	1.7%	2.7%	3.2%
11 = No Facility/bush/field	52.0%	42.4%	21.1%	19.5%	22.6%	35.1%
12 = Other (Specify)	0.0%	.4%	7.0%	.8%	1.4%	1.1%
13-Don't know	0.0%	4.3%	5.3%	3.4%	1.4%	2.7%

From KIIs with a representative of the County Department of Health UNKEA health facility officer in Nasir County, it was revealed that most people defecate in the open/bushes.

### 5.7.4. BL16: Percent of households using basic drinking water services

SDG target 6.1 calls for achieving universal and equitable access to safe and affordable drinking water for all. The indicator used to measure progress is the percentage of the population using safely managed drinking water services, which is defined as the population using an improved drinking water source (the indicator used for MDG monitoring) which is located on premises, available when needed, and free of fecal and priority chemical contamination. In order to meet the criteria for a safely managed drinking water service, people must use an improved source meeting three criteria:

- it should be accessible on premises,
- water should be available when needed, and
- the water supplied should be free from contamination.

If the improved source does not meet any one of these criteria but a round trip to collect water takes 30 minutes or less, then it will be classified as a basic drinking water service. If water collection from an improved source exceeds 30 minutes it is categorized as a limited service. The JMP also differentiates populations using unimproved sources such as unprotected wells or springs, and populations drinking surface water collected directly from a river, dam, lake, stream or irrigation canal.

From the survey, only 5.7% of the households had access to basic drinking water services compared to 50% national average. About 30-50 percent of water facilities are non-functional at any point in time<sup>35</sup>. Disaggregated by county the results show that Ulang had the highest access at 36.7%; Renk-24.5%, Melut-17.5%, Baliet-10.8% and Nasir-10.5%. Table 21 below presents the sources of water (both improved and unimproved) for the households in the project area with public tap being the main sources for majority of the households at 39.9% and river/stream at 31.9%. Other minor sources include; piped water into dwelling (7.8%) while the rest were insignificant. This finding was corroborated by the Key informant interviews which revealed that most of the water systems are provided by humanitarian agencies, hence the reason for the high number of households using public tap.

**Table 20: Sources of water for the households in the project area**

Water source	Nasir	Ulang	Baliet	Melut	Renk	Total
Piped into dwelling	1.3%	16.3%	0.0%	5.9%	4.1%	7.8%
Piped into yard/plot	11.8%	.4%	0.0%	0.0%	11.6%	4.9%
Public tap	13.2%	35.0%	66.7%	61.9%	47.9%	39.9%
Protected well in dwelling	0.0%	.4%	0.0%	.8%	4.1%	1.1%
Protected well in yard/plot	.7%	.4%	1.8%	0.0%	.7%	.5%
Protected spring	0.0%	0.0%	3.5%	0.0%	0.0%	.3%
Protected public well	0.0%	0.0%	0.0%	0.0%	.7%	.1%
Tubewell/borehole	3.3%	8.6%	0.0%	.8%	0.0%	3.8%
Open well in dwelling	0.0%	.4%	1.8%	0.0%	5.5%	1.4%
Open well in yard/plot	0.0%	0.0%	7.0%	0.0%	0.0%	.5%
Open public well	0.0%	.4%	0.0%	0.0%	9.6%	2.1%
Protected spring (closed)	0.0%	0.0%	7.0%	0.0%	0.0%	.5%
Unprotected spring (open Spring	0.0%	0.0%	1.8%	0.0%	0.0%	.1%
River/stream	64.5%	33.1%	10.5%	27.1%	8.2%	31.9%
Pond/lake	0.0%	4.3%	0.0%	3.4%	2.7%	2.6%
Dam	0.0%	.4%	0.0%	0.0%	2.1%	.5%
Rainwater harvesting	5.3%	.4%	0.0%	0.0%	2.7%	1.8%

**Box 4: - Key Informant – Nasir County Water & Sanitation department**

According to KII with a representative of County Water and Sanitation Department, the main sources of water in Nasir County are rivers and boreholes. There are 3 boreholes for about 25,000 users in the whole of Kuerenge-Ke Payam in Nasir County, water available from boreholes is not enough for the population and therefore most of the population fetches water from the river and swamps.

<sup>35</sup> South Sudan Global Water.org

From the finding, 61.9% of the households reported that they treat their water to make it safe for drinking. The main water treatment methods ranged from adding chlorine (53.3%), boiling (26.1%) and letting it stand to settle (12.7%). The rest were insignificant. Table 22 presents the findings.

