A.8 Somalia - 2007 - Civil conflict

Resettlement

Project type:
Resettlement project
Support to local authorities in sourcing private land
Security of tenure to IDPs and urban poor
Provision of extendable one-room shelter
Service provision to family plots

Emergency:
Somalia civil conflict – 1991 onwards (chronic emergency)

No. of people displaced:
400,000 IDPs in Somalia before 2007; 1 million in 2008
25,000 IDPs estimated to be in Bossaso

Project target population:
140 families; 80% IDPs and 20% urban poor

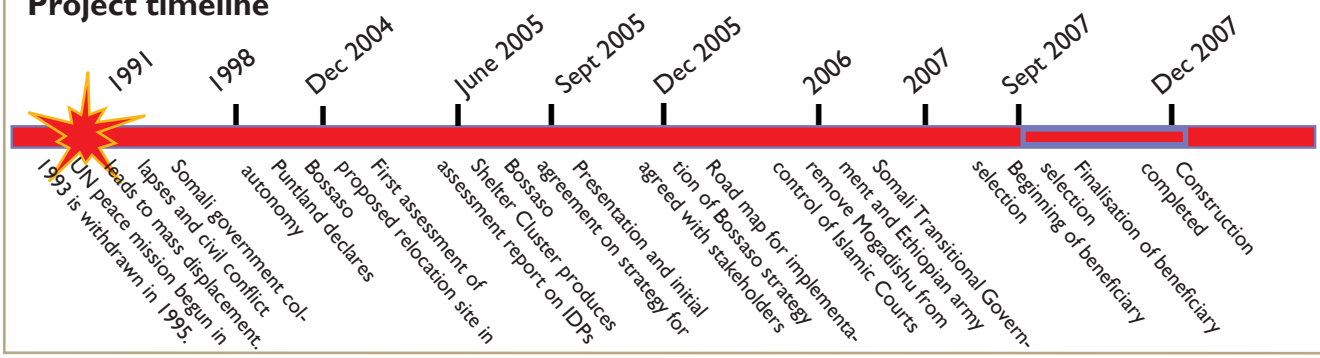
Occupancy rate on handover:
100% of resettled IDPs (112 families);
25% of urban poor (7 of 28 families)

Shelter size
13.5m² extendable shelter on a 7.5m x 15m plot (including shower and toilet)

Summary

A resettlement project in Puntland, Somalia, preceded by in-depth discussions on the concepts of access to land for IDPs and related negotiations on land rights. A consortium of agencies built a serviced community settlement supporting beneficiaries in the construction of extendable single-room houses and providing them with temporary shelters on their new plot.

Project timeline



Strengths and weaknesses

✓ Beneficiary involvement in construction increased a sense of ownership and sometimes meant a higher quality of workmanship at lower cost compared to contractors. Contractors were necessary for some of the infrastructure works.

✓ Announcing the outcomes of meetings publicly was one way of avoiding a breakdown of communication with local authorities and ensuring transparency.

- In a place without clear land policies, laws or record systems, land issues were complicated and sensitive and required careful investigations, localised responses and public awareness-raising through mass media and meetings.

- Joint planning and implementation by agencies through a coordinated system was necessary to limit manipulation of the process by powerful groups.

- Although slow, the beneficiary selection process used simple and verifiable criteria that ensured that the target group was assisted.

- Donated land does not always guarantee sufficient quantity or quality of land. As a result, an integrated urban development plan can be hard to develop. Assessment of land suitability and direct discussions with private landlords to clarify donation conditions are necessary before land is formally donated to the municipality.

× Working with the municipality was difficult, due to its low capacity, high turnover of staff and overlapping responsibilities with the clan system. Documenting

Strengths and weaknesses (continued)

decisions and agreements made was of little help due to literacy issues.

× Selection of beneficiaries took much longer than expected, so some construction work began before knowing who the final beneficiaries would be. This limited participation.

× At times not all the humanitarian agencies involved communicated the same messages. This meant that agreements sometimes had to be renegotiated.

Photos: Ombretta Tempra

Sites and services: the project focused on negotiating land and providing access, secure compound walls, water and sanitation.

Background

Bossaso is a coastal town in the Puntland region of northern Somalia. Puntland, with 2.8 million mostly nomadic/pastoralist inhabitants, has been semi-autonomous since 1998. Due to its relative stability, it has become an attractive area for IDPs fleeing conflict in South Central Somalia.

Bossaso has a significant population of IDPs, many of whom had been present for over ten years. The livelihood opportunities created by the fast-developing port of Bossaso is a strong pull factor, along with some IDPs' clan connections in the area.

There is no land administration and there are few documentary records, so customary law, secular law and sharia law all overlap.

Aim of the project

The idea of the permanent resettlement project was to substantially improve IDP protection, security of tenure, access to basic services and infrastructure (especially water and sanitation), and to provide a solid base for income-generating activities (renting out rooms, space for shops or productive activities), in addition to the provision of a better shelter.

Freeing IDPs from paying rent for inadequate shelter meant that they could use resources for basic services, such as education and health. Construction training would provide beneficiaries with new skills.

The project indirectly tackled governance-related issues relating to land, and broader urban development and city planning issues. Approaching these issues directly, without a clearly visible project, would have been difficult.

Implementation

Negotiations with authorities for accepting the permanent resettlement of IDPs within Bossaso, and the relative provision of suitable land, began in 2004. These negotiations were linked to a joint UN strategy for IDPs in Somalia published in 2005.

Once a strategy for Bossaso had been agreed upon between humanitarian agencies and Bossaso authorities, the project began in 2006. It was implemented by a consortium of agencies, all of whom were represented in the newly established Somalia Shelter Cluster.

Construction was completed by the end of 2007. The duration of the project was longer than initially envisaged, due to difficulties in obtaining land, a long beneficiary selection process and the challenges of maintaining consensus with a relatively unstable and inexperienced local government system.

Land issues

The original site proposed by the local authorities was rejected on the grounds that it was too far from the town and limited economic integration of the IDPs with the host community. This was a key requirement by the agency to improve livelihood opportunities for beneficiaries and promote peace between the IDPs and the host population.

A committee was established to identify land within the current urban growth areas. During Ramadan, calls were made for land donations. Five of the offered sites were selected and officially handed over to the municipality. The land transfer was endorsed by the sharia court in December 2005.

With no clear legal framework in Puntland, customised 'letters of allotment' had to be developed to substitute for an 'ownership title'. Beneficiaries received the right of occupation, use and inheritance for the first 15 years. After this, each family would also acquire the right of disposal (selling the property for profit). For the document to provide the strongest protection for IDP tenure, it was signed by the beneficiary, the mayor, the minister of local government and the magistrate of the sharia court.

Selection of beneficiaries

Beneficiary selection took longer than planned. Some 80% of plots were to be allocated to IDPs and 20% to poor families from the host community. This approach limited the interest of powerful members of the host community from exerting too much influence in the selection of IDP beneficiaries. Post-occupancy assessments found that few of the urban poor beneficiaries in the project


Photo: J. Ashmore

Many of the sites initially offered were rejected because they were far from Bossaso and possible livelihoods. The five selected sites were donated following requests for land made during Ramadan.

occupied their site, preferring instead to rent out the new accommodation or leave the house empty, while the occupancy rate on project completion from IDP families was 100%.

The selection process, managed by the multi-representative Bossaso selection committee, began in September 2006. IDP beneficiaries were selected by April 2007, but agreement on urban poor beneficiaries was not reached until November 2007.

Before selecting individual families, the IDP settlements with the worst shelter conditions were identified. Selection committees were formed in each of these settlements and were tasked with putting forward individual households who had lived in Bossaso for more than six years, with no fixed assets and at least three children. More detailed 'vulnerability' criteria were rejected due to the complexity of Somali family structure and the lack of identification documents.

Selection lists were made public to allow time for complaints to be investigated (one of the settlements produced a list that excluded an ethnic minority). The final selection of the 112 IDP families was made through a lottery broadcast on local TV and radio, which was deemed a fair method by beneficiaries.

'Compared to the shelter I had before, I can now say that my life has improved 100 percent. The resettlement programme was completely transparent and well done'.

Technical solutions

This project provided the infrastructure for a serviced community settlement, well integrated with the host population, and support to IDPs for the building of individual dwellings within the settlement.

Contractors were used to trace roads for the new settlement and connect it to the municipal water supply. This also benefited those living along the route of the new water pipes. An ongoing solar-powered street lighting project was also started towards the end of the project.

A plot was provided within the settlement for each family to construct their own house, with support from the consortium.

Two different agencies implemented the construction of the 140 housing units in two phases using contractors. The first phase took five months and involved the construction of foundations, boundary walls, sanitation (shower, toilets and septic pits) and a 4.5m x 3m floor slab. Phase 1 cost US$ 1,850 per housing unit.

The second phase began after beneficiary selection was complete and took three months, finishing in December 2007. The beneficiary families moved onto their plot, living in a temporary tent-like shelter provided by another agency until the work was completed. The temporary shelters were later used as additional rooms or for storage.

Food for work for a maximum of 30 days was provided to beneficiaries for the construction period, along with US$ 30 to hire a mason (families sometimes did masonry work themselves, with technical support, and kept the money). The main agency provided technical support in the form of cash for skilled labour and employment of a foreman for supervision.

Giving the families the opportunity to select their own mason (rather than following the wishes of the local authorities who wanted the whole construction process contracted out) meant that they had greater quality control over the work done and allowed the agency to avoid the problems of a tendering process.

The cost for the second phase was US$ 580 per housing unit. This excluded agency staff costs and food-for-work contributions but included all other logistics, administrative and material costs.

Logistics and materials

Materials were procured locally, with contractors responsible for their own procurement.

Bill of quantities

The following table shows the bill of quantities for Phase 2 of the project, averaged for a single unit (some units were corner units rather than free-standing).

Materials	Quantity
Hollow concrete blocks (150 mm x 390 mm x 180 mm)	281 pieces
Cement for mortar and concrete ring beam	5 bags
Sand for mortar and concrete ring beam	1 tonne
Aggregate / ballast for ring beam concrete	0 tonnes
Y8 bars (12m long) for ring beam	4 pieces
R6 rings (6m long) for ring beam	2 pieces
6x1 white wood for form work	12 metres
28-gauge galvanised corrugated iron sheets	14 pieces
Structural grade 150 x 50 (6' x 2') timber roof rafters	18 m
Structural Grade 75 x 50 (3' x 2') timber roof purlins	27 m
Roofing nails	1 kg
Ordinary wire nails	1 kg
Steel single doors (0.8m x 2m)	1 set
Double leaf-steel window (1m x 1m)	1 set
White wash	4 bags
Brushes for whitewashing	2
Bamboo/rope for ceiling mats	As required

A.9 Darfur - 2004 (ongoing) - Conflict

Materials distribution

Project type:
Darfur shelter materials pipeline
Multi-agency common logistics system
Distribution of shelter materials and non-food items

Emergency:
Response to displacement caused by violent conflict in Darfur, Sudan, 2004 (ongoing)

No. of people displaced:
Over 1 million people affected (May 2004 estimates); 700,000 people internally displaced

Project target population:
1 million people initially (167,000 families)
Increased to 1.4 million people in September 2004

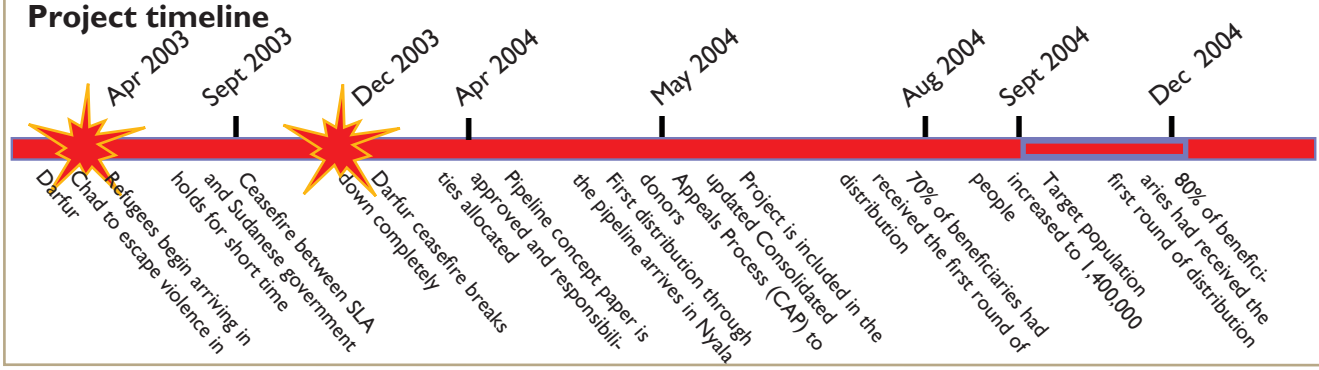
Occupancy rate on handover:
80% of target population reached by December 2004
A further 8% of beneficiaries reached by those not operating within the pipeline

Shelter size
Maximum of 20m^2 of covered space for a family of six people, provided by a 4m x 5m plastic sheet. Actual covered space would have been less, due to the need to fix and fold the sheeting.

