

**JOINT ASSESSMENT MISSION (JAM)
WHITE NILE – SUDAN**

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FINAL REPORT

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GOVERNMENT OF SUDAN: COMMISSION FOR REFUGEES (COR)

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WORLD FOOD PROGRAM (WFP) AND PARTNERS



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Acronyms

BSFP	Blanket Supplementary Feeding Program
CBT	Cash Based Transfer
CMAM	Community Based Management of Acute Malnutrition
COR	Commission for Refugees
e-BSFP	Emergency –Blanket Supplementary Feeding Programme
FAO	Food and Agriculture Organization
FFA	Food Assistance for Asset
GFD	General Food Distribution
JAM	Joint Assessment Mission
JPA	Joint Plan of Action
MAM	Moderately Acute Malnutrition
MUAC	Mid upper arm circumference
NFI	Non-Food Item
PLW	Pregnant and Lactating Women
RMS	Refugee Multi-Sector
SAFE	Safe Access to Fuel and Energy
SAM	Severely Acute Malnutrition
SENS	Standardized Expanded Nutrition Surveys
SRCS	Sudanese Red Crescent Society
TFP	Therapeutic feeding program
TSFP	Targeted Supplementary Feeding Programs
UNFPA	United Nations Population Fund
UNHCR	The Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

I. EXECUTIVE SUMMARY

Since the outbreak of fighting in South Sudan in December 2013, Sudan has experienced large inflows of South Sudanese refugees, making it the largest recipient of new arrivals in 2015. The arrival of South Sudanese refugees is driven by very high levels of food insecurity in South Sudan and continued violence. As of end of December 2016, more than 300,000 South Sudanese individuals have arrived in Sudan, seeking refuge, mostly in White Nile State, South Kordofan, West Kordofan, East Darfur, South Darfur, and Khartoum. The majority of South Sudanese refugees has settled in refugee camps in White Nile¹.

Many of the new arrivals in White Nile reached the border to Sudan exhausted, nutritionally weak and in poor health, with many of them having travelled under difficult conditions to escape violence and deprivation. Most have come without significant belongings, money, livestock or other assets. In the camps, most refugees face insufficient access to basic services, including food, shelter, water, sanitation, health and education. In addition, the basic services in host communities are not capable of accommodating the large influx of new arrivals.

The 2016 Joint Assessment Mission (JAM) is the first such exercise for the South Sudanese refugees in White Nile state and was initiated jointly by UNHCR, WFP and COR to 1) establish a comprehensive understanding of the needs, risks, capacities, and vulnerabilities of refugees with regard to food security and nutrition; 2) examine the ongoing humanitarian response; and 3) make recommendations to improve the provision of assistance. The findings and recommendations of the 2016 JAM will form the basis of the Joint Plan of Action, designed to improve assistance to refugees for the coming two years.

The JAM was conducted by UNHCR, WFP, COR and cooperating partners from 26 November to 1 December 2016 and included an extensive literature review and secondary data analysis; and primary data collection from six refugee camps in White Nile state. Primary data was collected through focus group discussions, key informant interviews, household interviews and general observations. Important secondary data sources included recently completed assessments and surveys in the areas of nutrition, food security, livelihood, logistics and markets.

The findings of the food security assessment conducted by WFP in November 2016 revealed that 53 percent of South Sudanese refugees in White Nile is not categorized as food secure. The demographical composition of the refugees has contributed to their vulnerability as the majority concern women-headed households with an above-average number of children and a below-average number of working-age men. Many women-headed households experience the double-burden of caring for their family members while also having to generate income. Low-income work and unemployment, combined with high food prices resulted in very limited economic access to food: seventy-eight percent of refugees were unable to afford the price of the local food basket. Food consumption among children aged 6-23 months – a critical age for development – was poor: only 4 percent of children were found to have minimum acceptable diets in WFP food security assessment for South Sudanese refugees and host communities in White Nile, April 2016. Results were also weak for infant and young child feeding indicators (including timely initiation of breastfeeding, exclusive breastfeeding for infants 0-5 months, and the introduction of solid, semi-solid or soft food for children 6-8 months).

The JAM found that the coverage of food assistance programs was acceptable, but highlighted the heavy reliance on unconditional activities, especially General Food Distribution provided by

¹ UNHCR South Sudan Situation Information Sharing Portal

WFP. Opportunities should be explored to conduct household-level targeting to identify refugees that could benefit from conditional food assistance, aimed at enhancing self-reliance through the development of assets, capacities and skills at the individual, household- or community level. The current dependency on humanitarian assistance is not sustainable and may eventually be difficult to roll back if appropriate measures are not implemented to promote the livelihoods and self-reliance of the refugees and the host communities. Whilst it is important for relief agencies to continue supporting the poor and vulnerable, efforts should also be directed towards enhancing the livelihoods of the refugee population. To support the push for livelihood interventions, this assessment recommends that a joint refugee profiling exercise be explored by main providers of assistance. A common understanding of households-level vulnerabilities would facilitate a coordinated inter-sectorial response to humanitarian and early recovery needs.

Despite efforts to provide all range of primary healthcare services in the camps, the temporary structure is, in general, sub-standard with insufficient space and light. Even, essential facilities such as hand washing are lacking. The capacity of the infrastructure to provide privacy of patients is minimal. In all locations, the inpatient medical ward is not segregated by gender and age.

Standardised Expanded Nutrition Surveys (SENS) South Sudanese refugee camps in White Nile, in October 2016, indicated that the overall nutrition situation is critical with high Global Acute Malnutrition (GAM) rates that are above the 15 percent emergency threshold that the WHO has set. Likewise, the Severe Acute Malnutrition (SAM) prevalence also ranges from 2.6 percent to 5 percent (any SAM rates above 2 percent are seen as critical as per WHO classification). The prevalence of anaemia among children aged 6-59 months was above the 40 percent public health significance as per WFP classification (ranging between 46.6 percent – 69.4 percent). The prevalence of stunting among children aged 6-59 months in all camps was found to be within the acceptable standard <20 percent. The mission recommended to strengthen community outreach through providing training to local nutrition and health staff and by increasing field monitoring and on the job training.

The quality and quantity of water are reportedly acceptable, but hygiene promotion varies across the camps; all locations have family shared latrines close to their shelters. However, the presence of open defecations in the surroundings of the camps is an indication that the number of latrines constructed might not be adequate to meet the needs. The mission recommends to carry out a Knowledge, Attitude and Practices Survey in all camps in 2017 and to share the outcomes and recommendations of this survey with the concerned agencies so that follow-up can take place accordingly.

In this report, the JAM team has consolidated all findings gathered from consulted secondary sources and primary data collected from the field in order to presented the key findings for key institutions and authorities, including UNHCR and WFP, Commission for Refugees (COR), cooperating partners, and representatives from donors including the European Civil Protection and Humanitarian Aid Operations (ECHO), UK Department for International Development (DFID), and the US embassy in Sudan and United State Agency for International Development (USAID).

1. Introduction

Sudan has a longstanding tradition of hospitality towards refugees and asylum-seekers, with over 447,000 refugees and asylum-seekers from South Sudan currently hosted in eastern Sudan, Darfur states, White Nile State, South and West Kordofan, Khartoum, and other areas since conflict erupted in South Sudan in mid-December 2013. Until a political solution is found in South Sudan, the number of refugees seeking safety in Sudan is expected to grow. The presence of refugees has placed pressure on available local resources, and it is important also to ensure support for host communities. With a decrease in humanitarian funds available to UNHCR and WFP, one of the key challenges is to improve standards for refugees and provide supports in food security and nutrition and other unmet basic needs.

Since the outbreak of fighting in South Sudan in December 2013, Sudan has experienced a large inflow of South Sudanese refugees, making it the largest recipient of new arrivals in 2015. The arrival of South Sudanese refugees is driven by very high levels of food insecurity in South Sudan and continued violence. As of end of December 2016, more than 300,000 South Sudanese individuals have arrived in Sudan, seeking refuge, mostly in White Nile State, South Kordofan, West Kordofan, East Darfur, South Darfur, and Khartoum. The majority has settled in refugee camps in White Nile.

Many of the new arrivals in White Nile are reaching border areas exhausted, nutritionally weak and in poor health. Those who have fled have come without significant belongings or any livestock, and without capital to support their initial requirements. In this context, responding to refugee needs and ensuring their protection in a timely and gender-sensitive manner is a top priority for humanitarian partners. Nevertheless, most refugees are facing a lack of access to the necessary basic services, including food, shelter, drinkable water, sanitation, healthcare and education services, as existing resources are not sufficient for the large and ongoing influx into Sudan. Nutrition partners continue to identify and treat malnourished children across sites in White Nile State. In addition, the limited basic services that exist in host communities need to be strengthened to accommodate the influx of new arrivals.

The main livelihood pattern of South Sudanese refugees is agro-pastoralist and pastoralist. Despite arriving with few personal belongings, they possess skills in the areas of farming, fishing and handicrafts that can be capitalised on to reduce dependency on assistance. The South Sudanese refugees have access to small scale market and are somewhat integrated with the local community in terms of trading. There are limited livelihoods activities being implemented, in terms of providing agricultural inputs (seeds, tools, training and land rent), or access to fishing activities. The refugees receive regular food assistance and additional nutrition support if targeted.

1.1 Background of White Nile State and South Sudanese refugees

White Nile state is located in the Southern part of Sudan, sharing international borders with South Sudan, as well as national borders with South and North Kordofan states to the west, Al Gezira and Sennar states to the east, and Khartoum state to the north. It consists of nine localities with approximately 2 million people in a total area of 30,411 square kilometres. The economy heavily relies on agricultural and livestock activities. Rabak is the capital of the state with other important cities include Kosti, Elduein, Gutaina, Tandaliti and Jabalain.

White Nile state has constantly been receiving refugees coming from South Sudan since December 2013. As of end of December 2016, the state hosted a total number of 116,000 registered refugees, residing in eight refugee camps.

1.2 Objectives

The JAM focused on the South Sudanese refugees in camps in White Nile State. The JAM had the following main purposes:

- Collect information to better understand the situation, needs, risks, capacities and vulnerabilities of the refugees with regards to food security and nutrition and ongoing assistance;
- Determine and provide recommendations on what actions may need to be taken by UNHCR, WFP and others partners to ensure a more sustainable and adequate response;
- Identify solutions that enable refugees to help themselves to be as self-reliant as possible while avoiding adverse effects on the host population and the environment.

The main focus of the JAM is to consider improvements to how assistance is being provided. Beyond the identification of sector-specific and inter-sectoral gaps in the assistance, cross-sectorial areas that will require exploration include the feasibility of scaling up conditional assistance (for example skills training and asset creation), the use of market-based delivery modalities (for example vouchers), and the need and practicality of household-level targeting.

2. Joint Assessment Mission Overview

This JAM was conducted as an initial inter-agency joint assessment for South Sudanese refugees in White Nile. UNHCR, WFP, COR and other partners were directly involved in the JAM while observers from donors such as European Civil Protection and Humanitarian Aid Operations (ECHO) were also present. The findings and recommendations of the 2016 JAM form the basis for the future operations aiming at improved assistance to refugees.

2.1 Methodology

The teams deployed various methodologies of data collection which include:

- Review and analysis of the available studies and reports on South Sudanese refugees in White Nile state.
- Field visits to the camps for interviews with refugee households, focus group discussions with refugees, community leaders, and health officials.
- Key Information Interviews with relevant national, regional and local authorities, NGOs and other organisations working with the refugees.

The team carried out focus group discussions, interviews with key informants, spot-checks, transect walks and general observation of the prevailing situation to allow for an adequate and reliability of the consolidated data. Any information gaps identified were filled with an in-depth review analysis. The teams verified and triangulated all available data using both quantitative and qualitative methods. The secondary data sources included technical reports by WFP and UNHCR including WFP White Nile food security report 2016, the preliminary results of WFP's market and supply chain and retailer assessment, the UNHCR Livelihood and Self-Reliance Strategy report, UNHCR SENS report, UNHCR Energy assessment. Besides the reports of WFP and UNHCR, the JAM uses UNHCR Registration data, Ministry of Health nutrition data, the Simple Spatial Survey Method (S3M) survey, briefing document on RMS partner's activities, major achievements and challenges (see the list of secondary data in the appendix for more information).

2.1 Preparations

A two-day pre JAM training workshop for all team members was held on 20 November 2016 in Khartoum, and 27 November 2016 in White Nile prior to the field works in the camps. The training focused mainly on fine-tuning of the checklists and orienting team members on what would be required from them in the field. Team members included UNHCR, WFP, COR and staff from all cooperating partners who joined different teams depending on their area of expertise. The JAM training workshop proceeded according to UNHCR-WFP JAM guidelines and was contextualised based on the South Sudanese refugee operation in White Nile state. The training covered JAM concepts and principles, nutrition and food security, livelihood and self-reliance, environment and energy, and in-depth preparation by each of the five thematic groups, including checklists, methods, tools for information gathering, as well as output and expectations.

2.2 Fieldwork

The JAM teams visited the six camps namely; Radies 2, Jory, Al warel, Um Sangor, Algaya, Dabad Bousin between 26 November and 1 December 2016. The core JAM field team included two mission coordinators, team leaders from UNHCR and WFP, as well as representatives from WFP, UNHCR, FAO, WHO, UNFPA, COR and other cooperating partners. Each team was split into two sub-teams to cover two camps per day for the days of the exercise. During the fieldwork, teams collected primary data through focus group discussions with groups of women, youth (boys and girls), leaders, camp managers, and the host community. Technical teams also conducted interviews with key informants including traders, medical personnel, and women at the water points. Data collection tools included semi-structured interviews, focus group discussions; transect walks through the camps, direct observations, and infrastructure visits. In an effort to ensure broad representation, diversity, gender and age was ensured at all stages of data collection. The primary qualitative data collected by the teams was triangulated by the five groups and sector-specific information from different sources both within and between the groups.

3. Findings and Recommendations

3.1 Population size and demography

As of End December 2016, over 300,000 South Sudanese refugees have arrived in Sudan since December 2013. Sudan also hosts an estimated 350,000 South Sudanese refugees who remained in Sudan following the Independence of the Republic of South Sudan in 2011. There has been a steady arrival of South Sudanese refugees into White Nile state at a rate of approximately 2,000 individuals per month toward the end of 2016, as well as sporadic influxes into mostly East Darfur, which has averaged at approximately 3,000 individuals per month in 2016. This has been putting additional pressure on host communities who are already impoverished and struggling due to the lack of sustainable livelihoods and scarce natural resources. The steady yet significant flow of new arrivals into Sudan combined with sudden spikes in arrivals related to localised fighting, political instability and malnutrition are expected to continue into 2017.

Beginning January 2016, there was a surge of South Sudanese refugees fleeing into Sudan. A large proportion (45 percent) of these refugees continue to reside in eight designated sites in two localities in White Nile state. According to the WFP food security assessment, refugee households were far more likely to be headed by a woman compared to households in host or returnee

communities. More than two-thirds of refugee households were headed by a woman. The average age of a household head was 37 among the refugees, compared to 46 for host communities and 45 for returnees from South Sudan.

3.2 Refugee verification process and coordination

Safe and organised transport arrangements have been established for the movement of South Sudanese refugees from the border point to the camp, which is closely monitored by Commission of Refugees (COR), NISS, police and UNHCR. These transport arrangements prevent the risk of arrest and deportation following undocumented and unauthorised travel and charges brought against persons of concern for illegal entry, which could happen if the person travels in Sudan on his/her own. The transit centre has therefore proven to provide effective protection against deportations and abductions and facilitate safe access to the territory. Once the South Sudanese refugee reaches the camp, UNHCR and SRCS ensures registration and access to Refugee Status Determination procedures, and the Government grants refugee status to the new arrivals.