**Table 21: Water treatment methods in the project area**

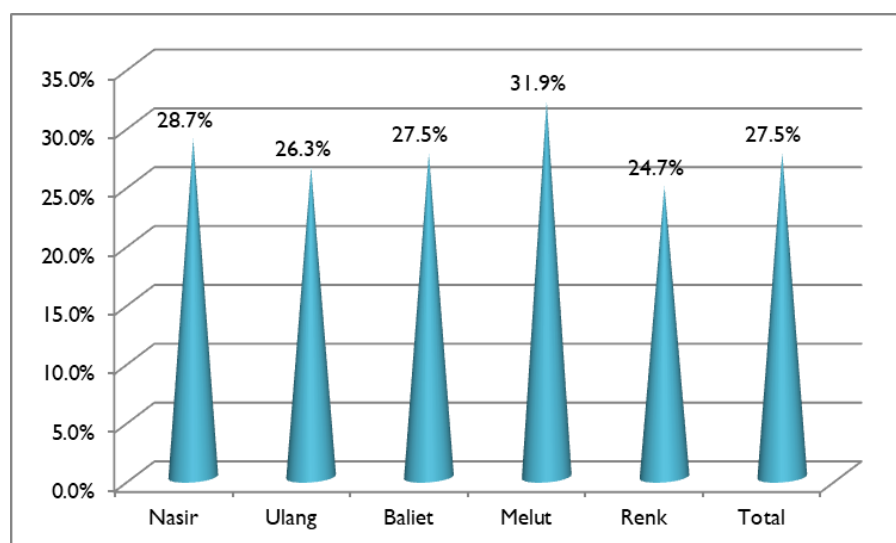
Treatment method	County					
	Nasir	Ulang	Baliet	Melut	Renk	Total
Boil	4.9%	23.4%	24.5%	26.9%	49.4%	26.1%
Add bleach / chlorine	6.6%	64.1%	64.2%	68.7%	43.0%	53.3%
Strain it through a cloth	0.0%	4.2%	0.0%	0.0%	1.3%	2.0%
Use water filter (ceramic, sand, composite, etc.)	3.3%	7.3%	3.8%	1.5%	5.1%	5.1%
Solar disinfection	1.6%	0.0%	0.0%	0.0%	0.0%	0.2%
Let it stand and settle	83.6%	1.0%	3.8%	0.0%	0.0%	12.2%
Don't know	0.0%	0.0%	3.8%	3.0%	1.3%	1.1%

According to the 9 FGD with local community leaders (4 men and 5 women) in Jikmir Payam in Nasir County, the quality of water from Sobat River is not good; it is brownish in color. On what people do to make water safe to drink, FGD with 14 local community leaders (8 males and 6 females) in Ulang County revealed that only a few households treat river water by boiling and/or using chlorine tablets provided by NGOs.

#### 5.7.5. BL17: Percent of households with soap and water at a handwashing station

Appropriate handwashing behavior refers to hand washing at critical times and appropriate methods (use running water and soap/ash). Handwashing facilities can consist of a sink with tap water, but can also include other devices that contain, transport or regulate the flow of water. Buckets with taps, tippy-taps and portable basins are all examples of handwashing facilities. Bar soap, liquid soap, powder detergent and soapy water all count as soap for monitoring purposes.

Overall 27.5% of the households surveyed had soap and water at a hand washing station, with Melut recording the highest at 31.9% and Renk the lowest at 24.7%. Figure 8 presents the findings.



**Figure 8: Percent of households with soap and water at a handwashing station**

The proportion of caregivers with appropriate hand-washing behavior stands at 56.4%. This poor performance of this indicator can largely be attributed to inadequate access to water as shown by the low number of HHs that can access improved water sources. On disaggregation by gendered HH type there was low uptake on appropriate hand-washing behavior for caregivers, within across the HHs falling below the SDG required threshold of 100% for hand washing, during critical times (SDG6.2). Table 23 presents the findings.

**Table 22: How they wash their hands by gendered HH type**

How do you wash your hands	M&F	FNM	MNF	CNA	Total
Running water with soap	49.1%	55.0%	58.8%	0.0%	50.8%
Running water with ash	5.5%	6.5%	2.9%	0.0%	5.6%
Water in a basin with ash	3.4%	5.9%	8.8%	0.0%	4.2%
Water in a basin and soap	34.5%	8.9%	17.6%	50.0%	27.8%
Water in a basin only	4.8%	15.4%	5.9%	0.0%	7.3%
Running water only	2.3%	7.1%	5.9%	50.0%	3.7%
Water with leaves	.2%	.6%	0.0%	0.0%	.3%
Other(specify)	.2%	.6%	0.0%	0.0%	.3%
Total	100%	100%	100%	100%	100%

Analysis of qualitative data from FGDs and Key informants reveal that even though literacy level is low (28.6%), some community members knew the benefits of washing hands (kills germs and prevents diseases), However others said that some people were ignorant of benefits of personal hygiene while others said that those who seek treatment from traditional herbalists are sometimes instructed not to touch water or to wash themselves for a given period of time. Illiteracy and ignorance were also blamed as some of the reasons for low uptake of appropriate hand washing. Some community members washed their hands with water only while others with water and soap/ash. ...*Because of water scarcity in this area, some people don't wash their hands as required...others think soap is only for bathing and not washing hand...so people need education to change their attitude...FGD discussant-Southern Renk*

Key informant interview with the WASH focal point at the MoH Renk County revealed that there is need for partners to support WASH CLTS program in the area.