Summary

A joint distribution mechanism, which would later include joint procurement, was set up by a consortium of NGOs and UN agencies to standardise the procurement and distribution of basic shelter materials to those displaced by the conflict.

Project timeline



Strengths and weaknesses

✓ More effective use of overall emergency funds due to economies of scale.

✓ Reducing logistics overheads for individual humanitarian agencies in the field meant they could concentrate on service delivery to beneficiaries.

✓ Reduced competition for transport and warehousing among agencies limited price inflation.

✓ Customs clearance from the government was more easily obtained by the UN than NGOs, so collective purchase reduced customs obstacles.

✓ Common purchasing meant greater ability to direct resources based on a broad overview of need in the region.

✓ Centralising stock in a warehouse outside of the conflict area meant that goods were not tied up in warehouses in the 'wrong' areas, so interruptions to distribution by security problems were minimised.

✓ Early donor commitment of funds and air cargo

Strengths and weaknesses (continued)

allowed the project to move quickly. Donor coordination meant funding went through a central channel, avoiding duplication of projects.

✓ Individual agencies in the field augmented the provision of shelter items with their own locally procured materials (such as poles) to provide shelter solutions.

× Roles could have been decided more quickly at the beginning, as slow-moving discussions delayed initial implementation.

× Some key items (poles and cooking fuel) were problematic to procure in bulk and the poles were not supplied.

× Without the distribution of a frame, the distribution of plastic sheeting did not constitute a complete 'shelter solution'. If not provided by an NGO working in the field, IDPs had to provide these items themselves, which carried risks in terms of collecting material from unsafe areas or having to buy local materials at high prices.

× Shelter issues were seen as being dealt with by the provision of basic materials and the project had limited technical support to help consider what other shelter issues might need to be addressed.

× Access was severely restricted due to the conflict itself and limitations set by the government.

Photo: Joseph Ashmore

Queue for distribution of materials

Situation before emergency

Before 2004, Darfur was one of the poorer areas of North Sudan. Although there are no exact figures, its mostly rural population had limited access to safe drinking water and had poor child nutrition. The region's increasingly scarce natural resources of grazing land and water were one of the factors behind the conflict.

The situation in Darfur became increasingly volatile throughout 2003, with refugee movements beginning as early as April. The crisis began to escalate at the end of the year. Response to the crisis in Darfur was hampered by the Sudanese government's restriction of access to the affected areas.

Joseph Ashmore

Unloading a lorry of relief items

Situation at the initial response stage

At the end of 2003, humanitarian agencies were able to access less than 5% of IDPs due to travel restrictions imposed by the Government of Sudan. This made accurate needs assessment difficult. The May 2004 revision of the Consolidated Appeals Process for Sudan estimated a US$ 22.5 million need for shelter and non-food items for the remainder of the year.

The severe lack of shelter available to IDPs was a major health threat, with exposure to heat and dust during the day and very cold temperatures at night. By May, exposure to rains led to an increase in communicable diseases.

Selection of beneficiaries

The project aimed to reach all of those displaced by fighting in Darfur, which by April 2004 was estimated to be a total of 1 million people. Beneficiaries were then divided into categories of full or partial assistance so that the most vulnerable would receive a full package of items. Those receiving a partial package were assumed to be able to supply missing materials themselves, which may not have always been the case.

By August, 70% of the beneficiaries were reached with 'first tier' NFIs, comprising plastic sheeting, blankets, jerry cans and soap. In September the number of beneficiaries in need was raised to 1.4 million and by December 2004 around 80% of this target population had received assistance. This equated to almost half a million blankets and other material by the onset of winter. An additional estimated 8% was covered by other agencies not using the common pipeline.

Technical solutions

With the shelter materials supplied, beneficiaries were assumed to be able to construct basic shelters using poles as frames, plastic sheeting as a roof and rope for fixings.

However, procuring poles in bulk at a national level proved too difficult and these were left out of the package. This meant that no complete shelter solution was provided.

Many agencies in the field planned a shelter response where they augmented the materials received through the pipeline with items they procured locally, such as poles. However, the lack of a clear idea of how beneficiaries would use items to create shelters meant that some beneficiaries would have had to source construction materials themselves. These may have been expensive, or, in the collection of poles, have entailed the same risks to personal security that many women faced when collecting wood for fuel.

The limited consideration of technical shelter issues was unsurprising considering that the programme's main focus was on the logistical challenges of mass distribution.

Implementation

Meetings to discuss the idea of a pipeline were held in March 2004, with a concept paper for funding included in the updated Consolidated Appeals Process released at the beginning of May 2004.

With such a large affected population and the government restricting both access and imports, the main aim of the pipeline was to get enough non-food items and shelter items into the hands of beneficiaries as quickly as possible to cover basic needs.

During April 2004 a structure was agreed upon for the management and implementation of the pipeline. The process was supported by several donors and the final allocation of responsibility was undertaken by the UN Country Team. The organisation of the pipeline was split into two main parts: a supply part and a programme part.

For the supply part of the programme, one UN agency was nominated for procurement, which would be distributed as far as a centralised warehouse (though this process started later in the year). An NGO was responsible for the ongoing transportation and storage of these items to sub-level warehouses and the UN agency that made the original pipeline proposal was made responsible for co-ordinating the supply chain.

In addition, a third UN agency agreed on 19 April to act as a 'consignee' to officially receive imported goods, an extension of their role in receiving food items. This was crucial, as individual NGOs were unable to clear customs as quickly as the well-established UN agency.

On the programmatic side, coordination of needs analysis, gap identification and interaction with humanitarian partners in the field was carried out by the UN coordination agency and the agency that initiated the whole project.


Joseph Ashmore

Emergency shelters

'Coordination with all of the agencies was key. We held weekly meetings in Khartoum and the field and set up information-sharing systems such as a website. No one had an excuse for not knowing what was going on!'
- Coordinator

The centralising of procurement and the management of an efficient and cost-effective supply chain reduced the logistics overheads for agencies on the ground, freeing them up to concentrate on direct assistance to beneficiaries.

The coordinating agencies were able to keep an up-to-date broad overview of the requirements in Darfur, which helped to direct assistance to those areas most in need and prevented a duplication of response.

Any agency wishing to receive items from the pipeline had to fill in a request form and a basic needs assessment form. The procurement agency delivered items to El Obeid and/or Nyala. From there the NGO responsible for distribution arranged for deliveries to their warehouses in the different state capitals. The individual NGOs responsible for making the initial request would then make the final distribution to beneficiaries.

Information-sharing on needs gaps, current stocks and supply chain updates was achieved through regular meetings and access to an open website.

Logistics and materials

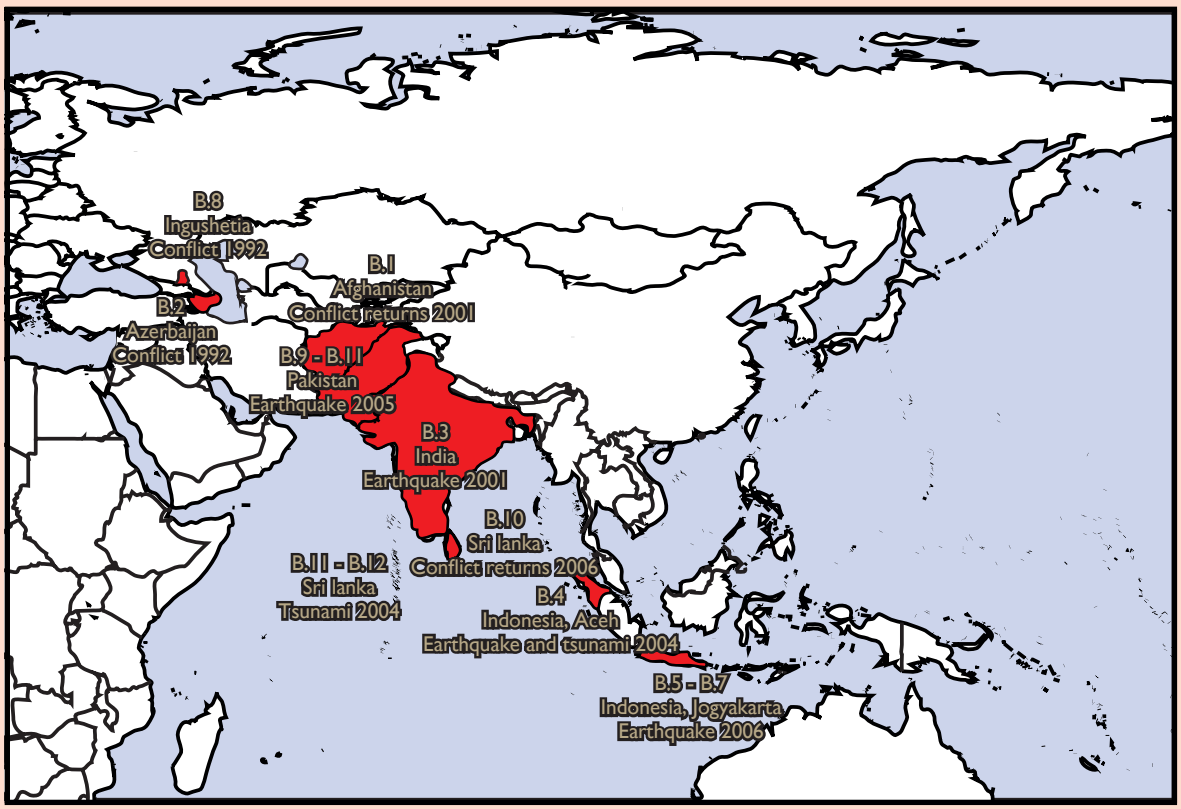
A basket of non-food items was agreed on by participating agencies. This basket included plans for some sanitary items, clothing and kitchen sets. Initial plans for additional shelter items – poles and rope – were dropped after it proved too difficult to provide them. Plastic sheeting was mostly donated from abroad or imported. Other non-food items were purchased in Khartoum or Nyala.

Shelter items in the NFI basket

Note: Other items, such as sanitation items, were also supplied in the non-food item basket, but are not listed here.

Materials	Quantity
Blankets	2
Plastic sheet (4m x 5m)	1
Rope	20 m
Poles	6 planned, but not distributed
Sleeping mat	2

Section B
Asia



B.1 Afghanistan - 2002 - Returns

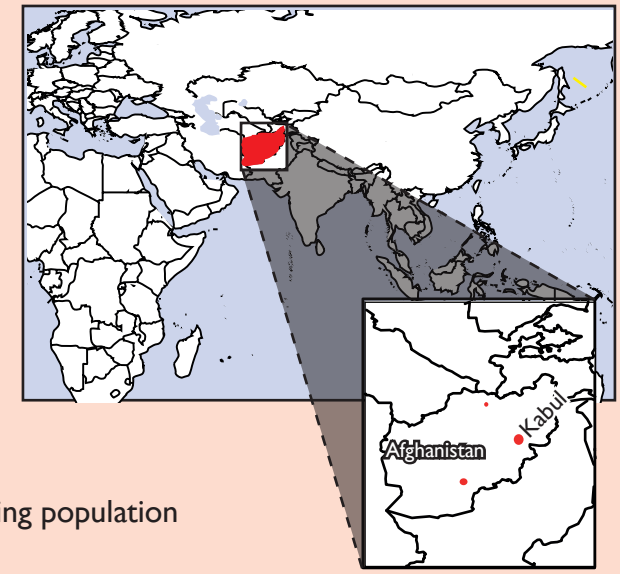
Case study: Shelter construction

Project type:
Package of shelter construction materials
Self-build shelters
Cash grants
Technical support

Disaster:
Afghanistan repatriation, 2002-2008

No. of people displaced:
5 million or more returnees since 2002

Project target population:
1.2 million beneficiaries to date
Average family size of six people
Shelter provided for an estimated 25% of returning population

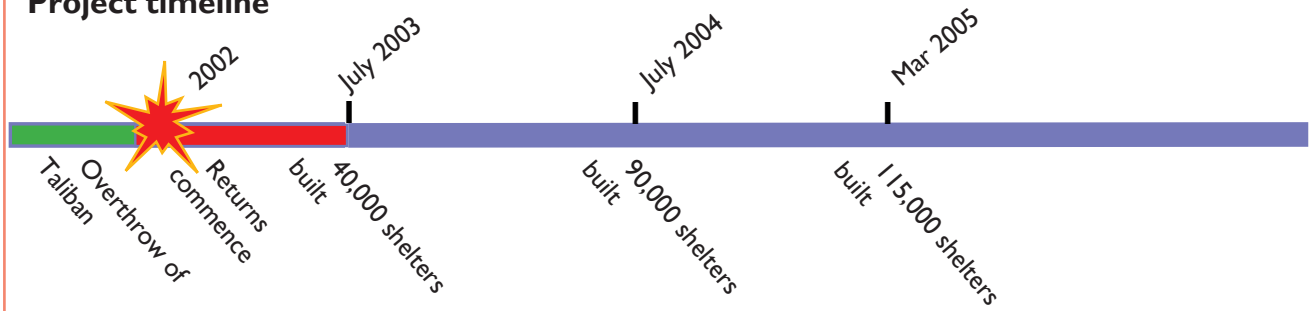


Occupancy rate on handover:
Unknown

Shelter size
Maintaining a 21m^2 minimum net floor area was strongly recommended. The shelter consisted of two rooms, one corridor and an external latrine. The shelter plan could modified if it was within the allocated budget and if structural integrity was not compromised.

