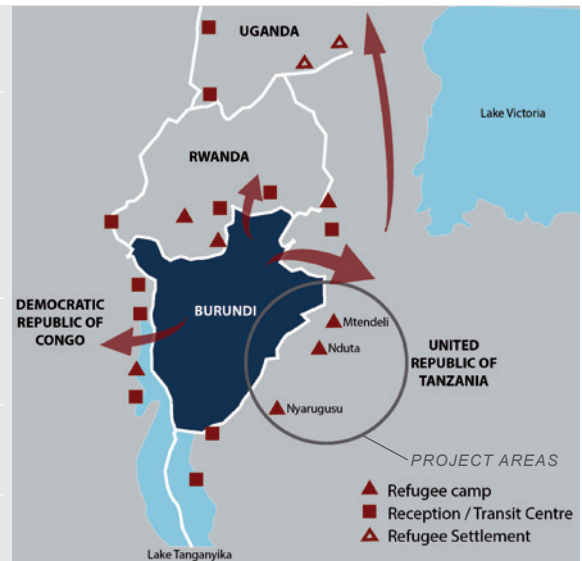


CASE STUDY

TANZANIA 2016-2017 / BURUNDI CRISIS

KEYWORDS: Transitional shelter, Adobe brick making, Training, Community participation

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|-------------------------------|---|
| CRISIS | Conflict / political tension, April 2015-ongoing. Refugees from Burundi. |
| TOTAL PEOPLE DISPLACED | 178,000 Burundian refugees in the United Republic of Tanzania (approx. 40,000 households). 326,000 total Burundian refugees in neighbouring countries. 139,000 people internally displaced in Burundi. |
| PROJECT LOCATIONS | Nyarugusu, Nduta and Mtendeli camps in Kibondo, Kakonko and Kasulu Districts, Kigoma Region, Western Tanzania. |
| PROJECT BENEFICIARIES | 37,760 individuals as of December 2016 (65% female). |
| PROJECT OUTPUTS | 7,552 Transitional shelters (target: 11,000). 30% are duplex shelters for small families/individuals. |
| SHELTER SIZE | 18m² covered living space. |
| SHELTER DENSITY | 3.6m² per person (average household size is five). |
| MATERIALS COST | USD 395 per shelter |
| PROJECT COST | USD 500 per shelter (including transport, water trucking, labour, support payment to persons with specific needs and project administration costs). |

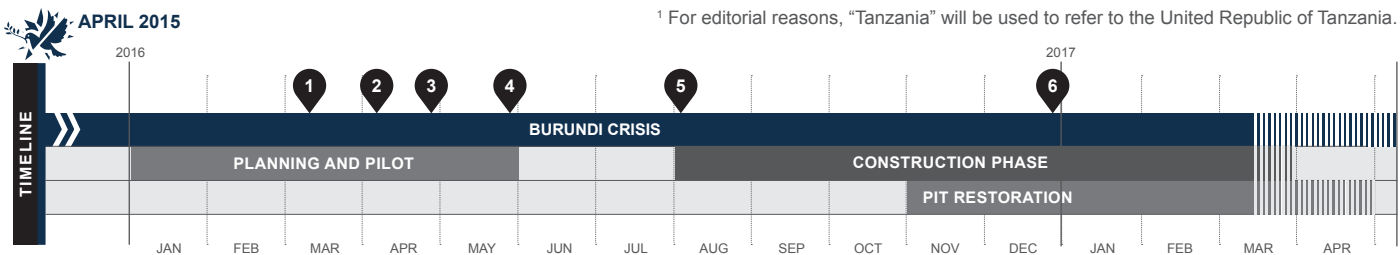


The project was implemented in the three camps of Nyarugusu, Nduta and Mtendeli camps, near the border with Burundi, Western Tanzania. From Burundi Situation: Regional Refugee Response Plan, January-December 2016.

PROJECT SUMMARY

This project provided durable shelter for refugees fleeing violence in Burundi, across three refugee camps in Western Tanzania¹. The programme was based on a community engagement model to produce adobe bricks within the camps and was accompanied by training and the production of a technical manual.

¹ For editorial reasons, "Tanzania" will be used to refer to the United Republic of Tanzania.



- 1 Mar 2016: Three different model shelters completed and tested with the community.
- 2 Apr 2016: Start of brick making and testing.
- 3 End-Apr 2016: Completion of first 100,000 stabilized adobe bricks.
- 4 End-May 2016: Completion of first 64 T-Shelters.

