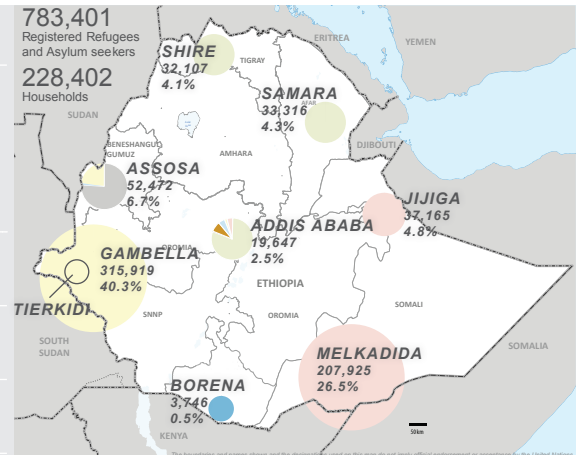


CASE STUDY **ETHIOPIA 2014-2016 / S. SUDAN CRISIS**

**KEYWORDS:** Transitional shelter, Site planning, Training, Local techniques

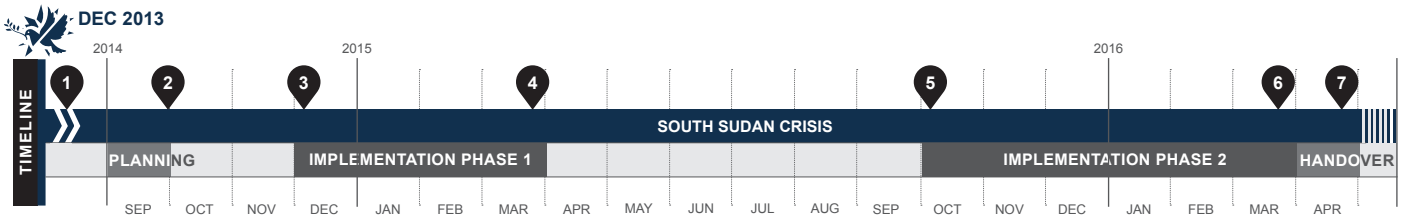
<b>CRISIS</b>	<b>South Sudan refugee crisis, Dec 2013-ongoing</b>
<b>TOTAL PEOPLE DISPLACED</b>	<b>245,298</b> refugees in Gambella region <b>48,507</b> refugees in Tierkidi camp (as of September 2014, at the start of this project).
<b>PROJECT LOCATION</b>	<b>Tierkidi Refugee Camp, Gambella.</b>
<b>PROJECT BENEFICIARIES</b>	<b>835 households</b> (4,125 individuals).
<b>PROJECT OUTPUTS</b>	<b>835 Transitional shelters</b> ( <i>Tukuls</i> ).
<b>SHELTER SIZE</b>	<b>17.6m<sup>2</sup></b> (4.2m x 4.2m).
<b>SHELTER DENSITY</b>	<b>3.5m<sup>2</sup></b> per person (average household size is 5).
<b>MATERIALS COST</b>	<b>USD 604</b> per shelter (including labour).
<b>PROJECT COST</b>	<b>USD 800</b> per shelter (estimated).
<b>OCCUPANCY RATE</b>	<b>100%</b> (based on data from camp management agencies).



Map showing the locations of arrival of refugees to Ethiopia and the respective total figures for each region, as of November 2016 (source: UNHCR).

**PROJECT SUMMARY**

The project supported the construction of 835 transitional shelters in a refugee camp in the Gambella region, for South Sudanese fleeing conflict, alongside WASH and NFI activities. The shelters were constructed with traditional techniques, locally available materials and a high involvement of the beneficiaries.



- 27 Jun 2014: Refugees from South Sudan reach almost 240,000 in Gambella, after a steady growth since the beginning of the conflict.
- End Sep 2014: Project planning and shelter designs completed.
- Dec 2014: Project starts. Refugee population in Tierkidi camp is approx. 49,000.
- Mar 2015: Safe water provided to all camp residents through initial trucking of purified water and subsequent establishment of 33 emergency water points. 500 tukul shelters constructed in zone D.
- Oct 2015: Second phase of the shelter project starts, with different funding.
- Mar 2016: Completion of 335 additional tukul shelters in zone C of the camp.
- Apr 2016: Beneficiaries are relocated from the Emergency Centres to the newly constructed transitional shelters, although the project was handed over to the local authorities and the community at the end of 2015.

**STRENGTHS**

- + Engagement of all actors in the process.
- + Use of local building practices.
- + Skills and knowledge of workers and refugees were enhanced.
- + Effective coordination and technical assistance.
- + Efficiency and savings.