## **5.8. Purpose 2: Strengthened community cohesion through improved disaster risk management, protection and mental health psycho-social support (MHPSS) services.**

### **5.8.1. Indicator E3: Reduced Coping Strategy Index (rCSI)**

The rCSI is a proxy indicator of household food insecurity that is based on a list of behaviors (coping strategies). The index reflects both the frequency of each behavior (i.e. how many days over the last 7 days the coping strategy was used by any member of the household) and severity (i.e. how serious the strategy). The rCSI is based on a list of five food-related coping strategies that the household used in the seven days prior to the survey.

The rCSI raw scores are calculated by multiplying the frequency with which a behavior was used by the universal severity weight, then summing the weighted scores for each coping strategy. The maximum raw score for the rCSI is 56, i.e. a household that used all five strategies every day for the last 7 days would have a raw score of 56. rCSI considers both the frequency and severity of five pre-selected coping strategies that the household used in the seven days prior to the survey. The coping strategies were weighted as follows; rely on less preferred/expensive foods=1; borrow food/rely on help from friends/relatives=2; limit portion at meal times=1; restrict consumption by adults=3; reduce number of meals=1.



The baseline survey recorded a rCSI of 40.6. On disaggregation by Gendered Household: Female and Male Adults (F&M) had 41, Adult Female no Adult Male (FNM) had 37, Adult Male no Adult Female (MNF) had 42, Child no Adults (CNA) had 43. Table 24 presents the finding.

**Table 23: Coping mechanisms adopted**

#	Coping mechanisms for food security needs	Frequency	Severity Rank	Weighted CS score
.1	Eating less preferred and less expensive food	5.6	1	5.6
.2	Borrowing food/rely on help from friends/relatives	3.6	2	7.2
.3	limit portion at meal times	6.7	1	6.7
.4	restrict consumption by adults	5.5	3	16.5
.5	reduce # of meals	4.6	1	4.6
Coping strategy score				40.6

## 5.9. Outcome 2.2: Strengthened community managed disaster risk reduction (CMDRR) systems

### 5.9.2. BL23: Ability to recover from shocks and stresses index; disaggregated by gendered household type

Understanding the impacts of shocks and stresses on individuals, households, communities and the systems they live in provides some direction on what data to collect and when. In general, we would like to understand how household and community response evolves over time, whether household or community resilience has been eroded by repeated events and whether the negative effects are compounded by multiple, intersecting shocks/stresses. These data are useful throughout the project cycle, including informing a resilience assessment for project design, targeting emergency and/or development interventions, monitoring and evaluating projects, and testing key assumptions about resilience<sup>36</sup>.

Shocks are usually (but not always) acute (rapid onset, typically short duration) events, while stresses usually (but not always) described as chronic (slow onset, typically protracted duration), which refers to the onset and duration of the event. Acute shocks and stresses occur rapidly at one point in time, whereas chronic shocks and stresses occur over relatively longer periods of time – note that this definition is limited to the event itself and not the effects, which usually persist long after the shock or stress<sup>37</sup>. Stresses could include factors such as population pressure, climate variability, chronic poverty, persistent discrimination, and protracted crises like intergroup conflict.

In this study the respondents were asked if their households had suffered any shocks or stresses such as floods, drought, fire, landslides, etc during the 6 months, preceding the survey. Shock exposure INDEX has a maximum range of 0-90 where 0 means the household experienced no shocks in the specified time period, and 90 means the household experienced all 18 shocks. The survey recorded an index of 26 meaning reduced capacity to recover from shocks. Disaggregated by gendered HH type; M&F recorded the highest ability to recover at 34 followed by FNM at 14 and MNF at 2. Child headed HH had 0 score meaning no capacity to recover. Figure 9 presets the findings.

<sup>36</sup> Measuring Shocks & Stresses, Resilience Evaluation Analysis and Learning (REAL), USAID,

<sup>37</sup> Adapted Mercy Corps' Resilience Framework presented in: Our Resilience Approach to relief, recovery and development. Mercy Corps. (2016)

