

## HOUSING & HAZARDS AND THE WORKSHOP PROCESS : REALISING POTENTIAL

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### Introduction : Promoting self-help for safer housing

The Housing & Hazards Group (H&H) piloted a series of Building for Safety workshops during its first field study in 1997 (Carter, 1997). The study was conducted in Sundarban Union, Dinajpur District, in cooperation with Chetonar Dak, a small village-based non-governmental organisation. The workshops, which are described in another paper in this volume (Hodgson & Carter, 1999), aimed to reduce poor people's vulnerability to disaster by motivating them to improve the hazard-resistance of their homes. This paper presents an assessment of the impacts of that first study and indicates possible ways ahead for the workshop process.

The H&H workshop approach was developed to support low-income communities' own strategies for survival in hazard-prone Bangladesh. It is intended to be flexible so as to accommodate localised and personal circumstances. The workshops provided a mechanism through which H&H worked with villagers to find ways of strengthening their homes using affordable and locally appropriate ideas. Participants worked through a series of discussions and practical exercises under the guidance of local facilitators to examine their local building methods and materials. From their analyses of the causes of vulnerability they derived "best practice" building techniques which would strengthen their homes and reduce the damage resulting from natural hazards. This process resulted in marginal cost improvements which would make more resilient homes affordable within the villagers' means and circumstances.

### Survey summary: The participants have been slow to act

The impact assessment, conducted during December 1998, revealed that the rate of implementation of workshop ideas by participants has been disconcertingly low. A number of issues need to be addressed if the workshops are to achieve their objective of reducing hazard vulnerability in the community.

*Firstly, a greater understanding of poverty is required.* The study has suggestions for ways of negotiating a way forward within a resource-scarce environment.

*Implementation of building improvements is impeded by causes of inertia other than poverty alone.* To overcome these, activities must be sustained beyond the workshops themselves.

*The role of women in home-building and maintenance.*

### Poverty : A persistent bar in the path of progress

There is a slowness to act upon building needs in general. Many of the workshop participants commented that building is undertaken only when it becomes more than necessary :

*“house improvements or repairs are not necessary unless our houses have been damaged or worn out”*

Given this prevalent attitude, it was unsurprising to find that people had not taken action to make their homes more hazard resistant before disaster struck. Although it was not as devastating there as in other parts of Bangladesh, the 1998 flood was unusually severe for Dinajpur district. The impact was felt by workshop participants, one half of whom reported damage to their buildings. Yet, despite the participant's comments reported above, slowness to act has continued even after the disaster: the majority of participants have not yet made any repairs to their homes, even four months after the event.

Once the floods and rainy season have passed, people can usually expect that significant rain will not come again until the following year's rains. This could explain why some people feel in no hurry to make repairs, especially on buildings considered less essential than the main living/sleeping house. However, in some cases even those important buildings remain unrepaired. An example is that of one participant who is now living with his family in their small kitchen house. He lives a hand-to-mouth existence and has been unable to find the money to rebuild his living house destroyed by the floods. The winter in north west Bangladesh which follows the rainy season is a bitterly cold experience, especially for those without decent shelter. It is not for lack of suffering that this participant, like others similarly placed, has not been spurred into action. The reason is poverty.

An essential part of Housing & Hazards' future research must be to investigate more closely the reasons why people do not get on quickly with building. This is an important key to understanding why so many participants are not taking the further step of making the kinds of improvements advocated by the H&H workshops.

Of those few who have started some remedial construction, only a couple of participants have used one or two of the workshop ideas. One participant explained:

*“It is hard for us to rebuild after the floods because there is not enough money. Therefore, people can rebuild only in a poor way - repairing enough just so that we can get by.”*

Even one of the workshop demonstrators, although well disposed towards H&H ideas, struggled to implement them when building his own house. The living house of his homestead had fallen down; being a day-labourer, he was building the new home bit by bit as money came in. Meanwhile, he and his wife were sleeping outside and winter was advancing. On days when he had enough money, he would stretch it to use H&H ideas such as painting bamboo pillars with tar to ward off insects and rot. When money was short, he put in pillars without treatment. The need to complete the house so that he and his wife could sleep in warmth and security was a greater force than any thoughts of waiting for a few days to accumulate the funds to make the house more durable.