Summary
A large-scale, self-build shelter programme implemented through partner organisations to help meet the needs of the 5 million people returning to Afghanistan since 2002, following conflict since 1979. Different shelter models were adopted around the country depending on local construction technology. This programme provided materials, basic technical guidance and cash for the most vulnerable people. It was integrated with monitoring and support for return. Escalating steel prices severely affected the programme, leaving it US$ 5 million under budget for 2008.

Project timeline



Strengths and weaknesses

✓ Very large-scale programmes are possible using partner organisations as implementers.
✓ Efforts were made to encourage equitable and gender-sensitive participation in beneficiary selection.
× Building sites must be serviced. On some new build sites, site selection and provision of water and infrastructure were poor.
× The non-anticipated rise in international materials prices severely effected the programmes.
× Inequality between the responses of different organisations has led to some of the cheaper shelters being demolished by their owners.
× There were delays in shelter provision for the landless.

Urban housing in Kabul

Project background

Since 2002, there have been over 5 million returnees to Afghanistan, displaced over 20 years of conflict. The largest returns are from Pakistan and Iran. Three million refugees remain in host countries and it is estimated that 1 million more will return by 2013.

Those returning through official schemes receive a 'one-off' grant of US$ 100.

Selection of beneficiaries

Traditionally, there is serious under-representation of women in public decision-making in Afghanistan and significant control is in the hands of a few non-elected individuals. To remedy this, beneficiary committees were formed in each project area. Each committee consisted of the lead and implementing organisation, a local government representative and members of the population for whom the project was targeted.

Land issues

The project could only provide shelter materials to those who had land to build on. Returnees with no land had apply to the Government of Afghanistan's managed land allocation scheme. However, this scheme has proven slow to operate in the past. As of mid-2008, approximately 500,000 returnees have registered for land and very few of them are now living on registered land.

It was originally anticipated that 55 land allocation sites would be provided through the support of the Ministry of Refugees and Returnees. This number was reduced to thirteen, partly due to the unsuitability of selected sites.

One of the challenges with building on new sites has been to coordinate with other organisations to provide services on previously uninhabited sites. In some cases this has not happened and has led to shelters being unusable.

Technical solutions

Shelter programmes in Afghanistan started as a distribution of tents and household items. The main focus gradually turned to shelters.

This programme began building mud-block shelters with wooden roofs, windows and doors. Due to supply and sustainability issues, steel was used to replace the timber.

'There are strong indications that more women are now participating in programme decision-making'.

As the programme worked across the entire country of Afghanistan, there were significant variations in climate, cultural values, construction materials, capacity of implementing partners and community support mechanisms. This led to the development of standard formats for technical specifications, data collection, reporting, feedback and analysis.

The following key regional variations of shelter design were adopted:

- Dome-type ceiling without beams in west and north Afghanistan;
- Flat roof with beams in central, east, south-east and south Afghanistan;
- Smaller windows in the Central Highlands area than in other areas. Relatively wider windows can also be found in the central region.

Implementation

The shelter programme is based on a four-stage process:

Stage I: Planning - Allocation of shelter per region/province/district, budgeting, identification of implementing partners, establishment of materials supply contracts.

Stage II: Contracting – Establishing contracts with implementing partners.

Stage III: Assessment – Local needs assessment and beneficiary selection.

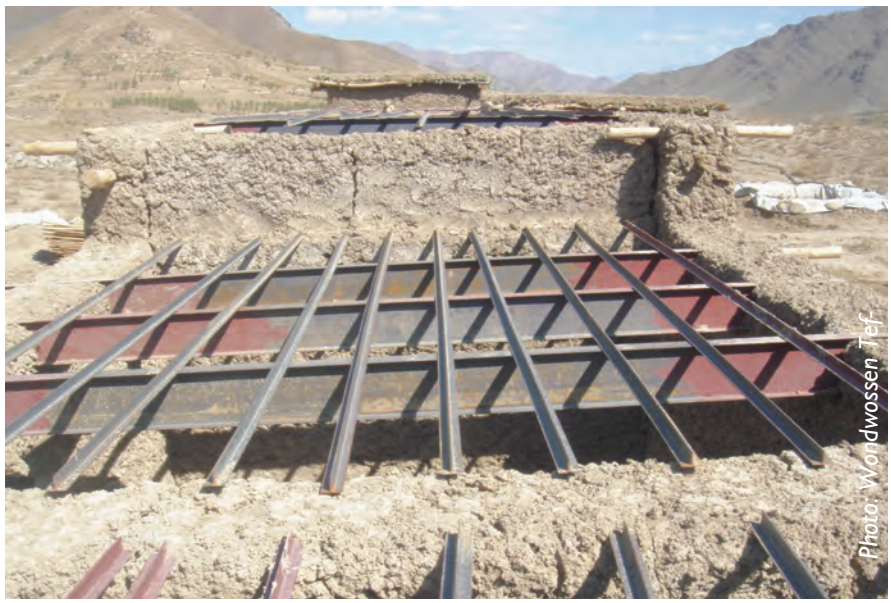
Stage IV: Implementation.

- Work started on site and foundation completed (eight weeks).
- Walls erected, lintels installed (four weeks).
- Shelter completed (four weeks).
- Handover (liquidation period, four weeks).

Logistics and materials

In the first years of this programme, the timber was sourced from South Africa and Pakistan. Supply challenges and major sustainability issues with the sourcing of timber have led to revised designs for 2007 onwards that will use steel in place of timber.

Completed shelters



Steel trusses

During 2007 and 2008, rising costs of steel led to cost escalations from US$ 900 per shelter to in excess of US$ 1500 per shelter. This caused serious budget shortages and the materials used consequently needed to be reassessed.

Completed shelter

Internal view

B.2 Azerbaijan - 1992 - Conflict - People displaced

Case study: Upgrade of collective centres

Project type:
Upgrade of collective centres

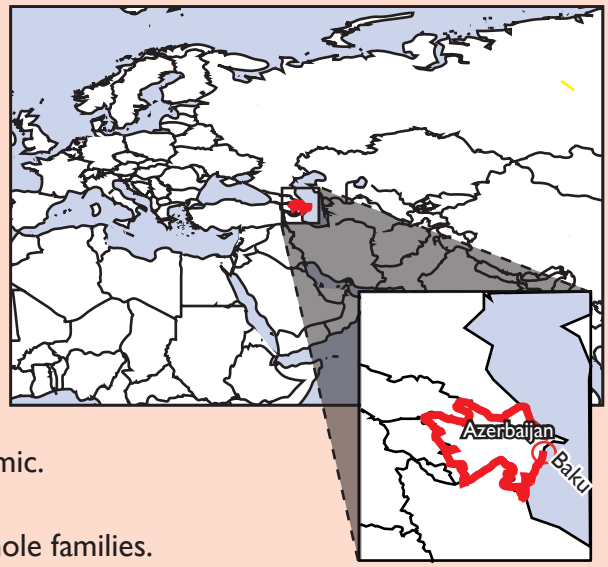
Disaster:
Nagorno Karabakh conflict

No. of people displaced:
700,000 people displaced
40,915 families (169,609 people) came to Baku in 1992-1993

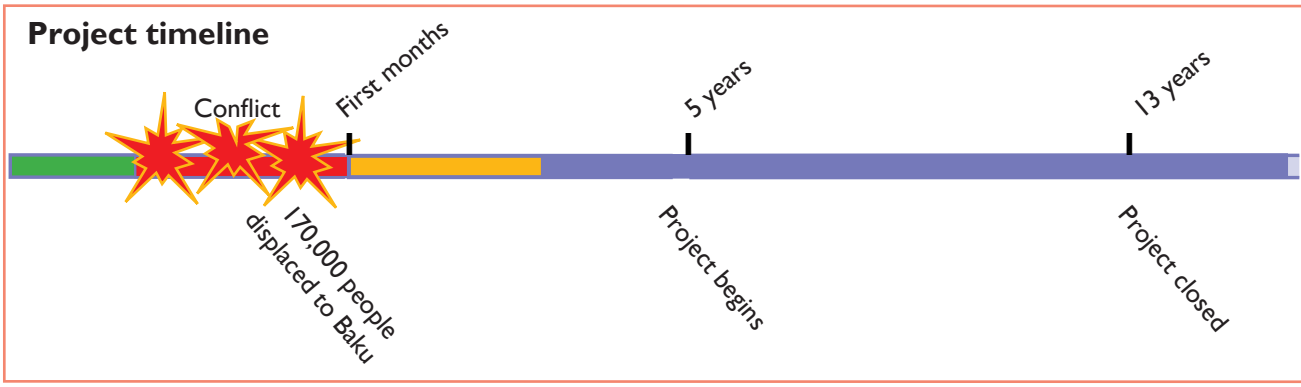
Project target population:
27, 500 people in over 60 buildings over 8 years

Occupancy rate on handover:
No data. Room allocation in the buildings is dynamic.

Shelter size
Variable. Individual rooms are often shared by whole families.



Project timeline



Summary

This programme upgraded and maintained public buildings that people had moved to during the conflict in Nagorno-Karabakh in the early 1990s. The project worked with families who, by the end of the project, had been displaced for over ten years. The way of working evolved over time, starting with contractor-led construction and evolving into direct implementation by the NGO. Although the project closed without a clear exit strategy, aspects of the project were taken up by the government in their housing policies.

Strengths and weaknesses

✓ This project provided essential maintenance. The buildings were often poor to start with and had further deteriorated with the long-term displacements.

✓ The project was able to adapt its methods to improve cost effectiveness. The final approach was to directly supervise hired master craftsmen and to use contractors to provide materials.

× The programme did not have a clear exit strategy from the outset. This led to some difficulties when the project was finally closed after eight years.

× Overpopulation, lack of a sense of ownership and high resident turnover reduced the overall durability of both repair and community activism.

× The project could have included closer cooperation with the authorities for further upkeep and maintenance. Success of the rehabilitation largely depended on close cooperation and support from the local authorities, since many problems required intervention outside the public building.

This case study draws heavily on: *Project review report: Public building rehabilitation, Baku, Azerbaijan*, by Bayaz Zeynalova, 2007. (www. reliefweb.int)


Photo: NRC Azerbaijan


Photo: NRC Azerbaijan

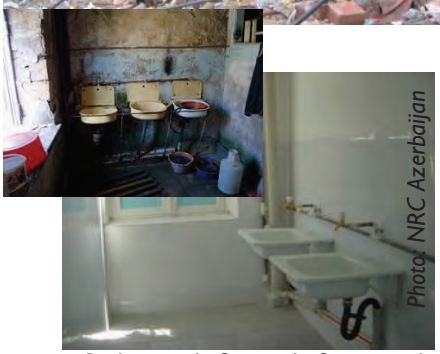


Photo: NRC Azerbaijan

Bathrooms before and after upgrade

Context

The conflict in Nagorno-Karabakh between Azerbaijan and Armenia in the early 1990s led to over 500,000 people becoming internally displaced and a further 200,000 becoming refugees. Around half of the internally displaced people moved to urban areas, most of them to the capital, Baku.

