

## *Flood- and Typhoon-Proofing Communities: Learning from the Vietnam Experience<sup>1</sup>*

When it rains, it pours. And this is true for Vietnam, particularly when it comes to floods and typhoons. The UN International Strategy for Disaster Reduction (2007) estimates that 84% of all disaster deaths between 2000 and 2005 are all flood-related. It also reports that the number of floods have increased from 60 to 100 per year between 2004 and 2006.

Likewise, IDRC's EEPSEA Director, Dr. Herminia A. Francisco,<sup>2</sup> reports the same observation – that Vietnamese people have been living

with floods all their lives. These floods will still rise given climate change. In responding to the challenge of changing climate, IDRC conducted case studies in Vietnam, Philippines, Indonesia, China, and Thailand.

### **Coping with Flood**

In the five countries studied, results show that poor communities cope by relocating to designated areas; by accepting food; or by changing livelihoods from farming to aquaculture. Government relief

efforts usually focus only on giving food. Surveys showed 35% awareness on climate change-related risks in Thailand and Indonesia; and limited knowledge on disaster-related risks. For poor communities, relocation becomes the last resort – not the first action – because they have no money.

### **Innovative Solutions**

Of the five countries, Vietnam has the most experience in flood-proofing. The People's Committee of An Giang Province and Department of



November 2008 - The flooded streets of Hanoi's Hoang Mai District became canals and residents shuttled back and forth on the flood waters using all kinds of homemade floating vessels. (Copyright Justin Mott/Bloomberg News Retrieved from [www.digitaljournalist.org](http://www.digitaljournalist.org))

Agriculture and Rural Development are implementing one model flood-proofing project in the Mekong Delta. Supported by the United States Agency for International Development (USAID) and United Nations Development Programme (UNDP), the project showcases the construction of steep embankments using innovative technology that consists of sandwiching “geosynthetic material” (strong textiles) between layers of earth and covering it with a heavy stone overlay.

In other parts of Vietnam, such geosynthetic material has been used since 1997 to build river dykes and reinforce roads. “What the fabric does is allow the water to pass through but the soil to remain firmly in place.”<sup>3</sup>

Also, since 1996, the Vietnamese government launched the Living



Local people in Hoi An, Vietnam use boats as a means of transport during floods as an adaptation measure. (Photo Source: picasaweb.google.com)

with the Flood (LWF) Policy in the Vietnamese Mekong Delta (VMD). The objective of the program was to build dwelling houses to relocate residents in the VMD’s flooded areas.

The program built more than 1,000 resettlement clusters (RCs) for 200,000 households with one million people living in the permanently flooded areas. Total investment capital was about \$US 200 million.

The study showed that the resettlement program had problems of unsustainable finance, poor livelihood, and poor quality of infrastructure. Although livelihood in the RCs was still not good, the respondents felt happy with living in the RCs. A survey also indicated that people who currently live outside the RCs expected to move to live in the RCs.

In adapting to the permanent flood and coping with floods effectively, people in the long run need to adjust their habits and their social and economic activities towards living and getting benefits from floods rather than preventing floods.<sup>4</sup>

In helping countries to adjust habits, IDRC likewise puts forward some science-based actions as bases for future adaptation:

1. Map Southeast Asia according to cyclones, droughts, sea level rise, etc. Consider sensitivity through population density, ecological sensitivity, extent of protected area;

2. Implement future vulnerability mapping work that includes exposure to hazard and adaptive capacity of communities that considers economic, infrastructure, technology, human development index, and poverty incidence; and
3. Understand adaptation behavior – what make people adapt; what are the barriers; how income influences adaptation behavior; why are people adapting or not adapting; what are the actions taken or not taken; what are the things that constrain adaptation behaviors in coping with floods and other climate change related risks. (Dr. Lorna M. Calumpang, Head, Knowledge Management Unit, SEARCA)

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<sup>1</sup> Some thoughts are taken from Dr. Francisco’s presentation during the iBOP (Base of the Pyramid Program) Climate Change Forum hosted by Ateneo School of Government and IDRC, 4-5 March 2009.

<sup>2</sup> Director, Economy and Environment Program for Southeast Asia (EEPSEA) administered by the International Development Research Center (IDRC)

<sup>3</sup> Vietnam: Employing improved technology against typhoons, flooding. <http://www.irinnews.org/Report.aspx?ReportId=79890>

<sup>4</sup> Vo Thanh Danh (no date). Cantho University, School of Economics and Business Administration, Vietnam