Being aware of these economic pressures facing families after disaster, H&H had expressly sought to encourage participants to make housing improvements long before hazards strike. However, the survey suggests that only the better-off could respond to this encouragement. The few cases where participants had enthusiastically put several workshop ideas into practice were new building projects and not responses to hazard damage or dilapidation. Typically, those participants had ready cash available at the time of building - enough to afford the extra cost and even to employ builders.

Perhaps it can be said that none used as many H&H ideas as the demonstration building which was constructed at the end of the workshops. The survey also indicated a reason for this. When asked whether poor people would be willing to spend the little extra needed to make their homes strong “like the demonstration building”, only one gave an unequivocal ‘yes’. The majority said that the extra materials required (i.e. a few bricks, C.I. sheet, bamboo, wheat straw thatch, a small quantity of tar and a handful of nails) would be too expensive for poor people. The demonstration house was described by one person as being “like a rich person's bedroom”. Another described it as being “equivalent to four houses built in the general way”. The demonstration building is relatively large (18'x 12') because it was intended for communal use as a sewing training centre. This seems to account for participants' views that its cost would be beyond the means of a poor family, even though the workshops emphasised a budgeting exercise in which the marginal cost of the improvements was clearly seen to be a mere 8%. This attempt to demonstrate long term gains by spending a little extra initially seems to have been unsuccessful.

Most rural families have a fragile economy. Daily income varies with the seasons, weather, health and many other factors. Today's income can be as unpredictable as tomorrow's, never mind next month or next year. All income is immediately accounted for several times over by competing daily needs, and ‘marginal costs’ or ‘long-term benefits’ have little relevance. Even a workshop

facilitator explained that in pondering the rebuilding of his kitchen, he and his wife are already arguing over how they can afford the time away from earning to do the building. Money for 'extras' is beyond the point.

This points to a need for better understanding of rural economies, the dynamics of household resource management in a resource-scarce environment and of how hazard-resistant building can negotiate a way forward within these constraints.

Common responses by aid projects to economic obstacles are either to offer credit or to provide some form of material assistance. Credit provision was one of the recommendations of the 1996 Dhaka Workshop. However, pilot project participants mostly expressed dislike of credit as a possible solution. A few of them agreed that loans may be appropriate for business activities where profits can be used to repay capital and interest; the majority said that credit for housing is bad because poor people cannot afford credit for items which do not make money. The common sense in this attitude is difficult to dispute and it seems more appropriate to explore savings rather than credit as an economic approach.

### **Help with building materials: contradiction or complement to the H&H approach?**

Provision of building materials appears to be a departure from the H&H commitment to self-help solutions. Moreover, past failures of material distribution programmes have provided graphic warnings of the problems to be surmounted in avoiding a dependency culture. It is now seen as good practice in many sectors that beneficiaries should bear some of the costs of the 'aid'. However, with so many development initiatives now demanding contributions, the poor are sandwiched between the competing demands of essential facilities such as water, education, health care, sanitation and shelter.

Although each aid initiative sets its costs within the beneficiary's ability to pay, the cumulative effect is that even the marginal costs of H&H improvements lie beyond the means of the poorest sector of the community. Given the pressures on family incomes that have been seen in Sundarban, perhaps some kind of material assistance for hazard-resistant housing may prove worthy of consideration. Some people also remarked that organisations which conduct motivational programmes exhorting people to implement ideas but which do not fund the advocated actions, lack credibility.

Several people offered carefully considered opinions about what more could be done to help people make their homes more hazard-resistant. They called for very specific help with building materials which would be tailored to facilitate implementation of particular H&H ideas. Suggestions included :

- Provision of good quality wire for making bamboo joints and for the 'kata' process (cutting mud walls to control cracking);
- Tar and brushes for treatment of bamboo poles;
- Rice-husks for mud wall building;
- Bricks and cement for forming the 'dhari' (outer part of the mud plinth)
- Loan of compaction rammers for building more robust mud plinths.

