VGTU LEIDYKLA TECHNIKA

COMMUNITY INVOLVEMENT IN POST DISASTER RE-CONSTRUCTION – CASE STUDY OF THE BRITISH RED CROSS MALDIVES RECOVERY PROGRAM

Peter M. LAWTHER [1]

PML & Associates, PO Box 501, Ashburton, Victoria 3147, Australia
E-mail: PMLawther@bigpond.com

Received 14 December 2008; accepted 29 April 2009

ABSTRACT. Community involvement in post disaster re-construction is an important ingredient to the overall success of housing and infrastructure redevelopment. Implementing Agencies and governments need to design post disaster re-construction programs which promote the involvement of beneficiaries and communities in post disaster re-construction programs, to the extent allowed by the scale and context of any given situation. By extension, the management and organisational capacities which enable community involvement in a post disaster re-construction project need to be identified and developed to facilitate this process. The British Red Cross Maldives post – tsunami recovery program is presented as a case study to identify successes, limitations, and lessons learnt from one such project. The case study is examined to identify capacity building opportunities for community involvement in future post disaster re-construction projects. These opportunities are presented in terms of the project procurement model chosen for implementation, active and passive methods of community involvement, and the personal skills and management structure required to facilitate community involvement in post disaster re-construction projects.

KEYWORDS: Community involvement; Post disaster re-construction

1. INTRODUCTION

The 2004 Asian tsunami was an unprecedented natural disaster in modern times. The scale, timing, and media coverage of the event conspired to create an environment of great philanthropy across the world. A large portion of this financial assistance has been used to undertake re-construction projects. In particular, thousands of damaged and destroyed homes across affected countries have been re-built. Re-construction methodologies have varied from self-build repairs undertaken directly by the home owners, to full commercial style contacting, with multiple variations within each theme. The main stakeholders in post disaster reconstruction projects are commonly the homeowner or beneficiary, the implementing agency (e.g. an NGO) and the national government. Now that re-construction is largely completed, it is opportune to examine the processes used and the outcomes achieved, in part to capture the lessons leant, but also to capacity build for future post disaster re-construction efforts.

[1] The views expressed herein are those of the Author and not necessarily those of the British Red Cross.

ISSN 1648-715X print / ISSN 1648-9179 online
http://www.ijspm.vgtu.lt
DOI: 10.3846/1648-715X.2009.13.153-169

This paper identifies, through the literature, the need for community involvement in post disaster re-construction. It then presents a case study of community involvement in post disaster housing re-construction, with the aim of identifying capacity building opportunities through the successes, failures and lessons learnt of the case study. The case study is the British Red Cross Society (BRCS) Maldives post tsunami recovery program, which comprised the re-construction of 466 houses (216 houses across 4 islands in Phase 1) and (250 houses on one island in Phase 2), together with associated infrastructure. The paper examines the case study through the following:

- Overview of community involvement in the BRCS Maldives recovery program – Phase 1.
- Changes made for BRCS Maldives recovery program – Phase 2.

and then considers broader issues emanating from the case study in terms of:

- Opportunities and risks of community involvement in post disaster reconstruction.
- Skills required to facilitate community involvement in post disaster reconstruction.
- Management structure to promote community involvement in post disaster reconstruction.

2. RESEARCH APPROACH

The case study presentation and research findings are based upon the Author's two years experience as Construction Manager with the British Red Cross Maldives recovery program. They are also based upon extended observation and reference to project documentation where appropriate.

3. COMMUNITY INVOLVEMENT IN POST DISASTER RE-CONSTRUCTION

The current literature in post disaster reconstruction advocates high levels of community involvement to achieve best value recovery outcomes.

The underlying theorem is that the more the recovery relies upon local resource, the quicker the community will be able to move to self – sustainability, and thus from recovery to normalcy. Sullivan (2003) identifies the link between involvement of the community in post disaster recovery and mental recovery, noting that it (involvement) *"alters their status from passive pawns in the process, to once again active and contributing directors of their own destiny"* This has been identified as an important element in terms of positive psychological outlook (Raphael 1986; as cited in Sullivan, 2003). Conversely, a reliance on external resources hinders recovery by diminishing the use (and hence recovery) of local markets, thus prolonging recovery, as economic recovery is a key requirement for community recovery (Hass et al., 1977; as cited in Sullivan, 2003).

The requirement for community involvement is recognised by major stakeholders in post disaster re-construction programs. The International Red Cross Code of Conduct for Disaster Relief (IFRC, 1994) recognises the need to *"strive to achieve full community participation in relief and rehabilitation programs";* whilst the United Nations (Office of the UN Secretary-General's Special Envoy for Tsunami Recovery, 2006) recognises that *"a disaster's survivors are best placed to design the recovery strategy that best meets their needs. And they should be the ultimate judges of a recovery effort's success or failure".*

The correlation between community involvement and best value outcomes of post disaster re-construction programs has become increasingly important for humanitarian Agencies, as greater focus is placed upon the need

to measure the overall impact (e.g. benefit to the recipients) of a program, rather than outputs (e.g. the number of houses constructed) (Glasser, 2008). Further, the development of a rights based approach to disaster recovery (Eyre, 2004), requires the involvement of beneficiaries in program design and delivery.

Studies (Barakat, 2003; Barenstein, 2005 and 2008; Thwala, 2005; Fallahi, 2007), identified advantages of community driven reconstruction projects (as opposed to contractor driven approaches) as:

- Being more cost effective.
- Providing a potentially better product quality where technical and supervision skills are available.
- Being more empowering.
- Allowing for incremental re-construction thereby permitting occupancy before the house is fully completed.
- Restoring confidence in those traumatised through the experience of disaster.
- Providing local capacity building and employment.
- Preserving of local cultural heritage through land use planning and vernacular housing style.