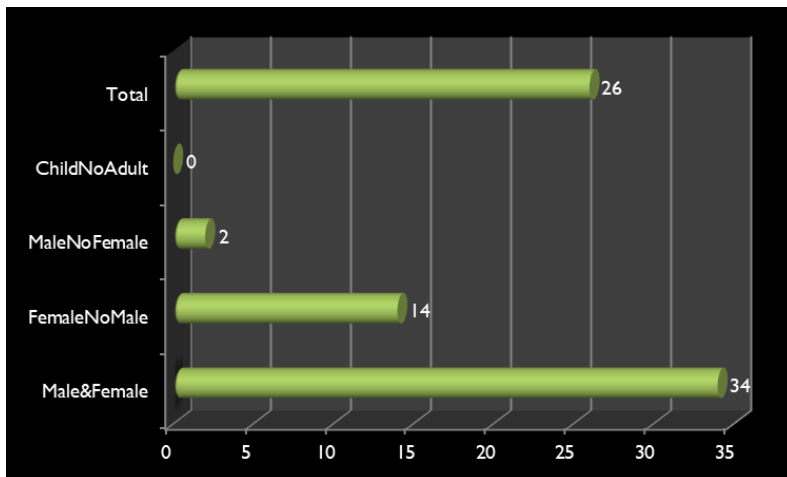


Figure 9: Ability to recover from shocks and stresses index

From FGDs with community members across the 5 counties the main shocks that affected the communities in the past six months were floods, high food prices and inter-communal violence. Currently a 50 kg bag of sorghum cost about 154 USD compared to 102 USD during the same period last year reflecting a price increase of 33%. According to them, those most affected by the shocks are returnees, IDPs, women headed households and the elderly who are living alone. Similarly Key informant interviews indicated that in the past six months, the communities suffered from floods which destroyed crops, high livestock death due to diseases and high food prices.

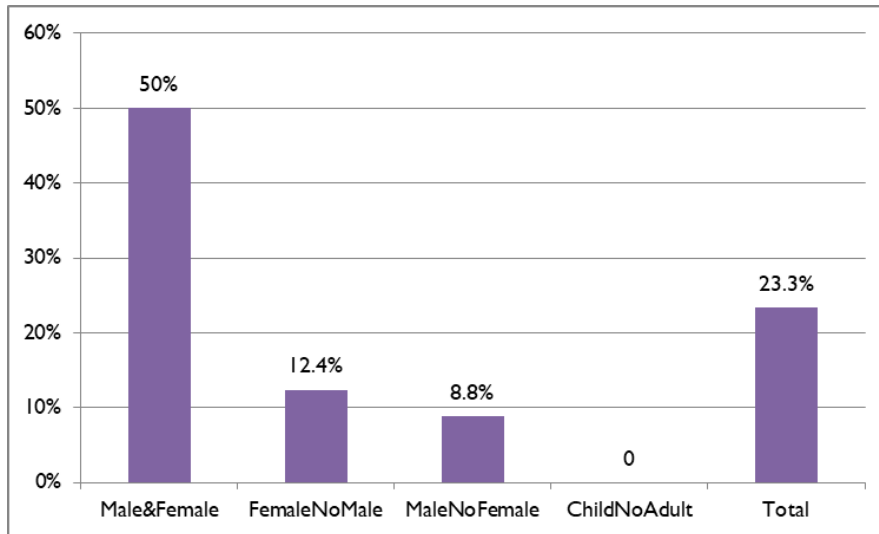
## 5.10. Outcome 2.3: Equitable leadership systems and communal structures supported

### 5.10.1. BL24: Percent of households that believe local government will respond effectively to future shocks and stresses; disaggregated by gendered household type.

When systems are affected by a shock or stress, which are themselves complex, it is difficult to anticipate the multitude of effects an event is likely to have and in many cases these are only recognized in hindsight<sup>38</sup>. Measuring resilience often relies on both objective and subjective measures. Objective measures are directly observable measurements of a shock including for example rainfall data, wind speed, seismic activity, national and community early warning system data (in some cases), food price shocks, infrastructure/assets destroyed etc. These measures tend to be standardized and are widely applicable – for example – rainfall deviation from norm is a consistently meaningful measure across all contexts.

The baseline study investigated these in the context of how the communities perceived the capacity and responsibility of the local authorities to effectively respond in the event of shocks and stresses. From the study finding (Figure 10), only 23.3% of the respondent households believe the government can effectively respond to shocks and stresses with the majority of such households being those with M&F (50%), followed by FNM (12.4%) and MNF at 8.8%. None of the child headed HH believed the government can respond effusively to shocks and stresses.

<sup>38</sup> Shimizu and Clark 2015



**Figure 10: Percent of HH that believe the local government to effectively respond in the event of shocks and stresses**

When asked on the main protection issues that affect people in the community, FGD with local community leaders indicated that the main social issues were rape on women and girls, forced early child marriages, inter-communal conflict, cattle raiding, violence and revenge killings.

### **5.11. Outcome 2.4: Improved access to community based MHPSS resources and services to strengthen community cohesion**

#### **5.11.1. M37: Percent of community members participating in collective actions; disaggregated by activity participation.**

‘Community engagement’ is the process of working collaboratively with groups of people affiliated by geographic proximity, special concern, community concern or similar situations to address the issues affecting them. It is a powerful vehicle for bringing about environmental, social and behavioural changes to improve collective well-being. It often involves partnerships and coalitions that help mobilise resources and serve as catalysts for changing policies, programs, and practices<sup>39</sup>. Community engagement matters since it increases the likelihood that projects or solutions will be supported. Citizens who participate in authentic and transparent engagement processes are more likely to make a significant commitment to help make the projects happen.

From the survey findings, 44.2% of the households were reportedly engaged in community collective actions. Even though this number is below average it is imperative for WV to note that communities are different. They have different histories, leaders, power structures, priorities, cultures and mix of citizens. Because of these differences, there is really no single model or recipe for undertaking community engagement efforts. It would be imperative for WV to strengthen its community engagement efforts in line with its core values and guiding principles.