The role of the COR is that of implementing agency, while UNHCR provides capacity- building, monitor registration activities and support as appropriate. UNHCR has agreed to build COR’s technical and human resources capacity to undertake future registration activities, with UNHCR’s support and monitoring. All data collected in the refugee camps is incorporated into ProGres which would be jointly accessed by COR and UNHCR.

The new arrival verification process is made up of five steps. First, new arrivals go through admission where their names, age and family size are checked against the information in their physical file from COR. They then proceed to the waiting area to undertake the third step, which is the biometric assessment, where they go through a one- on-one interview on an individual basis. The information is cross-checked against information provided by other family members and then entered accordingly into the computer database. This step also includes taking photographs of each member of the family. The fourth step is fingerprinting. Fingerprints will also go into the database in order to prevent a repetition of verification of the same person. The last step is the printing of two key documents: (1) an audit sheet – the document that will be enclosed in their physical file; and (2) a photo slip which is given to the refugee(s).

After their first verification as new arrivals, refugees will be verified again at a later stage through continuous verification efforts. Continuous verification, which is also conducted by physical verification, confirms the presence of absentees (who did not show up during the initial verification) and capture events such as marriage, divorce, death and newborns. This exercise entails physical verification of persons and documents.

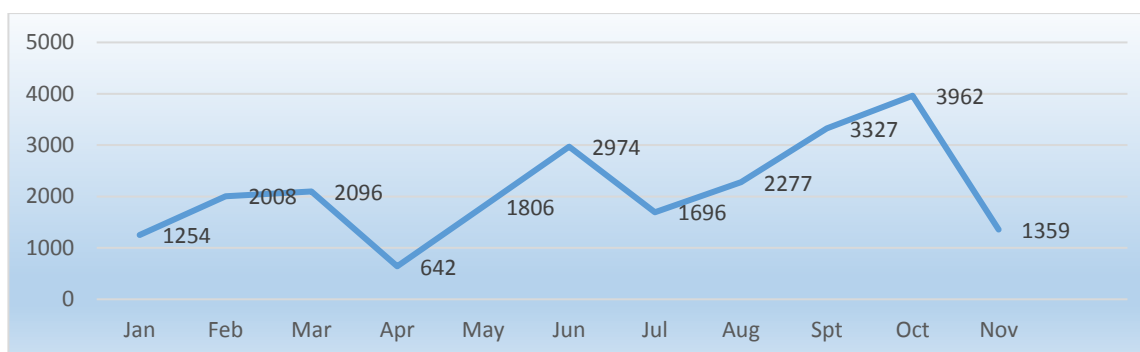
Table 1: Monthly New Arrivals Statistics (as of November 2016)

Reporting Period	Joda		Alkewaik		Almeganis		Total of HH	Total of IND
	HH	IND	H H	IND	H H	IND		
January	436	1010	58	233	2	11	496	1254
February	493	1557	79	301	30	150	602	2008
March	558	1802	16	64	89	230	663	2096
April	126	394	26	89	76	159	228	642
May	286	785	40	138	310	883	636	1806
June	364	1134	23	94	735	1746	1122	2974

July	412	1072	47	147	295	477	754	1696
August	633	1964	42	137	147	176	822	2277
September	1010	2860	19	91	267	376	1296	3327
October	1319	3529	32	148	201	285	1552	3962
November	498	1259	6	23	33	77	1545	1359
Grand Total	6135	17366	388	1465	2185	4570	9716	23401

(Source: UNHCR registration database)

Figure 1: Trends of new arrivals in White Nile January-November 2016



(Source: UNHCR registration database)

Table 2: Camp-based population of concern by location (as of November 2016)

Camps	Households	Individuals		Total
		Male	Female	
JOURIE	2,460	4,229	5,254	9,483
ALKASHAFA	2,980	5,219	6,959	12,178
ALAGAYA	4,318	7,114	8,174	15,288
DABAT BOSIN	815	1,455	1,546	3,001
ALREDAIS1	2,914	4,878	6,408	11,286
ALREDAIS2	4,454	8,010	10,567	18,577
UM SANGOUR	1,632	2,591	2,428	5,019
KHOR ALWAREL	1,898	3,311	4,639	7,950
Total	21,471	36,807	45,975	82,782

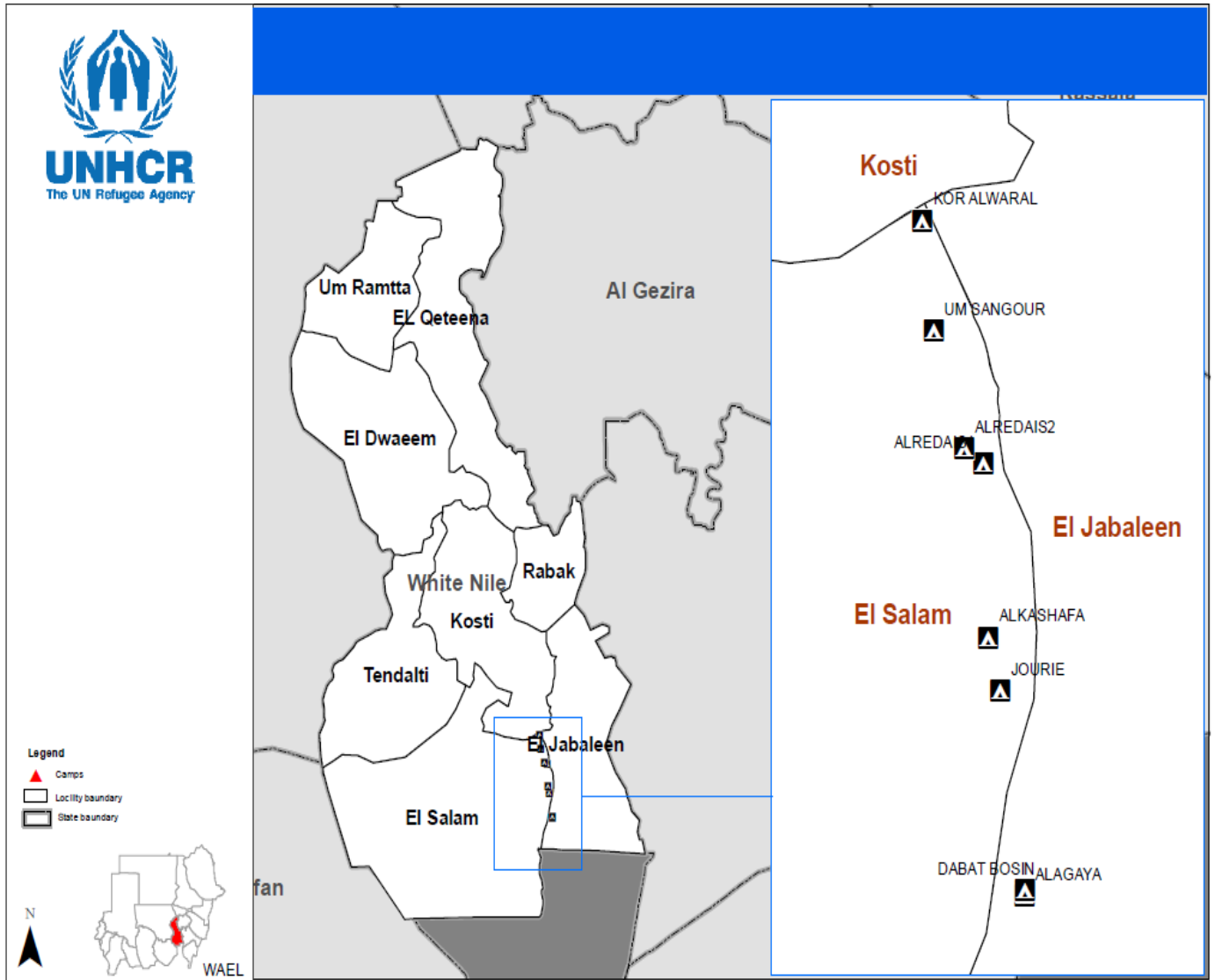
(Source: UNHCR registration database)

Table 3: Demographic Distribution of South Sudanese refugees (as of November 2016)

Cohort	Female		Male		Total	
	#	%	#	%	#	%
0-4	8,545	10%	8,656	14%	17,201	25%
5-11	12,145	15%	12,090	12%	24,235	27%
12-17	7,771	9%	7,118	6%	14,889	16%
18-59	15,872	19%	8,333	10%	24,205	30%
60+	1,642	2%	610	1%	2,252	3%
Total	45,975	56%	36,807	44%	82,782	100%

(Source: UNHCR registration database)

Map 1: Refugee camps in White Nile State (as of November 2016)

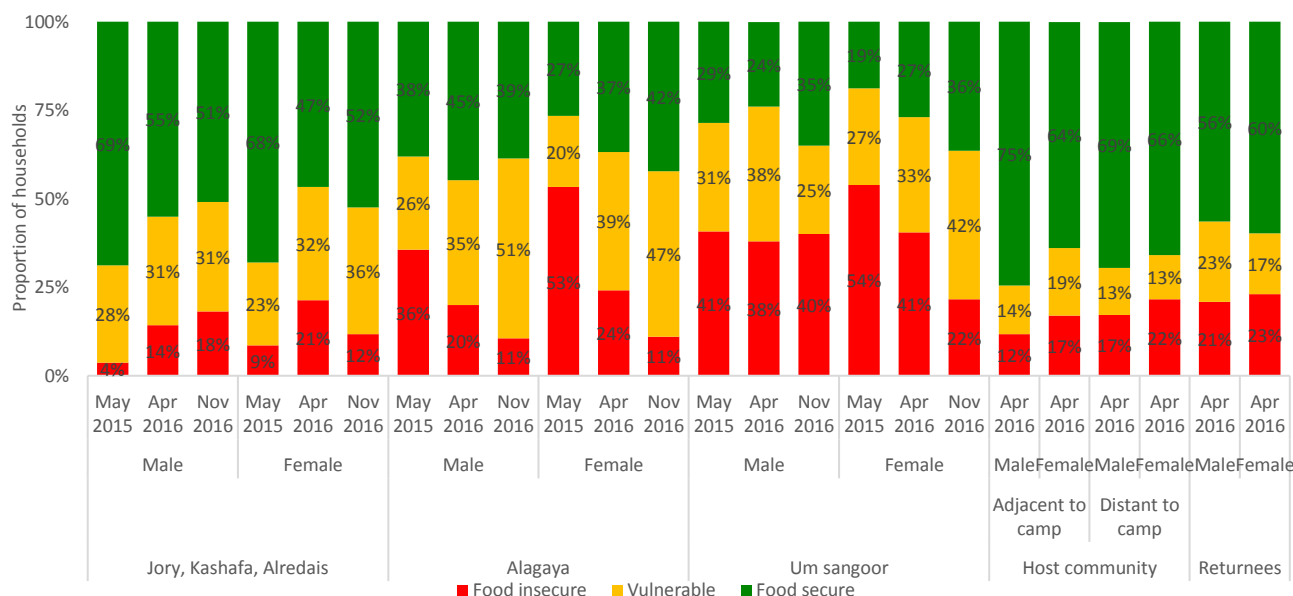


3.3 Food Security and Food Assistance

3.3.1 Food security situation

The South Sudanese refugee population in White Nile state faces several major food and nutrition insecurity challenges. According to WFP FSMS in November 2016, 47 percent of refugee households were food secure, which is an improvement from the 40 percent that was reported in WFP’s food security assessment in April 2016. The improvement can be attributed to the continuous humanitarian efforts. However, the demographical composition – disproportionately women-headed households with an above-average number of children and a below-average number of working-age men – has contributed to the vulnerability of South Sudanese refugees, and explains why food insecurity levels remain high. Women-headed households face a double-burden of both generating income and caring for their family members. Low-income livelihoods and unemployment, combined with high food prices, resulted in weak purchasing power: seventy-eight percent of refugees were unable to afford the price of the local food basket. Food consumption for children aged 6-23 months – a critical age for development – was worse, with only 4 percent of refugee children having acceptable diets in April 2016. Infant and young child feeding indicators, mainly timely initiation of breastfeeding, and exclusive breastfeeding for infants 0-5 months and the introduction of solid, semi-solid or soft food for children 6-8 month, were very weak as well.

Figure 2 : Food security of camps by gender



(Source: WFP food security assessment for South Sudanese refugees and host communities in White Nile, April 2016, WFP FSMS, November 2016)

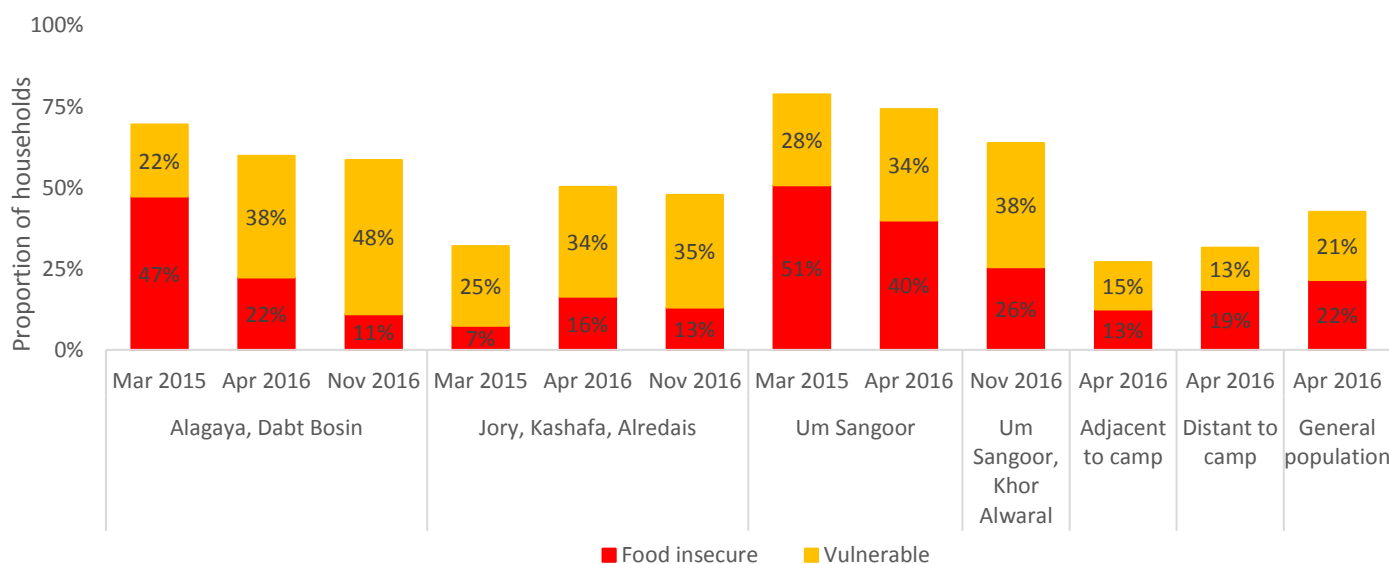
Unsustainable livelihoods were found to be widespread among the refugees as many households relied on begging, grass- and firewood collection, and on unconditional transfers, including sale of food assistance. These livelihoods and high rates of unemployment resulted in low earnings. Combined with high food prices (the price of sorghum in Kosti was 6 percent above the three-year average), low-income levels resulted in only 22 percent of refugees having acceptable levels of purchasing power, according to WFP food security assessment for South Sudanese refugees and host communities in White Nile, April 2016.

