

A.26 South Sudan – 2012 – Conflict

Case study

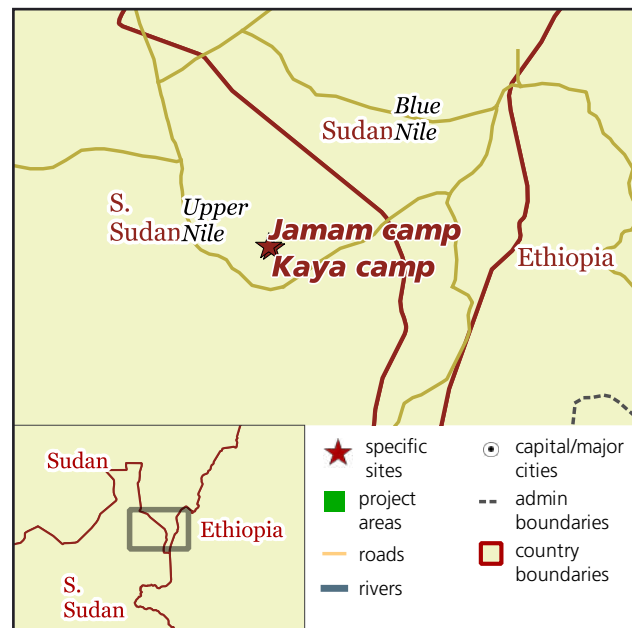
Keywords: Transitional shelter / T-shelter.

Emergency:	Conflict in Blue Nile state (Sudan).
Date:	December 2011 (ongoing).
People affected:	Maban County hosts 127,715 refugees, including 21,428 in Kaya camp (September 2014).
Project location:	Kaya camp, Maban County, Upper Nile State.
Beneficiaries:	4,007 households (15,433 refugees).
Outputs:	3,747 timber-frame shelters.
Occupancy rate:	100%.
Shelter size:	15m ² for families of three or more people.
Cost per shelter / household:	Materials and transport: US\$ 310 (timber structure and plastic roof). Construction and implementation costs: US\$ 56

Project description:

In order to improve the quality of shelter available to refugees in Kaya refugee camp, the lead agency and its implementing partner built 3,747 15m² shelters. The shelters were designed with flexibility in mind, allowing for later upgrading to CGI roofing and expansion or extension by the beneficiaries.

Beneficiaries were given training in construction techniques. Problems with sourcing construction materials meant that construction was delayed.

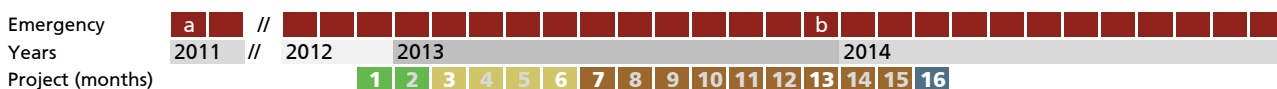


Emergency timeline:

- [a]** December 2011 refugees arrive in Maban county. Conflict in Blue Nile State ongoing.
- [b]** Civil conflict breaks out across South Sudan.

Project timeline (number of months):

- [1-3]** Project planning.
- [3-6]** Advance construction of 700 shelters.
- [6]** Relocation from Jamam to Kaya camp begins.
- [7-15]** Paid prefabrication and voluntary construction phase.
- [13]** Conflict halts supply and staff evacuated.
- [16]** 3,747 shelters completed in Kaya.



Strengths

- ✓ The shelter was easily upgraded, with several families reinforcing roofs with thatch.
- ✓ The shelter could be expanded by building out from one side, though it has been too early to see this in practice.
- ✓ Prefabricating parts of the shelter means that shelters could be constructed in a single day.
- ✓ The beneficiaries were instructed on how to construct both the prefabricated parts and the shelter itself, resulting in a transfer of knowledge and skills and a reduction in the need for external expertise.

Weaknesses

- ✗ The use of plastic tarpaulin as a roofing material was inappropriate, as it provided poor protection against the sun. It is planned that 2,000 shelter roofs will be

replaced with CGI sheeting later on.