### **5.12. Outcome 2.5: Strengthened Rapid Response (RR) capacity to save lives and alleviate human suffering during rapid onset shocks**

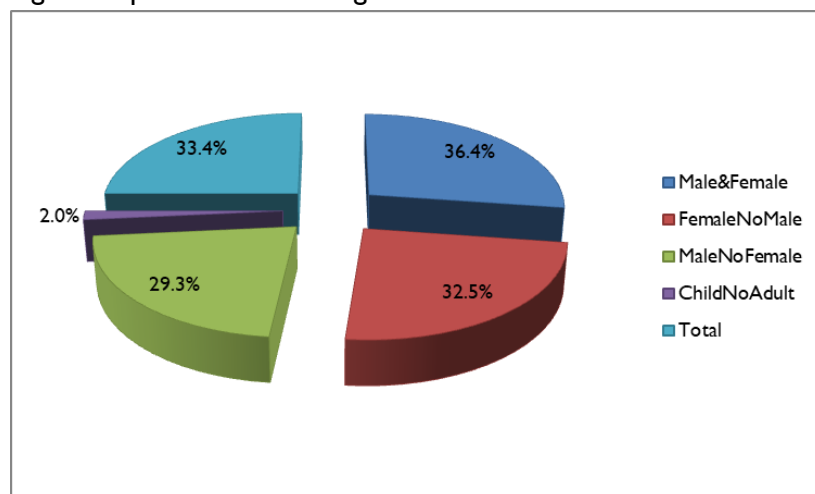
#### **5.12.1. Custom: Percentage of people reporting improved capacity to respond to and recover from sudden onset shocks**

Understanding the impacts of shocks and stresses on individuals, households, communities and the systems they live in provides some direction on what data to collect and when. In general, we would like to

<sup>39</sup> Community Engagement for collective Actions, A handbook for Practitioners, December 2017

understand how household and community response evolves over time, whether household or community resilience has been eroded by repeated events and whether the negative effects are compounded by multiple, intersecting shocks/stresses. These data are useful throughout the project cycle, including informing a resilience assessment for project design, targeting emergency and/or development interventions, monitoring and evaluating projects, and testing key assumptions about resilience<sup>40</sup>.

The baseline also sought to investigate the proportion of people who report improved capacity to respond and recover from sudden onset of shocks. From the findings, 33.4% of the HH reported improved capacity to respond and recover from sudden onset of shocks. On disaggregation by gendered HH type; M&F household recording the highest at 36.4%; followed by FNM at 32.5%, MNF at 29.3% and CNA at 2%. Figure 11 presents the finding.



**Figure 11: Percent of people who report improved capacity to respond and recover from sudden onset of shocks**

### **5.13. Purpose 3: Strengthened coordination, systems and learning to support recovery and resilience.**

#### **5.13.1. BL28: Index of social capital at the household level; disaggregated by gendered household type, and social capital component.**

Social Capital refers to the nature and extent of one’s involvement in various informal networks and formal civic organizations. From chatting with neighbors or engaging in recreational activities to joining environmental organizations and political parties, social capital in this sense is used as a conceptual term to characterize the many and varied ways in which a given community’s members interact<sup>41</sup>. Social capital helps to disseminate information, reduces opportunistic behavior, and facilitates collective decision-making. The effectiveness with which structural social capital, in the form of the associations and networks, fulfills this role depends upon many aspects of these groups, reflecting their structure, their membership, and the way they function.

At the level of households, the density of membership is measured by the average number of memberships of each household in existing organizations (this can be normalized by household size). The SC-IQ data make it possible to assess the internal diversity of organizations according to nine criteria: kinship, religion, gender, age, ethnicity/linguistic group, occupation, education, political affiliation, and income level. Diversity information can be used separately or combined in an index. For example, a “diversity score” can be

<sup>40</sup> Sagara, B. (2018). Resilience Measurement Practical Guidance Note Series 2: Measuring Shocks and Stresses. Produced by Mercy Corps as part of the Resilience Evaluation, Analysis and Learning (REAL) Associate Award.

<sup>41</sup> Measuring Social Capital, World Bank Working Paper No. 18, November 2003.

calculated for each organization, ranging from 0 to 9. These scores then averaged over all or the most important organizations to which households belong.

The baseline survey sought to ascertain the index of social capital by asking respondents about the groups or organizations, networks, associations to which member of your household belonged. These could be formally organized groups or just groups of people who get together regularly to do an activity or talk about things. A list of groups was read out and the respondents would tell if anyone in their household belongs to such a group, and whether he/she participates actively in the group's decision making. The finding recorded an overall social capital index of 25 with M&F household recording the highest at 34 followed by FNM at 13, MNF at 2 and CNA at 0. Figure 11 presents the finding.