In the aggregate, household food consumption among the refugee population was similar to that of host and returnee communities, which was largely the result of the large-scale assistance operations focusing on the refugees. On average, 59 percent of refugee households had acceptable food consumption compared to 70 percent in 2015. Some locations were worse off: Only 30 percent of households in Um Sangoor had acceptable levels of food consumption. Food consumption for children aged 6-23 months – a critical age for development – was far worse, with only 4 percent of refugee children having acceptable diets.

Despite the large food assistance operation in the refugee camps, refugees were still the most vulnerable groups: 48 percent of refugees were food secure (this was 62 percent in 2015), compared to 57 percent of returnees from South Sudan and 70 percent of households in host communities, according to WFP food security assessment for South Sudanese refugees and host communities in White Nile, April 2016. It is believed that, without assistance, food security among the refugees would be dramatically worse.

For returnees and host communities, livelihoods were more sustainable and purchasing power was stronger, although a similar proportion of households reported unemployment as the main livelihood constraint. Household and child food consumption were similar between the three groups, indicating that households in host and returnee communities were able to make up for the lack of food assistance through their means. Food utilisation indicators appeared to be better in the camps: households in host and returnee communities were far more likely to rely on unsafe water sources and practice open defecation. The impact of the presence of refugees on the host community could not be conclusively determined. However, the assessment found no elevated vulnerability in host communities located near the refugee camps compared to host communities farther away, potentially indicating a limited impact.

Figure 3: Food security situation in camps



(Source: WFP food security assessment for South Sudanese refugees and host communities in White Nile, April 2016, WFP FSMS, November 2016)

3.3.2 New Arrivals and Food Security

South Sudanese refugees cross the border into Sudan with little or no items for basic survival. Upon arrival in the refugee camps, it is normal practice for WFP and UNHCR to immediately support

them after verification through relief food assistance and distribution of non-food items such as cooking utensils (stove, metal sheet, pans and plates), provision of shelter, access to primary health care, and addressing any protection concerns. However, the new arrivals interviewed during the JAM verification mission reported delays in receiving initial food assistance due to the registration cycle, which took for more than three weeks. The delay of registration resulted in a further temporary gap of the provision of food assistance due to the monthly distribution cycle from WFP. Another concern that was raised by interviewed refugees was that new arrivals are often stranded at a location during the process of being transported from the transit centre to the final camp destination.

3.3.3 Food Assistance Overview

Since the start of the influx, in early 2014, the World Food Programme (WFP) has been providing emergency food and nutrition assistance to all South Sudanese arrivals in eight camps and three transit centres. All targeted beneficiaries are provided with 575 grams per person per day composed of cereals (475g/person/day), pulses (60g/person/day), vegetable oil (30g/person/day) and salt (10g/person/day) making up 2,100 kilocalories per person per day in line with Sphere standards. At the transit centres located in El Salam and El Jebelen locality, WFP provides transit ration, or ready to use supplementary food (RUSF) to children under five-year-old and pregnant and lactating women (PLW). In the refugee camps, WFP provides GFD and nutritional support through Emergency Blanket Supplementary Feeding Programme (e-BSFP) to children and Targeted Supplementary Feeding Programme (TSFP) for the treatment of MAM cases. These nutrition programmes support 12,729 children under five-year-old and PLW through the provision of specialised nutrition foods aimed at preventing and treating acute malnutrition. To implement nutrition programmes, refugees are also mobilized with conditional food incentive for the GFD distributions.

3.3.4 Household Level Targeting

The purchasing power profile of the refugees suggested that only a small minority of households would be able to satisfy essential food and non-food needs without the ongoing food assistance programs. The income gap indicated that 60-70 percent of the population required full-ration food assistance in order to secure a sufficient amount of food. For 20-30 percent of households that have somewhat greater income, a partial ration could be sufficient. Fewer than 15 percent of households were believed to be able to sustain themselves without food assistance. A household level targeting process could identify refugees that require ration or no food assistance.

The mission also recommended the introduction of conditional forms of food assistance such as FFA and UNHCR's livelihood programme for refugee households for whom such activities would be suitable. Conditional assistance can contribute to promoting more sustainable livelihoods and building the self-reliance of communities through the creation of community and household assets. At the same time, it should be clear that the demographic profile of the refugee population suggests that a segment of the population is unable to participate in livelihood development activities, even if such support is scaled up. This group requires continuous unconditional food and nutrition assistance without a work requirement. To save costs and minimise duplication, the type of food assistance (unconditional or conditional) and the size of the support (full or half ration) could be informed through one comprehensive refugee profiling exercise.

3.3.5 Cash-based transfers

Based on the focus group discussion conducted during the verification mission, the majority of the refugees noted they were selling and bartering a substantial portion of in-kind food provided on a monthly basis in exchange for access to preferred food and other unmet needs such as fuel, lighting, milling cost, and fees for the access to the forest. Especially for fuel, 20-40 percent of the refugees purchase wood by exchanging 30 percent of their food assistance ration. In addition, the refugees in the Alagaya, Dabt Bosin exchange food rations to pay fares for crossing the river and for fees to the host community to gain access to the forest for firewood collection. Food rations were usually sold below market prices.

The above highlights that there is a need to meet unmet needs for non-food items. However, according to the rapid market and supply chain assessment conducted by WFP in November 2016, market operational capacity at refugee camps in the east bank is challenged by restrictions that have been imposed on commodity movement. These restrictions limit the quantity of commodities that can be transported and means that the supply chain to the camp is not able to respond to the anticipated increase in demand in case of introduction of cash based transfer (CBT)². Most traders at refugee camps are small-scale, with limited stocks capacity and even though traders interviewed are confident to have the capacity to expand up to a quarter their current volumes, the supply is likely to be insufficiently elastic. Beneficiary consultations with the refugee communities at various levels conducted during the JAM verification mission in regards to CBT indicated reservation towards CBT due to the mistrust of traders and the market price instability. Further assessment for food assistance is needed to determine the feasibility of CBT.

3.3.6 Summary of Key Food Security and Food Assistance Recommendations

Key concerns	Recommendations	Locations
<p>From the above narratives: Refugees have limited and fragile livelihoods and are primarily dependent on food assistance.</p> <p>The refugee population is dominated by women and children. Their vulnerability to food insecurity is high.</p> <p>Refugees arrive into Sudan with little or no items for basic survival in a poor physical condition, especially children.</p>	The JAM recommends WFP and its partners to continue the food assistance in all locations as per the ongoing food rations and distribution cycle.	All camps
	WFP and partners to explore the feasibility of implementing conditional forms of food assistance such as Food Assistance for Assets (FFA) that can contribute to building the resilience of communities through the creation of community and household assets. Integration of such programmes with UNHCR's livelihood programme is recommended.	All camps
	UNHCR and WFP to look into the possibility of providing cooking fuel, milling vouchers, or provision of milling machines in each camp.	All camps

² Cash based transfer includes both cash and voucher modalities. UNHCR uses cash based intervention. To keep consistency, we apply Cash based transfer throughout this report.

<p>Refugees arrive in locations with scarce natural resources, putting pressure on host communities who were already impoverished and struggling due to the lack of sustainable livelihoods.</p> <p>Food consumption, income levels and purchasing power of refugee communities are found to be very weak or poor.</p> <p>Refugees sell a substantial amount of food in exchange to buy cheaper and less nutritious food or fulfil other unmet needs, including for energy or milling.</p> <p>The food security situation highlights an extremely fragile situation that could worsen to such an extent that it would affect all refugees across all locations.</p>	<p>UNHCR and SRCS to increase operational efficiency for registration and transportation of new arrivals to the designated locations to facilitate delivery of services in a timely manner.</p>	All camps
	<p>A UNHCR/WFP Camp Registration Standard Operating Procedures should be developed to clarify the process by which new arrivals are received, registered and provided with food assistance. The SOP will contribute to achieving a speedier registration and assistance process.</p>	
	<p>A full-fledged CBT assessment for food assistance to be done at a later stage for exploring the possibility of applying cash-based interventions. A study for non-food items is recommended to be undertaken at the same time, or as part of this assessment.</p>	All camps
	<p>WFP and UNHCR to study the possibility of household-level targeting exercise of food assistance in order to distinguish between households who require full rations, half rations or no rations, and to distinguish between conditional and unconditional assistance. The potential of increased cost-effectiveness of vulnerability-based targeting would have to be balanced against the substantial cost of conducting this targeting exercise.</p>	All camps

3.4 Livelihoods and Self-reliance

3.4.1 Key findings and problems

A number of key issues and problems were identified through the JAM verification mission and the UNHCR-led livelihood assessment.

Limited employment opportunities (mostly for agricultural labour) have been a major problem for refugee households. Most of the refugees (around 90%), both men and women, work as agricultural labourers for the host community, mainly for cutting sesame and sorghum. This is a seasonal job which is available only during the crop production and harvesting season (June-October). Some seasonal work is also available during the winter season for production and harvesting of winter crops. Another issue is that oversupply of labour reduces labour prices. Some of the refugees complained that landowners exploited them and they do not receive the pay for their labour that was originally agreed. However, they are obliged to work in the agricultural fields or do casual work as this seems to be the only available income opportunity for the majority of the refugee households.

The livelihoods assessment found that the majority of the refugee households to poor and to earn about 500-1000 SDGs per month and depending largely on agricultural labour. The middle income

earning households represent about 4.7 percent of the total households in the camps with average monthly earnings of 1, 000 – 2,000 SDGs. The better-off households earn 2000 SDGs and more per month and represent less than 1 percent of the total households.

Some refugees (mostly the men) are engaged in fishery, but they face many problems including inadequate or unavailability of fishing tools such as fishing boats and nets. Fishing is considered as an important livelihood opportunity that can boost refugees' income sources, but the unavailability of fishing tools remains a major challenge for most refugee households.

The majority of the refugees showed a great interest in farming; many of them have good knowledge and skills in farming as this has been their livelihood in their place origin. However, refugees have a lack of agricultural tools and seeds. More importantly, they do not have enough access to farming land because the land belongs to the nationals who charge them a lot of money for the land rental cost. The only way most refugees can access land is by renting or crop sharing modalities with the land owners. However, for crop sharing purposes, most refugees do not have relevant inputs except for their labour.

Both male and female refugees showed interest in undertaking small business such as selling fruits vegetables, or charcoal but they lack the financial resources to establish these small businesses. Some have managed to sell vegetable as an income generating activity, but they are missing important materials such as shades and tables. Lack of financial resources is a barrier to get started by most of the groups for the establishment of small businesses.

Handcraft is a common income generating activity for many of the female-headed households. However, there is no readily available market for their products. As such, they have to go to the markets in the localities to look for potential buyers, which can amount to high transport costs. Some women do domestic work in the host community, but they are paid less than 10 SDGs per day. Many of the women and girls are involved in firewood collection for sale and home consumption, and they usually face harassment as they have to travel more than 6 hours a day to collect firewood as most trees around the refugee camps have already been cut.

Youths mainly work as agricultural labours. As noted above, this is a seasonal activity, and the majority of the youth stay jobless for remaining months of the year. Youths indicated that they would like to have marketable technical skills training that can lead to self-employment. At the moment, only a few of them have such skills. As a result, youth have to depend for a large extent on casual or agricultural labour as the main source of income.

Coping mechanisms such as begging, borrowing, and selling food rations are used by the majority of the refugee households, especially when there is no seasonal agricultural work. The majority of refugees sell part of the food distributed by the WFP, mainly sorghum, to meet other needs such as charcoal, milling costs, NFIs and other food items such as sugar, milk, and onions. Many of the households borrow from their relatives and sometimes they have to cut down on the number of meals they eat per day.

3.4.2 Conclusion for livelihoods sector

The dependency on humanitarian assistance is not sustainable and may at some point be difficult to address if appropriate measures are not implemented to promote the livelihoods and self-reliance of the refugees and host communities. It is important to strengthen the technical and financial capacities of refugees to improve their livelihoods and enable them to accumulate assets that will

eventually lift them out of a cycle of continued dependency they are currently in. Whilst it is important for relief agencies to continue to support the most vulnerable, efforts should also be directed towards enhancing the livelihoods of the refugee population. The region is endowed with some natural resources which could be used to benefit the refugees and host communities by designing joint projects. The host communities have demonstrated interest to assist the refugees, and both the refugees and the host communities have a relatively good relation. Therefore implementing projects targeting both communities is considered as a step in the right direction. It is important to ensure that livelihood programmes include women as they constitute the majority of the refugee population that can work.

Widespread unemployment and use of marginal and unsustainable income generating activities in the refugee camps underlined the importance of increasing livelihood support aimed at households with underutilised labour. A dedicated livelihood assessment is required to explore potential opportunities, in particular, because projects with a public works components may be challenged by the limited opportunities for permanent infrastructure development, while activities aimed at building skills for income-generating activities may be limited because of weak potential economic demand.

To support the push for livelihood support, this assessment recommends that a comprehensive profiling exercise be explored by main providers of assistance. A common understanding of households-level vulnerabilities would facilitate a coordinated inter-sectorial response to humanitarian and early recovery needs.

3.4.3 Summary of Key Livelihood and self-reliance Recommendations

Key Issues	Recommendations	Location
<p>The dependency on assistance for food, shelter, water, etc. is not sustainable and may at some point be difficult to address if appropriate measures are not implemented to promote the livelihoods and self-reliance of the refugees and the host communities.</p> <p>There is widespread unemployment, and use of marginal and unsustainable income generating activities in the refugee camps.</p> <p>Most refugees are farmers, but they do not have access to land or tools to put their farming skills to good use.</p>	Facilitate the refugees to form associations or groups including members of the host community. For the case of fishing groups, they should be provided with a boat, fishing nets and hooks	All camps
	UNHCR and livelihood partners to support vocational training especially for youth and female refugees. Vocational training for youth in welding, tailoring, plumbing, electrical maintenance, repairs and maintenance of cell phones should be supported as a means of promoting self-employment and employment opportunities inside and outside the camps.	All camps
	Providing financial support and provision of start-up kits for the establishment of small businesses such as the sale of vegetables, the establishment of small restaurants, small shops, and grinding mills.	All camps
	UNHCR and partners to establish livelihood working groups or committees in the camps to coordinate the livelihood activities with the host community and	All camps

	main assistance providers, to advocate for the scale-up of income-generating activities, and to promote the awareness of the refugees about self-reliance.	
	UNHCR with livelihood partners to consider that a dedicated livelihood assessment required to inform better livelihood programmes such as the construction of fuel-efficient stoves, or promotion of share crop agriculture in collaboration with host communities using unused agricultural lands. Solutions can be complex as projects with public works components may be challenged by the limited opportunities for permanent infrastructure development, while activities aimed at building skills for income-generating activities may be limited by weak potential economic demand.	All camps

3.5 Health, Nutrition, WASH and Education

The JAM for the Health, Nutrition, WASH and Education theme was conducted by the team members of WFP, UNHCR, WHO, UNFPA, and partners from the 27th to 30th November 2016. The team was organised to include diverse expertise from both head and field offices. The team visited six field locations of refugee settlements in White Nile camps. This team has focused on health, nutrition, WASH and school situation of the camps.

The team has implemented a qualitative data collection method to verify issues identified during secondary data review. Accordingly, focused group discussions were undertaken with women, community leaders and elderly both within the refugees and the host communities, while key informant interviews were undertaken with health personnel, community members. The physical observation was undertaken by visiting different parts of health, education and WASH facilities. Transect walks were also utilised to observe different services in the camp. The overall process of field verifications was guided by checklist formulated during the preparatory work for this JAM.

3.5.1 Health Services

Health services are centralized with a health centre in each camp, and the majority of the curative health services are provided in the temporary infrastructure. The main causes of illness in all camps ranges from malaria and respiratory tract infections, followed by diarrhoea, intestinal worms, and skin diseases. The trends vary seasonally, such that during cold season respiratory tract infections are the most prominent while during the onset and last months of the rainy season malaria and rainy season diarrhoea are the most commonly found. There were no seasonal disparities among intestinal worms and skin diseases, which are affecting mainly children throughout the year.