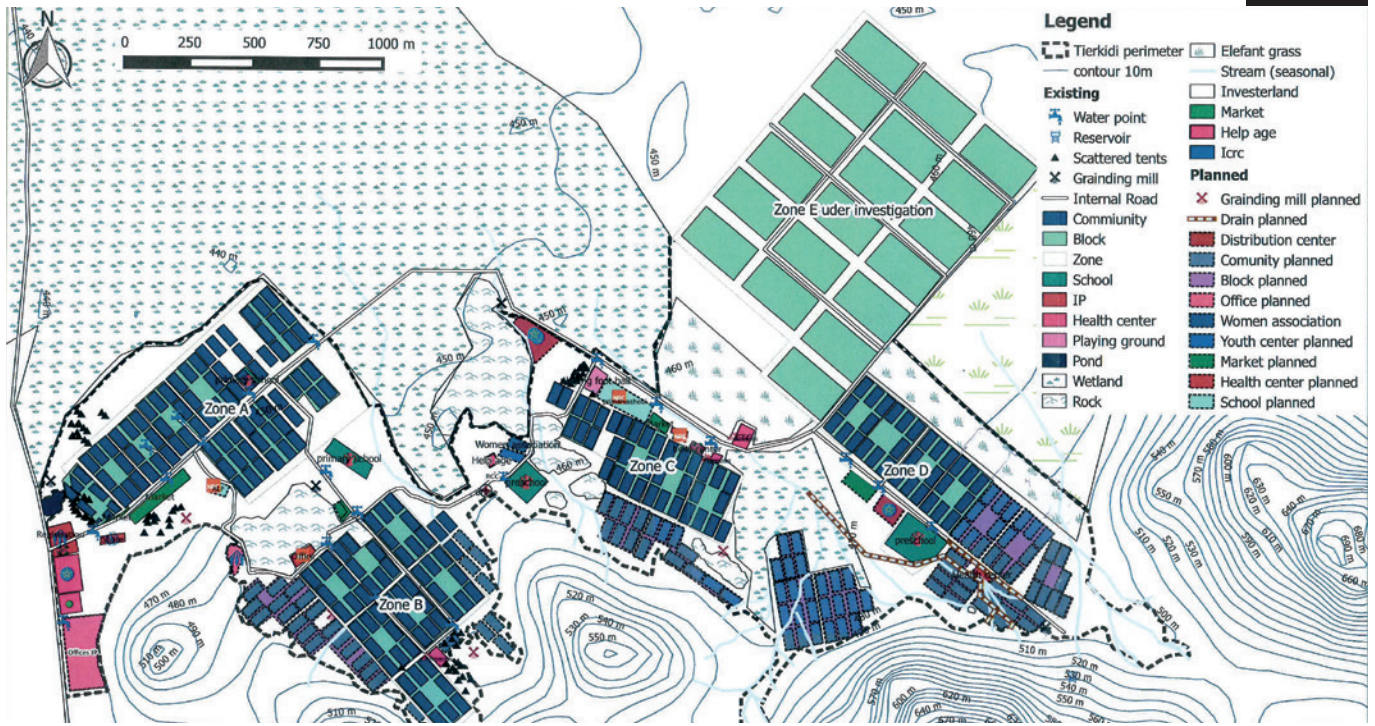
**WEAKNESSES**

- Scarce availability of raw materials.
- Poor site selection.
- Sourcing of the soil for walling delayed the project.
- Limited involvement of women.

**CONTEXT**

The Gambella region is located in the western part of Ethiopia, next to the border with South Sudan. It has a tropical climate, characterized by hot temperatures, heavy rainfalls from April to September (average of 229mm in July), however it is very dry during rest of the year. Settlement location is therefore particularly important in regards to the rainy seasons. Ethiopia is the country hosting most refugees and asylum seekers in Africa, with a total of 783,401 individuals as of November 2016, mainly from South Sudan, Somalia, Eritrea and Sudan<sup>1</sup>.

<sup>1</sup> UNHCR, 30 Nov 2016, <http://bit.ly/2j00A1E>.



The shelter project built shelters in areas D and C of Tierkidi, a planned refugee camp (plan as of January 2015).

**SITUATION AFTER THE CRISIS**

The conflict in South Sudan erupted in December 2013 and caused massive displacement, both internally, and into neighbouring countries<sup>2</sup>. The Gambella region received large numbers of refugees fleeing the conflict in the eastern parts of South Sudan. As of August 2014, there were over 190,000 refugees in the region. This number continued to increase, reaching almost 250,000 individuals by the end of the year.

Several refugee camps were set up and received a high influx of people seeking protection and adequate shelter, along with access to food, water and basic services. At the planning stage of this project, in September 2014, Tierkidi camp was already hosting approximately 48,500 refugees and asylum seekers from South Sudan<sup>3</sup>, most of whom were living in emergency tents, in dire conditions.