Whilst high levels of community involvement are accepted as preferable, there are difficulties in implementing this approach. Barakat (2003) notes that increasing scale and complexity of the proposed re-construction scheme increases the likelihood that a contractor driven implementation model will be used, in turn reducing the potential for community involvement. Lizarralde and Massyn (2008), point out that community participation on its own does not guarantee project success. Rather, it depends upon a complex interaction of components including participants, interests, objectives, resources and processes that go beyond the benefits of the participation of the beneficiaries, not withstanding that this is a requirement. Davidson et al. (2007) elaborate that whilst the paradigm of community involvement and participation in post-disaster re-construction is accepted, the meaning of community and participation are so widely defined that they are difficult to apply in a project concept, due to any given unique characteristics that exist within a given project environment.

Such characteristics may be seen as context specific moderators which will impact upon the implementation of a community participation approach to post disaster re-construction. They may not negate it, but will affect the extent to which it can be implemented, or indeed how it will be implemented. Moderators of implementing a community based approach to post disaster re-construction have been identified as (i) difficulties to integrate the community in the design and management of the project (ii) difficulties in building up mutual trust between Agencies and communities, (iii) reluctance on the part of governments to give power to low-income groups, and (iv) the reduction of participation to sweat equity instead of active participation in decision making (Davidson et al., 2007). Time pressures on Agencies to expend funds and show visible "bricks and mortar" results on the ground may be considered another moderator to more robust levels of community involvement.

Therefore, community involvement is not simply "all or nothing", but rather graded in accordance with the specific moderators and contexts that exist within any given post disaster re-construction project. Recognising this, a "ladder of community participation" has been developed. This model was originally promulgated by Arnstein 1969 within the context of the United States (as cited by Davidson et al., 2007), and then adapted by Choguill (1996) within the context of developing countries. The ladder of community participation identifies levels of involvement with correlated levels of community control over project decision making processes, as shown in Figure 1.

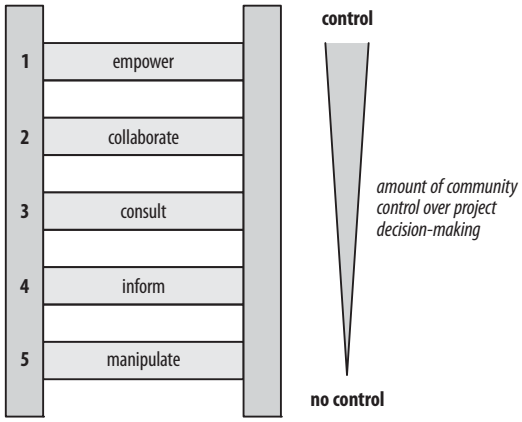

Figure 1. Ladder of community participation (Davidson et al., 2007)

The ladder is useful for measuring the level of community involvement that is possible and achievable within a given post disaster re-construction program, and in turn how that is likely to assist or impact upon overall community recovery. Further, humanitarian Agencies are in turn able to identify what capacities exist within their organisations to implement appropriate levels of community involvement in post disaster re-construction programs.

The case study is now presented to assist with identifying strategies for such capacity building.

4. COMMUNITY INVOLVEMENT IN BRCS MALDIVES RECOVERY PROGRAM – PHASE 1

Involvement of the community was not paramount in the initial stages of the BRCS re-construction program. Rather, it was an issue that evolved and grew as the project progressed. It did, however, become of some importance, particularly as BRCS received criticism from other NGO's for failing to include the community "adequately" in the re-construction process, and also for not seeming to be interested in doing so. So what was the level of involvement in the community in the BRCS in Maldives Recovery program – Phase 1?

It could be summarised as "limited"; correlating to levels 3- 4 on the participation ladder. There was no real involvement of the community in the beneficiary identification and selection process. This was done on the basis of government assessments of damaged houses. Disgruntlement with the beneficiary identification process was highlighted at the completion of the Phase 1 projects through the housing satisfaction surveys.

In terms of the housing design process, the major design parameters of the houses (size, number of rooms, ceiling height), were decreed by the Government of Maldives, and the detailed design of the houses was undertaken by a consultant, although this did to some extent take cognisance of local norms of house design. Identified beneficiaries were involved in the housing selection process. Through this process they were able to choose:

i. A floor plan from a range of three.
ii. A floor tile colour from a range of three.
iii. An internal paint colour from a range of three.
iv. An external paint colour from a range of three.
v. A roof sheeting colour from a range of three.

The housing selection process was an interesting experience of community involvement. It became apparent that whilst beneficiaries were clearly concerned with the choice of floor plan (evidenced by the due consideration given to this aspect), there was far less concern for the "colour choices" as the remaining choices became collectively known as. In a number of cases the beneficiaries even left the colour choices to BRCS staff to complete. It can be appreciated that people would consider the choice of floor plan to be a reasonably important decision. However, the decision to provide beneficiaries with choice of colours was a contentious one. It was believed to have been done to provide beneficiary involvement in the housing design, and hopefully foster

some notion of stakeholder involvement in the entire reconstruction process. However, to the extent it was treated with disinterest by the beneficiaries, it was not a success. Further, the colour choices created a significant implementation complexity. Given that the colour selections were made in a rather adhoc manner and over a long period of time (e.g. people were not available, had died, or there was a change of house ownership etc.), it was not possible to order all of the colours at the one time. Some colours had to be estimated based upon the choices already made, and in the case of floor tiles, one of the offered colours went out of production midway through the reconstruction process. Inevitably, the beneficiaries of the final batch of houses did not receive the colours they had nominated. This created tensions and criticism of BRCS, requiring skill and diplomacy to resolve. In purely mathematical terms, five choices of three options each creates 243^2 possible house types. This was a significant issue to manage from the practical construction perspective of ensuring the correct colours went on the correct houses, and also in a project management context of managing the expectations of the beneficiaries. The colour choice issue was identified in the post-construction housing satisfaction surveys of beneficiaries. Views were polarised. Whilst some said that it was a token effort to promote beneficiary involvement, others mentioned that it was important and appreciated. The process was reviewed and altered for Phase 2 housing re-construction (see below).