Participants were also keenly aware of the pitfalls of material provision and of how pressure on daily incomes could lead to misappropriation of resources intended for housing improvements. An essential recommendation came out of their comments:

*Specifications for assistance should be made so that it will not be tempting for poor people to sell the designated materials and so that materials (or quantities thereof) should not be too attractive to a market of marginally better-off people in the surrounding community.*

This recommendation can be met by keeping the distribution of materials tightly matched to the implementation of workshop-sanctioned improvements and activities.

The success of a materials provision programme such as this will hinge on one crucial factor : the presence of a field worker who can procure and distribute the materials justly. The H&H programmes initially relied on a local partner to host the workshops and later to conduct the follow-up activities. However, it turned out that the H&H objectives for the use of the resources did not tally with those of the local partner. This indicates a need for independent field staff who would ensure that assistance could be specifically tailored to the needs of the target (neediest) beneficiaries. Such field workers, responsible to H&H, would also provide the basis of effective monitoring and accountability structures.

### **The need for follow-up activities**

Recognising that participants would need to draw support and inspiration from one another as they started to put workshop ideas into practice, the first H&H project arranged for follow-up activities during the ensuing building season. The local NGO partner agreed to host further workshops; a song team was commissioned to publicise the work; tar would be provided for bamboo treatment and advice would be given by the workshop facilitators. However, as no single person was made responsible for the coordination of this activity, the plans were slowly forgotten. Without someone to nurture the process of hazard mitigation stimulated by the workshops, it could not survive.



It had been hoped that the participants themselves would be the sources of a spread of enthusiasm for H&H ideas. This had been discussed and agreed with the participants at the end of the workshops. However, of those who could recall making this commitment, nearly all had to admit that they had not put it into practice. They commented that as their houses had not fallen down they had not had to rebuild and so had not been in a position to spread the building for safety messages. Several respondents called for a community-based motivator. They explained this need with comments like

*"I'm only a little person - people don't listen to me"*

There is clearly a lack of personal confidence among the poorer people which inhibits them from taking the sort of leading role envisaged.

The second study has also found a lack of confidence about certain ideas which had been explored during the workshops. Without reinforcement of the original messages, participants were beginning to get muddled about what ideas had been covered. Many could remember that particular methods had been discussed but could not recall the 'nuts and bolts' details that would enable them use the techniques to good effect. This vagueness would also reduce confidence in implementation of ideas.

This all points to a need for a follow-up worker who would keep ideas fresh in the minds of participants and would stimulate the spread of building for safety practices to other members of the community. Appropriate activities for such a worker might include :

- Answering questions on practical implementation of workshop ideas;
- Finding out and attending when people are doing building work;
- Inviting neighbours to observe implementation of ideas and to lead discussion;
- Organising follow-up meetings;
- Involving participants in motivational work;
- Coordinating song team and 'jatra' (drama) performances which raise awareness of the issues;
- Organising demonstration building exhibitions.

The list of potential follow-up activities is as long as the imagination can stretch.

### **The role of women in home-building and maintenance**

The first study targeted female as well as male participants, recognising that both are involved in the building process. In practice, the division of activities traditionally has men undertaking tool-based work such as site preparation, preparation of materials and roof construction. Bamboo wall

construction requires the use of tools and is thus done by men; mud walling is much more a hands-and-feet activity and is often done by women.



**Figure 1 : A woman carries out weekly plaster maintenance on her mud verandah**

However, once the building is completed, the woman of the house plays a much more significant role in maintaining the buildings, particularly those built of mud. The effects of rain, floods and even daily wear and tear all result in a continual erosion of the structure. The methods of construction used also contribute to a lack of long-term resistance to those hazards and the workshops suggested appropriate ways of reducing cracking in mud walls.

Two neighbours present an example of the importance of maintenance and of the woman's role:

In home A, the women follow traditional practice, polishing the walls and plinth of the house weekly with a mud paste or with water. Each month, they undertake more substantial plastering. As a result of this attention, the 26 year old house appears almost new.