**NATIONAL SHELTER REFUGEE RESPONSE**

In 2014, the refugee shelter response in Gambella was led by humanitarian organizations, in coordination with the Administration for Refugee and Returnee Affairs (ARRA) and the lead refugee agency in the country. The strategic focus of the sector for 2015 was to transition from emergency to stabilization, and to relocate refugees away from transit centres and flood-prone camps.

Two types of shelters were provided in camps, 1) Emergency shelters, primarily tents or *Bajaj* (plastic sheeting on wooden frames); and 2) Transitional shelters, mainly traditional structures known as *Tukuls*. Upon arrival to the camps, households were registered in reception centres and received the emergency units, which were gradually upgraded or replaced with the transitional options. Implementing partners undertook the sourcing and construction of the superstructures, including roof construction, and the refugees usually complemented the process by mud plastering the walls. This project supported 835 households in the Tierkidi camp, as part of a wider programme that included NFI, water and sanitation components.

<sup>2</sup> For more information on the South Sudanese crisis and shelter response, see overview A.23.

<sup>3</sup> UNHCR Information Sharing Portal, <http://bit.ly/2kzuifp>.

**BENEFICIARY SELECTION**

The project targeted South Sudanese refugees who were residing in three camps in the area (Tierkidi, Leitchuor and Kule). The targeted households were new arrivals who temporarily settled in the camps, without basic shelter. The lead camp management organization and the refugee government agencies were directly involved in the assessment and selection of beneficiaries, according to common vulnerability criteria. Priority was also given to those who had been living in emergency shelters longer.

The government had already allocated the land for the refugees, which was demarcated in collaboration with ARRA along with camp management actors.

**TEAM STRUCTURE AND STAKEHOLDERS' ENGAGEMENT**

For the implementation of this project, the Country Director provided operational oversight, with support of a Grants Management Officer. At the field level, an internationally recruited Area Manager was responsible for the quality of the intervention, supervision of staff and liaison with ARRA, the camp management agency and other stakeholders. A WASH technical specialist and a team leader were also in place and a shelter project manager was being recruited at the time. The field team consisted of more than 30 staff. To ensure standardized application of organizational compliance regulations, accountability and quality of programming across the region, regional and Headquarters staff were also employed as part of this project.

The shelter design was based on the standards in Gambella, used by different agencies, and agreed upon by the Shelter Working Group. Initially, there was resistance from the refugee community about the standard design; the organization, who joined the larger shelter programme at a later stage, therefore faced difficulties in adopting the selected model. This issue was overcome by incorporating the feedback that beneficiaries had given to the Working Group and other agencies. In fact, sector partners, relevant authorities and the beneficiaries, such as elders and vulnerable people, were involved in the design phase.





Skilled workers were paid to build shelters in the following stages: 1. The site was demarcated and structural poles were erected. 2. The structure and door were built. 3. Wall matting was added. 4. The roof structure was built. 5. The roof was thatched. 6. Once the thatching was complete, the *Tukul* was ready to be plastered with mud (see picture on the opposite page).

## SHELTER DESIGN AND MATERIALS

The chosen design consisted of a mud *tukul* (traditional house) with a eucalyptus wooden structure finished with bamboo or grass-thatch matting for the mud render. The shape, as well as the thick mud layer, protect the structure from the elements and helps in maintaining a cooler indoor temperature. The materials, grown in large plantations, are normally abundant in the region. However, a quick market survey showed the possibility of a shortage of bamboo, so the project chose to use primarily grass lattices.

The traditional shelter components included:

- Treated eucalyptus posts (with anti-termite solution using engine oil);
- Bamboo split-bracings, tied to vertical posts with nails, ropes, or grass thatch;
- Mud-plaster made with termite soil;
- Steep-sloped grass roof, on top of treated eucalyptus rafters and purlins (top height 5m);
- Lockable door made from eucalyptus pole frames and corrugated iron sheet;
- 60cm gap above the walls, left open for ventilation.

## PROJECT IMPLEMENTATION

After beneficiary selection, the project was implemented as follows:

- **Plot demarcation**, followed by the mapping of the shelters location.
- **A prefabrication workshop was set up**, in a warehouse in section D of the camp, to produce the shelter elements, such as doors, poles and frames, in a standardized approach. The capacity of pre-cutting and processing was strengthened to meet the construction targets, within at least three days in advance of the construction.
- **The superstructure (frame and roof) was built** by a team of carpenters from the host community.
- **The bamboo or grass lattice** was undertaken by paid refugee workers, skilled in this type of construction.
- **The grass thatch** was installed by a team of skilled refugee workers. The thatching technique was improved in the second phase of the project, due to the observation of some parts of the roof deteriorating relatively quickly.
- **The house was then handed over** to the identified beneficiary family.
- **Suitable locations for the quarrying of soil** was agreed with ARRA and the host community, to ensure that safe practices were adhered to and conflicts with the host community mitigated. The soil was sourced by the refugees themselves, with assistance from field officers.
- Refugees then organized, in self-help groups, and were provided with the necessary local materials, tools and technical assistance to **undertake the mud rendering**