In Baku, many people moved into dilapidated, overpopulated public buildings, most of which were originally student residence halls and dormitories. The buildings were designed with rooms intended for one person, not for families of five or more. The kitchens and bathrooms were shared. In some cases the buildings were without water supply or sanitation. This was in the context of a significant growth in wealth in Baku, in part due to the oil industry.

The temporary shelter solutions found following the conflict lasted longer than was expected. Many of those displaced following the conflict had been living in one of twelve camps. The last of these did not close until 2008, after fifteen years. Upon its closure, many of the camp residents were resettled rather than being able to return to their original homes.

The climate in Baku is cool and wet in the winter and hot and dry in the summer, leading to challenges of leaking roofs and poor sanitation.

Selection of buildings

A programme to upgrade the public buildings and schools was adopted.

Criteria for the selection of public buildings for inclusion in the programme were adjusted throughout the project period. However, the main criteria remained unchanged: at least 70% of building inhabitants had to be IDPs; other organisations could not have previously worked in the building; and the building had to be in exceptionally bad condition.

In its first years (1998-1999), the project prioritised hostels located next to each other and that shared a common yard. Such locations made repair works easier and reduced costs. Letters from local or central authorities, as well as applications from the residents, were also considered in the selection process.

The willingness of the building residents to work with the NGO was the decisive factor in the final selection. Inhabitants had to be willing to volunteer to help with repairs, and to clean corridors and shared areas. In some cases, works had to be suspended until the community agreed to fulfil the NGO's conditions.

Not everyone benefited equally from the project. Although similar works were performed in most of the buildings, several of them were only partially rehabilitated (only roof or electricity) for a variety of reasons.


Photo: NRC Azerbaijan

Technical solutions

Inhabitants saw broken sewerage as the greatest problem in the buildings. Other common problems included shortage of water, leaking roofs and dampness. As a result, plastering, floors and ceilings in toilets and bathrooms were damaged in most buildings.

A typical repair of a public building involved:

- rehabilitation of the shared areas - toilets, bathrooms, washing rooms, kitchens and corridors;
- infrastructure repairs - electricity, sewerage, water and sewerage pipes;
- repair of roofs;
- installation of new water heaters, sinks, stoves, faucets, showers, light bulbs, circuit breakers, switchboards, windows and doors;
- installation of electricity transformers (this was not costly but served a large number of IDPs).

The most durable output of the project was the provision of electricity systems (including transformers and switchboards) and new roofs.

The project was not always successful in solving problems with the water supply. A durable solution would have required dealing with the malfunctions outside the building, which was beyond the scope of the project. Cooking stoves and taps in the rehabilitated buildings had short lifespans because many people used them.


Photo: NRC Azerbaijan

Kitchens before and after upgrade

Implementation

An average building took two months to rehabilitate, with the implementation scheme being significantly improved over the years.

In the beginning, contractors were hired to implement the work. In practice, this meant that the NGO purchased construction materials and hired contractors to implement all works. The payment of labourers lacked transparency and important irregularities in the system were found. This led to the dismissal of project staff and the adoption of a new implementation scheme.

After two years of project implementation the NGO hired construction workers directly.

After five years of project implementation the NGO subcontracted a local company to supply construction materials. The supplier was selected on the basis of submitted quotes.

Over time, a good team of core construction workers, most of them IDPs, has been formed. Many of these have subsequently found work on other projects run by the NGO.

The involvement of community members in the work was seen as a key to the successful implementation of the project. The goal of the community programme was to ensure beneficiary buy-in and participation in the project. This was believed to be instrumental in creating a feeling of ownership and in the further maintenance and upkeep of the rehabilitated buildings.

Wiring before upgrade

One of the occupied public buildings in Baku

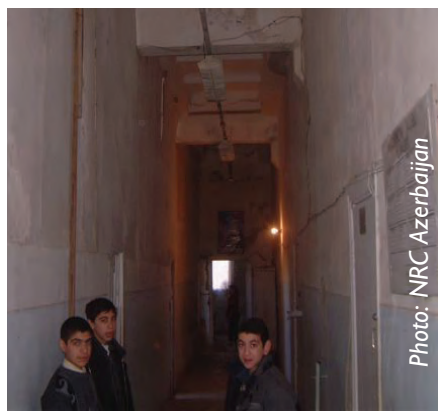
Occupancy

A survey conducted upon the completion of the project found that all of the buildings were still occupied by IDPs. However, the occupancy of individual rooms changed constantly. Many IDP families moved out of the buildings to an outskirt of Baku. In some cases, the emptied rooms were given to local families or those moving to Baku from other regions, but usually to other IDPs. According to the building superintendents, IDPs sell their rooms to relatives or friends. Yet some also lock their rooms and keep them as a storage space.

Obviously, the families who could afford to leave the public buildings were those who managed to establish some livelihoods and were relatively well off. The remaining occupants of the public buildings are still the most vulnerable of those living in the cities.

'The project was based on learning...We drew conclusions from the previous experience and made improvements every year. The work became more efficient over time'.
- Project staff member

Along with the large-scale construction of new settlements, urban public building rehabilitation became part of the 2004 State Programme on IDPs and Refugees. In many cases the repairs implemented by the State Social Fund for the Development of IDPs have copied this project.



Corridors before and after upgrade

B.3 India - Gujarat - 2001 - Earthquake

Case study: Non-food items and shelters

Project type:
Non-food item distribution
Self-build transitional shelters
Technical support

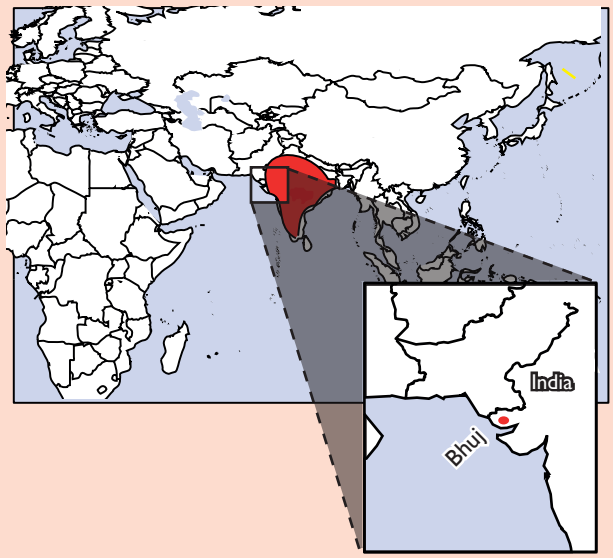
Disaster:
Gujarat earthquake, January 2001

No. of houses damaged:
180,536 completely destroyed
913,297 partially damaged

Project target population:
Over 23,000 families

Occupancy rate on handover:
Unknown

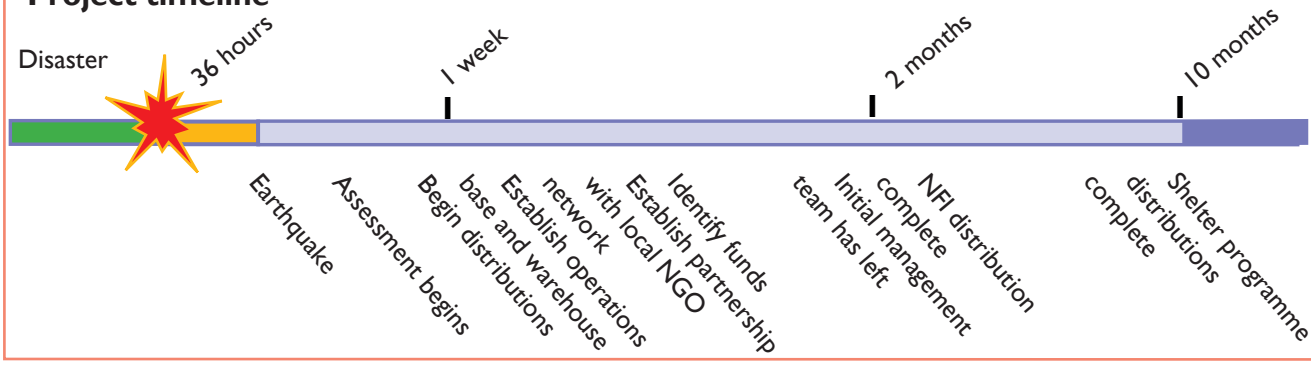
Shelter size
Approximately 4m x 2½m



Summary

An international NGO worked in partnership with a network of 22 local NGOs to rapidly implement a non-food items distribution programme followed by a transitional shelter programme that built over 27,000 shelters. By working with local organisations, existing networks and local knowledge was used to effectively deliver materials and help construct shelters on a very large scale. The speed and scale of the programme, combined with the different approaches of the international and the national organisation, led to a lack of the paperwork required by donors.

Project timeline



Strengths and weaknesses

✓ An effective and very large-scale shelter programme was implemented within ten months.
✓ The international organisation was able to work with a strong network of local organisations to support large numbers of families with seismic-resistant designs.
✓ Many of the materials distributed to build shelters could be reused at a later stage.
× Systems that could create an auditable trail of paperwork were not set up due to the rapid nature of the response and differing organisational cultures.
× There was a high turnover of programme management staff, which led to a loss of institutional knowledge.
× The local network of NGOs that partnered in the programme was approached by multiple donors, causing it to become operationally stretched.

Note: This case study drew on *Learning by doing*, by Zahid Hussein, 2001.

Photo: David Sanderson

Damage following the earthquake at Gujarat that completely destroyed over 180,000 houses. In the first weeks after the earthquake the organisation distributed non-food items through partners. This was followed by a transitional shelter programme.

After the earthquake

The earthquake struck the State of Gujarat on 26 January 2001, and particularly affected the district of Kutch and its neighbouring areas.

News of the earthquake spread rapidly through the international media. Local communities, the Central and State governments, the defense forces, donors, and international and national NGOs all responded to the emergency.

Within one week, a network of 22 local organisations, including developmentally minded architects, had formed a partnership agreement with an international organisation. Members of this local network had been working on low-cost construction technologies prior to the earthquake and were able to act as an effective coordination mechanism. During the earthquake their focus was on:

- interim, transitional shelter (it would not be possible to build permanent shelter to meet the needs of all affected families within a year and tents were not durable enough to fill the gap);
- examples of low-cost and safe public buildings.

In the first weeks of the response the focus was on the distribution of non-food items.

Selection of beneficiaries

The initial assessment was rapid and defined some crucial needs. However, it relied on individual competence and was not standardised.

The criteria and procedures for the selection of beneficiaries for relief distribution in the communities were not always clearly defined. They were commonly left to the subjective interpretation of the village-level workers and the communities. Although this allowed a degree of flexibility, it is likely to have introduced some inclusion (as well as exclusion) errors.

Technical solutions

A low-cost shelter design was developed using low 1m walls and a bamboo-framed and grass-thatched roof. With time it was recognised that there was a need to preserve the grass for animal fodder, so the roofing material was replaced with locally produced Mangalore clay tiles.

The dimensions of the shelters built were approximately 4m x 2½m. Although this provided a covered area of only 10m^2 for a family, these dimensions were carefully selected to focus on earthquake safety. A larger span would have required significantly more materials to ensure the same level of safety.

The distribution of construction materials was phased to ensure that buildings were built safely:

- First, a shallow foundation was built. When this was complete the cement for the walls was distributed.
- Walls then had to be built. When these were complete, walls and roofing materials were distributed.

After the initial shelters were built, issues were found with the roofing and an upgrade programme was required. This involved distributing four pieces of bamboo (1½m long) to brace the roof.

The distributions of materials were accompanied by the training of local masons and carpenters, to mobilise the communities and raise their awareness of seismic-resistant construction. A significant amount of work was required to ensure that people correctly braced their shelters and to explain that once braced, the buildings would be stronger and safer.

'What the international NGO saw as normal professional procedures, the local organisation saw as meaningless bureaucracy. The international NGO had bent its own rules in favour of the local NGO to such an extent that our financial consultant became highly concerned… But ultimately there is no doubt that the international NGO's real achievement in the Gujarat response was its link with local NGOs and the temporary housing project'.
– Evaluation by the Disasters Emergency Committee (the donor)

Working with partners

The way in which the international NGO was able to work in partnership with a strong local network of NGOs was one of the strengths of this project. However, the relationship at times became strained, in part due to the different working methods and the speed at which the working relationship was set up.

The international NGO had internal rules and donor requirements for paperwork and processes for accountability. The local organisations saw much of this as overly bureaucratic. These organisational differences were compounded by high staff turnover.