Beneficiary involvement in land-use planning issues in Phase 1 was limited to one island – Isdhoo Kalaidhoo. On the other islands, houses were rebuilt on existing plots of land, and there was no need for integrated land use planning, although each beneficiary was consulted and agreement reached with respect to the location (siting) of their new house on their existing plot of land. However, on Isdhoo Kalaidhoo, 46 BRCS houses were constructed on a tract of new land with a new land use plan. This created an opportunity for greater community involvement. With the aid of large scale drawings and model houses, beneficiaries were able to locate their house on their allocated plot of land, having regard to government planning regulations, orientation, roads and adjoining house locations. So in a block of eight or ten house plots, the beneficiaries created an integrated outcome, which nevertheless seemed random when construction was completed. This was because the houses were not all located in the same positions on the plots, thus avoiding "barracks" style housing and creating a more pleasant, semi – unplanned feel to the final development.

It was during the actual construction process that community involvement was at its most contentious. Whilst expectations had been raised on certain islands with the creation of a register of local people interested in working on the re-construction project, these expectations were not fulfilled. This was primarily because a commercial model of procurement had been adopted to deliver the houses, using a profit motivated contractor to supply the labour and complete the housing to time, cost and quality parameters. In addition, a professional consultant was engaged to manage the construction process. The scale of the projects, and the technical complexity of the houses (required for future disaster risk reduction purposes), determined the method of delivery of the re-construction. In turn, this did not permit a self-build model to be implemented, nor encourage high levels of community participation.

Whilst the contract agreements did require the Contractors to "use local labour where possible", they did not recognise the commercial

[2] In some of the earliest house selections, beneficiaries were given choice of different colours in different rooms. This meant that some people had a choice of up to eleven items of three options each; resulting in a mind-boggling 177,147 possible house types!

realities of these projects. Contractors who were already on low profit margins used a low cost, less risk model of importing labour, typically from Bangladesh, India and Sri Lanka. The use of imported labour for construction, and generally, is not new to the Maldives, and has been created by a lack of enthusiasm for this work by locals, coupled with lower wages payable to migrant labour. Whilst the tsunami was different in that it did bring work opportunities to local islands (as opposed to usually only the capital Male and the tourist resorts), the attitude of the locals was mostly one of indifference. They were either too busy with their own livelihoods or would not work for the wages being offered by the Contractors, which were set against the benchmark of what would be paid to migrant labour.

This is not to say that BRCS did not attempt to involve the locals from the communities in the reconstruction process. On all islands, the Contractor was pushed to pursue this option wherever possible. Generally it failed. In one example, gangs of local block layers were employed by the Contractor. Whilst an initial price was agreed, after two days they refused to work for the agreed amount and demanded a substantial increase. In addition, the work they did complete had to be pulled down and reconstructed. The Contractor was forced to terminate their employment. In turn, they proceeded to blame the BRCS consultant site Engineer whom had ordered the walls demolished and pressured to have him removed from the island. Ultimately, BRCS, who were under both internal and external pressure to deliver the houses, had to support the Contractors whom could not deliver on their contractual commitments with the uncertainty created by the employment of local labour.

But there were also some successes. Locals were successfully employed either directly by BRCS or Contractors in a number of areas, both on a contract and casual basis, to undertake activities including security, loading/unloading of boats, warehousing, making and curing of blocks, and manufacture and installation of the gifilli (water) wells. These activities became identified as "non-core / low risk" activities to the main housing construction, and employing locals in this way became the "pseudo" BRCS policy. This did not endear BRCS to some other Agencies whom made it clear that proper practice required the employment of a mandatory percentage of local people on construction work proper, along with robust training and capacity building strategies etc. The reality was that the commercial imperatives of the project, coupled with the attitude of the local communities, did not permit this.

Post construction, all beneficiaries were given a basic training course on the operation and maintenance of the houses, in particular the plumbing and electrical systems.

Another variation to the model of direct employment of local people on the physical reconstruction occurred on Isdhoo Kalaidhoo. With construction to take place on a new land use-plan, this required the clearance of a large tract of virgin bush to enable construction to commence. Whilst this was the responsibility of the Government, lack of capacity determined that BRCS pushed the process forward. This was done by engaging the community to undertake the bush clearing on a cash for work basis. This was a large project which required considerable planning and preparation with local Authorities and the community prior to implementation. Eventually the project was completed as a collaborative between BRCS and the community. In addition to enabling the housing construction process proper to commence, this project developed an important platform of goodwill between BRCS and the community. This is evidenced by the quote below from the BRCS Construction Delegate who implemented the program on the ground.

> *"Even though I have only been on Isdhoo-Kalaidhoo for a month, through the cash for work program I have a very strong under-*

standing of who our beneficiaries are within the geographical and social dynamics in the island. Beneficiaries and non-beneficiaries now refer to Carmen and me as friend, sister or son. This is an immense compliment and makes the job rewarding. Throughout the bush clearing there was not a single piece of negativity towards any ground supervisors. By contrast I have experienced considerable negativity / confrontation since starting my contract from various community members when carrying out other site operations on other islands. This of course is very demoralising and does nothing to push our objectives of pushing the shelter programme forward and achieve the desired goals. After the bush clearing people now smile and talk to me freely in the community, make me free food and drinks, give me free rides in taxis and on mopeds and are keen to interact and help in any other way possible. A complete contrast to our relationships on the island three weeks ago."