The health centre in Kashafa ran by Médecins Sans Frontières (MSF) Spain serves as the primary referral centre for all camps on the western side of the river White Nile. In addition, the centre serves as stabilisation centre for the severely acutely malnourished treatment for an inpatient care

and stabilisation. The ambulance services and treatment capacity of the medical personnel in Kashafa have led many refugees to self-refer to the centre. The rest of the camps health program are run by SRCS, the Ministry of Health, global health and Adventist Development and Relief Agency (ADRA). Medical referral for further treatment are arranged at Jabalain and Kosti hospitals. However, transportation from the camps to these facilities are the main challenge.

Despite efforts to provide all range of primary healthcare services in the camps, the temporary structure is, in general, sub-standard with insufficient space and light. Even essential facilities such as hand washing are lacking. The capacity of the infrastructures to provide privacy for patients is minimal. Additionally, the inpatient medical ward in all locations is not segregated by gender and age.

3.5.2 Summary of Key Health Recommendations

Key Issues	Recommendation	Location
Health services operates substandard: (Space and conditions of facilities: underequipped, shortages and quality concerns of staff, makes persons of concerns under the risks of public health	Health centres to be standardised include waiting space, appropriate consultation rooms, segregations of Out Patient Department based on gender and age. UNHCR and WFP to support partners financially and logistically for the standardisation of service facilities in 2017/18.	Except for Kashafa camp all locations. In Kashsafa MSF fulfil the minimum required resources.
	UNHCR, WHO, UNFPA and UNICEF to integrate and plan together for the joint inventory of facilities and address staffing, the missing medical items and ensure that regular supply of medicaments through 2017-18.	All locations
	UNHCR and WHO together with government and non-government partners to plan together and include host communities during resource allocations, in order to improving the provision of health services in the camps.	All locations
	UNHCR, UNICEF and WHO to discuss with the Ministry of Health and use permanent health post structure in Dabat boisin and Jouri, to provide services for both host community and refugees.	All locations

3.5.3 Nutrition

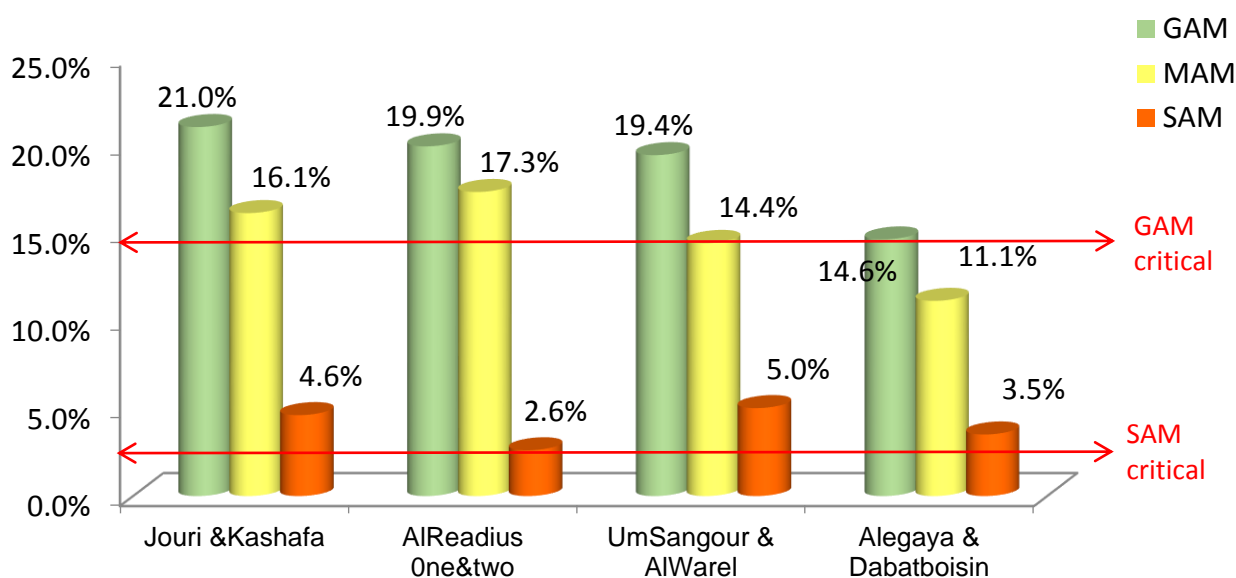
The on-going nutrition program in all camps comprises curative services for the treatment of severely and moderately acute malnutrition and protection or nutritional supplements for children 6 to 59 months of age, pregnant and lactating women for six months after delivery. Though the technical capacity and adherence to the WHO 2006 guidelines vary among camps, all camps in principle are implementing CMAM to address nutritional needs of persons with concerns. Nutrition services and activities in the camps at the time of the surveys are many. The prevention program Blanket Supplementary Feeding Program (BSFP) provided by WFP is available to all children 6-59

months and pregnant women and Lactating mothers. The nutritional product used for this program is Super cereal plus, and distributions are undertaken with the general food ration distribution at the rate of 6 kg per person per month. Targeted Supplementary Feeding Programs (TSFP) are provided by WFP for the treatment of Moderately Acute Malnutrition (MAM) by using Ready-To-Use Supplementary food (Plumpy-supp), while Provided by UNICEF, therapeutic feeding program (TFP) are targeted for the treatment of Severely Acute Malnutrition (SAM) through the outreach model by using Ready-To-Use Therapeutic Food (Plumpy-nut). The treatment of SAM with medical complication are corrected at stabilisation centres, while the MSF SC at Kashafa camp provides services for the six camps in the western part of Nile River. The Jabalain and Kosti hospitals provide SC services for the two camps in the eastern part. Though no pipeline break was reported from either of the agencies, the use of the nutritional product mainly for the Super cereal plus considered as the main challenge. Sharing the product among family members and selling in the local market reported problems.

Periodic mass MUAC screening of children 6-59 months are undertaken every month at the health centre with the admission cut-off point of <12.5 cm. During the time of the survey, some of the camps ceased this program due to budget constraints for the payment of outreach workers.

UNHCR in collaboration with WFP, UNICEF, SRCS and State Ministry of Health carried out Standardised Expanded Nutrition Surveys (SENS) in White Nile camps of South Sudanese refugees during the 26 September to 20 October 2016. The overall aim of the survey was to assess the general health and nutrition status of refugees, morbidities and mortality indices and formulate workable recommendations for appropriate nutritional and public health interventions. According to the survey results, the prevalence of global acute malnutrition (GAM) is above 15.0 percent, and SAM above 2.0 percent, which is the critical situation as per the 2006 WHO cutoff point for the interpretation of acute malnutrition. The GAM as per the survey result was as follows:

Figure 4: Prevalence of Global Acute Malnutrition in children 6 -59 months by WHO 2016 Weight-For-Height Z-score in White Nile camps (SENS, 2016)

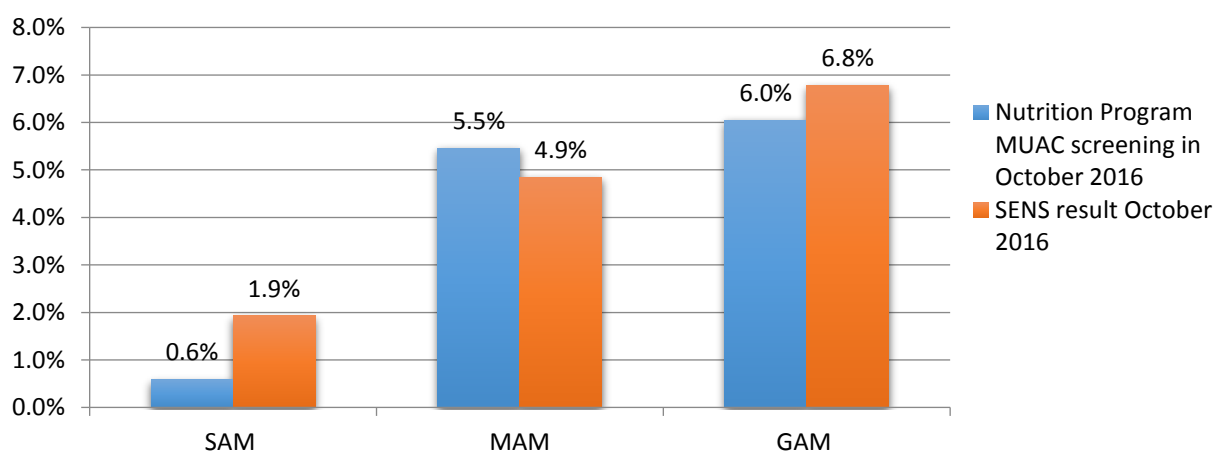


(Source: UNHCR's Standardised Expanded Nutrition Survey (SENS) results in White Nile Refugee Camps-Sudan: December 2016)

The nutrition programs in all locations are using MUAC screening for nutritional screening and follow-up. The overall nutritional situation by the MUAC indices, the MUAC screening during the month of October 2016 and the SENS result indicating a similar serious situation, as per the

national nutrition survey protocol. Comparisons of MUAC screening and SENS findings are illustrated in the below figure.

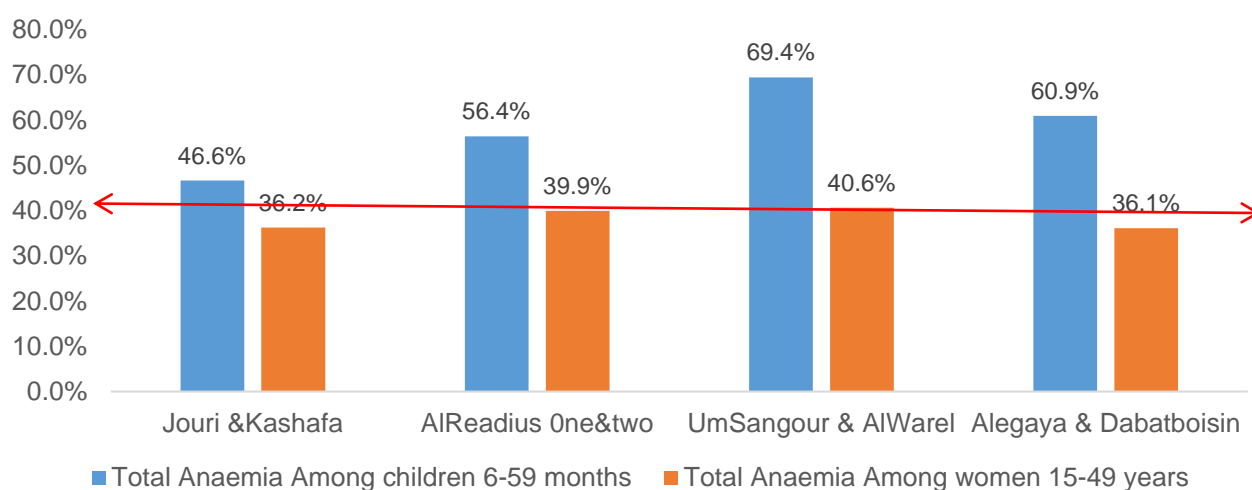
Figure 5: Prevalence of Global Acute Malnutrition in White Nile camps by MUAC screening and SENS results



(Source: UNHCR’s Standardised Expanded Nutrition Survey (SENS) results in White Nile Refugee Camps-Sudan: December 2016)

Micronutrient deficiencies are responsible for most childhood deaths and often co-occur with stunting and/or wasting. Micronutrient deficiencies weaken the immune system, leaving those affected vulnerable to disease, and when unresolved they ultimately result in death. According to the 2016 nutrition survey, the prevalence of anaemia among children (6-59 months) ranges from 46.6 percent to 69.4 percent above 40 percent of public health significance in six camps, and the prevalence among non-pregnant women of reproductive age (15-49 years) ranges from 36.1 percent to 44.6 percent in all camps, with only two camps above 40 percent.

Figure 6: The prevalence of anaemia among children 6-59 months and women 15-49 years in White Nile camps (SENS, 20156).



(Source: UNHCR’s Standardised Expanded Nutrition Survey (SENS) results in White Nile Refugee Camps-Sudan: December 2016)

3.5.4 Summary of Key Nutrition Recommendations

Key Issues	Recommendation	Location
<p>Nutrition services operates substandard: (Space and conditions of facilities underequipped, shortages and quality concerns of staff, number of outreach workers, key messages, program integrations, defaulter rate and recurrence of malnutrition) putting persons of concerns in greater risks of malnutrition</p>	<p>Nutrition facilities to include waiting space, appetite test place, appropriate consultation and anthropometric measurement space, and store for nutritional products. UNHCR and WFP to support partners financially and logistically for the standardisation of service facilities in 2017/18.</p>	<p>All locations</p>
	<p>Nutrition activities mainly SAM, MAM and BSFP for children aged 6-59 months and PLW, to be integrated within project implementing partners to enforce accountability and ensure program quality in all locations. UNHCR and WFP to consider this point during project agreement with partners.</p>	<p>All locations</p>
	<p>A clear set of CMAM protocols disseminated in all camps and concerned nutrition and health staffs should be provided with CMAM component training and further strengthened through field monitoring and on the job training. UNHCR, WFP, and UNICEF to closely work with the Ministry of Health and concerned partners for the facilitation of training and enforcement of protocols in 2017/18.</p>	<p>All locations</p>
	<p>Standardise key messages for the outreach workers. Project implementing partners together with UNICEF, UNHCR, WFP, the Ministry of Health and concerned partners to develop and agree on key messages and ensure that the key outreach strategies put in place in 2017/18.</p>	<p>All locations</p>
	<p>UNHCR, UNICEF and Nutrition partners to use the UNHCR anaemia reduction strategy and allocation of resources for the special nutritional product in the refugee camps to tackle the problem.</p>	<p>All locations</p>
	<p>UNHCR, UNICEF and Partners to Strengthening support and promotion of IYCF to reduce malnutrition rate anaemia to an acceptable level.</p>	<p>All locations</p>
	<p>All nutrition partners to strengthen nutrition screening, detection (active case finding), and referral to the nutrition programme.</p>	<p>All locations</p>
	<p>All partners to strengthen monitoring of their programme results.</p>	<p>All locations</p>

3.5.5 WASH

White Nile camps are situated adjacent to the River White Nile, two camps in the Eastern part and six camps in the west. The water in all camps is supplied by the river. The quality and quantity of water are reportedly in the acceptable situation. Water is regularly collected from the river, treated and pumped to distribution points which are fixed in the appropriate location, and easily accessed by the community.

Although hygiene promotion varies across the camps, all locations have family shared latrines close to their shelters. However, the presence of open defecations in the surroundings of the camps is an indication of an inadequate number of latrines constructed. Additionally, the assumption is also that despite the designs might not be culturally suited to the experience or lack of knowledge on the utilizations.

3.5.6 Summary of Key WASH Recommendations

Key Issues	Recommendation	Location
<ul style="list-style-type: none"> • Water delivery interruptions and inadequacy • Water management at household level • Jerry cans are not adequate to collect the daily water requirements • Open defecations • Waste management • General concern on personal and environmental sanitations. 	Water delivery system to be checked and appropriately established for all camps. UNHCR and UNICEF to coordinate with project implementing partners and ensure that water delivered to all people in timely fashion and without interruptions starting the beginning of 2017. UNHCR and UNICEF to closely supervise and monitor WASH activities.	All locations
<ul style="list-style-type: none"> • Contributes to general public health concerns of community residing in the camp and the surroundings 	UNHCR and UNICEF to organise and carry out Knowledge, Attitude and Practices Survey in all camps in 2017 and share the outcome and recommendations for the concerned agencies to address issues accordingly.	All locations

3.5.7 Education

All locations have education facilities both in the camp and host community villages. The facilities are fairly equipped with the necessary educational materials, and rooms are adequate to absorb the enrolled children. There were no reports of significant variations in terms of enrollment of boys and girls. However, dropouts for older children are high during crop harvest time. Students both boys and girls leave school and join labour work in the big farms to earn income to support their families.