Many of the procedures, logistical and financial controls were loosened. However, the shelter programme was very effective according to both internal and external evaluations.

By working through a network of local NGOs, it was possible to mobilise large numbers of people.

These school buildings were adapted from the transitional shelters. The low walls reduce the risk of masonry falling on occupants during future earthquakes.

'Generally, the concept of working through a local NGO partner is better than working directly, particularly in relief distribution. INGOs have less detailed knowledge about the affected people's needs. On the other hand, local NGOs may lack the skills to meet donors' requirements. Collaboration between INGOs and local NGOs, thus, is mutually benefiting'.

- Project evaluation report

Implementation and logistics

Within the first week, a base camp and warehouse were set up in Bhuj and a liaison office was established in Ahmedabad. Tents, plastic sheeting, some blankets, jerry cans, children's clothes and WHO medical kits were procured from outside India. They were brought to Bhuj by four chartered flights. Blankets and some tents were procured from Bangalore and Kanpur and were brought to the Bhuj warehouse through transport agencies.

Relief materials were delivered to the network of NGOs. Its members collected the relief materials at the warehouse and transported them to the villages for distribution.

Construction materials were procured through the local NGOs' procurement team. Two entire trains were chartered to bring in 265,000 bamboo poles from Assam. As the Bhuj train station did not have freight handling capacity, the station had to be closed for 24 hours while the trains were unloaded. It took 120 trucks to transport the materials onwards to temporary stores in the village from where they could be distributed.

The remaining bamboo was procured from Nagpur and brought to Bhuj through trucking companies.

Roof tiles are traditionally produced by small-scale suppliers. In order to purchase the 12 million required, it was necessary to send a finance officer to pay multiple roadside suppliers.

Wooden purlins, rafters and patties were procured from the timber merchants and transported by truck, in some cases directly from the sawmills.

Record keeping for procurement, supplies and distribution was not very good. This was the result of the complex and very rapid procurement of multiple items. In addition, the multiple partner organisations had different working practices. The resulting programme created difficulties for the auditors, but was effective in providing shelter for a large number of people.

Materials list

Relief items distributed in 259 villages until 31 March:

Relief items	Quantity
Tent	847
Plastic sheet	8,835
Blankets	127,515
Bucket	3,728
Jerry can	1,328
Children's clothes	7,237

Total distribution of construction materials from 1 May to 15 October 2001:

Relief items	Quantity
Cement	72,684
Bamboo	422,217
Woven mats	149,878
Wooden spacers	9,689,295
Wooden rafter	178,401
Wooden purlin	39,250
Roof tile	12,114,483
Roof ridge	325,600
Iron wire	52,22
Mild steel rod	97,532

B.4 Indonesia - Aceh - 2004 - Tsunami and earthquake

Case study: Shelter or housing?

Project type:
Emergency non-food item distribution
Land rights advocacy
Housing

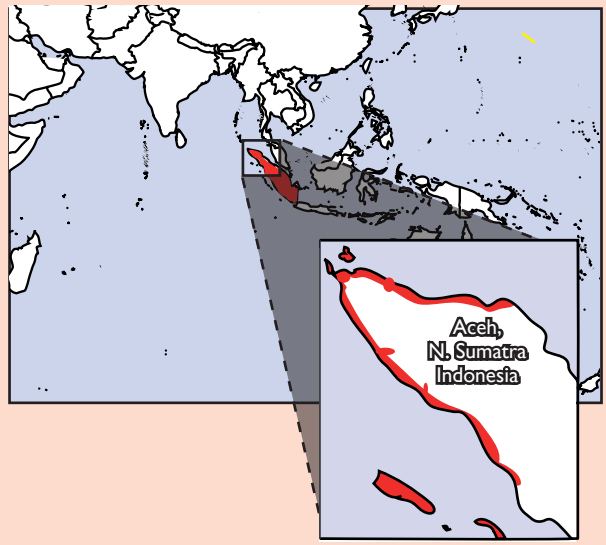
Disaster:
Earthquake followed by tsunami

No. of houses damaged:
252,000 destroyed or partially destroyed, all within 5km of the coast

Project target population:
1,564 houses created in 28 villages in seven regions

Occupancy rate on handover:
95%, compared to 79% for all of Aceh

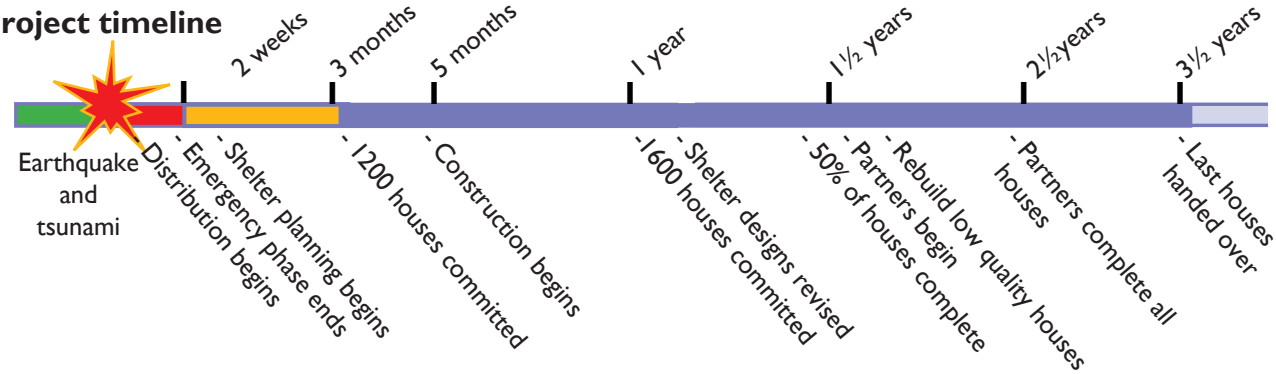
Shelter size
36m² per family, all with additional water/sanitation facilities



Summary

This programme began with the concept of community-built, 'transitional' timber-framed shelters, managed and implemented by the community over a period of months. Due to the challenges in procuring legal or sustainable timber, local politics, the availability of significant funds and the number of other NGOs working in the area, the project evolved into a programme to build houses made from reinforced concrete and brick. The programme lasted over three years. Towards the end of the programme, many of the shelters were built by partner organisations.

Project timeline



Strengths and weaknesses

✓ The project was able to adapt from community-built transitional shelters to durable houses constructed by implementing partners and contractors.

✓ There was success in negotiating land for families displaced by the conflict and affected by the tsunami.

✓ Lessons were learned from mistakes made by other organisations. The large budget allowed mistakes to be rectified.

× Major structural changes were made to the house designs without full consideration of the logistical, technical and managerial implications.

× It was not possible to get the right quantity and quality of materials as a result of a huge demand.

× Unrealistic expectations were raised among beneficiaries. This led to challenges with community relations during the programme. Because of the budgets available to NGOs there was competition for beneficiaries and communities. Beneficiaries had a choice of organisations and designs.

× Lack of management staff available with experience of construction projects led to an unexpectedly large amount of management time being required.

× The phrase 'building back better' was interpreted in many ways. The emphasis should be to 'build back safer' and reduce future risk.

Photo: Joseph Ashmore

In the first weeks after the tsunami, people found shelter in large collective tents (left), squatted buildings (right), tents, rented housing or with friends and family. The government built transitional living centres (centre).

Before the tsunami

The Indonesian state of Aceh is a densely forested state in the north of the island of Sumatra. The majority of the population live along the coast and the main access is by sea or along the coastal roads.

Aceh has had intermittent periods of conflict since 1976. In May 2003, the government of Indonesia declared martial law in the province. As a result of the conflict there was limited involvement of non-governmental organisations in the province.

After the tsunami

The earthquake that struck on 26 December 2004 was one of the largest ever recorded and damaged many of the larger concrete-framed buildings in Aceh. The ensuing tsunami caused extensive damage in many of the countries in the Indian Ocean. The province of Aceh was the worst hit, due to its proximity to the earthquake and because the majority of the population live in low-lying coastal areas.

Following the tsunami, the majority of emergency shelter needs were met in the first weeks by the Indonesian military, Indonesian organisations and beneficiaries themselves. This was due to logistical challenges and the fact that foreign access was limited by infrastructure damage and travel restrictions resulting from the ongoing conflict. Shelter was provided in collective tents, existing buildings, individual family tents, by use of plastic sheeting and by families moving inland to where the damage was not as bad.

Throughout the response and reconstruction, government housing policy had a strong impact on the response. Policy required that the shelters that were built create a minimum covered area of 36m^2. The only official transitional response was the building of transitional living centres, also known as 'barracks'. These were long, timber-framed and panelled buildings on stilts with plywood separation between families.

Technical solutions

Traditional coastal Achinese shelters are entirely made of local timber and have thatched roofs. They are often on stilts to keep them off the ground. More recent construction has a concrete plinth and low brick walls, with a timbered superstructure built on top. The roof is covered in corrugated iron.

This project began building semi-permanent shelters based on local designs. These had concrete and brick foundations and low brick walls, and were topped with timber frames, a corrugated iron roof and timber panels.

About ten months after the tsunami, the house model changed to a reinforced concrete-framed structure with brick walls and a wood-framed roof. It included over 50 separate components, as well as toolkits. This was seen as 'building back better', although there were some safety concerns where builders had taken shortcuts.

This project was based in five distinct districts, with different designs and implementation methods developed in each district.

As part of the agreements reached with the communities, the first semi-timbered shelters, which had provided transitional shelter for as long as two years, were upgraded at the NGO's expense once all shelters had been completed.

Photo: Predes

Road shown two years after the tsunami. Access was initially difficult along much of the west coast of Aceh.

Who builds?

Planning of the programme started approximately six weeks after the tsunami, as a community-led construction programme to build shelters similar to those that many families had before the disaster. The programme sensibly aimed to build skills and capacities within the villages, create livelihood opportunities and cultivate a higher level of ownership by encouraging self-build approaches.

The scale of the construction in Aceh was significantly greater than had ever before been experienced in the region, requiring over 109,000 houses from a building industry that had only built a fraction of that number. As time passed and villagers started to regain their livelihoods, NGOs found it harder to find a workforce from the villages.

Many people built their own shelters using reclaimed materials.


Photo: Joseph Ashmore

One of the completed shelters in Sigli, Aceh

In 2006, as local community contractors and other NGOs became available in Aceh, the NGO started to work with implementing partners in the local community and contractors to construct the remaining houses. They were finally able to complete construction by the spring of 2008, just over three years after the tsunami.

Despite the challenges, community-built houses were perceived by the community as being better at resisting minor earthquakes because 'we were able to monitor the construction quality'. Any construction project in post-tsunami Aceh had to have a very high level of monitoring by INGO staff and the community or there would be poor construction undertaken by the contractor or the beneficiaries. For example, the construction of 86 houses in three communities in Aceh Besar employed nine staff members who were in the field every day.

'The house is a base for people to operate their daily lives [from]. The construction of a house is an essential shell to secure early livelihood recovery, as it gives privacy, stability and a physical asset. The shell needs to be filled with life to make it a home'. – Internal project report

Logistics and materials

Following the tsunami, roads were severely damaged in three of the five project areas, although access improved during the programme. In some villages, bridges, roads and drainage had to be built before work could start on the houses. The community-built housing programme was quicker and more successful in the two areas where access to materials from the non-affected city of Medan was easier.

Logistics delays, combined with raised expectations, led to villagers becoming frustrated by waiting.

Why did the programme change?

The programme changed from self-build, semi-timbered shelters to contractor-led reinforced shelters for several reasons, many of which were specific to the post-tsunami environment of Aceh.

The availability of funds and the number of different organisations operating in Aceh led to competition between organisations, which served to raise expectations of what could be built. The government in Aceh strongly encouraged the construction of durable shelter, and agencies, eager to fulfil their early promises, started to implement significantly more complex construction programmes than originally intended.


Photo: Joseph Ashmore

Obtaining good quality building materials remained problematic. These bricks decayed rapidly in the rain.

The availability of materials strongly impacted the shelter designs used. There were significant challenges in obtaining legal timber locally, while importing timber was slow and problematic. Strangely, the amount of wood burned to make bricks may have had a larger environmental impact on the local forest resources than using timber would have done.