Whilst high levels of local community involvement in physical reconstruction is possible, it requires a different model of implementation and a recognised and dedicated commitment from the implementing Agency. This commitment did exist in the form of the BRCS logistics team. Whilst BRCS undertook the direct responsibility for procurement and supply of all construction materials and key pieces of equipment, implementation required a sizeable (approximately 15 No.) team of locals. These people were (all but one) young males who were trained to varying extents in the logistics of materials supply, administration, warehousing and equipment usage, scheduling, occupational health and safety. All of the house roof trusses for the BRCS Phase 1 construction were assembled by the logistics team. This required the training and development of basic carpentry skills within the team. This was extended at the end of Phase 1, when the logistics team were utilised to undertake minor housing defects rectification on the islands. They in turn used the opportunity to train local capacity on the islands to undertake similar work in the future. Indeed, the skills development within the logistics team was one of the understated achievements of the BRCS Phase 1 construction program. The direct employment model of the logistics team created additional HR and management requirements, but these are considered to be minor by contrast to the capacity building benefits delivered.

All of the above may be considered "active" involvement of the community in the reconstruction project. However, there was also "passive" involvement. This primarily comprised information dissemination and dialogue with the beneficiaries, the wider community and local Authorities. This was the responsibility of the BRCS Construction Delegate and was generally undertaken through the monthly meetings and site visits. This was an important component of keeping people informed of construction progress, the issues encountered, and providing a forum for asking questions. It was during these meetings that the beneficiaries had the opportunity to raise concerns regarding any quality and/or technical issues of construction. As the beneficiaries were not directly involved in monitoring of construction quality[3], it was important that they were provided a forum in which to provide feedback and have issues addressed.

In conjunction with this, the model of engagement with the community was important. In summary, the BRCS Construction Delegate was responsible for all interfacing and dialogue with the community and local Authorities. Any instructions arising from the dialogue were

[3] Quality monitoring was the responsibility of the Consultant to undertake. Given the Contractor model of re-construction adopted by BRCS, and the scale of the re-construction, this was considered the best method to achieve a consistent quality in a timely manner.

passed to the consultant and to the contractor in turn. This formal process was deliberately put in place to simplify and streamline communications between stakeholders. Contractors and consultants were instructed not to take directions directly from the beneficiaries / community, whom in turn were instructed to raise all issues and concerns with the BRCS Construction Delegate, working in conjunction with the BRCS community mobilisation team.

These "passive" requirements for community involvement in the reconstruction process are particularly important and should not be underestimated, or given less prominence by comparison with the more visible "active" side of community involvement. The establishment of robust, clear lines of communication and information dissemination is imperative to the successful management of the post disaster reconstruction process.

5. CHANGES MADE FOR BRCS MALDIVES RECOVERY PROGRAM – PHASE 2

Recognising some of the shortcomings arising from community involvement in Phase 1, BRCS revised it's approach to this aspect in Phase 2 (Vilufushi Island) of the project. It also recognised that a commercial contractor driven approach to the re-construction of Vilufushi was to be undertaken. Therefore a radical overhaul of the engagement of the community, particularly with respect to the physical construction, was not likely for the reasons identified above. Further, the physical relocation of the community away from Vilufushi island, added to the complexities of community involvement, whereas in Phase 1 the beneficiaries were generally all living on the islands of construction, in temporary shelters.

The biggest changes to the involvement of the community occurred in the pre-construction processes. Firstly, the community were given responsibility for the beneficiary identification and selection process, whereas previously they had been almost completely excluded. A management group was formed within the community and they were charged with the responsibility of undertaking the selection process, with due input from all residents. A dedicated grievance process was put in place. This community led beneficiary selection process was time consuming and problematic at times, which was only to be expected. However, it was ultimately successful and will contribute to more robust and sustainable longer term project outcomes.

Secondly, the beneficiaries had a greater input to the design of the houses than they did in Phase 1. As a design and construct contract with detailed design requirements, the Contractor was contractually required to present their designs to the community for information, consideration and comment. However, the design consultation process commenced before the community presentation, with a three day design and value engineering workshop held in Male. This workshop was attended by the BRCS, consultant, the contractor's design team, representatives from the Government of Maldives (Ministry of Planning and Ministry of Construction), and an independent Maldivian Architect experienced in local housing design. The purpose of the workshop was to refine the tendered housing designs taking into account local customs, regulations, plot size constraints, and the experience of the Phase 1 construction, prior to presentation to the community. The result was five house designs (three detached and two-semi detached or "duplex") approved in principle by the Maldivian Government for presentation to the Vilufushi community.

The subsequent presentation of the housing designs to the community was done in stages. The first stage involved a four day process undertaken on the island of Buruni where approximately three quarters of the beneficiary community were living. The four

days commenced with a general presentation and familiarisation of the house designs, using large printed poster drawings and scale models, and explanation of the process that was to follow. People were then given the opportunity to study the house designs in detail and ask questions of the Maldivian Architect whom was present on the island throughout the process, along with BRCS construction and community mobilisation staff. In addition, structured focus group discussions were held with representative groups from within the community, including the women, the elderly, the fishermen, and the youth.

At the end of the four days, each beneficiary was given a design preference selection form to be completed and returned to BRCS. This form allowed people to undertake three important tasks as follows:

i. make any written comments with respect to the housing designs.
ii. rank the housing designs in terms of preference, from first to fifth.
iii. nominate a family that the beneficiary wished to live next to in the event that their preferred house design was a "duplex" (i.e. a semi-detached house).