Most of the schools visited in the camps lack appropriate toilet facilities, and some of the latrines are abandoned due to open defecations in the rooms. Some of the latrines lack adequate gender segregations and access for the children with specific needs. The school in Dabat Bosin lacks water facilities.

According to the regular UNHCR standard indicator, about half of school-aged children are not yet enrolled, and yet there is overcrowding in all schools (some schools working two shifts with the same number of teachers). Based on the bellow chart, there is still a long way to go on education in White Nile.

Figure 7: Percentage of Girls Enrolled in primary education, South Sudanese Refugees in White Nile

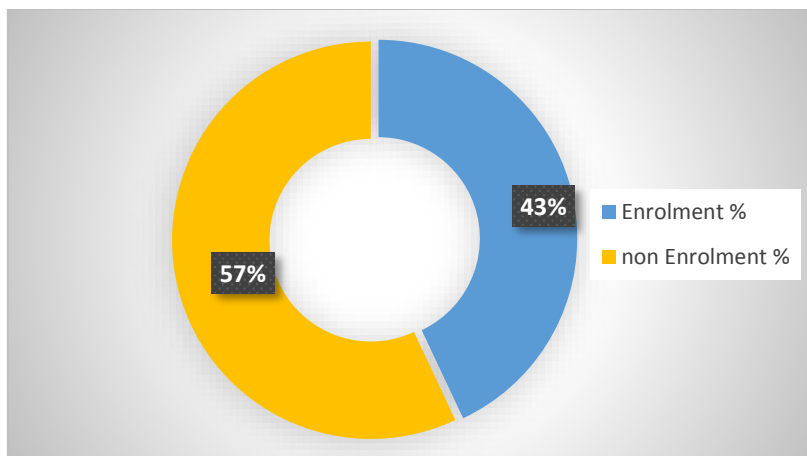
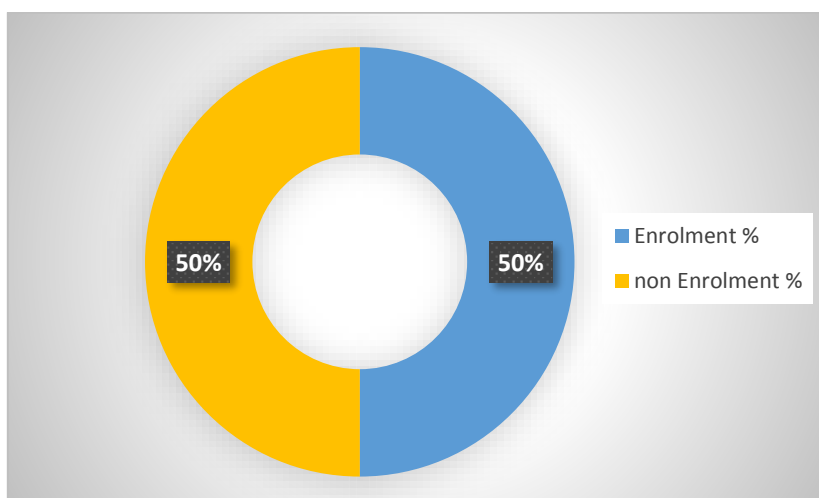


Figure 8: Percentage of boys Enrolled in primary education, South Sudanese refugees in White Nile



Some of the Refugees parents do not agree with the Sudanese curriculum. Schools in the refugee's sites have better enrollment, but they lack school seating, books, uniforms, water and latrines.

As part of the Education Assessment recommended, partners shall keep into consideration minimum requirements for School Meals, and shall take note of what actions might be needed.

3.5.8 Summary of Key Education Recommendations

Key Issues	Recommendation	Location
<p>School dropouts main concern for older children during seasonal agricultural activities</p> <p>Facilities lack basic services, such as water facility and latrines.</p>	<p>A joint assessment of education to be carried out during 2017. UNHCR, WFP and UNICEF together with partners to organise and formulate a detailed action plan for the 2017/18 operation, including a focus on identifying and addressing basic needs.</p>	<p>All camps</p>
	<p>A joint assessment (WFP, UNHCR and UNICEF) to be conducted in relation to the feasibility of implementing school meals and make programmatic decisions based on the findings.</p> <p>If and when the lack of necessary infrastructures in schools are resolved, and following the recommended feasibility study, implementation of school meals might be considered according to needs.</p>	<p>All locations</p>

3.6 Energy and Environment

Cooking fuel has not been part of the humanitarian assistance provided to beneficiaries. The burden of finding cooking fuel rests on the women and children despite a number of energy and environment related interventions provided by UNHCR, and FAO, leaving a tremendous gap on the ground.

UNHCR supplies part of the refugee population with clean cooking energy, but still, 90 percent of refugee households depend completely on firewood (wood and charcoal), of which 60-80 percent of the refugees is collecting from locations needing 6-13 hours for the round trip. Increased incidents to sexual harassments of refugees women and children might be attributed to these long distance travelled in search of firewood for domestic consumption. Incidents might be linked to competition over scarce natural resources, causing hostility of the communities towards refugees collecting firewood. Additionally, 20-40 percent of the refugees purchase wood and/or charcoal by exchanging 30 percent of their food ration.

Regarding the utilisation of firewood as fuel, 90 percent of the refugees use 3-stone stoves for cooking. This causes health risks arising out of inhalation of toxic and poisonous fumes during the burning of biomass fuels, which remains alarming. Lack of ventilation inside the house also leads to contamination with Indoor Air Pollution. Normally 3-stone stoves are used inside the shelter to avoid the wind outside the house, which increases the risk of fire incidents within the houses. The introduction of the improved stoves is less than 3 percent, and alternative energy sources have not been used.

The presence of refugees has contributed to environmental degradation in and around camp locations. UNHCR, however, has also been engaged in environmental programmes in the region, including reforestation, energy saving, collaborative forest management, capacity building and awareness raising programmes. UNHCR developed Safe Access to Fuel and Energy Strategy (UNHCR SAFE- Strategy) in 2016 for White Nile state highlighting key achievements and recommendations for better management of environmental and natural resources.

Energy used for lighting at night is 100 percent from torches that consume batteries every month. These are necessary, as in the dark incidents of harassment faced by women and or children during the nighttime increase.

A review of the current situation of the environment around the camps raises concerns, as there is no tree plantation around the camps, a limited number of trees were planted in some of the camp management areas. Waste is collected and transported in regular time. Additionally, latrines are beyond capacity and locations are usually a little far away for many of the women

- In Alagaya main camp, the houses are located in proximity, no ventilation inside the house, contaminated with Indoor Air Pollution.

3.6.1 Summary of Key Recommendations for Energy and Environment

Key Issues	Recommendation	Location
Most refugees purchase fuel by exchanging a large proportion of their food assistance ration	Integrate energy into emergency preparedness and response.	All camps
Refugees depend completely on firewood and charcoal for their fuel needs	Improve access to efficient stoves and sustainable fuel for cooking.	
Protection concerns for women and girls during firewood collection	Improved stoves, the introduction of LPG gas stoves and ethanol for cooking).	All camps
Most refugee households use 3-stone stoves for cooking which are used inside of shelters, resulting in health issue, an increase of fire incident risk, and an injury due to the over-crowded shelter.	Improve lighting using appropriate renewable energy for refugees and host communities (Solar electrification for the services in the camps, solar streets lights for safe movements of women and children during the nights)	All camps
Competition for resources result in tension between host communities and refugees	Rehabilitate and manage forests around the camps for the dual purpose of fuel provision and environmental protection (Forest rehabilitation and plantation surrounding the refugee camps).	All camps
Dependency on firewood and construction results in pressure on the natural environment	Implement peaceful co-existence activities while using shared resources. (Support the implementation of energy and agro-	All camps

Key Issues	Recommendation	Location
	products project, through seeds revolving fund to create joint activities between the refugees and the host communities for peaceful co - existence and their and) mutual benefits	

3.7 Logistics, Warehousing, Road, Shelters and Non-Food Items (NFIs)

The mission revealed various challenges such as road inaccessibility during the rainy season, insufficiency of storage capacity in three of the camps situated at the western side, and inadequacy of shelters materials and NFI compared to the actual needs of households of big size. It is also explored the possibility of other options and opportunities. The team also used the secondary data for the analysis of the situation to determine the likelihood of the impact if any, and the way forward. Briefly, the gaps, the needs, the challenges and opportunities identified during this assessment will constitute the baseline for addressing these issues in the future.

3.7.1 Road accessibility

The roads linking western camps with the main dispatch origin (i.e. Kosti), are rough roads and will be cut off during the rainy season for almost three to four months. Thus, the chances of serving the camps smoothly using the normal trucks during this period are low if not none, and this makes the opportunities for immediate response to emergencies very limited. Gravel road linking Khor Al Waral with Um Sangour camps, of about eight km in distance, is under construction including a small bridge and two culverts, and so far, the work on five kilometres is in progress. There is another option of serving these camps through the eastern part using paved road between Kosti and Al Jabalain, utilising government ferry for crossing the river. Based on the information provided, the capacity of this ferry could accommodate, 12 light vehicles, or four empty trucks, or two trucks with their loads. However, this subject to the availability of funds for overhauling of this asset but so far, no information on this. If this is confirmed, this will give the opportunity of accessing the western camps through this leg, and this will reduce the impact of road inaccessibility.

It is important to indicate that there was no issue of lack of transport capacity for serving the western camps during the dry season, but this capacity will be severely tested by inaccessibility during the rainy season, which makes the truck owners reluctant to send their trucks through roads at this time. In order to achieve year-round access, considerable efforts into road rehabilitation and road upgrading would be necessary.

3.7.2 Warehouses Capacities

All camps are provided with food storage capacities by WFP, while only 3 three of the camps situated at the western areas are provided with NFI storage capacity by UNHCR (Khor Al Wareh, Um Sangour and Al redais 2 - below table illustrate details). Nevertheless, e problems were observed during the assessment, as the floors of wiik halls are not concrete or back-filled and compacted floors. Therefore, the high humidity and rats' and crickets infestation constitute high risk towards stored

food damage or quality deterioration. In addition, it was observed that some of the rub halls canvases were damaged (torn), which will contribute to a sprinkling of rainwater into the rub halls and this would subsequently affect the commodities. The total storage capacity at these camps is 4,727.5 mt (3,714.25 mt WFP and 1013.25 mt UNHCR), but it is important to note that the storage capacities in three of the camps situated at the western part are limited compared to the needs if pre-positioning has to be considered. Safety equipment such fire extinguishers were all expired and needed re-filling. The storage facilities are equipped with pallets and plastic sheets. However, need for the reconstitution materials for the purpose of loss mitigation measures was observed.

WFP and UNHCR have adequate storage capacities in Kosti that could accommodate the needs of building stocks for meeting pre-positioning requirements for three to months for the western camps. If the caseload is increased and the needs exceed the current capacity, and additional storage capacity is needed, the possibility of getting the required capacities is also feasible.

WFP Storage Facilities:

#	Camps	GPS Coordinates	capacity (mt)	Capacity (mt)
1	Jourie	N 12 28 332 :E 032 47 271	24x10 (1) wiik hall	337.5
2	Al Kashafa	N 12 31 115 :E 032 47 037	32X10(1) wiik hall	450
3	Al Redes 1	N 12 35 432 :E 032 46 632	24X10(2) wiik hall	675.5
4	Al Redes 2	N 12 35 907 :E 032 45 919	24X10 (1) &32X10(1) wiik halls	787.75
5	Um Sangoor	N 12 39 723 :E 032 44 739	24x10 (1) wiik hall	337.75
6	Khor Al warel	N 12 42 998 :E 032 44 473	32X10(1) wiik hall	450
7	Alagaya	N 12 21 940 :E 12 48 113	24x10 (1) wiik hall	337.75
8	Dabat Bosin	N 12 22 45 :E 032 48 244	24x10 (1) wiik hall	337.75
Total			10 Wiik halls	3,714.25

UNHCR Storage Facilities:

#	Camps	GPS Coordinates	capacity (mt)	Capacity (mt)
1	Khor Al Warel	N/A	24x10 (1) wiik hall	337.5
2	Um Sangour	N/A	24X10(1) wiik hall	337.75
3	Al Redais 2	N/A	24X10(2) wiik hall	337.75
Total			3 Wiik halls	1,013.25

3.7.3 Shelters

Overcrowding especially in Alagaya, and insufficiency of the shelters' materials allocated for the construction of the household shelter were the main issues raised by both women and leaders during the FGDs and some of the KIIs in all camps visited by the teams. In some camps, the leaders indicated that the inadequacy of shelters materials contributes to the construction of weak shelters that are not strong enough to resist any strong wind, last long or protect the household from the rainwater as it sprinkles through the shelters' sides (photos express the comparison between the two set-ups).



Moreover, some of the shelters are made of materials affected by weevils, termites and rats that contribute to lessening the lifespan of the shelters, and this may lead to its collapse. In Alagaya congested camp, ventilation is one of the major concerns among the refugees and this in addition to the narrowness of passages and spaces between shelters increases the risk of firebreaks and minimise the chance of extinguishing them on time. Except in Khor Al Waral camp, in all the other camps, women, leaders and camps managers, indicated the need for complete shelters' renovation before the onset of the rainy season as essential, and this was also observed by team members through transect walks. On the same note, it is crucial to indicate that the level of the shelter's floors is equated with the level of the surface, and this will lead to the leak of rainwater inside the shelter when it rains, and this increases the humidity, which might contribute to the creation of a pest friendly environment. This will expose the household members to the risk of insects and pests bites and attacks that create unnecessary disturbances to the household members especially children, also associated with health risks linked with these bites. The need for the construction of a separate kitchen and shelters to be used as bathrooms was regarded as one of the essential needs, instead of using part of the shelters for covering these services.

New arrivals were reported in five of the camps visited by the team, but they did not receive shelters materials yet because the registration process was not finalised. These families were hosted by some of their kinships, despite the fact that the availability of shelters materials and NFI in some of these camps was observed and this could meet the needs of some of these households.

3.7.4 Non-Food Items (NFIs)

South Sudanese refugees often arrive in reception centres with only a few clothes and no other belongings. Once accommodated in the reception centres, they are provided with a set of non-food items (NFIs) which includes basins, plastic buckets, and blankets, sleeping mats, jerry cans and kitchen sets. These items are essential, yet UNHCR is always faced with the challenge of meeting the needs of a large number of new arrivals.

Insufficiency of NFIs allocated for the household compared to the actual household size needs, associated with the poor quality of some items are some of the major issues addressed by both women and leaders in all of the camps visited during this assessment mission. It was indicated that the household regardless of the size receives these numbers: two blankets, one plastic jerry can (18 litres), two sleeping mats of 2x1 meters, two mosquito nets. Gender or age are also not taken into consideration, and this creates some serious issues for any household size that exceeds four members.