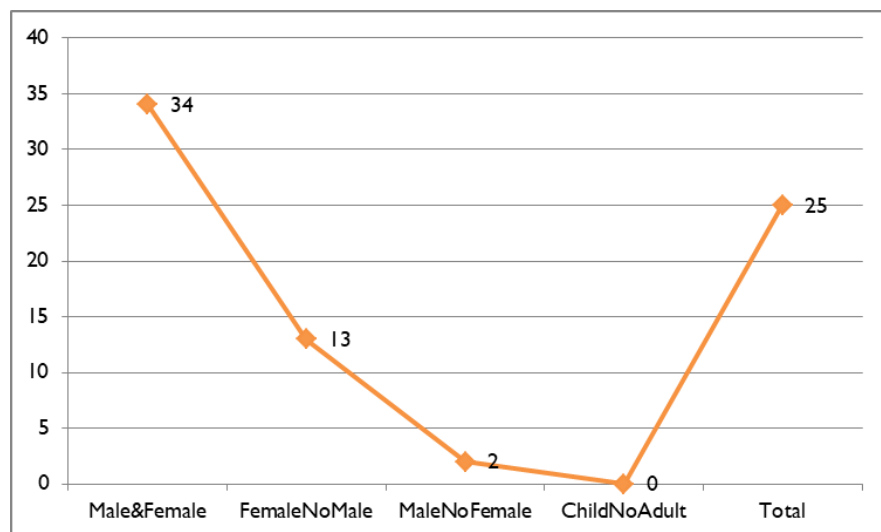


Figure 12: Index of social capital at the Household level

### 5.13.2. Custom: Percentage of people reporting improvements in their feelings of well-being and ability to cope at the end of the program

When we understand what makes people's lives go well, see the positive things people bring to situations, and understand people's emotional and social needs, projects and services can be better designed to respond to the many aspects that make up people's lives. There is growing interest among political leaders, local statutory agencies and others in measuring something that really matters – people's wellbeing. The study adopted the Short Warwick- Edinburgh Mental Well-being Scale (SWEMWBS), the Office of National Statistics (ONS) subjective well-being questions and a question on social trust, which is known to be a key factor for wellbeing.

SWEMWBS is a scale of seven positively worded items, with five response categories which have been specifically designed to measure both the feeling and functioning aspects of positive mental well-being, i.e. flourishing. These questions meet various statistical tests of robustness, and they also have 'face validity' as measures of aspects of flourishing within the dynamic model, i.e. on the face of it, the questions really are about wellbeing! For example, good feelings ('feeling relaxed'), sense of meaning ('feeling useful') and good relationships ('feeling close to other people'). The SWEMWBS is a shortened version of the longer Warwick and Edinburgh Mental Well-being Scale (WEMWBS)<sup>42</sup>.

<sup>42</sup> <http://www.healthscotland.com/understanding/population/ Measuringpositive-mental-health.aspx>

From the findings the proportion households with positive mental well-being, i.e. flourishing stands at 22.7% (M&F-30%; FNM-6.4%; MNF-1.4% and CNA-0%) meaning that generally people have a low of near negative feeling of well-being about their lives (Figure 12).

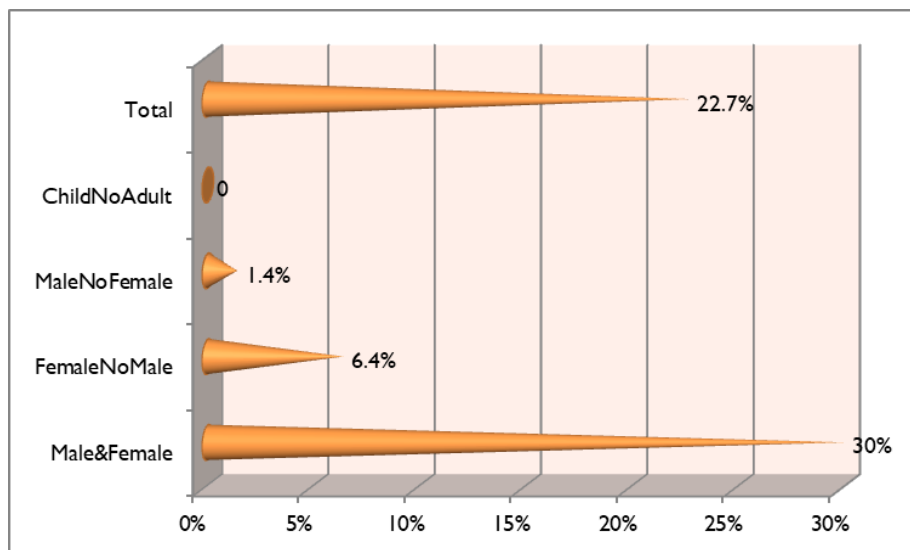


Figure 13: Percent of people reporting feelings of well-being and ability to cope at the end of the program

#### 5.14. Cross-cutting. Proportion of female and male children aged 12-18 years who have experienced violence in the past 12 months (by type) - type to include physical, emotional, sexual,

About 41% of respondents indicated that there are specific security concerns affecting women and/or girls in the five targeted counties in Upper Nile State. There are more cases of security concerns for women and girls in Nasir (59%) and Ulang (55%) as shown in the table below.