The design consultation process was repeated shortly afterward in Male for those beneficiaries not located on Buruni. 220 of the 250 design preference selection forms were received.

The main results of the design consultation process were:

i. People were generally happy with the design of the houses and only minor comments/suggestions were received relating to the relocation of doors etc. These were incorporated into the designs of the houses where possible.
ii. Feedback obtained identified that some beneficiaries found the responsibility of ranking their house design preferences difficult. Whilst they could identify what their preferences were, they were not accustomed to such choice and were not comfortable with the responsibility that they felt came with it. As the Maldivian Architect explained in her report of the design consultation process;

"I felt that some people felt the pressure of having to state a preferred choice and some probably found it overwhelming. This may partly be due to the fact that people would have to be responsible for their choices and cannot really blame someone else if they do not like the house at a later stage. If different types of houses are to be provided, this is the best way to ensure most people get what they want and feel that they were part of the whole process and are regaining some control over their future."

iii. The preferences identified that one of the house designs was chosen by only 8 of the 250 beneficiaries. This design was therefore omitted as it had previously been agreed with the community that any design chosen as 1st preference by less than 10% of the beneficiaries would not be built for practical reasons around construction efficiencies. The 8 beneficiaries who chose this design were reallocated their second preference. Importantly therefore, BRCS identified what was *not* preferred by the beneficiaries, and were able to incorporate this into the re-construction program.

On the basis of the preferences received (and revised in light of the point iii above), the number of each design type was allocated across the nominated 250 plots for construction. This was a difficult exercise as not all houses fitted on all plots (in hindsight a risk taken by BRCS). But the end result was that all beneficiaries will receive their first choice of house design, except the 8 whose design will not be built. They will receive their second preference. The final allocation of houses to individuals will be done by ballot upon completion of construction.

This highlights an important difference between Phase 1 and Phase 2 of the re-construction project. Under Phase 2, the beneficiaries do not know which house is actually theirs until construction is complete or near complete, and the houses are allocated under a lottery system. They understand that they will receive the house design of their preference, but not which one of that design which is physically under construction. This is a reflection of government policy whereby houses are not allocated to owners until the end of the construction process. The primary reason given for this is to avoid zealous owners being overly concerned with quality of "their" house, and unduly interfering with the construction process. As such, the community are deliberately disengaged from the re-construction process.

Finally the offering of colour choice as per the Phase 1 model was abandoned. The Contractor was obliged to develop three different colour schemes which apply to an entire house, and these are to be allocated across the houses by the BRCS / Contractor. As such, the beneficiaries were given no choice of colour. Whilst this was because of the problems encountered with this issue in Phase 1, it would also have been impossible to apply personal colour preferences as the individual houses are not to be allocated to the beneficiaries until the completion of construction. However, it was intended to have some community input into the finalisation of the three colour schemes. Another option would be to exclude the paint and floor tiles from the Contractor's scope of work and leave these for the beneficiary to undertake, which would enable them to apply their own colour preferences. However, the idea was not pursued because it was not standard practice of the Government of Maldives housing reconstruction programs, and any inconsistency may have created problems with the beneficiaries. Nevertheless, the idea of the beneficiaries undertaking some / all of the finishes work merits consideration for future programs. Not only can the beneficiaries choose colours to their liking, but they are also actively engaged in the re-construction process, and take responsibility for the finished quality of these items.

Due to the comparatively large nature of the community on Vilufushi, a representative committee was established by the BRCS community mobilisation team. This group took initial responsibility for the beneficiary and selection process, but are also intended to be utilised as focal point for community involvement in the re-construction process. They will assist in the organisation of the monthly community visits to the island whilst under construction, have input to the selection of the final colour schemes, and also assist with the formulation of community utilities groups to be closely involved with the associated sewer and power infrastructure projects. This utility group is important to develop longer term operational capacity for community operated systems, as distinct from privately owned housing. The utilities group will be vitally important to the operation, maintenance, fee setting and other issues surrounding the sewer and power infrastructure projects.

Given the contractor model adopted for reconstruction, and the removal of the entire community from the island (site), the level of community involvement in the re-construction process will be low.

6. MAPPING COMMUNITY INVOLVEMENT IN PHASES 1 AND 2

The level of community involvement for Phases 1 and 2 of the BRCS Maldives recovery program can be mapped using the ladder of participation model identified earlier. Further, this can be tracked over the main stages of the projects, namely design, construction and occupation. This is shown in Figure 2.

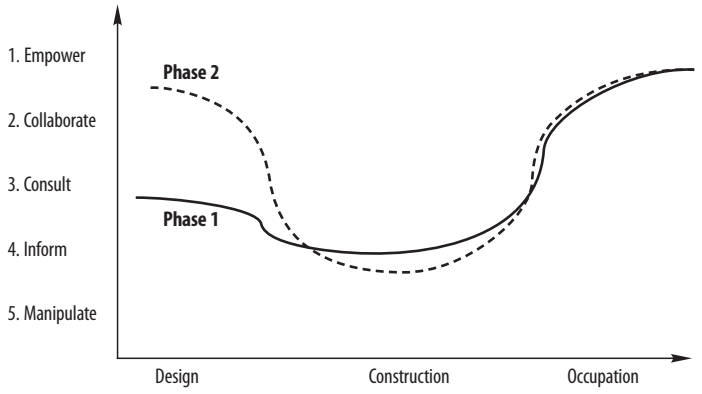

Figure 2. Mapping community involvement through project stage

As shown, the main differences for Phase 1 and Phase 2 occurred in the design stage, and predominantly related to the beneficiary identification and housing design processes. The gap between Phases 1 and 2 at this stage represents the increased community involved identified. The construction stage remains similar for both phases, with little real community involvement given the contracting method of procurement used in each (notwithstanding the role of the BRCS logistics team). Phase 2 is considered to be marginally less at this point purely because the community are removed from the island, with virtually no local employment on the construction project. The occupation stage for both phases is characterised by high levels of community involvement as the beneficiary become fully responsible for the housing.