- ✗ Payment for construction of the first batch of shelters created an unrealistic expectation amongst the camp community that all work to construct and erect the shelters would be paid for.
- ✗ The construction monitoring process was weak initially, partly due to gaps in staffing, and corrections had to be made to some shelters.

Observations

- Very few refugees had prior construction skills as most were agro-pastoralists without previous experience of constructing with timber.
- Timber was not available locally and the conflict in December 2013 meant that timber supplies were halted, staff were withdrawn, and the project was delayed.

Situation before the crisis

The end of the North/South Sudan war with the 2005 Comprehensive Peace Agreement did not resolve the status of areas such as Blue Nile State. With South Sudan becoming officially independent in July 2011, violence in the state re-erupted, a mixture of local and national conflicts.

Situation after the crisis began

There are currently more than twice as many refugees from Blue Nile State in Maban county than the original 50,000 inhabitants of the county.

Several refugee camps were established in Maban county, but the rainy season of June to November 2012 led to flooding in several of them and a need to relocate. In May 2013, 17,000 refugees moved from Jamam camp to Kaya.

Shelter strategy

There was no national government shelter strategy for refugees, partly because South Sudan's Commission of Refugee Affairs was created as recently as 2013.

A local shelter strategy was developed by the main agency and its implementing partners. As Maban does not have the capacity to host large numbers of displaced people directly in the community, the default sheltering option was to build camps.

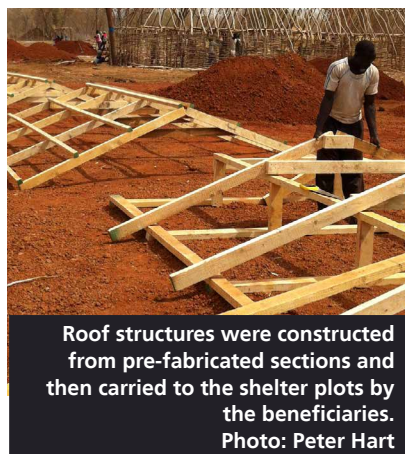
Project implementation

The project was overseen by a lead agency and implemented by an international NGO.

The lead agency started working with county authorities in Maban from December 2012 to identify a site less at risk of flooding. After three months, Kaya site was approved, located around an hour's drive away from Jamam and with a capacity for up to 30,000 people.

Prototype shelters were built in Kaya and Jamam in order to obtain beneficiary feedback. Initially the design did not include a framed door, but beneficiaries requested that this be added.

The first refugees were transferred to Kaya in May 2013. Jamam's transit centres were dismantled, with



Roof structures were constructed from pre-fabricated sections and then carried to the shelter plots by the beneficiaries.
Photo: Peter Hart

reusable materials transported to Kaya.

A pre-fabricated approach to shelter construction was decided upon in order to erect as many shelters as possible before the transfer in May, with the aim of completing 4,000 shelters by September 2013.

Around 700 shelters were built (at a rate of around 50 a day) in advance of the arrival of the first camp residents. These shelters were constructed by fully-paid teams made up of the refugees themselves and the host community.

Paying for the construction of the first shelters in preparation for the first arrivals meant that the refugee community was initially reluctant to contribute voluntary labour for the erection of the remaining shelters.

Cooperation improved when each sheik agreed to provide 30 individuals to assist in construction, and the imminent arrival of the rainy season encouraged greater participation.

The lead agency procured and transported all the construction materials. Upgrading of shelters from plastic sheet roofs to CGI sheeting is planned for 2,000 shelters, though procurement will be managed by the implementing partner.

Delays occurred in sourcing timber and eventually the timber pipeline dried up completely in December 2013, due to insecurity. At the same time many camp staff had to be evacuated and the final shelters were finished after a short delay in March 2014.

Monitoring of the quality of construction was improved half-way through the project after a gap in staffing resulted in shelters being

constructed incorrectly. Some shelters had to be fixed and from then on all shelters were built under closer inspection.