The neighbouring house of family B, only 15 years old, shows substantial decay in several places. Family B is much poorer than family A and both male and female members of the family must spend the day working away from the house. Therefore, the women are unavailable to keep the house in good repair and the building is less able to resist any hazards which may occur.

This traditional role of the women in keeping building exteriors crack-free is very important in reducing the penetrations of rain and insects. However, it appears that such maintenance is in fact undertaken more for aesthetic reasons than for structural ones. This suggests that future workshops should emphasise the long-term benefits of mud maintenance and incorporate ways of making this possible. It also points to a need to consider how public demonstration buildings, which do not get such regular attention, will be able to demonstrate the durability of improved mud walls.

The gender division of labour based on tool use is not hard and fast. In many aspects of life women can be seen using tools too, for example, harvesting crops, tilling the land and making bamboo baskets, as well as in the kitchen. When there is work to be done, women will get on and do it, tradition notwithstanding. However, when a male arrives on the scene, with time, rather than tools, in his hands, the confidence of the women who had been getting with the job often seems to evaporate, with the tools being handed over to the men to finish the task. Confidence and opportunity are, of course, fundamental factors which influence women's liberty and decision-making. In particular circumstances, tradition can be bypassed, even during house-building. The author was introduced to two young women who had built their parental home, in its entirety, by themselves. Their father is paralysed and their elderly mother works all day in the fields to earn 20 taka for their rice. The girls had been given sanctuary by a small organisation for abandoned women where they learned handicrafts and skills which developed their self-confidence. Having saved money from their handicrafts, they returned home to build the family house and provide a more secure situation for the whole family. The important stimulus was the confidence acquired through mastery of new skills plus the accompanying income.

Those parents were lucky in their children. Many households headed by elderly widows have to rely on costly professional builders for home construction. The 1997 workshops included two examples of this. In both cases, it was the young daughters who attended but it appears that the girls, aged 15 and 16, were too young to take part in subsequent building work or to influence decisions about it. In neither case were the improved technologies implemented. These are among the poorest households in the village and can ill-afford the expense of the builders who were needed to reconstruct after storm damage. Such households should be the main focus for building for safety programmes and would benefit particularly from the work of a confidence-building motivator.

It must also be recognised that female participants are not as immediately empowered to make decisions about building (or most other things) as are their men-folk. In a resource-scarce environment, family differences over major

expenditures can be a source of great tension. While the man can follow the patriarchal norm and make his own decisions, the woman has much greater difficulty in persuading her husband to use extra money for implementing ideas which she has learned from a workshop. This problem might be avoided if husbands and wives were to attend the workshops together, with the result that there would be a better likelihood of getting the full family's support for H&H ideas. Working together, a husband and wife could be a good resource team for an H&H field worker to use in motivation work in the paras. An advantage in many areas is that whilst the husband can work with the men of the para, the wife can have access into the homes and courtyards of neighbours that her husband would not.

Decisions about the methods of construction used for different houses within the family homestead can also impact adversely on women. The living/sleeping house is usually the best built and maintained. By comparison, the kitchen, in which the woman spends much of her time, is typically the least well-built of the houses. Therefore, the survey found, the kitchen is one of the first buildings to suffer damage during hazard events. As a result, working in the cold and rain makes the woman more vulnerable to sickness, further adding to her workload. Participants' stories of their suffering in the 1998 flood included problems associated with cooking and eating as an important theme. This is an aspect worthy of more consideration in future workshop programmes; before that can happen, a closer study is needed of peoples' attitudes to kitchens.

"Distressed sales" (where materials such as C.I. sheet are resold to realise capital) can adversely affect the women and children who are left exposed in the home (Sorrill, 1998). The decision to resell C.I. sheeting is commonly made by the male of a household following spending controlled by the same male. In many cases, the men spend much of their time working or living away from the building in question while their women and children remain to occupy a house exposed in security and environmental terms. People are often very concerned about personal security and violent robbery. For example, one family building their home explained that the house would have no windows because violent individuals could easily enter through such openings. Part removal of a C.I. sheet roof creates additional (but often unrecognised) hazards of dislodged and flying sheets in high winds. These negative aspects of distressed sales might be emphasised during the workshops.