7. OPPORTUNITIES AND RISKS OF COMMUNITY INVOLVEMENT IN RE-CONSTRUCTION

The literature and the case study have identified some distinct opportunities and risks associated with community involvement in the post disaster re-construction process. Each are summarised below.

Opportunities

- Involvement of the beneficiaries and the wider community in the re-construction should lead to more sustainable outcomes of projects. It stands to reason that the more people are engaged in the process, the greater the level of stakeholder engagement is, the more they are able to influence and take ownership of the outcomes. (e.g. Involvement of the beneficiaries in direct quality monitoring could in theory lead to higher quality being achieved if they are given the appropriate skills and training).
- On the job skills (trade) training and capacity building programs (e.g. quality monitoring) can be developed and implemented to enhance future employment prospects.
- Significant relationship building opportunities can be created between implementing Agencies and the local community. It is particularly important for field staff to create an operating context which enables them to achieve their goals. In essence, this requires the two groups working in partnership rather than in an adversarial way.
- Significant economic stimulus for the local economy, albeit for a limited time.

The more the beneficiaries / community are directly involved in re-construction, the more likely that the financial resources provided to undertake the project will directly benefit that community. E.g. under a self build program, the beneficiaries may be compensated for some or all of their labour. Also, the material and labour requirements are more likely to be sourced locally as are contractors engaged by beneficiaries. Whilst the BRCS contractor model of re-construction did stimulate local economies, this was primarily due to the discretionary spending of the migrant labour on the islands. All of the construction materials were imported, and all but one of the Contractors was foreign. Therefore, comparatively less of the financial resources were expended directly to the local communities under this approach. There was, however, direct expenditure by BRCS on local transport and fuel requirements.

- Community/beneficiary involvement in the re-construction process can be used as a key indicator of project success. Types/Levels of involvement can be clearly identified with measurable indicators of achievement. This could be used to distinguish humanitarian re-construction projects from commercial re-construction projects.

Risks

- Over-reliance on the local community could have a detrimental impact upon other project objectives around time, cost and quality. There may be complexities created if a commercial contractor driven model of re-construction is adopted in conjunction with direct community monitoring, and clearly defined roles, responsibilities and acceptable levels of quality are not established. The adoption of a self-build re-construction model could also impact on project objectives of time, cost and quality. This risk can be ameliorated by clearly defined and accepted organisational strategic objectives developed at the commencement of a re-construction program, coupled with a robust risk management plan. These objectives should consider the type of re-construction model to be used (contractor or self-build), and the risks associated with each in achieving the organisational objectives. E.g. a self build model may achieve more sustainable long-term project outcomes, but this may be at the detriment to the timeframe of the project. Therefore, the risk of project overrun needs to be accepted and planned for.
- There is potential to get the community offside if the engagement is not handled by people with the requisite skills and intentions. This factor should not be underestimated. The skills required to facilitate community involvement in re-construction are many and varied. This risk can be ameliorated by recruiting and training people with the necessary skills and desire required to facilitate community involvement in a re-construction project. These skills are identified below and should be considered mandatory (along with traditional construction technical and project management skills) for this type of project. Further, these skills should be clearly recognised and rewarded by implementing Agencies, as they are in short supply.
- Implementing Agencies can be used as a political "football" by individuals in the community whom have other, unrelated, agendas. This occurred in Maldives where individuals could use forums provided by BRCS to engage people in the reconstruction process (e.g. meetings), as a platform to make political statements against the government, or allege BRCS

was anti-government. This did impact on the general reputation of the BRCS in the community, and also at higher levels of central government. This risk can be ameliorated by clear and consistent communication processes between the Agency and the beneficiary community, through the use of more than one medium, particular in relation to responsibility boundaries between stakeholders. Relationship building with stakeholders (e.g. national and local government) is fundamental to ensure that such issues can be dealt with quickly and effectively when they arise.

8. SKILLS REQUIRED TO FACILITATE COMMUNITY INVOLVEMENT IN RE-CONSTRUCTION

As described above, the BRCS Construction Delegate was responsible for interfacing with the community with respect to the construction projects. The theory was that the community mobilisation team were to lead on this, but the reality was that they lacked the technical expertise to deal with the issues as they arose, and the process gravitated back to the Construction Delegate. Therefore, the Construction Delegate became the link between the community, the consultant and contractor, and the BRCS senior management. This is a challenging position and requires a special blend of technical, project management and community interfacing skills. The technical / project management skills are well known and comparatively easy to identify. However, the community interfacing skills are rarer (particularly when required to be coupled with technical skills), but it is imperative that they are identified at the recruitment stage. These skills include:

- Ability to appreciate the broader objectives of the program in so far as it is people focussed, and that the physical re-construction is done to allow people to recover from disaster and re-establish their lives. It is not necessarily an objective in itself.
- Awareness to realise that beneficiaries in the main are not technically minded construction people. This therefore requires a more intensive process to explain difficult concepts, in simple terms.
- Very high level communication skills. In particular, the abilities to:
  i. listen carefully, and interpret body language;
  ii. speak clearly through an interpreter;
  iii. produce simple and clear sketch diagrams;
  iv. produce simple written pamphlets (especially for maintenance training of beneficiaries).
  v. Public presentation skills to large groups (at times 100+) people.
  vi. Strong negotiation skills.
- A background in training is useful to demonstrate and explain technical issues.
- Patience, diplomacy and cultural sensitivity.
- Firm but friendly and approachable disposition.
- Resourceful and independent.
- Ability to work with a local "wingman" and delegate tasks to this person.
- Ability to "switch off" when not on the job and re-charge, as these roles are highly taxing, both physically and mentally.