Beneficiary selection

Though all refugees can be categorised as "vulnerable", with most arriving in Maban with nothing more than their clothes and a few belongings, prioritisation had to be made for relocation. Priority was given to female-headed households as well as to households with elderly or disabled family members and/or with a large family size.

A beneficiary list was provided by the lead agency which was used by the implementing partner to distribute the shelter kits. Ration cards were marked once the shelter kit had been distributed to prevent duplications of distributions, and biometric registration data was recorded for the whole population.

Within Kaya itself those families which were initially allocated tents were then prioritised for upgrades to the new shelters. Families of more than seven were given highest priority, followed by large households with a high proportion of vulnerable family members.

Households of only one or two people were not part of the target group. These refugees continued to be sheltered in tents.

By the end of March 2014, Kaya camp housed 4,657 households, a total of 19,161 refugees. 3,272 households of three or more family members received a shelter, along with 735 of the remaining 1,385 households made up of individuals or families of two people.

Technical solutions

Design

When the initial shelter design was made in December 2012, poles were chosen for the frame.

Although Maban County is a source for poles sold to other parts of South Sudan, tensions between refugee and host communities increased as refugee numbers rose and competition for construction poles intensified.

By early 2013 it became clear that using poles would exacerbate tensions between the groups and it was decided to ship timber into Maban in order to avoid worsening the situation and in order to start the construction process on time.

Mud bricks were also considered but the volume of water required to produce thousands of shelters was too great.

Construction

The shelters were prepared as kits by paid teams while the erection and assembly of the shelters was carried out by the beneficiary community themselves, with some refugees receiving special carpentry training.

The shelters were put together in four stages by four different teams:

- Pre-fabrication stage.
- Distribution stage.
- Roof assembly stage.
- Installation (erection) stage.

Each team was made up of around 15 people, making 60 paid workers in total.

Pre-fabrication unit

The end walls and roof sections were pre-fabricated. The production line was split into sections, supported by workers who fed the timber to the teams as it was processed:

- Cutting section: saw timber/ poles to length.
- Truss section: assemble trusses with two rafters and two beams.
- Walls section: assemble walls with 1 x 4m and 4 x 2m timber/ poles. Prepare bundles of bamboo and binding wire.

Distribution unit

The distribution unit loaded the trucks, transporting the pre-assembled parts and shelter kit items to the distribution points.



Roof assembly unit

Roof assembly was carried out by four teams of four people. These teams worked in tandem with the distribution teams, assembling the two roof truss sections per shelter at the distribution points.

Assembly took approximately 15 minutes per roof, with four sets of roofs being assembled at the same time. Completed sections were carried to the shelter plots by the families themselves.

Installation unit

For the initial advance shelters, installation of the shelters was carried out by a paid team.

Once refugees moved into Kaya, the implementing partner agreed with the camp shelter committee that the beneficiaries themselves would build the shelters without payment.

The installation of the shelter was supported by the five carpenters provided by each community leader (sheik), who were trained by the implementing partner. The final structure was checked by the project's technical team.

A toolkit was shared between five families, which they kept. It included a digging bar, a claw hammer and a saw.

Disaster Risk Reduction (DRR)

Maban County faces extreme heat during the dry season and storms and flooding during the rainy season.

Shelters were designed with bracing to counteract strong winds (sand storms are common) and

CGI roofing, once it is in place, will provide improved protection against the sun, compared to tarpaulin.

The site of the camp was chosen with mitigation of flooding in mind and precautions were taken to lay down gravel for roads. The shelter floor could be raised using marram (gravel mixed with laterite) if required.

Materials

Timber was sourced outside of the county until conflict in late 2013 put a stop to deliveries. At this point it was decided to spend money that would have been spent on timber on CGI sheets instead, for later upgrading.

Transport costs were high as many items had to be flown in to avoid the risk of materials being seized.

Shelter kit
1 pre-assembled roof (12 timber pieces 4" x 2", and 8 timber pieces 2" x 2")
2 end walls (to be joined with bamboo)
22 pieces of bamboo
2 plastic sheets 4m x 5m (one for wall, one for roof)
Binding wire (3kg)
Nails (3kg of 4" and 2.5")