The major challenges faced by women as reported by households in order of frequency are sexual harassment (61%), Sexual assault (43%), and rape (40%), and verbal harassment (35%), violence in the home-hitting, slapping, choking, kicking (34%) and no safe place in the community (27%). Table 25 presents the challenges faced by women in the community.

Table 24: GBV challenges face by women in the community

	Nasir	Ulang	Baliet	Melut	Renk
Challenges faced by women in the community	89	142	14	22	35
1=No safe place in the community	27%	52%	7%	64%	57%
2=Sexual harassment	61%	7%	29%	27%	26%
3=Sexual assault	43%	3%	7%	14%	17%
4=Verbal harassment	35%	5%	14%	36%	0%
5=Rape	40%	7%	7%	0%	3%
6=Violence in the home (hitting, slapping, choking, kicking)	34%	34%	14%	45%	11%
7=Early and forced marriages	19%	8%	21%	23%	20%
8=Kidnapping	3%	0%	0%	0%	0%
9=Risk of attack when travelling outside the community	4%	2%	7%	0%	0%
10=Risk of attack when moving within the community	1%	1%	0%	0%	0%

I 1=Trafficking	1%	0%	7%	0%	0%
I 2=Unable to access services and resources	0%	6%	7%	5%	9%
I 3=Not enough privacy at home	2%	6%	7%	0%	17%
I 4=House or dwelling is insecure/has no locks	0%	5%	0%	0%	0%
I 5=Don't know	0%	12%	57%	5%	3%
I 6=Other (specify)	0%	0%	0%	0%	0%

Survivors of GBV look for help when they experience violence as mentioned by 57% of the despondence. More households in Ulang (78%) and Nasir (64%) said that survivors of GBV look for help.

During KII with a Protection Officer from ACROSS Africa Development Organization in Mandeng Field Office, the officer said that the specific security concerns affecting women and girls in Nasir County are physical violence, sexual assault and rape, abduction, forced early marriages, inter-communal violence, intermittent fighting between government troops and the Opposition forces and cattle rustling, denial of resources, emotional violence and domestic violence/intimate violence.

KII with a WVI staff at Melut Field Office indicated that last year, women and girls worried about their security and safety due to violence related to the civil war when there was no respect for law and any men with guns would act unlawfully. According to the WVI staff, there were cases of violence on girls and women including violence within family, husband and wife or husbands and in-laws about dowry, early marriage, and sexual violence and community conflicts. Girls and women feel unsafe when they go collecting firewood in the bush and when solitary in the bush. According to the staff, most of the perpetrators are armed men and drunken men and boys.

Some of the barriers mentioned (Table 26) by respondents include, fear of being identified as survivors (63%), distance to health facility (37%), no availability of confidential treatment (25%) and no female staff (22%).

**Table 25: Barriers that prevent GBV survivors including women, girls, men and boys from accessing support including health support?**

Some reasons or the barriers that prevent GBV survivors including women, girls, men and boys from accessing support including health support	Total	Nasir	Ulang	Baliet	Melut	Renk
	735	152	257	57	118	151
1.Fear of being identified as survivors	63%	81%	78%	35%	46%	44%
2.Distance to health facility	37%	66%	18%	32%	37%	42%
3.No female staff	22%	20%	24%	30%	13%	25%
4.No availability of confidential treatment	25%	48%	21%	11%	5%	32%
5.Lack of trained staff	15%	17%	17%	28%	3%	13%
6.Don't know that they should access the facility for treatment	2%	0%	1%	7%	5%	2%
7.Don't know where to go	6%	0%	0%	33%	20%	3%

On the question of whether survivors of GBV look for help when they experience violence, a KII with a Senior National Protection Officer from Non Violence Peaceforce (NP) in Ulang Field Office highlighted that Survivors of GBV often are awarded by NP to seek relevant help. There is a referral pathway to report cases to relevant health authorities and services such as psychosocial and medical support are provided by MSF including awareness raising and capacity building interventions. The Senior National

Protection Officer alluded that only very few GBV survivors look for help at health facilities and from GBV partners thus many cases go unreported. According to him, there are two main reasons that prevent GBV survivors from seeking support from the local authorities and these are the fear of stigmatization from other women who will judge the survivor as a loose girl/woman and/or a prostitute and secondly such cases when reported could lead to killing of the perpetrator of the violence by relatives and or/husband of the survivor. Thus, according to the women and girls they do not want to be party to or the cause of blood shed of another person. In Melut and Baliet, a KII with a Protection Officer from WVI Melut Office mentioned that cultural norms are barriers that prevent most GBV survivors from accessing support/health supports including fear of future targeting by the perpetrators. Nonetheless other Survivors of GBV look for help when they experienced violence, women and girls most often goes to camp leaders or Payam Administrators to seek help.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

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### 6.1. Conclusions

#### Outcome 1.1: Improved household food production and storage

- ✚ Less than a third (26.8%) of the producers/households are using/applying improved agricultural management practices or technologies in the project area. This is evident from the low acreage 3.48 Hectares under improved management practices or technologies and the low number of individuals in the agricultural system who applied improved management practices of technology.