On top of that, it is important to highlight that due to insufficiency of NFIs such as the sleeping mats, blankets, and mosquito nets for the members of the big household size, the adult family members leave the blankets and the mosquito nets to the young children and the elders and this has an impact on the other family members. In all camps visited, the refugees reported the presence malaria. While they did not link this to the insufficiency of mosquito nets, the team has serious concerns regarding attribution. Moreover, it was mentioned that the household receives only one jerry can of (18 litres) capacity that is not sufficient for the provision of daily water quota. In addition, the daily water supply facility has two schedules a day, one in the morning and the other in the evening that means when the family ran out of water between the two schedules, no other options are available. In some camps, the refugees did not receive buckets and washing basins, which are essential for the family despite. Still, they are part of the NFI package.

Concerning the kitchen set, the refugees' preference is the aluminium type, the increase in the number and size of both the dishes and cooking pots are some of the refugees' concerns because traditionally the family members eat together and not individually. Additionally, some of the refugees requested the distribution of plastic buckets for the storage of the flour to protect it from any insects' infestation. Moreover, they highlighted, there is a high need for buckets for bathing and basin for clothes washing too.

The needs for the distribution of NFI for the new arrivals could be considered as one on the top priorities that need to be addressed as soon as possible. Below table illustrated the caseload assisted by UNHCR.

Shelters Materials

Location	HH assisted	Individuals	Plastic Sheet / 2 PC/ HH	Bamboo 28 PC/ HH	Korki/ 23 PC/HH	Y Pole/9 PC/HH	Read Rush/ 8PC/HH	Grass Mat/ 8 PC/HH	Sisal Rope/ 1 kg/HH
Jourie	2,460	9,483	4,920	68,880	56,580	22,140	19,680	19,680	2,460
Al kashafa	3,026	12,899	6,052	84,728	69,598	27,243	24,208	24,208	3,026
Alagaya	4318	15,288	8,636	120,904	99,314	38,862	34,544	34,544	4,318
Dabat Bosin	815	3,001	1,630	22,820	18,745	7,335	6,520	6,520	815
Al redains 1	2,914	11,286	5,828	81,592	67,022	26,226	23,312	23,312	2,914
Alredais 2	4,452	18,567	8,904	124,656	102,396	40,068	35,616	35,616	4,452
Um sangour	1,632	5,019	3,264	45,696	37,536	14,688	13,056	13,056	1,632
Khor al warel	2,016	8,415	4,032	56,448	46,368	18,144	16,128	16,128	2,016
Total	21,633	83,958	43,266	605,724	497,559	194,726	173,064	173,064	21,633

Other NFIs

Location	HH served	Individual	Mosquito Net	Kitchen Sets	Jerry cans	Blankets	Sleeping Mats
Jourie	2,460	9,483	4,920	2,460	2,460	4,920	4,920
Al Kashafa	3026	12,899	6,052	3,026	3,026	6,052	6,052
Alagaya	4318	15,288	8,636	4,318	4,318	8,636	8,636
Dabat Bosin	815	3,001	1,630	815	815	1,630	1,630
Al redais 1	2,914	11,286	5,828	2,914	2,914	5,828	5,828
Al redais 2	4,452	18,567	8,904	4,452	4,452	8,904	8,904
Um Sangour	1,632	5,019	3,264	1,632	1,632	3,264	3,264
Khor Al Waral	2,016	8,415	4,032	2,016	2,016	4,032	4,032
Total	21,633	83,958	43,266	21,633	21,633	43,266	43,266

3.7.5 Summary of Key Recommendations for Logistics, Warehousing, Road, Shelters and NFIs

Key Issues	Recommendations	Locations
Road accessibility:		
<p>Access to camps: Road inaccessibility during the rainy season coupled with the limited number of 6x6 trucks for accessing the six camps situated at the western part.</p> <p>Interruption of distribution cycles at the right time for the camps situated at the western side.</p> <p>Insufficiency of storage capacities at some of the camps</p>	<ul style="list-style-type: none"> Building up adequate stocks at Kosti warehouse quite in advance to facilitate pre-positioning process. 	Kosti
	<ul style="list-style-type: none"> Mobilisation of adequate transport capacity for the timely delivery of these requirements to western camps. 	Western camps
	<ul style="list-style-type: none"> Pre-positioning of adequate stocks for covering three or four months' requirements to be made to the camps situated at the western part before the onset of the rainy season. 	Western camps
	<ul style="list-style-type: none"> Assessing the possibility of overhauling the big ferry to be used for accessing the western camps through Kosti- Al Jabalain paved road. Assignment of an expert for assessing the needs and budget estimation is required. 	Kosti-Al Jabalain
Warehouses capacities:		

<p>Major rat and termite infestations of stores holding shelter materials, NFI, food items including at household level.</p> <p>Warehouse Management: levelling & fencing, and rats infestations.</p>	<ul style="list-style-type: none"> • Immediate deployment of pest management expert to assess the issues of rats and crickets infestation of the storage and development of action plan accordingly. 	All camps
	<ul style="list-style-type: none"> • Increasing the storage capacity in Joury, Kashafa and Al Redeas 2 camps to accommodate at least three (3) months requirements by erecting additional wiik halls (32X10) one at each location. 	Western camps
	<ul style="list-style-type: none"> • Deployment of an expert to assess the possibility of the construction of concrete floors or back-filled, and compacted floors, (50 centimes elevation above the normal surface level is recommended) for all storage facilities including UNCHR wiik halls to reduce the humidity and rats' infestation. 	All camps
	<ul style="list-style-type: none"> • Construction of proper drainage system for all storage facilities to reduce the risk of water affecting the MSUs peripheries and subsequently stored food commodities. 	All camps
	<ul style="list-style-type: none"> • Construction of chain linked fence and doors for all WFP wiik halls to secure the assets from any damage. 	All camps
	<ul style="list-style-type: none"> • Replacement of complete two affected canvases in Dabat Bostin and Um Sangour that to be made after the construction of the fence. 	All camps
Shelters:		
<p>Overcrowding and inadequacy of shelters: materials and NFI for households. Shelters materials affected by termites, and rats in some of the camps</p>	<ul style="list-style-type: none"> • Immediate distribution of shelters materials for the new arrivals to enable them to have their shelters before the peak of winter season. 	All camps
	<ul style="list-style-type: none"> • Renovation of affected shelters in all camps except Khor Al Waral as it was established recently. Assignment of teams to determine the number of the affected shelters in all the seven camps. 	Western camps
	<ul style="list-style-type: none"> • Increase the shelters materials allocated for construction of household shelter especially the plastic sheet from two to four pieces to enable the household to reinforce the side of the shelters to protect rainwater sprinkling through them. 	All camps
	<ul style="list-style-type: none"> • Elevation of the level of the shelter's floor by at least 30 centimetres of gravel to reduce the risk of water seeping inside and this will subsequently reduce humidity. 	All camps

	<ul style="list-style-type: none"> • Construction of separate kitchen and a small shelter for bathing instead of performing these activities in the same shelters, as this might create a risk of fire and increase of humidity. 	All camps
	<ul style="list-style-type: none"> • Distribution of shelters material to be made on an annual basis. 	All camps
NFI:		
	<ul style="list-style-type: none"> • Immediate distribution of blankets, mosquito nets and mattresses to all camps including the new arrivals before the peak of winter season. 	All camps
	<ul style="list-style-type: none"> • Replace small mattresses with larger ones, that could accommodate two individuals. 	All camps
	<ul style="list-style-type: none"> • Reviewing NFI distribution criteria, to consider the household size, gender and age instead of the current distribution practice that is based on the household. 	All camps
	<ul style="list-style-type: none"> • Based on the refugees' preference, aluminium cooking sets to be provided instead of nickel cooking sets, as the lifespan of the aluminium is long compared to the nickel. 	All camps
	<ul style="list-style-type: none"> • Increasing the number of the dishes to four instead of three and two medium sizes, two small. 	All camps

4. Conclusions and Summary of Recommendations

Key recommendations of the current JAM 2016 will be translated into a Joint Plan of Action (JPA) between UNHCR and WFP covering the years 2017/18. Key recommendations will be divided between short and long term actions, based on financial requirements and agency capacity.

4.1 Key recommendations of the 2016 JAM are summarised in the bellow table.

Recommendations	Action by	Support from
<i>Food Security and Food Assistance</i>		
<p>The JAM recommends WFP and its partners to continue the food assistance in all locations as per the ongoing food rations and distribution cycle.</p> <ul style="list-style-type: none"> · Introduce Biometric registration for the effective use of resources 	WFP, and partners	UNHCR
<p>Explore the possibility of providing cooking fuel, milling vouchers, or provision of milling machines in each camp</p> <ul style="list-style-type: none"> · Conduct assessment to explore the possibility of CBT intervention. WFP to do a full-fledged cash based transfer assessments for food assistance at a later stage 	UNHCR and WFP	Partners
<p>Increase operational efficiency for registration and transportation of new arrivals to the designated locations in a short duration to facilitate delivery of services in a timely manner.</p> <ul style="list-style-type: none"> · Minimise new arrivals length of stay at reception centre (3-7 days) 	UNHCR and partner (SRCS/COR)	Sudan government (COR) and White Nile State
<p>A UNHCR/WFP Camp Registration Standard Operating Procedures should be developed to clarify the process by which new arrivals are received, registered and provided with food assistance. The SOP will contribute to achieving a speedier registration and assistance process.</p>	UNHCR, WFP and SRCS	
<p>Study the possibility of doing household level targeting of food assistance in order to distinguish between households who require full rations, half rations or no rations.</p> <p>To save costs and minimise duplication, the household level targeting exercise could also be utilised to distinguish recipients of unconditional food assistance from recipients of conditional assistance.</p> <p>The potential of increased cost-effectiveness of vulnerability-based targeting would have to be balanced against the substantial cost of conducting a household-level targeting exercise.</p>	UNHCR, WFP and partners	Government to support access to livelihood opportunities

<p>Increase livelihood support to increase self-reliance amongst refugees and reduce their dependency on food distributions.</p> <p>-Explore the feasibility of implementing conditional forms of food assistance such as Food Assistance for Asset (FFA) that can contribute to building the resilience of communities through the promotion of sustainable livelihoods and creation of community and households assets. Integration of this approach with UNHCR's livelihood programme is encouraged.</p>	UNHCR and partners	WFP
Health, Nutrition, WASH and School Feeding		
Health and nutrition centres to be standardised: include waiting space, appropriate consultation rooms, segregations of OPD based on gender and age. UNHCR (health) and WFP (Nutrition and food security) to support partners financially and logistically for the standardisation of service facilities in 2017/18	UNHCR, WFP and partners	WHO, UNICEF and the Ministry of Health
Integrate and plan for the joint inventory of facilities and address staffing, the missing medical items and ensure that regular supply of medicaments	UNHCR to arrange	Health and Nutrition technical advisory group (TAG) and sector coordination
UNHCR and WHO together with government and non-government partners to plan together and include host communities during resource allocations, in order to improving the provision of health services in the camps.	UNHCR to lead	WHO, UNFPA and UNICEF to provide support
Discuss with the Ministry of Health and use permanent health post structure to provide services for both host community and refugees.	UNHCR to lead	WHO, UNICEF and the Ministry of Health
Nutrition		
<p>Nutrition activities mainly SAM, MAM and BSFP to be integrated within project implementing partners to enforce accountability and ensure program quality in all locations. UNHCR and WFP to consider this point during project agreement with partners.</p> <ul style="list-style-type: none"> · The distribution of BSFP to be integrated with nutrition program instead of distributing resources together with general food ration. · Review to be developed at Kosti level. 	WFP and UNHCR	Food distribution and nutrition partners

A clear set of CMAM protocols disseminated in all camps and concerned nutrition and health staffs should be provided with CMAM component training and further strengthened through field monitoring and on the job training. UNHCR, WFP, and UNICEF to closely work with the Ministry of Health and concerned partners for the facilitation of training and enforcement of protocols in 2017/18.	UNHCR to lead	WFP, UNICEF and the Ministry of Health
Standardise key messages for the outreach workers. Project implementing partners together with UNICEF, UNHCR, WFP, the Ministry of Health and concerned partners to develop and agree on key messages and ensure that the key outreach strategies put in place in 2017/18.	UNHCR and WFP	UNICEF and the Ministry of Health
UNHCR, UNICEF and Nutrition partners to use the UNHCR anaemia reduction strategy and allocation of resources for the special nutritional product in the refugee camps to tackle the problem.	UNHCR and UNICEF	Nutrition partners
UNHCR, UNICEF and Partners to strengthen support and promotion of IYCF to reduce malnutrition rate anaemia to an acceptable level.	UNHCR and UNICEF	Nutrition partners
All nutrition partners to strengthen nutrition screening, detection (active case finding), and referral to the nutrition programme.	UNHCR, UNICEF and WFP	Nutrition partners
All partners to strengthen monitoring of their programme results.	UNHCR, UNICEF and WFP	Nutrition partners
WASH		
Water delivery system to be checked and appropriately established for all camps. · Implementing partners to ensure that water delivered to all people in timely fashion and without interruptions. UNHCR and UNICEF to closely supervise and monitor WASH activities.	UNHCR and UNICEF	WASH partners
Organise and carry out Knowledge, Attitude and Practices (KAP) survey in all camps. · Share the outcome and recommendations for the concerned agencies to address issues accordingly.	UNHCR to lead	WASH partners
Education		
A joint assessment of education to be carried out during 2017. UNHCR, WFP and UNICEF together with partners to organise and formulate a detailed action plan for the 2017/18 operation, including a focus on identifying and addressing basic needs.	UNHCR	UNICEF

<p>A joint assessment (WFP, UNHCR and UNICEF) to be conducted in relation to school meals feasibility study and make decisions based on the findings.</p> <p>If and when the lack of necessary infrastructures in schools are resolved, and following the recommended feasibility study of the school meals programme, its implementation might be considered according to the needs.</p>	<p>WFP to lead for school meals</p>	<p>UNICEF</p>
<p><i>Livelihoods and self-reliance</i></p>		
<p>Facilitate the refugees to form associations or groups including members of the host community. For the case of fishing groups, they should be provided with a boat, fishing nets and hooks</p> <ul style="list-style-type: none"> · Establish livelihoods working group or committees in the camps to coordinate the livelihoods activities with the host community and main assistance providers, to advocate for the scale-up of income-generating activities, and to promote the awareness of the refugees about self-reliance. 	<p>UNHCR to lead</p>	<p>Livelihood and food security partners</p>
<p>Support vocational training for refugee youths and female refugees.</p> <ul style="list-style-type: none"> · Vocational training for youth in welding (males), tailoring (female), plumbing, electrical maintenance, repairs and maintenance of cell phones should be supported as a means of promoting self-employment. · Provide financial support and provision of start-up kit for the establishment of small businesses such as the sale of vegetables, establishment of small restaurants, small shops, grinding mills, etc. · Livelihood partners to consider that a dedicated livelihood assessment might be required to potentially explore the possibility of introducing Food Assistance for Assets activities which include training for income generation activities such as the construction of fuel-efficient stoves; promotion of share crop agriculture in collaboration with host communities using unused agricultural lands. · Livelihood interventions to be considered to strengthen household food security 	<p>UNHCR and WFP</p>	<p>WFP, Livelihood partners</p>
<p><i>Environment and energy</i></p>		
<p>Coordinate to support Sudan refugees /Persons of concern to have access to clean, renewable energy for cooking and lights, through the provision of mixed energy sources which include:</p> <ul style="list-style-type: none"> · Encourage the use of LPG clean cooking stoves (liquefied natural gas) for refugees instead of charcoal & wood, and explore cash-based intervention for the refilling cost · Introduction of Ethanol, as clean, renewable energy cooking fuel and Ethanol stove for refugees closely work with Kenana Sugar company as partner 	<p>UNHCR</p>	<p>WFP, FAO, Energy and Environment partners</p>