- **and the raised embankments** to protect from flooding.
- **Regular technical assistance and supervision** was provided, according to the design and agreed criteria.
- **Coordination and monitoring** of the process was ensured with the organization staff, ARRA and other implementing partners, to address any problems that may have arisen.
- The organization conducted a **post-implementation assessment**, collecting sex and age disaggregated data. The majority of beneficiaries reported to be satisfied (over 80%) or very satisfied (over 10%) with the shelter design and materials. The results were shared with the Shelter Working Group and its members.

## COMMUNITY INVOLVEMENT AND TRAINING

The refugee community was involved in the implementation of the shelters through several tasks, including the overall layout and construction, aiming to incorporate their requirements and ensure a higher sense of ownership and user satisfaction. This was demonstrated in the post-implementation monitoring and by the fact that people personalized their shelters with decorations and paintings, as well as building fences, hedges and gardens on their plots.

During implementation, one of the main challenges was finding skilled workers (like carpenters, masons and foremen). Such technicians were not readily available, especially among the refugees. This was solved by providing on-the-job training and technical assistance throughout the project. Some workers were promoted to “shelter foreman level” due to the technical skills gained during their involvement. The refugee community also participated in the plastering of the shelters according to their traditional construction skills; however, women were not involved, only contributing to the collection of grass for thatching.

## COORDINATION

As the proposed programme was implemented in a refugee camp, there was coordination with development actors and programmes, and interventions were designed to be sustainable. Coordination with other agencies and sectors in the camp was essential to avoid duplication and create complementarity, particularly as the organization adopted a “Linking Relief, Rehabilitation and Development” approach. Based on the understanding of the socio-cultural, environmental and technical components of existing building practices, the use of locally available resources and the improvement of traditional techniques was favoured.

## STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Refugees plastered the walls of the shelters with mud, made from soil sourced by the refugees themselves, in areas agreed with authorities and host communities.

### MATERIALS LIST FOR ONE TUKUL SHELTER

ITEMS	UNIT	QTY	TOTAL COST (USD)
Bamboo poles, 10cm diam.	pcs	8	27.3
Eucalyptus poles, 8cm diam.	pcs	16	49.9
Eucalyptus poles, 6cm diam.	pcs	4	10.9
Bamboo poles, 5cm diam.	pcs	200	237.4
Corrugated Iron Sheet	pcs	1	6.9
Bolt, latch, hinges for door	lump	1	3.5
Local fibre string	roll	1.5	5.2
Plastic rope	m	200	4.9
Roofing nails	kg	0.5	1.5
Assorted nails: 10cm, 8cm, 6cm	kg	5	7.2
Soil for walling and plaster	m <sup>3</sup>	4	59.4
Grass: 55cm, 150cm long	bundle	35	103.9
Transport + labour to load	lump	1	4.9 + 1.0
Used motor oil	litre	1	1.0
Community mobilization	lump	1	24.7
Labour for shelter structure	lump	1	32.1
Labour for roof thatching	lump	1	22.3

### STRENGTHS

- + **Involvement of all actors and the affected community** in project design and implementation.
- + The shelters were designed **respecting the local building culture**.
- + **The project engaged both the host community and some refugees**, to enhance their skills and knowledge of building practices.
- + **Effective coordination**, technical assistance and supervision of works.
- + **Efficient implementation**, minimizing unnecessary expenses. In the first phase, 500 shelters were completed in four months.

### WEAKNESSES

- **Scarce availability of raw materials** for the roof, due to seasonality.
- **Poor site selection**. The second allocated site was at the bottom of a hill, therefore being more prone to flooding.
- **Sourcing of the soil for walling**. The soil chosen for the construction was far from the site, therefore affecting procurement times and delaying the whole project.
- **Women were not involved** beyond collecting the grass. Their involvement in activities such as pit excavation and mudding of the shelters would have created income opportunities and help them to support their families.

### LEARNINGS

- **Engaging affected people at all stages** of a project is key to facilitating implementation, skill transfer, as well as enhancing ownership and building trust.
- **Strong coordination at all levels and technical and managerial support** significantly contributed to the effectiveness and efficiencies of the shelter project.
- **Effective monitoring and documentation of activities** throughout the project can provide lessons for future evaluation and planning of similar interventions.
- **Cash-for-work as a modality of assistance is highly dependent on assessments** and thorough analysis. Without a proper assessment of existing economic activities and household-level livelihoods, as well as careful targeting to ensure that all affected groups can benefit from the assistance, cash may not be effective and exclude certain groups, such as women and persons with limited mobility.