- 5 Aug 2016: Funding awarded and construction started for 11,000 Transitional Shelters.
- 6 Dec 2016: 7,552 shelters completed and handed over.

CONTEXT

Civil unrest in Burundi has resulted in over 326,000 refugees fleeing to the neighbouring countries of the Democratic Republic of the Congo (DR Congo), Rwanda, Tanzania¹, Uganda and Zambia. An L1 emergency was declared in April 2015 and escalated to L2 in May, with a Regional Refugee Coordinator appointed. In addition to political instability and increasing violence, Burundi's deteriorating economy and several natural disasters (floods, landslides, heavy rains and storms) over the last year have contributed to displacement.

The project was implemented in the Kigoma Region, Western Tanzania, which borders Lake Tanganyika to the south and Burundi to the north. The climate is bimodal with a wet season from November to January, reoccurring again from February to April. May to the end of October is primarily dry.

STRENGTHS

- + Community mobilization ensured high efficiency and speed.
- + Suitability and flexibility of the shelter design.
- + Use of locally available materials.
- + Significant sense of ownership and buy-in from the community.

WEAKNESSES

- Limited experience in adobe brick-making and lime stabilization.
- Adobe bricks can be problematic in wetter months.
- Shelter staff with technical background needed guidance on the community engagement processes.
- Minor delays and high turnover of staff.



Women were involved in mixing clay, lime and sand (Nduta camp pilot project).



The process of adobe brick making in Nyarugusu refugee camp managed to produce a total of over 11 million bricks, used for the construction of the shelters.

SITUATION BEFORE THE CRISIS

Kigoma is one of the poorest regions in Tanzania and has regularly hosted refugees in Government Gazetted refugee campsites. The road network is poor, with mostly dirt roads, and thus access to the region is difficult, particularly in the wetter months of the year. While larger towns, such as Kasulu and Kibondo have benefited from increased employment and local economies (as a result of the presence of humanitarian organizations), smaller towns near border crossings have seen minimal change. The environmental impact of refugee influxes, particularly on the surrounding forest resources (wood collection), has been significant. The Government of Tanzania was expected to increase focus on the host communities and regional infrastructure.

Prior to the development of an additional four refugee camps throughout 2015 and 2016 near the border with Burundi, all refugees were residing in Nyarugusu. This led to very poor conditions and heightened tensions between groups of longer-term refugees and new arrivals, as the camp, its facilities, and infrastructure, far exceeded its capacity.

SITUATION AFTER THE CRISIS

As of 16 October 2016, Tanzania was hosting more than 240,000 refugees and asylum seekers, mainly from Burundi (171,934) and DR Congo (68,009). The overwhelming majority of these persons of concern resided in one of the three refugee camps in North-Western Tanzania. Due to continued insecurity in Burundi, from April 2015, refugees continued to flee to Tanzania, through over 18 border entry points.

New camps (including Nduta and Mtendeli) were established to allow the decongestion of Nyarugusu through relocation, as well as to provide space for new arrivals. 18,493 Emergency Family Shelters were constructed and 7,466 tents erected.

SHELTER STRATEGY

The national shelter strategy focused on providing more durable and secure transitional shelters, as well as responding to the immediate need for shelter and NFIs amongst new arrivals from Burundi and DR Congo. Shelter responses included standardized family tents, to ensure that persons of concern did not spend more than three days in mass shelters. Emergency shelter construction was prioritized to minimize the use of tents and ensure the rapid upgrading to transitional shelter.

This project aligned to the sector priorities, by constructing

transitional shelters in the three camps of Nduta, Mtendeli and Nyarugusu.

BENEFICIARY SELECTION

The older areas of the camps, which had been occupied first, were prioritized for this project. Households living in tents were also prioritized, due to the shorter lifespan of tents compared to emergency family shelters. People with specific need for support, such as single female heads of household, the elderly and those with disabilities, were also identified and prioritized (preventing their engagement in the construction phase).

PROJECT IMPLEMENTATION

Three implementing shelter partners were engaged for this project, one for each camp. The project team consisted of one project engineer, two assistant engineers for each implementing partner and foremen (to directly supervise the construction of the transitional shelters). The shelters were fully constructed by refugees, using local materials, skilled and daily labour from the camp population.