Sample bill of quantities for one of the finished houses:

material	quantity
Mountain stone – foundations	12m^3
Sand	20 m^3
Gravel	14 m^3
Filling Soil	28 m^3
Rebar 12mm x 10m	61 pieces
Rebar 8mm x 10m	50 pieces
Tie wire	4 rolls
Nail 1"	1 kg
Nail 2"	15 kg
Nail 3"	15 kg
Nail 4"	12 kg
Bolt diameter ½"x6"	45 pieces
PVC gutter no hole	2 pieces
PVC gutter 1 hole	2 pieces
Gutter hanger plate	32 pieces
Gutter side bracket	4 pieces
Gutter connection	2 pieces
PVC glue	1 tube
Plywood/ 8'vx 4'vx 4 mm	30 pieces
Timber - concrete formwork 2 x 20cm x 5m	28 pieces
Timber-concrete formwork 2 x 5cm x 5m	15 pieces
Timber - gable 2 x 20cm x 5m	20 pieces
Timber - facia board 2 x 20cm x 5 m	8 pieces
Timber 5 x 10cm x 5m	20 pieces
Timber 5 x 7cm x 5m	20 pieces
Timber 4 x 12cm x 4m	6 pieces
Timber 5 x 5cm x 5m	25 pieces
Cement (40 kg)	135 pieces
Masonry brick	6200 pieces
Zinc roofing sheet	46 pieces
Zinc plate for ridge	4 pieces
Zinc roofing nails	4 boxes
Door hinge 6"/4"	28 pieces
Window hinge 3"	14 pieces
Window wing	14 sets
Window lock 2.5"	2 set.s
Door lock 4"	10 sets
Door/window handle	7 pieces
Door handle with key	4 pieces
Door screw no. 7	2 boxes
Door screw no. 6	1 box
Window screw no. 5	2 boxes
Paint for walls / waterbase (25 kg/can)	4 cans
Paint for timber frame/oil base (5 kg/can)	8 cans
Door frames	4 pieces
Window frames (single)	1 piece
Window frames (double)	3 pieces
Door panels type A	2 pieces
Door panels type B	2 pieces
Window panels type 1	1 pieces
Window panels type 2	3 pieces

B.5 Indonesia, Jogyakarta - 2006 - Earthquake

Overview of the response

Summary

At 6:30 a.m. on a Saturday morning an earthquake measuring 6.0 on the Richter scale struck the south-eastern corner of the province of Jogyakarta in Central Java. The 53 seconds of violent activity killed 5,000 people and decimated over 8,000 rural and peri-urban sub-villages, leaving over 2 million people homeless.

The largest response was a national response from a diversity of private actors and organisations. This was backed up by an international response, which was accelerated by the preparedness activities that were already ongoing in anticipation of the eruption of nearby Mount Merapi. The international response was coordinated through the Emergency Shelter Cluster that was activated locally.

The case studies included in this section involve two organisations that both responded in phases: an initial distribution of emergency items, followed by a transitional shelter response. Both organisations used cash grants, either to individuals or to local organisations, to implement the transitional shelter programmes.

Before the earthquake

As there had been no major earthquake in the area in living memory, the quality of general construction in the province of Jogyakarta had slipped. When the 2006 earthquake struck, the level of housing damage was disproportionately high.

Immediately prior to the earthquake, the imminent threat of eruption from nearby Mount Merapi meant that several agencies in Jogyakarta were pre-positioned to respond to a disaster. For example, one international NGO's disaster response unit had over 10,000 tarpaulins warehoused in Jogyakarta and a fully functioning office. This organisation was in an ideal position to respond very rapidly in the emergency phase of the shelter response.

The earthquake

The proportionally low levels of death and injury, when compared to the damage to physical infrastructure, resulted in comparatively low levels of damage to the social infrastructure. This, combined with the disaster's proximity to the relatively unscathed major city of Jogyakarta (a major hub of university learning and NGO activity), provided a massive national capacity for the INGO movement to draw upon and work with.

In the early stages of the disaster response, international funds and resources appeared extremely limited for such a vast affected area.

Few other sectors were as badly affected as the shelter sector. Most families used private wells and septic tanks, which remained largely functional. This, along with high general hygiene levels, greatly reduced the need for water, sanitation or hygiene assistance.

The Jogyakarta earthquake response became primarily a shelter disaster, and over 50% of the over 200 agencies on the scene became involved in the Shelter Cluster that was set up to coordinate the response.

The semi-rural nature of most of the affected areas meant that there was space for temporary shelters in the rubble. The combination of people's desire to stay close to their remaining possessions and (mainly) agricultural workplaces, meant that the need for IDP camps was largely avoided.

Transitional shelter

Soon after the earthquake, the government of Indonesia committed to providing permanent housing to every affected family, announcing the 'one step' policy to move people directly from emergency to permanent housing.

With over 300,000 houses destroyed, initial government reluctance to support transitional shelter gave way to a cluster-wide strategic approach to address the upcoming rainy season and the gap between emergency and transitional shelter.

With limited apparent funding, and therefore little conflict over operating areas (compared to the tsunami response in Aceh), the member organisations in the Shelter Cluster worked closely together to develop guidelines for locally appropriate transitional bamboo shelter. These were then taken on board across the cluster.

Resource management

A total of about 25 million sticks of bamboo were used in the response. Some 5 million sticks were used by the Shelter Cluster, about 3 million by the Indonesian government and 10-15 million by other communities.

However, management of the growing clumps of bamboo was not integrated into the transitional shelter programmes. In response to demand, much bamboo was clearcut or harvested using unsustainable techniques. Depending on the type of bamboo and how it was harvested, some areas will take three to five years to return to their original stock. Other areas may take ten years and some will not grow back.

The resultant environmental impact was significant. Although formal studies have not been carried out, it is likely that vast areas of bamboo forests were decimated, including entire valleys.

There is a strong tradition of bamboo-based construction in Jogyakarta.

A transitional shelter strategy was adopted by the Shelter Cluster members.

Bamboo jointing details

Bamboo being bound with string

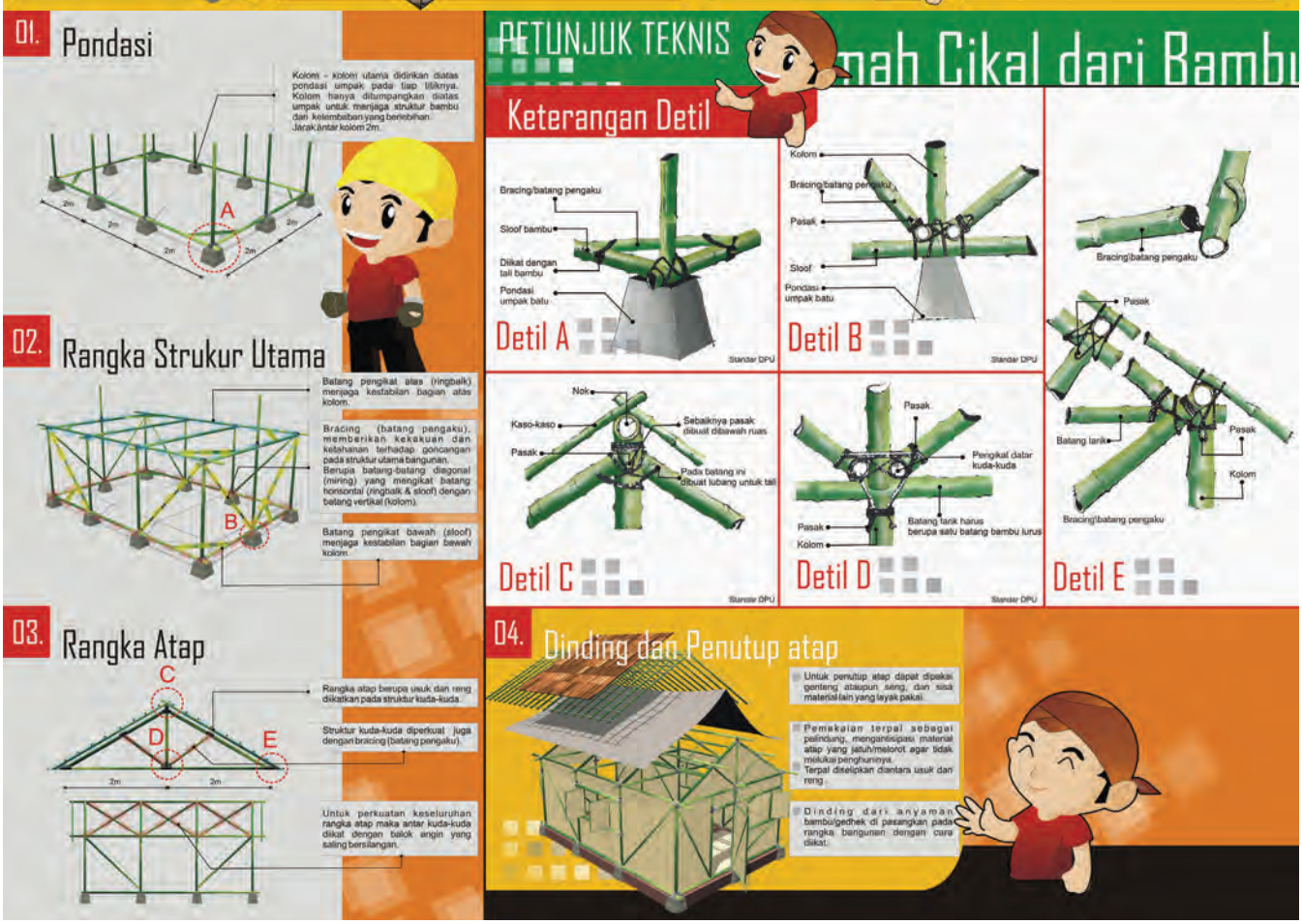
Electric power drills used to drill holes in the bamboo so that it can be pegged

Prefabrication of a wall panel

Connecting a vertical post to the foundation

Foundation pads cast with bamboo to connect them to the frame

Photos: IFRC



Public information messages distributed as part of the response

B6 Jogyakarta - 2006 - Earthquake

Case study: Cash and transitional shelter

Project type:
Community-built transitional shelter
Self-build, cash grants for materials
Skills transfer through volunteers living in communities

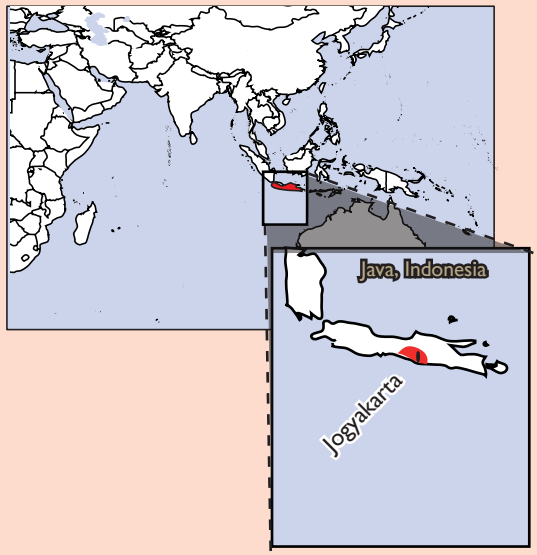
Disaster:
Jogyakarta/Central Java earthquake, 24 May 2006

No. of houses damaged:
303,000 destroyed or seriously affected

Project target population:
12,250. 22.5% of UN/OCHA-recorded shelters

Occupancy rate on handover:
100% (according to an independent student survey)

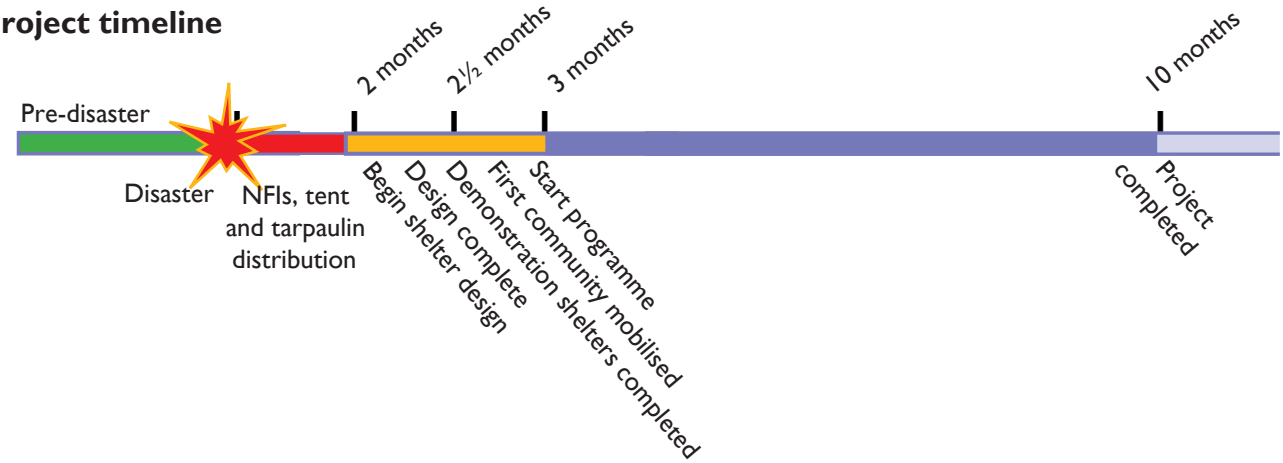
Shelter size
4 x 6m^2 (minimum 2m height)



Summary

This organisation developed a locally appropriate shelter design based on traditional building materials and construction techniques. It delivered cash with support to affected families to build their shelters. It set up a community-built transitional shelter programme supported by hundreds of volunteers and extensive instructional and promotional materials, including short training manuals, video compact discs, posters and radio advertisements.