From the above it is clear that there are many aspects of the relationship between women and housing that should shape the development of the H&H workshop approach. It is worth noting that the workshops themselves provide a very good action-research opportunity for investigating women's issues and perspectives. To do this will require the development of focus discussions in both the mens' and womens' workshops which approach housing in a way that

is sensitive to the different gender perspectives.

### Realising potential

The first H&H pilot study sought to initiate a 'process' of growing attention to self-help improved housing within the community. Having revisited that aim during the second evaluation study, it can now be seen that the sustaining of this process will require more than just the initial workshops. The following auxiliary inputs need to be considered :

- Specific types of assistance with materials, closely associated with the workshop technologies;
- Field workers to facilitate the workshops and maintain subsequent momentum;

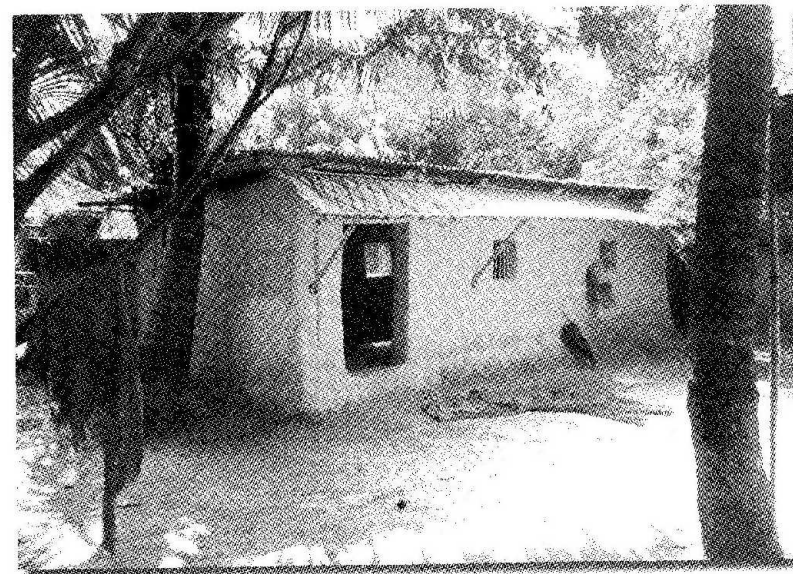
Careful preliminary negotiations should be conducted with the community concerned, to:

- establish programme objectives;
- develop understanding of the social, economic and materials constraints prevalent in that community;
- arrive at a mutually agreed plan of action in which the motivators work alongside community based organisations to bring about reductions in hazard vulnerability.

Incorporation of these additional measures will require coordination, the training of staff and the creation of administrative structures if the workshop process is to be replicated widely. In return, the process gives a unique close acquaintance with vulnerable communities and a valuable action-research opportunity. The workshops provide the opportunity to draw on information about local situations in terms of community experience of hazards, vernacular housing, building methodologies and local constraints on good building practice. These data are needed by organisations interested in addressing vulnerability reduction and will also be vital in directing the research and development being conducted by the link between BUET and H&H at the University of Exeter.

With such support, a community-driven approach can begin to empower communities to overcome the difficulties which impede self-help housing action. It also has the potential to make significant contributions to the strategies of development organisations working towards a Bangladesh less vulnerable to the effects of hazards.

*Note: SAM Magne's full report is now available from the Housing and Hazards Group at the address in the front of this book*



**Figure 2: Getting results: A savings Group meeting room was built by a member (an H&H participant), using workshop ideas**

### Acknowledgements

This field study has been underpinned by the hard work of the evaluation team. Many thanks are due to Debashish, Dibachor, Pulin, Mousummy and Komodini. My thanks go also to John Bodley Scott for his dedicated assistance in the preparation of the manuscript.

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