<ul style="list-style-type: none"> · Introduction of Solar energy for lighting in schools, health care centres, feeding centres of new arrivals and to light the Street of the camps for safe movement of the women and children during the night · Facilitate and create an opportunity for marketing of solar lanterns for the refugees and host community. 		
Introduce production of briquettes to be used as cooking fuel to replace wood and also look for possibilities of income generating activity for the refugees /Persons of concern /host communities	UNHCR	WFP, FAO, Energy and Environment partners
Forest rehabilitation and plantation of short rotation growing trees, around the refugee's camps for the provision of cooking woodlots, agroforestry for livelihoods activities and environment protection	UNHCR	WFP, FAO, Energy and Environment partners
<i>Logistics, warehousing, shelters and NFIs</i>		
Build up adequate stocks warehouse quite in advance to facilitate pre-positioning process.	WFP	UNHCR
<ul style="list-style-type: none"> · Mobilize of adequate transport capacity for the timely delivery of these requirements to western camps. 		
Increase the storage capacity in the western camps to accommodate at least three (3) months requirements by erecting additional Wiik-halls (32X10) one at each location.	WFP	UNHCR
Pre-position of adequate stocks of food for covering three or four months' requirements to be made to the camps situated at the western part before the onset of the rainy season.	WFP	UNHCR and food distribution partner/SRCS
Assess the possibility of overhauling the big ferry to be used for accessing the western camps through Kosti- Al Jabalain paved road. Assign an expert for assessing the needs and budget estimation is required.	UNHCR	WFP
Deploy pest management expert to assess the issues of rats and crickets infestation of the storage and development of action plan accordingly.	WFP	UNHCR and partners
Assess the possibility of the construction of concrete floors or back-filled, and compacted floors, (50 centimes elevation above the normal surface level) for all storage facilities to reduce the humidity and rats' infestation.		
<ul style="list-style-type: none"> · Construction of proper drainage system for all storage facilities to reduce the risk of water affecting the MSUs peripheries and subsequently stored food commodities. · Construction of chain linked fence and doors for all Wiik-halls to secure the assets from any damage. 	WFP	UNHCR and partners
Replace affected/old canvases after the construction of the fence.	WFP	UNHCR and partners

Distribute blankets and mosquito nets to all camps including the new arrivals before the peak of winter season.	UNHCR	Health partners
Increase the number of blankets, mosquito nets, sleeping mats (one for each adult) – for the sleeping mats- replace this small size by large size that could accommodate more two individual easily) if possible.	UNHCR	
Review NFI distribution criteria, to consider the household size, gender and age instead of the current distribution practice that is based on the household. Follow standard UNHCR guideline	UNHCR	
Based on the refugees' preference, aluminium cooking sets to be provided instead of nickel cooking sets, as the lifespan of the aluminium is longer compared to the nickel. · CBT could be an option for refugees to access kitchen sets based on their needs and culturally suits for cooking and serving.	UNHCR	
<i>Gender and Protection</i>		
Establish community organisation, food distribution committees and Livelihood projects to consider equitable participation of all community members: male and female, age and diversities to be considered · At least 50% of food distribution committees to be represented by female participants · Vocational training to consider the youth both female and male	UNHCR and WFP	Partners
Construct facilities (latrines, water delivery points, schools, etc.) which take into consideration age, gender and diversity, people with specific needs, etc.	UNHCR and WFP	Partners
Consider refugee self-help in the design of livelihood projects, so as to lead towards a durable solution which promotes voluntary repatriation whenever the situation allows in the country of origin.	UNHCR and WFP	Partners

5. ANNEXES

Annex 1: List of References and Sources for Secondary Data

- 1 A solution Strategy for the Protracted Refugee Situation in Sudan, UNHCR and COR: 2007
- 2 WFP Vulnerability Food Security Assessment, March 2016
- 3 WFP Food Security Monitoring Report, November 2016
- 4 Findings of a Joint Multi-indicator Nutrition, Health, WASH, Food Security in major refugees camps: 2013
- 5 WFP Monthly Market Update -September 2016
- 6 Standardised Expanded Nutrition Survey (SENS) results in White Nile Refugee Camps-Sudan: December 2016
- 7 Joint Assessment Mission report, Eastern Sudan: 2015
- 8 Memorandum of understanding between the Office of United Nations High Commissioner for Refugees (UNHCR) and the World Food Programme (WFP), January 2011
- 9 ProGres database community health services list of vulnerable households:
- 10 Promoting Livelihoods and self-reliance: Operational Guidance on Refugee protection and solutions in Urban areas: UNHCR, 2015
- 11 Livelihoods Assessment for South Sudanese Refugees in the White Nile State, October 2016
- 12 Sudan Institutional Capacity Programme: Food Security Information for Action
- 13 The Sphere Project: Humanitarian Charter and Minimum Standards in Disaster Response 2004
- 14 UNHCR Regional Health Information system annual/monthly reports
- 15 United Nations High Commissioner for Refugees: Self-Reliance Strategy for refugees: 2015
- 16 FEWSNET report Sudan - October 2016
- 17 WFP Monthly Market Update -September 2016

Annex 2: Terms of Reference for Joint Assessment Mission (JAM) South Sudanese Refugees in White Nile

Background

Since the outbreak of fighting in South Sudan in December 2013, and throughout 2015 and the beginning of 2016, Sudan has experienced a large in-flow of South Sudanese refugees, making it the largest recipient of new arrivals in 2015. The arrival of South Sudanese refugees is driven by very high levels of food insecurity in South Sudan and continued the violence, despite several peace agreements. At present, more than 197,704 South Sudanese have arrived in Sudan, seeking refuge, mostly in White Nile State, South Kordofan, West Kordofan, East Darfur and South Darfur. The majority has settled in refugee camps in White Nile.

White Nile new arrivals are reaching border areas exhausted, nutritionally weak and in poor health, with many traumatised after having travelled in difficult conditions to escape on-going violence and conflict. Those who have fled have come without significant belongings or any livestock, and for the most part without capital to support them. Responding to these needs in a timely and gender-sensitive manner and ensuring their protection is a top priority of humanitarian partners.

Most lack access to necessary and basic services, including food, shelter, drinkable water, sanitation, healthcare and education services, as existing resources are not sufficient for the large and ongoing influx into Sudan. Nutrition partners continue to identify and treat malnourished children across sites in White Nile State. In addition, the limited basic services that exist in host communities need to be strengthened to accommodate the influx of new arrivals.

The South Sudanese who are arriving are mostly agro-pastoralists and pastoralists. Despite arriving with few personal belongings, they possess skills in the areas of s farming, fishing and handcrafts that can be capitalized on to reduce dependency on assistance. The South Sudanese have access to small scale market and are somewhat integrated with the local community in terms of trading. There are limited livelihoods activities being implemented by FAO, in terms of agricultural inputs (seeds, tools, training and land rent), in addition to access to fishing activities. They receive regular food assistance and additional nutrition support if required.

Purpose

The JAM will focus on the South Sudanese population in the camps in White Nile State. The JAM has the following main purposes:

1. Collect information to better understand the situation, needs, risks, capacities and vulnerabilities of the refugees and the ongoing assistance;
2. Determine and provide recommendations on what actions may need to be taken by UNHCR, WFP and others partners to ensure a more sustainable and adequate response;
3. Identify solutions that enable refugees to help themselves to be as self-reliant as possible while avoiding negative effects on the host population and the environment.

The main focus of the JAM will be to consider improvements to how assistance is being provided. Beyond the identification of sector-specific and inter-sectoral gaps in the assistance, cross-sectorial areas that will require exploration include the feasibility of scaling up unconditional

assistance (for example skills training and asset creation), the use of market-based delivery modalities (for example vouchers), and the need for and practicality of household-level targeting.

Information requirements

The following stand-alone assessments are required in advance of the JAM:

1. **Food security:** A food security assessment will determine the level and nature of food insecurity. The food security survey will collect household-level data on food consumption, coping mechanisms, asset ownership, socio-economic circumstances, and related topics. Lead: WFP.
2. **Livelihoods:** A livelihood assessment will examine the most commonly practised livelihoods, the main livelihood constraints faced by the population, potential areas of livelihood development, and related topics. Lead: UNHCR.
3. **Markets:** The functioning of markets in and around the camps will be assessed in order to shed light on the degree to which markets are connected to the main trading routes, the vulnerability to price shocks, the capacity of traders and the economic and financial infrastructure to support market-based interventions, the seasonality factor, and related topics. Lead: WFP.
4. **Nutrition:** The nutrition assessment will determine the level and cause of malnutrition in the area, and the coverage and quality of services in relevant sectors. Lead: UNHCR.

Methodology

The teams will deploy various methodologies of data collection which include:

- Review and analysis of the available studies and reports.
- Field visits to the camps, including direct observations and focus group discussions with refugees, based on a participatory approach, community leaders, and health officials.
- Key Information Interviews with relevant national, regional and local authorities, NGOs and other organizations working with the refugees.

Data collection tools

- Data collection methods and tools on each thematic area will be prepared during the pre-JAM workshop for the systematic collection of primary data during the field visits.
- Refugee project documents listed below will be used for the review/analysis of the secondary data, and identification of the information gaps to be filled by the primary data collection during field visits.

Secondary data

The following documents will be reviewed/ analyzed by the JAM coordinators in the preparation of the pre-JAM workshop. A soft copy will be provided to team members during the workshop, and results of the review/analysis will be presented by the JAM coordinators.

- 1) **WFP:** PRRO Project document, M&E reports of the food voucher project (including evaluation report, BCM/PDM reports, market, price monitoring report), previous food security assessment report.

2) **UNHCR:** UNHCR Registration data, partner’s livelihoods assessment, the Ministry of Health nutrition data, S3M survey, briefing document on RMS partners activities, major achievements and challenges.

Activities undertaken during JAM process

JAM activity	Sub activities	Responsibility	Time frame/status
Food security assessment	Planning and coordination	WFP	March 2016
	Secondary data revision		
	Tools finalization		
	Enumerators training		
	Data collection		
	Data analysis and reporting		
Livelihoods assessment	Secondary data revision	UNHCR	October 2016
	TOR finalization		
	Data collection		
	Data analysis and reporting		
Nutrition assessment	Data collected: analysis and reporting on progress	UNHCR	October 2016
Energy and Environment	Study undertaken	UNHCR	March 2016
Rapid Market assessment	Data collection conducted during early November	WFP	November 2016

JAM work plan

Activities	Time-line	
	2016	2017
Agree on JAM leadership	WFP to lead and coordinate JAM process	
UNHCR and WFP senior management meets and assign technical focal person	October 27th WFP:- Takahiro Utsumi UNHCR:- Samuel Tadesse	
UNHCR and WFP technical focal person undertake initial meeting	2 November	
Participants checklist developed	2 November	
Invitation of JAM participants	3 November: WFP to initiate invitation	
Market assessment led by WFP	6-11 November	
Technical people review the available secondary data and develop gap checklist	6-18 November	
JAM tools review	20-21 November	
Key areas identified for field verifications	22 November	
Pre JAM training conducted for JAM participants	23 November	
JAM field verification	26 November - 1 December	
JAM field activities consolidation and reporting	7 December	
JAM debriefing and a one-day post JAM review workshop conducted	18-20 December (1day)	
JAM preliminary draft report developed	20 December	
Feedback first draft report finalised		End of January
Final report shared with partners		February
Joint Plan of Action (JPA) draft developed and circulated		Mid-February the first draft developed
JPA reviewed at all level and endorsed by UNHCR and WFP		Mid-March
Final document signed by the heads of UNHCR and WFP		Mid-March

Process and deliverables

Following the completion of the food security, livelihoods, markets and nutrition assessments, the JAM will proceed to consolidate findings across sectors, highlight areas of particular concern and conduct field visits and stakeholder consultations to verify findings. The JAM will produce a final report that answers to the focus areas related to its purpose: what is the need, what is the response and how can the response be improved. The results of the JAM will be fed back to stakeholders, including to the affected population.

Each assessment must, therefore, provide programme planners and managers – and executive staff, donors and host governments – with:

- A clear, concise analysis of (i) the situation, needs and risks; (ii) capacities of the population(s) of concern and opportunities for increasing their levels of self-reliance; and (iii) how food and other resources are being used;
- The numbers of beneficiaries for whom food and related assistance (including assistance for self-reliance) is required. Various planning scenarios should be presented, when appropriate;
- An analysis of (i) the mechanisms and capacities available for targeting and distributing food and related assistance and promoting self-reliance, including the effectiveness of current operations; and (ii) opportunities to build capacity, especially national capacity;
- A clear, concise statement of the options for action in relation to food and self-reliance, specifying the pros, cons and implications of each option; and
- The recommendations of the assessment team for food and self-reliance strategies, including proposed interventions and arrangements for selection and distribution; ration levels, commodities and food transformation requirements; logistic arrangements; technical and material inputs to support self-reliance; phasing-out/exit strategies; and related nonfood and protection measures.

The recommendations should also be presented in the form of a draft Joint Plan of Action Matrix indicating the actions that would be needed to implement them.

End

Annex 3: List of JAM 2016 participants.

	Name and title	Agency	Role in the JAM
1	Takahiro Utsumi	WFP	JAM manager / WFP JAM coordinator
2	Samuel Tadesse	UNHCR	UNHCR JAM coordinator
3	Zeneb Habte, head of sub-office	WFP	WFP JAM field coordinator
4	Emad Abdulmagid, head of sub-office,	UNHCR	UNHCR JAM field coordinator
Team 1 (Food security and Food assistance)			
5	Bakri OSMAN	WFP	Team leader
	Takahiro UTSUMI	WFP	Sub-leader
6	Anders PETERSSON	WFP	Member
7	Fatima SULIMAN	WFP	Member
8	Amna Abdalla	ASSIST	Member
9	Omer Hussein	Plan In.	Member
10	Nusiba Hashim	ASSIST	Member
11	Samia Mohamed Abuagla	GHF	Member
12	Izzeldin Jafar Koko	MOA	Member
13	Abdo Alsamee	IFAD	Member
14	Sabir ADAM	WFP	Member
15	Gihan Habeeb	WFP	Member
16	Hassan Abdelrahman	RAFA	Member
Team 2 (Health, Nutrition, WASH and Education)			
	Samuel Tadesse	UNHCR	Team leader
17	Omer KAROURI	WFP	Sub-leader
18	Moamar Eltalib	UNFPA	Member
19	Yousif Gomaa	WHO	Member
20	AHMED ELTAYEB A. DAFALLA	UNHCR	Member
21	Tasabeeh Mohammed	ASSIST	Member
22	Mohamed Ishag	CAFOD	Member
23	Asma Abdelrahman	SIDO	Member
24	Galaleldin Attahir	FAO	Member
25	Amir Osman	MSF	Member
26	Khalid Sarour	WHO	Member
27	Asma Abdelrahman	SIDO	Member
28	Malaz Mohamed	SIBRO	Member
29	Diaaeldeen Elniel	UNFPA	Member
30	Elgaili Ramdan fadul	MOH	Member
31	Wisam Winla	UNHCR	Member
32	Elsadig Mohammedzin	UNHCR	Member
33	Sidig Moh. Adam	MOE	Member
34	Mohammed Mahjoub	WFP	Member
Team 3 (Livelihood)			
35	ISEMU ERASMUS USONGO	UNHCR	Team leader
36	Hanni Abdalla	WFP	Member
37	Mohamed Osman Ahmed	JASMAR	Member
38	Abdalla Ismail Adam	FAO	Member

39	Almotaz Mohamed	FPDO	Member
40	Badria Abdelkarim	SRCS Kosti	Member
41	Abdalla Ismail Adam	FAO	Member
42	ABDELREHMAN ABDALGADIR	UNHCR	Member
43	Amna Abdallah	ASSIST	Member
44	Maysa Elsarag	ASSIST	Member
Team 4 (Environment and Energy)			
45	Abdel Rahman Elamin	UNHCR	Team leader
46	Ahmed IbrAhim	FNC	Sub-leader
47	Handi Altahir Mustafa	ADRA	Member
48	Gusm Muhgoup	FNC	Member
49	Bdr Adin	UNHCR	Member
50	GaLal adin Altahir	FAO	Member
51	Alaa Elden	Altdamin	Member
52	Tasabeeh Mohammed	Assist	Member
53	Osama Ahmed Adam	FNC	Member
54	Mohmed Fadulalkarim	NISS White Nile	Member
55	Naeir Abdalhadi	FNC	Member
Team 5 (Logistics, Warehousing, Road, Shelter, and NFIs)			
57	Adam Ali Omer	WFP	Team leader
58	Mohammed Osman Khamis	UNHCR	Sub-leader
59	Awad Yousif	WFP	Member
60	Samira Osman	WFP	Member
61	Shata Musa	UNHCR	Member
62	Adil Kamoon	UNCHR	Member
63	Salih Adam Suliman	HAC	Member
64	Mohammed Abdel Aziz Ali	COR	Member
65	Naser El Deen	HAC	Member
Observer			
66	Esteban Arriaga	ECHO	
67	Salah Rigal	ECHO	

Annex 4: Tools used (discussion guideline)

Checklist for Food Assistance and Food Security

Access to food

- 1- Are refugees able to work or gain income? If yes, who and which proportion? Are there seasonal variations in their ability gain income?
- 2- What are the main opportunities/constraints of income sources or access to food?
- 3- What are the typical coping strategies used by the households? Are there seasonal variations?
- 4- What are the main external or internal shocks and trends which affect refugee's access to food? What are the likely future threats or factors in the short and medium term that might affect household food access? Describe.