#### Outcome 1.2: Increased household income & economic empowerment of vulnerable groups.

- ✚ The culture of group saving and lending is still poor as evident by the small number of households (32.1%) participating in the group saving and lending programs in the project area and further point to the low (32.2%) number of women and men in a union earned cash in the previous 12 months preceding the study.

#### Outcome 1.3: Strengthened nutrition and IYCF interventions and integrated WASH services

- ✚ There exist high prevalence of food insecurity in the project area as evident by the high number of households (59.2%) surveyed having a poor food consumption score. A significantly high number (82.7%) of the households experience moderate hunger and as a result are adopting negative coping strategies to mitigate food insecurity.
- ✚ There exist poor IYCF practices as evident by the low rate of exclusive breastfeeding (16.3%) among children 0-6 months and the small number (36%) of children consuming a diet of minimum dietary diversity.
- ✚ Water and sanitation services are poor as evident by the low number of households (5.7%) with access to basic drinking water services. In addition, open defecation is still rampant and only 12.7% of the households can access basic sanitation services.
- ✚ There exists high rate of open defecation (35.1%) due to poor coverage of improved and safe sanitation facilities for defecation (12.7%) in the project area.
- ✚ WASH knowledge attitude and practices is still poor as evident by the low number of households with soap and water at handwashing stations (27.5%). Moreover, only a few households possess hand washing station.

#### Outcome 2.2: Strengthened community managed disaster risk reduction (CMDRR) systems

- Households in target counties are still prone to shocks or stresses such as floods, drought as evident by their reduced capacity to recover from shocks.

#### Outcome 2.5: Strengthened Rapid Response (RR) capacity to save lives and alleviate human suffering during rapid onset shocks



- Households in the project area do not possess adequate capacity to respond and recover from sudden onset of shocks.

## 6.2. Recommendations

### Outcome 1.1: Improved household food production and storage

- ✦ WV and partners to promote improved agricultural management practices or technologies in the project area.
- ✦ Infrastructure; access to markets, water for production, capital for agribusiness and inadequate land for farming calls for GoSS intervention and advocacy around resource allocation at all levels.

### Outcome 1.2: Increased household income & economic empowerment of vulnerable groups.

- ✦ WV to consider supporting alternative livelihood initiatives coupled with micro financing in the form of S4Ts will go a long way in transitioning the community from poverty.

### Outcome 1.3: Strengthened nutrition and IYCF interventions and integrated WASH services

- ✦ WV and partners to promote exclusive breastfeeding through increased sensitization and awareness creation.
- ✦ WV and partners to promote optimal IYCN practices among PLW.
- ✦ WV and partners to promote food diversification and promotion of maternal child care interventions.
- ✦ WV and partners to promote education of expectant mothers on proper nutrition provision of diversified diets for children including assorted fruits and vegetables that are locally available.
- ✦ WV and partners to promote climate smart practices already being adopted by the community like; rain water harvesting, small scale irrigation, control of soil erosion including mulching construction of gabions and terraces, kitchen gardening and agro-forestry.
- ✦ WV to rally partners to increase investment in water infrastructure development e.g. pipeline system extension to further reduce walking distance for women and girls who are mostly involved in water collection.
- ✦ WV to rally all partners in identification of most appropriate water technologies for surface water.
- ✦ WV to rally all partners to invest more resources and efforts to increase access to improved sanitation. The Community-Led Total Sanitation (CLTS) approach and design for behavior change should be adopted.
- ✦ WV to rally all partners to introduce more innovation on simple, affordable but quality adoptable improved sanitation structures for HH using sanitation led marketing approaches.
- ✦ WV and partners to capacity build water committees on governance issues to ensure proper water management that will guarantee sustainability.
- ✦ WV and partners to build capacity of CHEWs, WUAs, CBOs and other community structure groups to integrate and sensitize communities on proper hygiene practices at household level.

### Outcome 2.2: Strengthened community managed disaster risk reduction (CMDRR) systems

- ✦ WV and partners to support capacity building trainings on DRM cushioning them from potential disasters.
- ✦ GoSS and partners to support cross sector and multi stakeholder coordination and linkage.
- ✦ All stakeholders to support peace activities like; Peace Committees and Peace Clubs DPRC meetings, women leader's peace meetings, youth leaders meetings, elders dialogue meetings, Youth peace tournament, peace committee meetings and community resource committees to bring lasting peace in the area.
- ✦ GoSS to undertake disarmament exercise to rid the area of illegal arms among civilians.
- ✦ WV will work closely with community disaster management and peace committees to document early warnings for both conflict and natural disasters.

## 7.0 Appendices

### 7.1 Appendix 1: Evaluation TOR



ToR\_WV South  
Sudan EFSP Baseline

### 7.2 Appendix 2: Baseline Values



ACCESS Baseline  
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### 7.3 Appendix 3: Inception Report



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- ACCESS - 72BHA210

### 7.4 Appendix 4: ACCESS Log frame



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### 7.5 Appendix 5: Data Collection Tools



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### 7.5 Appendix 6: Datasets & Analysis Plan



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