Project timeline



Strengths and weaknesses

✓ Emphasis on community participation empowered communities in their reconstruction process and resulted in community engagement and ownership of the programme.
✓ The project was able to build on the Javanese self-help culture of 'gotong royong' ('working bee').
✓ The project sucessfully used materials that kept funds in the local economy.
✓ Maintaining volunteers to live within the communities was essential for effective knowledge transferral.
✓ Cash grants gave communities responsibility and engagement with the programme.
✓ Once new permanent houses were inhabitable, transitional shelters were used as kitchens, sheds, small shops, workshops, storehouses, etc.

× Environmental groups expressed concerns about the widespread impact on Java's bamboo forests. This could perhaps have been alleviated or averted by altered procurement mechanisms.
× A supply of treated bamboo would have greatly extended the usable lifespan of these structures (from two years to 25 years) and enhanced community recovery.
× Faster implementation, scale-up and scale-down of the shelter programme would have reduced the problems of overlapping with permanent reconstruction.
× Without the incentive of further funding, minor issues of accountability and transparency occurred with the final installment of funding. Clearer contracts, penalty clauses, training or incentives may have alleviated this.

A completed transitional shelter built through cash grants

A transitional shelter built on the site of a destroyed house

Beneficiary selection

Small cash grants were given out via traditional mutual support mechanisms to neighbourhood groups to buy tools and basic materials to build temporary shelters.

Meetings were held with each group to discuss the project and to sign a contract with the community. In order to participate, each neighbourhood (20-50 houses) had to form a shelter committee that had to include a head of the group, a treasurer (who had to be a woman) and a secretary. The positions could not be held by local officials or their family members.

The committee was responsible for the selection of beneficiaries, who could be anyone currently living in a tent or under a tarpaulin, with a house unsuitable for habitation. Priority was given to vulnerable people such as widows, orphans, disabled people, pregnant women, the sick and the elderly. Funds were delivered through group bank accounts in three to four instalments. The community contributed labour and materials recovered from the rubble.

Design process

This project aimed to empower community members to rebuild their lives, starting with the construction of a transitional shelter. The transitional shelter design was developed through an understanding of locally available materials, community needs and the capacity and objectives of the organisation.

It took one month for the design process, one month for community preparation and demonstration shelters, and one week to build 740 'model' houses through a public competition.

The competition involved three categories and offered prize money that went to the neighbourhood for:

- the most number of houses;
- the most beautiful houses; and
- the involvement of women.

The programme was rolled out over seven months, with 12,250 shelters built in 761 communities. Shelters cost under US$ 200 per unit.

Community-built shelter

Beneficiaries were strongly encouraged to follow the design, but not compelled to. In some cases people ignored or modified the design, such as in Delingo, a remote community with widespread construction skills and local construction resources.

The volunteers/supervisors were essential to guide and support good construction. The more the volunteers were confident and engaged in the process, the more the construction followed the design and was of sufficient quality. Variations were not problematic as long as the general principles were followed and the essential points (such as building size, safe connections, etc.) were satisfied.

Delay in project startup

The organisation was initially hesitant to give cash directly to beneficiaries. If there had been quicker institutional support for the project, it could have been scaled up faster and reached more people.

Community knowledge

Community levels of knowledge about the use of bamboo varied. The more urbanised the environment, the lower the level of traditional knowledge in the community, which led to a lower quality of bamboo construction.

The rural mountainous communities recovered relatively quickly, despite higher levels of damage from the earthquake and higher levels of general poverty. One of the reasons for this was that many locals had worked in the construction industry prior to the earthquake.

The interior of a transitional shelter

Transporting bamboo mats to a construction site

Implementation partners

Throughout this project, the organisation worked with national volunteers, two local universities, undergraduate architecture students, a training team, NGO facilitators/trainers, an implementation team, and a bamboo expert with experience in Venezuela and Flores, and communities in Jogyakarta and Central Java.

The local universities were involved and helped to:

- develop technical inputs for shelter design and messages;
- develop posters, pamphlets, t-shirts, etc.;
- train students to deliver 'build back better' messages under staff supervision; and
- set up mobile construction clinics.

The local media also got involved, reinforcing best practice shelter and construction messages on the radio, television and in print.

'Achieving good recovery and risk reduction outcomes in shelter is not about building structures. It is about building trust with communities'.
- Recovery coordinator for the programme

Working with volunteers

The shelter programme mobilised volunteers as community trainers, with two volunteers per neighbourhood. The volunteers first went through three days and nights of hands-on training making straw models and a mock-up frame, as well as finance training and team-building exercises. They then worked with communities on selecting and buying materials, the technical aspects of working with bamboo and building the shelters.

Community training lasted up to one week. During this time the volunteers and the community built the first shelter together, with supporting media (a step-by-step guide, an informative video about using bamboo in construction, safe construction advertisements and a booklet). Volunteers lived in the communities in a tent or transitional shelter and worked with the communities every day.

Working with volunteers allowed a large-scale programme to be set up. The volunteers were often enthusiastic and very willing to help, but some had a low level of confidence or experience. This led to some challenges in ensuring adequate quality control.

Volunteers were paid a small stipend and supported with cooking equipment, sleeping gear and field support. A weekly reflective learning/training session was held.

The Shelter Cluster design guidelines included seismic resistance, lasting up to two years, using materials that could be recycled and that cost under US$ 200.

Ongoing use of shelters

In the densely populated area of Klaten, the transitional shelters were eventually demolished to make room for permanent housing.

In the rural areas, the majority of the transitional shelters were still being used after permanent shelters were built, but for purposes such as storage sheds, shelter for cattle and livestock, or for small restaurants.

As per the requirements of the cluster-wide transitional shelter design, untreated bamboo was used (which deteriorates after two years). If treated bamboo had been integrated into the programme, the shelter structures could have been safely used in communities for up to 25 years.

Resource management

The shelter programme built 12,250 transitional shelters that used more than 100 culms of bamboo per shelter, using a total of more than 1.2 million culms of bamboo.

To avoid deforestation of the bamboo stock, this project could have set up purchasing control mechanisms to manage the bulk procurement of bamboo that controlled quality, environmental impact, procurement methods and treatment of the bamboo. It would have also been possible to allocate money to reforestation programmes.

Materials	Quantity
Bamboo mats 6 walls, 3 ceiling, 1 door	10 mats
Round poles (for columns) 3' diameter, 3m long	12 poles
Round poles (for beams and roof joists) 7.5cm diameter, 3m long	11 poles
Timber for fixing the mats	7 beams
Reinforced plastic sheet	3m x 15m
Nails 5cm, 7.5cm and 10cm	2.2 kg
Wire	1 kg
Hinges	3 units
Lock	1 units

Public information was a critical component of the project.

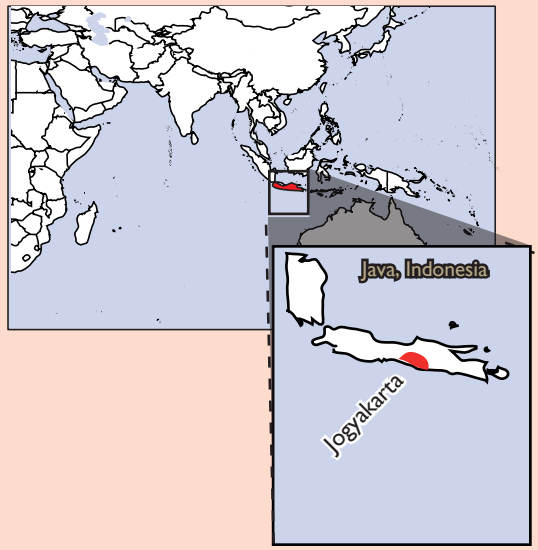
B7 Jogyakarta - 2006 - Earthquake

Case study: Emergency and transitional shelter

Project type:
Non-food item distribution (plastic sheeting)
Emergency shelter enhancement programme
Public outreach and information programme

Disaster:
Jogyakarta/Central Java earthquake, 24 May 2006

No. of houses damaged:
303,000 destroyed
240,000 seriously damaged
(mostly rural or peri-urban communities)



Project target population:
Distribution of plastic sheeting: 75,000 families
Emergency shelter enhancement: 26,500 families
Transitional shelter programme: 2,000 families

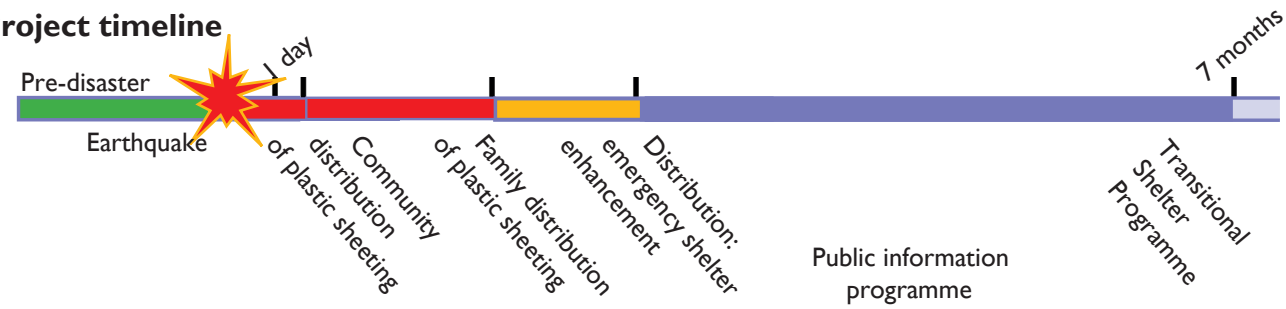
Occupancy rate on handover:
External evaluation shows close to 100% usage and correct targeting

Shelter size
Plastic sheeting: Phase 1, 20-30 sheets per village. Phase 2, one 4m x 6m sheet per family
Emergency shelter enhancement programme: walling and floor mats for 4 x 6m plastic sheeting
Transitional shelter programme: 24m^2 bamboo transitional shelters

Summary

This organisation implemented a four-part emergency shelter response that included: 1) distribution of tarpaulins for emergency shelter based on a broad vulnerability assessment; 2) a 100% infill project; 3) an emergency shelter enhancement programme of tools, walling and bedding for 26,500 families, a broad public outreach and safety information programme; and 4) a small grants programme for the design and construction of transitional shelters. All programmes were designed in coordination with the Shelter Cluster, where the organisation played a lead technical advisory role.

Project timeline



Strengths and weaknesses

✓ As early capacity was limited, a partial distribution programme across a large affected region followed by a 100% distribution infill program worked very well.
✓ The delivery speed of broad-based tarpaulin distribution effectively avoided the creation of IDP camps.
✓ By communities' request, distributions were delivered to the community level as opposed to individuals, with communities taking responsibility for internal distribution.
✓ Cash grants gave communities responsibility and engagement with the programme.
✓ Procurement of locally manufactured woven bamboo wall sheet was far more successful than conventional tender-based procurement methods.
✓ Running the entire programme through local partners worked extremely well.
× The shelter enhancement programme could possibly have been improved by providing flooring and wall framing material (not just wall cladding and sleeping mats).
× Ongoing support and expansion of successful transitional shelter projects would have been desirable and useful.
× Faster bulk procurement and distribution of tarpaulins would have been desirable.

Photos: Dave Hodgkin

Plastic sheets distributed as part the first phase of the response were often used to make shared temporary shelters.

Distribution - plastic sheeting

The organisation implementing this project was one of the few agencies with full-functioning capacity at the time of the earthquake. It started its first distributions ten hours after the earthquake.

As rain was falling each night there was an urgent need for shelter, but supplies were too limited to supply one tarpaulin per family.

