

Monitoring Visit to BRAC Core Housing Project, Phase 2 Barguna and Bagerhat districts, Bangladesh



*Completed house in
Patharghata*

Background

Oxfam America and Oxfam Novib supported BRAC in constructing 400 core houses in Patuakhali and Barguna districts in South Western Bangladesh as a response to the severe damage caused by Cyclone Sidr in November 2007. Villages were selected for shelter reconstruction work based on the scale of the cyclone damage and the relative lack of other agencies rebuilding houses. One of the key strategies of the project was to provide a strong core house which could be extended or modified by owners according to their particular household needs. The program was completed in December of 2008.

In order to share the learning from the project, a 3 day field monitoring visit was undertaken, followed by a post project review, held in the BRAC Training Center in Barisal in March 2009.

These were undertaken by myself, Claudette van Rijn (ON) and Sriraman Varadarajan of RedR India, who had been engaged as a technical consultant to monitor the project.

In the course of discussions with BRAC on a second phase of the project that would be funded with the remainder of OA's Bangladesh Cyclone appeal funds, I met Bill Flinn, a UK based architect who had consulted for UNDP following Sidr. Bill and a structural engineer colleague had designed a permanent house that UNDP was unable to have implemented at the scale intended due to concerns about costs of by donors. Bill consulted for OA on a pro bono basis, including meeting with Chief Engineer Monsoor and Assistant Chief Engineer Ashutosh Mondal in Dhaka. Ashutosh modified the original design with Bill's approval, and this was accepted by OA and Novib as the basis for a second phase. The unit cost to the affiliates is \$1275.

With Novib co-funding as in the first phase, the affiliates were able to provide financial support for 280 houses.

Goal / Objectives for the field visit

Objectives were to monitor and report on the progress and quality of the current phase of the shelter program. The accompanying consultant also provided capacity building and technical support to BRAC as needed during the visit. The monitoring visit, of 5 days duration in the field, covered a representative sample of houses completed, and under construction, giving consideration to the following factors.

- The selection criteria being used for location selection
- The selection criteria used for beneficiary selection
- Evaluation of the design being used, construction quality and BRAC's adherence to the agreed design
- Acceptability of the completed houses by owners
- An overview of what others are doing in shelter recovery, preferably in the same communities that BRAC is working

Methodology

Kenny and Sriraman were accompanied by Alamgir Hussein (Sr. Regional Manager, Disaster Management) and Asutosh Mondal (Assistant Chief Engineer) in visiting the project locations in Burguna and Bagerhat districts. In total 25 households were visited in 6 villages, mostly completed houses, but including some in various stages of construction. In addition to meeting the project beneficiaries and their neighboring communities, the team also met the BRAC staff responsible for the project in the relevant districts, observed construction crews, and met with elected and appointed officials in the 3 implementation Upazillas (sub-districts) to gauge their opinions of the project.

During the field visit the following factors were considered:

Context

The project villages have been identified by BRAC as continuing to have acute shelter needs, particularly for the poorest, two years after Cyclone Sidr. Travel from the capital involves a combination of road travel and ferries for one and a half days to get to the project areas. The logistical challenge that this presents has been exacerbated by a shortage of bricks and sufficiently skilled labor to ensure conformance with design and to ensure quality work.

Bricks: Brick production is seasonal. The clay bricks need to be allowed to dry for about 2 weeks before being fired in one of the many kilns that dot the landscape. Consequently, production is suspended from April to September as any rain will ruin the unfired bricks. Often submerged by monsoon rains, after the monsoon

season the kilns have to dry out before the first batch of bricks can be fired. Key to BRAC being able to keep costs within the project budget is to buy the bricks directly from local kilns, as transporting bricks from outside districts would be substantially more expensive.



*Brick kiln in production,
Patharghata*

Labor: Most of the skilled masons and carpenters working on the houses come from outside districts. Traditionally these workers go home for Eid al-Fitr (this year in mid September), and remain with their families until after Eid al-Adha. This means in effect that much of the skilled labor is not available for 2 months, and this has also contributed to production delays.

Overall impression of project

This report will not dwell on technical issues, as they will be comprehensively covered in Sriraman's mid-term report.

In visiting the houses we hard pressed to find any criticism, or even suggestions for improvements by their new owners. Features such as brick walls and columns, and a cement floor (usually the first time owners had experienced one) were the most commented on.

BRAC has provided a latrine for each house using its own funds, and BRAC's reach in the project areas helps to ensure that in addition to a house, participants have access to other BRAC program activities, such as safe water from a pond sand filter or tube well, and to its health and livelihoods programs (microfinance for women and Cash for Work for the ultra-poor). In Patharghata some participants can potentially also benefit from cyclone shelters newly constructed by BRAC.