Availability of food

- 1- Do refugees produce any foods themselves? What percentage in the camp? Who? When? How?
- 2- How is the availability of food likely to evolve in the short and medium term? Describe.
- 3- How do you compare availability in this season compared with the last one?

Utilisation of food

- 1- Do refugees have adequate means to appropriately store and cook food?
- 2- Are water and cooking utensils available and accessible?

Food assistance:

- 1- When you arrived in the camp, how long did you wait until you have been registered and received 1st distribution?
- 2- What are the food preferences of the refugees? What was the primary staple in the home country?
- 3- Is the monthly food distribution carried on a timely basis?
- 4- How long how usually you wait in the distribution centre to get your entitlement? Who is usually collecting the food for your household?
- 5- Do you prefer in-kind assistance or cash transfer?
- 6- If you have been asked to describe who are the neediest for food assistance in this camp, who do think you will classify? Moreover, why do you think they are more in need than the others?

Checklist for Health, Nutrition, WASH and School Feeding

Proposed Methodologies:

- Visit facilities (Health, Nutrition, WASH, School)
- Check records at facilities
- Observations
- Key informant interviews: health and nutrition personnel, teachers, community leaders, outreach workers, community members
- FGD with women group, outreach workers

Theme	Checklist	Methodologies
Health and Nutrition	<ul style="list-style-type: none"> • Types of services provided by the centre? • Access to services, quality, staffing? • Check surveillance and records? • The most common diseases in the area, who are the most affected and trends in the year/seasonality etc.? • Availabilities of medicines, medical equipment, nutritional products, and related items • Overall challenges in service delivery? • Community service seeking behaviours? • Host community using the facilities? How often? • Utilization of nutritional products, medicines, etc. • Outreach activities, the number of workers, key messages. Challenges etc.? • Referral system and linkages with different facilities? 	<p>Meet health personnel, nutritionists, outreach workers.</p> <p>Visit the centres and observation</p>
WASH Water	<ul style="list-style-type: none"> • Check water source, types, quality, distance from residences, access/operation or distribution time, • Who manages the water delivery system? Are women represented in management? • Any payment associated with water provision? If yes how much? Who collects and administer the money, for what purpose? • Water storage and management at household level • Any compliant in relation to water provision, quality, etc? 	<ul style="list-style-type: none"> • Observation • Discussion with women group • Discussion with water management committee • Sample household interview. • Key informant/Staff from WASH project implementing partners

Theme	Checklist	Methodologies
Sanitation	<ul style="list-style-type: none"> • Types of toilet facility? • How many households shares the toilet? If the toilets are shared with many households how do they manage? • Any barriers related with the use of latrines? • General waste management system in the camp • Check knowledge and practices on hygiene and sanitation 	<ul style="list-style-type: none"> • Visit toilet facilities • Discussion with community members, • Transect walk in the camp
School	<ul style="list-style-type: none"> • Visit to school, if available: check school feeding program? Types of the feeding program, schedule, who benefits from the feeding, objectives, concerns? • Visit different facilities in the school: Toilet, water, etc.? Appropriateness of toilet facilities and schools to consider gender and people with special needs? • Check records, enrolment status, host and refugee communities, • Male and female attendants and barrier associated with enrolment for the school age children? • Access, is there payment associated with education, dropouts rates, reasons for dropouts, who are the most affected (M/F) and why? 	<ul style="list-style-type: none"> • Observation • Key interview with the director • Group discussion with teachers. • Discussion with cooks, students,

Checklist for Environment and Energy

A- Cooking Fuel

1. Types of cooking fuel used
2. Source of cooking fuel
3. types of stoves used for cooking
4. Impact of Cooking fuel on: Food security/Nutrition
 - Percent of food ration exchanged to purchase cooking fuel
 - percent of the income used to purchase cooking fuel
5. Impact of Cooking fuel on: the protection of women safety
 - Walking distance and time spend on wood collection
 - the problem they face while collecting fuelwood
 - No. of Incident/harassment faced women /and/or children while fetching cooking fuel

B- Energy for lighting

- **Impact of energy for lighting on**
 1. Food security
 2. Health

3. the No. of Incident/harassment faced women /and/or children during the night time when it is dark

C- Environmental surrounding & available natural resources

- Inspection of the cooking area, ventilation
- Waste management in the camps

D- Impact of the past inversions in energy and environment such as:

- Solar street
- Improved stoves

Annex 5: JAM field verification Analysis matrix:

Health, Nutrition, WASH and Education

What is the problem?	What are the causes?	Who is affected?	What is the likely evaluation in short, medium and long term?	What are potential solution in the short and long term?	Missing information
Radius two					
No school feeding program	The program not established	Students	· Increase in the dropout rate	·Short: Conduct nutrition assessment among students	
			· Low students' performance	·Long: stablish SFP	
		Workers		· Construct latrines sufficient for the number	
WASH:			house are very small outside environment Dryness leads sanitary preferable environment		1- awareness raising for proper ventilation in HH 2-replaning if possible of Alagaya Camp 3- replace 3-stone stoves with efficient stoves program of plantation of trees inside the camps with awareness raising
				·Formation of water committee	
Jerri cans gap	No regular distribution of Jerri cans	Community	Quantity of water collected	Regular distribution of Jerri cans	
			Water contamination in the long run		
Waste management problems	Poor of final disposal system	Community	Increase morbidity and mortality	Short: set up garbage containers around the camp Long: establishment of final disposal system	
	Lack of awareness	Community		SBCC activities	

Poor personal hygiene	Availability of soap		Increase morbidity and mortality	Provision of hygiene facilities	
Lack of proper latrines for disabled person and children	No consideration in latrine design for special cases	Community	Open defecation Environmental hazard	Construction of latrines for special need	
Health & Nutrition:					
Staffing	High no. of patients (350-450 per day)	Camp and host community	Compromise the quality of services Reduction in the no of community seeking health services	Short: increase no of staff Long: reach international standards of medical profession staffing	
Medical supply	Pipeline break Pharmacy management Host community (high consumption)	Camp and host community	Short: Quality of services Long: Reduction in the no of cases	Training in pharmacy management Enhance supply pipeline Health awareness	
Health center general condition	Funding	Health cadre beneficiaries	Spread of infection Damage to medical supply	Permanent construction Infection control standard precautions	
Health seeking behaviour	Busy schedule Limited medical supply	Camp and host community	Significant reduction in community seeking behaviour	Increase no of outreach, training, monitoring and supervision	
Referral system	No proper ambulance Lack of in referral system	Camp and host community	Late referral lead to deterioration in case condition Reporting system and documentation	Provision of ambulance Training in case registration and reporting	

Nutrition coverage is low	Lack of awareness	Camp	Increase malnutrition rates	Awareness and SBCC activities	
Limited no of outreaches	Funding	Camp	Low coverage Affect community knowledge and behaviour change Quality of services	Deploying of sufficient no. of outreach workers	
High defaulter rate and low cure rate	Attitude towards: Breastfeeding Child care Personal/ public hygiene Labor migration Lack of caretakers for health children Sharing of supply by family member	Camp and host community	Defaulter and cure rates	Introduction of SBCC approach Reactivation of defaulter tracking system	
Alwarel					
Education:					
No school feeding program	The program not established	Students	· Increase in the dropout rate · Low students' performance	·Short: Conduct nutrition assessment among students ·Long: stablish SFP	
School water supply	Water system not completed yet Water facility available but not functioning	Students Teachers School workers	· School environment not conducive	·Shor: provision of drinking water at school facility ·Long: complete the water system	
WASH:					

Water supply	No regular supply		· Increase morbidity and mortality	·Short: improve water tracking system ·Long: establishment of proper water supply system	
Environment and sanitation	No effective action in relation to environmental hygiene	Camp community	· Health and wellbeing of the community	·Organize cleaning campaign ·Improve community participation (ownership approach)	
Use of latrine (dirty)	Lack of awareness	Camp community	· Latrine management	·Formation of WASH committee ·Awareness sessions ·Construction of latrines to avoid latrine sharing	
Lack of proper latrines for disabled person and children	No consideration in latrine design for special cases	Community	Open defecation Environmental hazard	Construction of latrines for special need	
Jerri can gap	No regular distribution of Jerri cans	Community	Quantity of water collected Water contamination in the long run	Regular distribution of Jerri cans	
Health & Nutrition:					
High cases of respiratory infection, malaria and diarrhoea	Community knowledge Lack of prevention program Environmental and housing conditions	Camp community	Increase no. of cases and mortality of U5 Malnutrition	Increase quality of outreach Continue mesquite net distribution	
Referral	No ambulance	Health providers Community	Deterioration of case condition	Establishment of referral system	

RH services	Low no. and capacity of health workers Gap in health promotion messages	Pregnant and lactating mothers	Increase morbidity and mortality rates	New establishment of RH packages of services Capacity building for health promoters Enabling environment	
poor conditions of health facility	poor construction gaps in room	Health providers Community	Drop down in services quality Patients privacy Poor conditions for supply storage	Short: provision of adequate supply Long: permanent construction of the facility	
Staff	Limited no. staff compare to case load	Health providers Community	Drop down in services quality	Increase no of staff	
Supply, pipeline break	Provision of regular supply	Community	Reduction in cure rate Quality of services	Improve medical supply system	
Alagaya:					
Education:					
No school feeding program	The program not established	Students	· Increase in the dropout rate · Low students' performance	·Short: Conduct nutrition assessment among students ·Long: stablish SFP	
School water supply	Water system not established	Students Teachers School workers	· School environment not conducive	·Shor: provision of drinking water at school facility ·Long: complete the water system	
School latrines conditions	Limited no of functioning latrines Clearance and maintenance	Students Teachers School workers	· School environment not conducive	·Construction of new latrine and maintenance of the available ones	
WASH:					

Household conditions (side planning)	Poor planning of the camp housing	Community	<ul style="list-style-type: none"> · Spread of diseases · Environmental conditions · Garbage collection 	·Re-planning of the camp	
Latrines	Overused	Community	· Open defecation	·Latrines construction	
Hygiene materials	No regular distribution	Community	· Poor personal hygiene	·Regular distribution ·Awareness	
Health & nutrition:					
Poor coordination and integration among sectors	Lack of proper coordination mechanism	Service providers Community	<ul style="list-style-type: none"> · Fragmented efforts · Poor quality of services 	·Establishment of proper coordination system	
Poor communication between health cadre and responsible NNGO	Limitation in supervision and monitoring visits from NNGO	Service providers Community	<ul style="list-style-type: none"> · Wrong estimation in supply · Mistrust between health providers and community · Quality of services 	<ul style="list-style-type: none"> ·Regular monitoring visit ·Establishment of response mechanism system, on time response and solutions for obstacles 	
Staffing	High no. of patients	Camp and host community	<ul style="list-style-type: none"> Compromise the quality of services Reduction in the no of community seeking health services 	<ul style="list-style-type: none"> Short: increase no of staff Long: reach international standards of medical profession staffing 	
Medical supply	<ul style="list-style-type: none"> Pipeline break High no of host community accessing the service 	Camp and host community	<ul style="list-style-type: none"> Short: Quality of services Long: Reduction in the no of cases 	<ul style="list-style-type: none"> Training in pharmacy management Enhance supply pipeline Health awareness Estimation of medical supply 	
	Funding		Spread of infection	Permanent construction	

Health center general condition		Health cadre beneficiaries	Damage to medical supply	Infection control standard precautions	
Health seeking behaviour	Busy schedule Limited medical supply	Camp and host community	Significant reduction in community seeking behaviour	Increase no of outreach, training, monitoring and supervision	
Referral system	No proper ambulance Lack of in referral system	Camp and host community	Late referral lead to deterioration in case condition Reporting system and documentation	Provision of ambulance Training in case registration and reporting	
High defaulter rate and low cure rate	Attitude towards: Breast feeding Child care Personal/ public hygiene Labor migration Lack of caretakers for health children Sharing of supply by family member	Camp and host community	Defaulter and cure rates	Introduction of SBCC approach Reactivation of defaulter tracking system	

JAM field verification Analysis matrix: Energy and Environment

What is the problem?	What are the causes?	Who is affected?	What is the underlying causes	What is the likely evaluation in short, medium and long term?	What are potential solution in the short and long term?	Missing information
1- Energy for cooking	There is no provision of energy for cooking	women and children	Energy for cooking is not considered in the preparedness response plan	Expected to be changed in the long term	implementation of the action plans of the SAFE strategies which include the introduction of:	Feasibility study on;-

	Natural resources for wood lots are very limited and at a far distance from the camps	(women sales ration of their food for wood cooling fuel, spend more than 12 hours for wood collection	the fund for energy cooking is very limited covering less than 2percent		1-Alternatives sources of energy 2- Fuel Efficient Stove 3- plantation of trees for wood lots around the camps	1- Ethanol gel for cooking 2- briquetting of water hygiene and other agricultural waste for cooking fuel
2-Energy for lighting	very limited energy light during the night No provision of energy for light for house hold only for some of the main services (latrines)	All refugees, particular women and children	Energy for light is not considered for house hold	No expected change in the short term, may be in long term for the camps	creation of solar lanterns markets inside the camps	setting up lively hood activities for marketing energy appliances
3-Environment condition of the camps	camps are very congested, no distance of security between the blocks	All refugees camps specially Alagaya	kitchen is not considered in the house design	No expected change in the existing camps, should be considered in the future camps planning		
	No ventilation/ windows inside the houses cooking with 3-stone stoves inside the house lead to indoor air pollution		house are very small outside environment Dryness leads sanitary preferable environment	intervention in short term is possible	1- awareness raising for proper ventilation in HH 2-replaning if possible of Alagaya Camp 3- replace 3-stone stoves with efficient stoves program of plantation of trees inside the camps with awareness raising	
	No trees inside the camps or around				Formulation of Environmental committees in each camp to follow up environmental activities	