Agencies should consider dedicated "community interface" training for Construction Delegates. This could be a two-stage process comprising firstly a general training session (in the "home" country prior to deployment), and then a specific in-country session provided shortly after arrival.

Finally, it should be remembered that the implementation model used in the BRCS Maldives recovery program generally removed the consultant and contractor from in depth deal-

ing with the communities. This was the correct decision as these groups by and large did not have the skills identified above. Further, they were not particularly interested in this type of community interaction. The Maldives recovery program demonstrated that it was best to allow the consultant / contractor to focus upon the process of delivering the houses, and allow the BRCS Construction Delegate to deal with the community. In turn, Agencies need to be clear as to what they expect from consultants and contractors. In some instances the consultant site Engineers were disliked by the communities. This was primarily because they said "no" to what they considered unreasonable requests from beneficiaries, whom had not followed the established communication processes through the Construction Delegate. However, this dislike was unfortunately interpreted by some BRCS staff members as incompetence on the part of the Site Engineer. Rather, these Engineers were discharging their responsibility of delivering the houses to time, cost and quality requirements, within the communication framework that had previously been established. If Agencies require consultants and contractors whom are technical, management and community engagement experts as well, they need to be clear about this at the time of appointment.

9. MANAGEMENT STRUCTURE TO PROMOTE COMMUNITY INVOLVEMENT IN RE-CONSTRUCTION

Successful involvement of the community in the post disaster reconstruction process also requires the correct organisational management structure to facilitate implementation. Which structure is preferred depends on the level of community engagement sought by the organisation, in the operating context of the project. Once this has been determined, people with the correlating skills will be required and this needs to be identified at the time of initiating the recruitment process.

A re-construction program which has significant levels of community involvement, such as a self-build community project may be better being led by a skilled community mobilisation team, with an emphasis on the "soft" skills of community engagement. This may be more pertinent to overall management of the program. The "hard" technical and construction project management skills would of course be required on the ground. However, this type of program will still require project management skills at the higher levels to ensure completion. These skills do not necessarily have to come from someone with a construction background, as project management is generic. This scenario would require an overall country manager (and associated support services), supported by a community mobilisation manager with project management skills, and the construction technical skills in turn sitting somewhere below this person. On the ground interfacing with the community can be done by community mobilisation experts. In Maldives, this was the intention, but not the reality, and the interfacing gravitated back to the Construction Delegate whom had the technical expertise required to undertake this. It was difficult to source experienced local community mobilisation people whom were treated seriously by the communities. Preferably, however, the community interface would be the responsibility of a skilled and dedicated community mobilisation team, with clear support from the Construction Delegate(s).

Generally, a large scale reconstruction program which is commercially orientated will have less "active" community involvement than the self-build or community driven model. This type of program may be driven more by traditional parameters around time, cost and quality, and is more suited to being managed by people from construction backgrounds, with the "hard" skills of Engineering and construction / project management. However, in this type of program, the community will still be

involved, but perhaps in a less visible although still important way, as exemplified in the case study. As such, there is a strong role to play to facilitate this involvement and a dedicated resource should be made available to ensure that this occurs. For example, on the International Federation of the Red Cross and Red Crescent re-construction projects in Maldives, a small team was dedicated to facilitating community meetings, trips to the construction site, newsletters, fact sheets etc. This is a vital function, and should report to the construction manager, whom in turn needs to have a broad awareness of the importance of this component of the re-construction process.

A hybrid type model of program combines both construction and other programs such as livelihoods and disaster management. This was the BRCS in program in Maldives. A flat management structure was implemented with a dedicated manager in place for each of these three components, and each reporting directly to an overall country manager. The danger of this approach is that it creates "silos" whereby each program operates somewhat autonomously. This did happen in Maldives to some extent, and there was some animosity between staff members of different programs, but it is also considered inevitable to a point as each program has it own objectives, time frames and budgets. The degree of interaction and crossover between the different programs becomes a function of the managers of each program (and the country manager in particular), and how willing, proactive and forceful they are to promote cross program integration. The model in the Maldives worked reasonably well because the country manager constantly emphasised that it was not purely a construction program (although this was by far the largest and most obvious component). This was useful in providing balance and enabled a broader perspective of identifying opportunities to integrate the three components of the BRCS Maldives recovery program. At the same time, the country manager fully recognised that she was not a technical construction person and allowed the construction team to operate independently, within this context. Without this approach from the country manager, there is the danger that the program would have become a largely one dimensional construction focused deliverable.

In general, a multi-faceted program being overall managed by a construction professional is not necessarily desirable because the risk would be a lack of ability to see the bigger picture of what the Agency may be trying to achieve. Of course, this depends on the type of person whom could be recruited for the role, but a broader perspective with previous exposure to the "soft" side of humanitarian programs is vital at the senior management level. In turn, this should not dominate the management perspective where there is a recognition that programs may have to deliver on commercial project indicators of time, cost and quality. A combination of "soft" skills and project management skills is perhaps the best mix to manage such a program overall. This person can in turn be supported by a construction professional, and other managers for individual programs.

10. CONCLUSION

This paper has considered community involvement in post-disaster housing reconstruction in the context of the BRCS Maldives recovery program. The paper has provided an overview of community involvement in the BRCS Maldives recovery program – Phase 1, and also the changes made for Phase 2. This has captured ways in which the community were involved with the program, and the success and shortcomings of this involvement. Some broad opportunities and risks of community involvement in reconstruction have been identified.