A broader distribution through local partners was conducted. Each village was provided with sufficient tarpaulins to ensure that the sick, the weak, the young and the elderly were adequately under cover. In the first days, villages joined tarpaulins together to form large communal shelters that housed the whole village at night (up to ten times the expected number of beneficiaries).

As funds and capacity from other organisations arrived, the project was reduced to an infill programme, returning to previously assisted villages and supplying 48m^2 of plastic sheeting per family (two 6m x 4m sheets).

At the request of local communities and in support of the local self-help tradition of 'gotong royong', all distributions occurred at the community level instead of the individual level. All needs assessments and distributions were conducted by local implementing partners. Communities were responsible for beneficiary selection.

Because local NGOs conducted all distributions and evaluations, the amount of human resources that the international NGO itself had to deploy was extremely limited. At its peak it employed only six shelter-specific staff, and focused its resources more on logistics and partnership support.

Expansion of the emergency shelter programme

Early analysis of the progress of community recovery showed:

- the use of tarpaulin for both roofing and walling, resulting in limited undercover space;
- sufficient reclaimable timber for temporary shelter framing, but insufficient material for wall cladding;
- a pressing need for tools and equipment for cleanup and reconstruction; and
- a shortage of clean sleeping mats.

The rush by affected families to reconstruct permanent houses raised a number of advocacy concerns. These included issues about the quality of construction, health and safety, treatment of the asbestos within the rubble and the construction of shelters in precarious positions.

The emergency programme was followed by an Enhanced Emergency Shelter programme, which provided:

- woven bamboo wall sheeting (gedek) to affected communities to ensure that each family had sufficient material to build walls for their emergency shelter;
- combined community toolkits for clean-up and reconstruction; and
- sleeping mats.

It also launched an advocacy and public outreach programmes to address safety and health issues.

Photos: Dave Hodgkin

A collective shelter built by beneficiaries using distributed plastic tarpaulins

The extension of the emergency programme provided additional plastic sheets so that each needy family received one sheet.

Transitional shelter grants

As a final part of the organisation's emergency shelter programme, a programme was started to support the transition into temporary housing. The transitional shelter programme was conducted in accordance with the Emergency Shelter Cluster guidelines that had been developed locally following the earthquake.

'The best we can do as shelter managers, is to be responsive and adaptive to the changing needs of the affected community;providing minimalist but strategic and incremental inputs into the communities' natural path from inadequate to adequate permanent shelter'.

Cultural, environmental and cost concerns led to the creation of a set of common guidelines based on traditional bamboo frame construction with clay roof tiles and woven bamboo wall cladding. Flexibility in design to allow for innovations was encouraged.

This programme provided eight cash grants to local community organisations/businesses and groups, to work with communities already serviced by the emergency shelter distributions. These were based on a tender process that resulted in a cost of US$ 100-300 per shelter.

As well as housing 2,000 families and improving the capacity of a number of local partners, this programme produced a range of well-documented transitional shelter solutions as potential examples for further expansion or adoption by other agencies.

Public outreach and advocacy

The final aspect of this post-earthquake shelter response was a public outreach and advocacy programme, where the organisation provided technical advice to the Shelter Cluster. This led to the formation of technical working groups. One group working on public outreach produced posters on a range of issues including:

- safe clean-up;
- safe siting of temporary shelters;
- safe reconstruction;
- safe handling of asbestos and dust;
- building next to hazardous buildings; and
- an introduction to simple bamboo and concrete construction techniques.

The organisation led a cluster working group to design and print posters. These were then distributed by the local government and by Shelter Cluster members as a part of shelter material distributions. In total, four batches of 20,000 posters each were distributed to the disaster-affected population.

The public outreach working group went on to develop a range of public outreach and advertising materials to promote safe reconstruction.

Materials	Quantity
Emergency shelter programme	
Plastic tarpaulin 6m x 4m	20-30 per sub-village (200-300 families)
100% infill programme	
Plastic tarpaulin 6m x 4m	1 per family
Enhanced emergency shelter programme	
Woven bamboo sheeting 2m x 3m	6 sheets per family
Tikka matts	2 per family
Toolkits	
1) Clean-up	Distributed per village
2) Reconstruction	
3) Village level	
Innovative T-shelter grants	
Cash grant based on tender process	US$ 100-300 per shelter
Public outreach programme	
Public outreach posters	4 batches of 20,000 posters

Grants were provided to build transitional shelters. Many different and innovative designs were built.

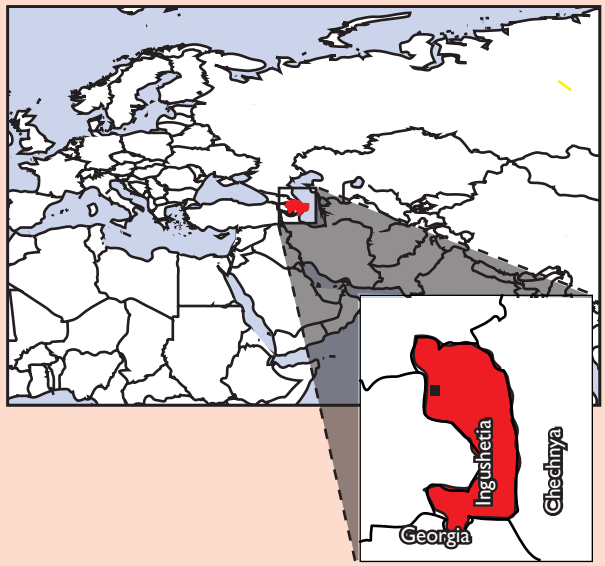
B.8 Russia, Ingushetia - 1999 - Conflict - People displaced

Case Study: Cash for shelter - host families

Project type:
Cash grants to assist host families to shelter displaced people in private households

Disaster:
Internal displacement of civilians following 2nd armed conflict in Chechnya,1999

No. of people displaced:
At the peak of the crisis, 213,000 people fled to neighbouring Ingushetia. Up to 150,000 people were privately accommodated by host families.



Project target population:
Winter 2000/01 – 15,000 Ingush host families.
Winter 2001/02 – 11,000 Ingush host families.

Occupancy rate on handover:
100% of the host families accommodated on average of five IDPs from Chechnya (subject to corruption, which was carefully screened out).

Shelter size
The cash grant was equivalent to an average of one month's salary in Ingushetia.
A 21m^2 minimum net floor area was strongly recommended. The shelter consisted of two rooms, one corridor and an external latrine.

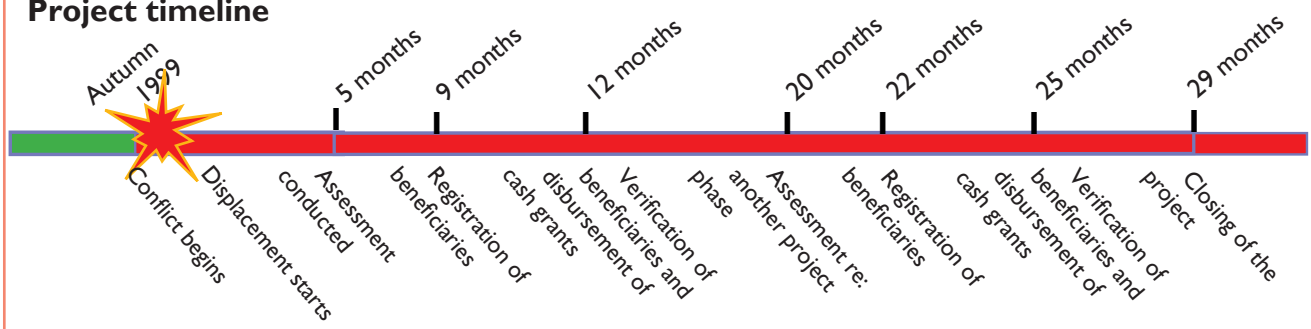
Summary

An international donor, in close cooperation with the international leading agency for shelter assistance in Ingushetia, provided cash grants to every family that hosted displaced people from the conflict in neighbouring Chechnya. The project goal was to prevent IDPs, who were being accommodated by host families, from being evicted during winter. This was achieved though the provision of cash grants to all registered host families in Ingushetia.

A one-off cash grant, roughly equivalent to one month's income, was given with no restrictions to each host family. The programme was implemented by the donor in close cooperation with the government of Ingushetia. The Ingush branch of the Russian postal service made the cash payments.

After a successful implementation during the winter of 2000/01, it was decided to implement a second phase, since the situation for displaced people in Ingushetia had not improved.

Project timeline



Strengths and weaknesses

✓ No eviction of IDPs during the winter months of 2000/01 and 2001/02 were reported.
✓ No abuse during cash distribution or any security incidents occurred despite a rather tense security situation.
✓ The programme's level of transparency achieved high acceptance among beneficiaries and local authorities.
✓ Professional cooperation with the Russian postal service (Ingush branch) allowed for a timely and accurate cash disbursement.
✓ The significant influx of liquid cash supported the local economy.

× The high number of beneficiaries in different databases required an intensive verification process.
× Implementation of the 2nd phase during the following winter was exposed to severe fraud attempts, as some individuals had manipulated official documents in order meet the eligibility criteria. However, the fraudulant cases were sorted out and expelled from the beneficiary lists before payment was released.
× In view of the scope of the project (the entire Republic of Ingushetia) an evaluation of the project was recommended to reveal detailed information about its effects and impact.

The project worked with host families.

Context

The conflict in Chechnya started in 1999, forcing 213,000 people to move to the Republic of Ingushetia. At one stage in early 2000, there was one displaced person from Chechnya for every Ingush citizen.

Almost two-thirds of the IDPs were accommodated by Ingush host families. This was possible because of close family and religious ties between the two countries.

In the spring of 2000, there was some evidence that IDPs had been evicted from private accommodation. This was commonly as a result of financial pressures on families, many of whom had been hosting the IDPs for more than one year.

This project recognised that staying with host families was psychologically better for IDPs than living in camps. It also sought to encourage the solidarity effort of the Ingush population. As a result, the project aimed to support host families with economic incentives to encourage them to continue hosting the IDPs.

Assessments were conducted in the spring of 2000. These confirmed:

- the appropriateness of the cash for shelter approach;
- acceptance among potential beneficiaries and authorities; and
- the readiness of partner organisations to provide security and logistics.

Eligibility criteria

A host family was eligible for the cash grant when they:

- presented official registration documents proving that they an Ingush resident; and
- presented a Chechen IDP's temporary registration document with the same address and a registration date within a given time period.

Implementation

Registration - The registration of beneficiaries was based on United Nations and the Federal Migration Service lists. The two lists were combined and filtered. The resulting beneficiary lists were cleared.

Verification - To ensure that the registered beneficiaries were hosting

By supporting host families with one off cash grants, the project aimed to avoid evictions.

IDPs, monitoring teams were sent to the registered beneficiaries' address.

Public information - The intention to implement a cash project was initially announced to the Russian federal government as well as to the Ingush government and the humanitarian aid community. Regular reports on local television kept the population updated on the programme and its progress. Detailed information on eligibility and lists of beneficiaries were posted at post offices and on the premises of local administrations.

Complaints - A complaints process involving the project management was originally not foreseen. Complainants were asked to refer to the Ingush government, which determined that 680 cases (out of 1,200) were eligible for compensation.

During the second phase in the winter of 2001/02, 6,100 faked documents were identified (out of 7,800 submitted). This was resolved as a result of close cooperation with the Ministry of Interior.

Payments - Payments were made by the Ingush branch of the Russian postal service. The postal service received a 1.5% commission for all transactions and personal invitations for beneficiaries. The cooperation was excellent in terms of reliability of payment procedures.

Cash for shelter collection point

Assistance provided - Each family received the equivalent of US$ 100 – the equivalent of an average monthly salary.

This project was accompanied by 32 small projects, such as equipment for computer classes and support to soup kitchens. The objective of this was to acknowledge the goodwill of the local community.

Staffing - The team consisted of two expatriate staff (a programme manager and a deputy programme manager), four local employees, two drivers and up to 24 part-time monitors and drivers. The staff were based out of two offices, one in Ingushetia and one in North Osetia.

Security - Movement was heavily restricted as a result of security restrictions on international staff. Small projects were visited by local staff.

Impacts - Although there were some signs of eviction reported among the international humanitarian aid community, no eviction of IDPs during the winter months of 2000/01 and 2001/02 was officially reported.

According to unofficial surveys, the cash grant was mainly used for daily needs as well as for the payment of electricity bills.

Due to the significant size of the two project phases, a total amount over US$ 2 million was indirectly invested in the local economy.