Newly constructed cyclone shelter in Padma village, Patharghata

Findings

BRAC has done a good job in getting the project underway in challenging circumstances, and within a tight budget. In visiting the project villages we were accompanied by up to eight, all male, BRAC staff except for one day, when we were accompanied by a female microfinance manager. As highlighted in the first phase report, BRAC's management structure in the Cyclone affected is overwhelmingly male. This has been explained by the difficulty of getting women to accept these remote postings, and also cultural realities that make it difficult for women to work in the area.

OA will recommend that for the final project evaluation in Spring 2010, the team include a Bengali speaking woman, or if this is not possible, that a female BRAC staff member, not directly associated with the project, accompany them and translate in interviews with beneficiaries.

The visit also included reviewing houses constructed by other NGOs and the government in the implementation areas.



Design features such as concrete reinforced brick columns considerably add to the strength of the houses.

BRAC has responded to recommendations made in the first phase final report and post project review. There are more technical staff involved in the project, compared to the first phase which had only 2 overall. Ashutosh is leading the project from Dhaka, and is supported by 4 project and site engineers.

While the overall quality of the construction is good, and the houses are very well accepted by recipients, issues around quality and non-adherence to agreed design were brought to BRAC's attention. In Borguna Sadar and Patharghata the quality of wood used and carpentry work was excellent, though brickwork was often quite rough, in large part due to the irregularity of the bricks being used. This was explained by the difficulty of obtaining good quality bricks at the end of the season.

Of some concern however was the poor quality of carpentry, and the use of warped wood particularly in roof trusses in Sharankhola. In a number of cases, the truss design has not been adhered to. While not excusing this, Ashutosh put the reason down to crews being obliged to complete houses prior to our visit, and hence likely cutting corners. He has instructed the site engineer to have the trusses reworked.



Chief Engineer Monsoor has already issued a memorandum instructing his staff to address the quality issues identified in the field.

Heavy gauge CGI sheets are bolted, not nailed, to roof members to improve wind resistance.

Construction

(This will be covered at length in Sriraman's report which will be shared shortly)

Perception of Beneficiaries

Beneficiaries were universally favorable about their houses. The points that were repeatedly raised were that the houses are stronger, being constructed of brick, with reinforced columns. As they are involved in the construction process, they are more aware of, and appreciative of the design and construction. The other feature most often commented on was the *pukka* cement floor. Owners talked of feeling safer in their new home, with one woman talking of not having to evacuate to a cyclone shelter (to the alarm of BRAC staff!). When pressed to come up with suggestions on how the house could be improved a couple of owners mentioned that they would like to be able to install a second veranda at the rear of the house. To accommodate this, BRAC will install metal brackets on the back wall for future use if desired.



Bakul Begum outside her new home, Kakchira village, Patharghata

Engagement with local officials (elected and appointed)

We met with elected officials (Union Chairpersons and Deputies) for the implementation areas, and were accompanied by them for part of the field visits. They were complementary of BRAC's work, comparing the houses favourably with those constructed by other agencies and government appointed contractors. They appeared knowledgeable about the project, including the budget for each house and the criteria for beneficiary selection. The perspective of the Upazilla Nirwahid Officer (UNO), the appointed administrative officer in Patharghata, was more difficult to ascertain as he was not particularly knowledgeable about the BRAC project, and had not yet seen the constructed houses. Both UNOs and the union chairman highlighted the need for many more houses in their areas. Kenny explained that it is unlikely that Oxfam would be able to provide additional funds, but that the project provide's an example of *best practice* to support advocating for funds from other donors, and asked whether government funds could be redirected to BRAC to allow additional house construction.

Beneficiary selection

The beneficiary selection criteria used by BRAC broadly followed that used in the first phase:

- Original house was fully destroyed
- Family has no assets to build a house on its own
- An buildable plot is available
- Family does not own agricultural land
- No significant shelter assistance has been provided by another NGO
- Woman headed households (widow, divorced) and disabled prioritized.

In discussed with neighbors and other community members it appeared that that these criteria had been adhered to, and there was general satisfaction about the selection process.

Selections were based on initial survey by BRAC, that took into consideration the status of community members against the above selection criteria. BRAC presented a list of potential participants to local officials. A final list of participants was agreed upon after discussions with local people, and the input of local bodies and officials and elected representatives.