Finally, the main personal skills necessary to facilitate community involvement in the reconstruction process have been identified, and the management structure required to successfully promote community involvement in reconstruction considered.

There is no doubt that community involvement in the re-construction process is important and should be treated as such. Well planned and resourced strategies which promote this objective will lead to more sustainable and robust post disaster recovery outcomes. It is hoped that the issues identified in this paper will assist Agencies to capacity build for successful community involvement within the varying contexts of future post disaster re-construction programs.

REFERENCES

Barenstein, D.J. (2008) From Gujarat to Tamil Nadu: Owner driven vs. contractor driven housing re-construction in India. *4th International i-REC Conference on Building Resilience: achieving effective post-disaster reconstruction*. 30 April – 2 May 2008, Christchurch, New Zealand. Christchurch, New Zealand. Available at: http://www.resorgs.org.nz/irec2008/Papers/Duyne.pdf

Barenstein, D.J. (2005) A comparative analysis of six housing reconstruction approaches in post–earthquake Gujarat. Sculoa Univeritaria Professionale della Svizzera Italiana, Lugano. Available at: http://www.odi.org.uk/hpg/meetings/SUPSI.pdf

Barakat, S. (2003) Housing reconstruction after conflict and disaster. Humanitarian Practice Network. Practice Network Paper No. 43. *Overseas Development Institute*. London. Available at: http://www.odihpn.org/documents/networkpaper043.pdf

Choguill, M.B.G. (1996) A ladder of community participation for underdeveloped countries, *Habitat International*, 20(3), pp. 431–444.

Davidson, C.H., Johnson, C., Lizarralde, G., Dikmen, N. and Sliwinski, A. (2007) Truths and myths about community participation in post-disaster housing projects, *Habitat International*, 31(1), pp. 100–115.

Eyre, A. (2004) Psychological aspects of recovery: practical implications for disaster managers, *The Australian Journal of Emergency Management*, 19(4), pp. 23–27.

Fallahi, A. (2007) Lessons learned from the housing reconstruction following the Bam earthquake in Iran, *The Australian Journal of Emergency Management*, 22(1), pp. 26–35.

Glasser, R. (2008) Why we need to look hard at the NGO's flaws. Section 3: The Developing world. *Europe's World*, Spring 2008, pp. 150–155. Available at: http://www.reliefweb.int/rw/lib.nsf/db900sid/ASIN-7C3SEW/$file/CARE-NGO%20Accountability.pdf?openelement

IFRC (1994) The Red Cross Code of Conduct for Disaster Relief. International Federation of Red Cross and Red Crescent Societies, Geneva.

Lizarralde, G. and Massyn, M. (2008) Unexpected negative outcomes of community participation in low-cost housing projects in South Africa, *Habitat International*, 32(1), pp. 1–14.

Office of the UN Secretary-General's Special Envoy for Tsunami Recovery (2006) Lessons learned from tsunami recovery – key propositions for building back better. A Report by the UN Secretary-General's Special Envoy for Tsunami Recovery, Clinton, W.J., December 2006. Available at: http://www.preventionweb.net/files/2054_VL108301.pdf

Sullivan, M. (2003) Integrated recovery management: A new way of looking at a delicate process, *The Australian Journal of Emergency Management*, 18(2), pp. 4–27.

Thwala, W.D. (2005) Employment creation through the provision of low cost housing in South Africa. *Proceedings of the XXXIII IAHS World Congress on Housing: Transforming Housing Environments through Design*, Pretoria, South Africa, 27–30 September 2005, ISBN 1-86854-627-6. [CD-ROM]

SANTRAUKA

BENDRUOMENĖS INDĖLIS Į APLINKOS ATSTATYMĄ PO STICHINIŲ NELAIMIŲ: DIDŽIOSIOS BRITANIJOS RAUDONOJO KRYŽIAUS ATKŪRIMO PROGRAMOS MALDYVUOSE ATVEJO TYRIMAS

Peter M. LAWTHER

Bendruomenės indėlis į aplinkos atstatymą po stichinių nelaimių – svarbus komponentas, padedantis sėkmingai atkurti būstus ir infrastruktūrą. Tai įgyvendinančioms įstaigoms ir vyriausybėms būtina kurti atstatymo po stichinių nelaimių programas, skatinančias nukentėjusiuosius ir bendruomenes dalyvauti tokiose programose, kiek tai įmanoma, atsižvelgiant į konkrečios situacijos mastą ir kontekstą. Platesne prasme, norint išplėsti šį procesą, reikia nustatyti ir išplėtoti vadybos bei organizacines galimybes, leidžiančias bendruomenei dalyvauti atstatymo po stichinių nelaimių projekte. Atvejui tirti pasirinkta atkūrimo po cunamio programa, kurią Maldyvuose vykdo Didžiosios Britanijos Raudonasis kryžius. Tyrimu siekiama nustatyti konkretaus projekto sėkmes, apribojimus, jo metu išmoktas pamokas. Atvejis nagrinėjamas siekiant nustatyti, ar įmanoma sukurti sąlygas, kurios leistų bendruomenei dalyvauti būsimuosiuose atstatymo po stichinės nelaimės projektuose. Tokios galimybės pristatomos imant įgyvendinti pasirinktą projekto pirkimų modelį, aktyvius ir pasyvius bendruomenės dalyvavimo metodus bei asmeninius įgūdžius ir vadybos struktūrą, kurie būtini, idant bendruomenė galėtų dalyvauti atstatymo po stichinių nelaimių projektuose.