PILOT SHELTERS

During the first phase of the project, a Shelter Working Group was established with the lead agency, implementing partners and other shelter actors, to manage and coordinate the project. **Three shelter designs were constructed and tested with the community:** 1) traditional clay and stick, 2) complete corrugated galvanized iron, and 3) adobe brick.

The three pilot shelters were constructed and trialled against the following criteria:

- 1) **Economic** (cost of materials, benefit to local community, cost to transport materials);
- 2) **Social** (maximize ownership, employment, and cultural appropriateness);
- 3) **Environmental** impact (materials used from natural resources, distance to transport, impact on host community, water, forest and other environmental resources);
- 4) **Socio-cultural** impacts (communities' ability to self-construct, acceptability of the shelter, protection issues, suitable size, security, plot size and layout, ventilation, storage, cooking and social space).

The adobe brick shelter design was preferred by the community and was deemed the most environmentally harmless and culturally acceptable. The government was very supportive of



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Duplex lime-stabilized shelter completed in Nduta refugee camp. Some of the shelters were designed to host two small families and followed the same design, but had two doors and a partition that divided the indoors in two units.

this type, as the national environmental policy prescribes limiting the use of native timber. While some partners and beneficiaries initially expressed preference for contracted shelter construction, or other design types, once the shelters started to be completed and community participation increased, this challenge was overcome.

BRICK MAKING

Once partners and the community had agreed on the type of shelter and design specifications, **community-led brick-making commenced in each camp**. Tests were carried out on different lime or cement stabilized bricks throughout the project, as variations in soil were encountered in different areas of the camps. It was initially decided to use lime, but later in the project the team discussed the suspension of lime distributions, mainly due to its scarce effectiveness in such minimal proportion, fear from some users that it would irritate their skin, and the fact that families did not use it at all in one of the camps. Brick-making was carried out in groups of 16 households, overseen by one full-time supervisor (foreman) from the implementing agency. Each group included at least one family with persons with specific needs. The bricks were air-dried and could therefore be produced in any weather, as long as cover was provided during wetter months.

A brick-making guide was also produced in the local language with diagrams to support best practice. These were distributed to communities, with regular community meetings held to ensure continuous targeted messaging. Trainings were held regularly for masons and carpenters, organized in mixed male and female groups to ensure that enough skilled labour was available to support households during the construction phase.

CONSTRUCTION PHASE

Each targeted household was assigned a construction plot within the camp. In Nduta camp, the plot was 20x15m, making it possible to construct the new shelter while the family continued to occupy their tent or emergency family shelter on the plot. In Mtendeli and Nyaragusu, the plot was 15x10m, making simultaneous construction more challenging. If living in tents, families were recommended to move their tent to the firebreak (or another space) while construction took place.

Once the bricks were produced and transported to the family plot, **a trained builder from the refugee community was assigned to each household to support the masonry work**. Households were responsible for mixing mortar, carrying water and other general activities. Following this, a carpenter

was assigned to support roof construction. **Skilled builders from the refugee community were remunerated through incentive payments**. A small payment was also available to support correct finishing of the shelter. For persons with specific needs, cash support was provided to allow the hiring of labour to support the skilled builders. In 2016, approximately 700 masons and carpenters were involved in the project.

SHELTER TYPES

The adobe brick shelters were 18m² which accounted for the average household size (five members). Small families and individuals were provided with “duplex” shelters. These were of the same size, with a partition wall in between and two separate doors to each of the rooms. 975 shelters also had a 4m² kitchen attached, built under a different project, which included the use of gas stoves.

The design was slightly adapted for each partner, due to the soil type in each camp and the partner’s capacity.

LIME STABILIZATION

Lime for brick stabilization was chosen over cement due to the high content of clay in the local soil, which hampered the efficient mixing with cement. 2x10kg lime bags were distributed to targeted households, while it was agreed that grass could also be used as a straw mix to protect the outside walls from rain – a technique that has long traditions within the refugee communities in the region. Protective gear was not distributed due to the minimal content of lime, which reportedly did not cause concerns by the users.

PIT RESTORATION

The soil for making the bricks was mainly extracted on the beneficiaries’ plots. For environmental reasons, a strong focus was put to ensure the restoration of the soil extraction areas in each community. A parallel project implemented by and environment partner, in coordination with Environment and Camp Management actors, planted banana trees in the pits as part of this restoration phase.