Beneficiary participation

While beneficiaries did not have input in the design process, BRAC has responded to concerns expressed in the first phase report about lack of participation. For example, each house owner is involved in paid labor, for up to 15 days at the current government CFW rate of 100 Taka / day, to assist in the construction process. This included backfilling inside the foundation in preparation for the cement floor, carrying materials for the masons, and curing the brickwork by regularly wetting it to ensure mortar attained sufficient strength. During the construction process they are also responsible for guarding

the construction materials and for providing water for masonry work.



Beneficiaries were paid for up to 15 days of work on the new houses. This woman is wetting the mortar to ensure that it attains the correct strength.

While the basic design was maintained in all cases, minor modifications were permitted where requested. This has included relocating windows, replacing a window with a second door, and plastering the front wall (normally left as bare brick). In some cases owners provided the additional cement and sand, second door or paint for walls and floors. Generally though, the participants expressed contentment with the basic design.

It is quite likely that as they settle into their new homes, as in the first phase, owners will make other modifications such as enclosing the veranda at their own expense depending on personal preferences and as their assets allow.

Water and Sanitation

BRAC has also addressed concerns raised in the first phase report about some owners experiencing lack of access to safe drinking water. In every house that we visited, water was available close by from either a tube well or from one of the new pond sand filters (PSFs) that BRAC is constructing with OA and ON funding. No household we visited had to depend on untreated surface water. The latrines provided with each house are still quite basic, although of improved quality over those provided to houses in the first phase.



Every house is provided with a latrine



BRAC has constructed 252 pond sand filters throughout the Sidr affected region with OA/ON support, providing safe water to more than 250,000

Cost effectiveness; How do the BRAC houses compare to what others are doing in shelter recovery in the same communities?

The BRAC houses compare favorably with those provided by other agencies and by the GoB (with external donor funds). The range of houses constructed in the project areas varies from windowless metal boxes with mud floors, (built at almost the same cost as the BRAC houses by government appointed contractors-see photo), to larger brick houses built by Muslim Aid.



Metal box- built at almost the same cost as the BRAC house by government appointed contractor

Of note are houses constructed by Muslim Aid. These are large substantial brick houses where the new owners were asked to contribute up to 70,000 Taka (more that \$1000 US) towards the total cost of 160,000 Taka. Clearly this distribution model excludes the poorest that the BRAC/ Oxfam project is targeting. We heard from the elected officials in Sharankhola that a number of recipients of Muslim Aid houses have had to give them up, unable to meet debt obligations incurred in order to participate in the scheme.



Strong wooden roof trusses offer resistance to high winds

Conclusion

The houses provided through this project are amongst the best of any Sidr rehabilitation program. This was repeatedly confirmed, not only by the beneficiaries, but also by other community members, and government and elected officials. The project is 2-3 months behind the initial schedule, largely due to reasons outlined above. This is not overly concerning, particularly if BRAC addresses the construction quality issues identified in Sharankhola. The production pace should pick up with the availability of new bricks from the kilns, and the return of masons from their extended Eid break. It is clear that BRAC takes the issue of quality seriously, with the deputy head of its construction department steering the project.



Sisters Halima (8) and Hamida (11) outside their new house

All photos: Kenny Rae, Oxfam America



Bangladesh Phase
2.kmz

[Click on this Google Earth link](#)

[to see house locations](#)

The schedule for the field visit was:

Saturday December 11

- Kenny & Sriraman arrive Dhaka evening

Sunday December 13 March

- Dhaka – Barisal (extended journey by northern detour due to fog interrupting ferry service in South)

Monday December 14

- a.m.Barisal- Barguna Sadar
- meeting with BRAC staff

- p.m. Project visits, Lobongola village villages & meeting with officials

Tuesday December 15

- a.m. Ferry from Barguna Sadar – Patharghata
- Meeting with BRAC staff
- Project visits in Kakchira village
- Lunchtime meeting with elected representatives and government official
- p.m. Project visits Tangra village
- Visit to nearly completed Padma cyclone shelter

Wednesday December 16

- a.m. Patharghata-Sharankola
- p.m. Project visits Kadomtola and Rajor villages

Thursday December 17

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- a.m. Continue project visits Kadomtola
- p.m. Meeting with Sharankhola Upazilla Chairman and 2 vice-chairs, Government program implementation officer (PIO) .
- Return to Dhaka

Friday December 18

- Meeting with Rumana Kabir, consultant to UNDP shelter coordination group
- Meeting with A.I.M. Monsoor, Chief Engineer, Construction, BRAC

Saturday December 19

- Leave Dhaka for Boston via Dubai
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