

More to lose – reducing family vulnerability to floods and storms in Central Vietnam

Viet Nam

Events such as hurricane Katrina that hit and largely destroyed New Orleans, the 2004 Tsunami in the Indian Ocean and the 2005 Pakistan earthquake have once again raised public awareness of the threat and impact of natural hazards. The media also highlights the probability that climate change will increase the risk and violence of some types of natural disaster. What does not get so much attention is the issue of vulnerability – the degree of susceptibility to a natural hazard (Lewis1999)ⁱ. We should in effect not really be so concerned with the hazard itself as in the impact of hazards on human settlements and on the people that live in them. And vulnerability – the degree of susceptibility to damage, destruction and death and the impact that any of these events has on families and individual and on communities as a whole – is in turn conditioned by the decisions and actions of society over time (Lewis 1999). Whether or not the frequency and violence of natural hazards is changing, and for whatever reason, it is unquestionable that human vulnerability is evolving and paradoxically, in contexts as far apart as New Orleans and Vietnam, vulnerability is increasing. In other words, people are often not only more exposed to the immediate impact of a hazard, but also to the longer term impact through the effects of losses sustained. This article considers the increase in vulnerability to material and economic loss caused by natural hazards that has occurred in Central Vietnam in the last twenty years, and the steps that have been taken by the NGO Development Workshop to reduce this vulnerability through preventive action to strengthen houses.

Central Vietnam is hit annually by major floods and typhoons. Smaller windstorms are a regular event. The population is used to living with disaster, but the impact of these events has been changing. Prior to 1985 the majority of people living in central Vietnam in houses built with very local and essentially gathered materials. These houses were easily destroyed by floods, storms and typhoons. But within a matter of days with the help of neighbours the houses were rebuilt using local resources and at almost no cost. People had very few belongings, and thus not much to lose. Whilst losses of life and injury were often very high, vulnerability in terms of loss of the home and belongings was in practice very low, because recovery was easy.

However in 1986 as part of the *Dôi mới* (renewal)ⁱⁱ process the Vietnamese government began introducing social and economic reforms that were to have far reaching on the lives of individual families. One of these was that families could keep a greater proportion of the profit from their farming or other activities. With their new savings, families began to replace their traditional shelter with new houses using more durable materials – cement blocks, fired bricks, ceramic roof tiles and corrugated sheeting, all of which had to be partially or totally paid for. These new houses have an economic value. They also represent a new and two fold source of vulnerability. Firstly, more than 70%ⁱⁱⁱ of these new houses are badly built or unfinished, with the result that they do not incorporate typhoon or flood resistant features in their design and construction, including a range of defects such as roofs that are too flat, tiles and roof sheets that are inadequately fixed, a lack of bracing in the structure. This means that even in a small storm, the roof is quickly destroyed and the structure damaged. In a typhoon, destruction is widespread. Secondly, with an average reconstruction cost of \$ 750 - \$ 1 000, when disaster strikes, the family has to find a considerable sum of money to rebuild their home. Many families tell of rebuilding their house four or five times, and each time, this is a major setback, reversing the improvement of living conditions and family health and productivity. With greater investment in the home and a shift to modern building techniques and styles, the effect is that vulnerability has



increased as there is more to lose.

Building on earlier experience in Vietnam^{iv} since the 1999 Development Workshop has promoted the preventive strengthening of existing houses in Central Vietnam with the initial support from Canada (CIDA), and since 2003 from the European Union (ECHO)^v. Preventive strengthening is based on the application of ten key generic principles of typhoon and flood resistant design and construction that can be applied to almost all types of construction. DW encourages preventive strengthening through rapid training of artisans and community leaders, through the application of the ten key points on individual homes with family participation and on public buildings, and through awareness raising events in schools and in public places using 'media' ranging from theatre to boat races, traditional community communication methods through to TV to get across the message that prevention is easy, cheap and durable. Although every house has different strengthening needs, on average the cost of strengthening is about 25% of the value of the house. DW has supported preventive strengthening with the promotion of access to credit for preventive strengthening and explores other ways that families can get financial support and encouragement to protect their home.



In 1999, community leaders thought the DW idea of strengthening houses was laughable. In October 2006; after Typhoon Xangsane^{vi} hit central Vietnam, the provincial authorities issued an edict to all the population and authorities stating that the DW ten key principles had to be applied to houses and public building to avoid further damage from future disasters. The effect of having strengthened hundreds of buildings, and the fact that these withstood the impact of a major typhoon have gone a very long way in convincing families and leaders alike that investing in prevention is cheaper than waiting till a storm comes and paying the high price of reconstruction. Just as

people accept that vaccination can reduce the risk of disease, the idea that you can vaccinate your home against the storm is becoming popular.

DW France, March 2007

- Background

Regular natural disasters and socio-economic change in recent years have combined to increase the vulnerability of families to economic loss.

- Objective

- To reduce vulnerability and risk at community level in the face of floods and storms;
- To demonstrate that communities are important partners in the DRR process;
- To show that preventive strengthening is viable;
- To create the institutional environment in which community based prevention can be sustained

- Term/Time Frame

Started in 2000, ongoing in 2007; Overall 10 - 12 years to achieve national impact.

- Activities undertaken

Support preventive strengthening of buildings; develop local institutional environment for prevention; skills developed; community DRR action planning, wide range of communication and animation events to convey popular messages.

- Major achievements

Convincing families, community and provincial leaders that preventive strengthening techniques to houses and public buildings is cost effective in reducing the risk of damage and loss caused by floods and typhoons.

- Total Budget

1 500 000 US\$ over 8 years

- Contact details

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ⁱ James Lewis, 'Development in Disaster-prone Places – studies of vulnerability' ITDG London 1999.

ⁱⁱ This overview of *Dôì mới* draws on *Economic Renovation In Vietnam* by Tim Thompson and Joel Prater of California State University, Chico, California, USA, and made available on www.csuchico.edu.

ⁱⁱⁱ Survey undertaken by Development Workshop, and statistics from communes in Thua Thien Hué, Central Vietnam

^{iv} UNCHS Project VIE/85/019 on the 'Disaster preparedness and rehabilitation in Binh Tri Thien province Vietnam', designed and implemented by DW (in consortium with GRET, Groupe d'échange et de recherche technologiques, France).

^{vi} CIDA - Canadian International Development Agency; ECHO - European Commission / Directorate General for Humanitarian Aid) - Disaster prevention programme DIPECHO
20 000 houses destroyed, 250 000 houses unroofed in 3 central provinces