WIDER IMPACTS OF THE PROJECT

The project set a minimum standard for shelter construction across the refugee camps in the Kigoma region, ensuring equality of assistance and providing households with a **durable shelter option which could easily be upgraded** through extensions or partitioning. It also resulted in the **training of thousands of refugees** in lime-stabilized adobe brick making and shelter construction. It had a **positive effect on local economies**, through encouraging the sustainable use of resources from local and national sources, supporting local businesses, as well as allowing skilled tradesmen and labourers from amongst the refugee population to generate income. **The design was also approved and promoted by the government**, as it meets the required minimal environmental impact standards, while also providing a durable solution.

Large-scale community engagement, and linkages with other projects and technical coordination through the Shelter Working Group, has brought considerable improvements to living conditions of Burundian refugees in the three camps.

The lessons learned through this first phase also fed into and informed the continuation of the project, which aimed to deliver an additional 3,500 shelters in 2017.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Mason laying the bricks of a shelter in Nduta refugee camp. Skilled builders from the refugee population were employed for the construction of the shelters.



Lime-stabilized transitional shelters were built in Nduta refugee camp. The emergency shelter solution (tent), where the family was living during the construction, can be seen on the same plot near the shelter.

STRENGTHS

- + Community mobilization** kept the shelter construction cost low and enabled a large quantity of shelters to be constructed in a short time.
- + Suitability and flexibility of the shelter design.** The plot size left sufficient space for a kitchen, individual latrine and garden. The shelter was adequately designed for the local climate (hot days and cold nights), with the clay walls providing good insulation and protection. The low-tech, simple technique and the design itself allowed beneficiaries to adapt the shelters, ultimately achieving high flexibility (extensions, partitions, upgrades, etc.).
- + The chosen materials were easily available locally** (particularly clay and lime), allowing local families to get involved more closely with the brick-making and construction process.
- + Community sense of ownership and buy-in was significant,** thanks to the comprehensive process of community engagement and consultation over the design and construction of the shelter. This could be seen in the care and pride families took over their new shelters after completion.

LEARNINGS

- **Shelter partners working in community projects require training in community mobilization and communication,** particularly those with a highly technical background. Piloting the ideas with the community proved beneficial in bringing partners and beneficiaries on board and exemplifying the benefits and shortcomings of certain technical solutions.
- **A realistic time frame is required** to take into account the significant time for planning such a project. Donors, lead agencies and implementing partners' funding and budgeting cycles have to be seriously considered and discussed openly during the planning phase, to avoid unrealistic expectations and implementation work plans.
- **A large-scale community-driven project requires a very high level of monitoring and quality assurance.** A lack of monitoring can result in poor site demarcation, change of orientation of the shelters, inconsistency in brick quality, refugees paying for support in construction, or the sale of sites to families not targeted by the project, which can all lead to poor quality and heightened protection risks for already vulnerable populations.
- **Different organizations have different capacities and networks.** As funding was an issue in the early stages of the project, the international organizations were better able to pre-fund their own work and scale-up more quickly. Local organizations were more knowledgeable about the local context and could therefore access materials more cost-effectively. **Better synergy and consultations with local partners** would have avoided some of the tensions at the project start.
- **The skills, ability and enthusiasm of the refugee community** to participate in shelter construction projects should not be under-estimated. With correct support and facilitation, as well as strong communication and community engagement, a very successful project with a high level of beneficiary' satisfaction can be implemented. Feedback and complaints mechanisms also needs to be in place.

WEAKNESSES

- Lead agency and local partners had limited experience** in community-driven lime stabilization and brick making. The identified need for initial sensitization, training and advocacy caused implementation delays of several months. However, pilot brick testing, capacity-building and consistent community messaging increased the quality of the bricks over time and the acceptance and understanding of the technical design.
- Stabilized adobe bricks can be problematic in the wetter months** and a significant amount of training was required to ensure correct and maintained drainage in the areas surrounding their shelter.
- Shelter staff in the sector had primarily technical backgrounds** (e.g. engineers) and were in need of additional guidance on the community engagement process of the project. These skills were particularly necessary during the pilot project, as a lot of skilled consultation was required in order to assess the acceptability of the design.
- The lead agency annual funding cycle and the need to accommodate capacity-building activities,** prior to start of the project, **led to minor delays** and pushed back the delivery date of the project. However, all materials for the continuation of the project have been prepositioned and no major disruption was experienced.
- High turnover of staff,** due to short contracts in emergencies, was problematic to ensure project continuity and consistency.