The "Three D's"

This chapter will conclude with a brief discussion of three, often controversial issues that need to be addressed by local officials after every major earthquake: 1) Demolitions decisions - which buildings should be demolished; which ones should be rehabilitated? 2) Debris removal - how can a local jurisdiction remove and dispose of vast quantities of urban debris? and 3) Donations management - what pre-disaster actions can be taken to manage the predictable flow of solicited and unsolicited goods and services that can potentially overwhelm a disaster relief operation?

Demolitions Decisions

Demolition of damages structures will present many public policy and private sector problems. During the initial days following an earthquake, local officials will be confronted with a number of decisions, including: 1) which buildings are suitable for demolition? 2) how should local officials treat historical and architecturally significant buildings? and 3) should the demolition process be carried out by local government or under contract with private companies? These decisions will potentially be compounded by the presence of aftershocks.

Building demolitions policies and criteria should be developed prior to the disaster. Local governments can develop checklists of demolitions issues to be considered and resolved before ordering any structure demolished. In recent U.S. earthquakes, the principal factor governing demolition decisions has been public safety - in general, buildings have been demolished where dangerous conditions prevailed and where no reasonable alternatives to demolition existed.

Historic buildings present unique problems and challenges for local officials The character and soul of cities and towns in the U.S and Latin America are often defined by historic buildings. Citizens attach great emotional value to these structures, which are often among the most vulnerable to the effects of earthquakes. Building owners and local officials often come into conflict with preservationists; public safety concerns are often pitted against compelling arguments to preserve important structural links to the past.

The key to resolving disputes following an earthquake is to develop a mediation process and procedures prior to the event. The guidance should establish broad decision criteria for demolition of historic buildings, yet be flexible enough to accommodate the unique factors associated with each case. It may be useful to establish a panel of experts - representing local government, public interest groups, and preservationists - to oversee the decisionmaking process on demolition of damaged structures.

Debris Removal

Within minutes, an earthquake can cause immense debris problems. The unreinforced masonry buildings that dominate the downtown business districts of cities and towns throughout the U.S. and Latin America will contribute significantly to the "debris problem."

There are two phases of the debris problem. First, is the emergency phase. Accessibility to the disaster sites will be greatly impeded by debris - bricks, glass, damaged automobiles, etc. Debris clearance is an operational priority. Secondly, the debris must be physically removed and disposed of, a process that poses considerable logistical and environmental problems.

Unsorted and often useless aid creates headaches for relief workers.

Prior to a disaster, local officials can take several steps to enhance efficiency and coordination in the debris removal function.

1. *Procedures for removing debris from damaged buildings and streets should be closely coordinated with search and rescue operations.* Priority should be given to ensuring that debris removal will not endanger lives or jeopardize rescue operations.

2. *Identify large, accessible areas that are suitable for both temporary storage and permanent disposal sites for debris.* Urban and regional planners, environmental officials, public works officials, hazard managers and others should coordinate the space requirements and location requirements in advance of an earthquake or other major disaster. A maze of environmental (air, water, solid waste) laws and regulations must be factored into a debris removal and disposal plan.

Debris removal and disposal became a fundamental problem in the cleanup after Hurricane Andrew. The volume of debris equaled 100 years of landfill capacity. An incineration strategy was adopted, in spite of air quality problems.

3. *Hazardous and toxic materials must be identified and disposed of properly* Since all debris has the potential to contain hazardous materials, every step in debris removal must be made carefully All debris must be surveyed to determine what part of it is hazardous and therefore must go to hazardous materials waste sites, what part of it is recyclable, and what part can go to a designated landfill.

Donations Management

An increasingly familiar scene following a major disaster is large piles of donated goods - food, clothing, pharmaceuticals, medical and relief supplies - most of which is unsolicited and of dubious value to the disaster-stricken country or community. The problems and issues associated with donations directly affect the emergency relief and rehabilitation phases, and therefore warrant a closer examination.

Unsolicited donations present overwhelming logistical problems for the health and disaster relief authorities of the disaster-affected country. Consequently, delays in the distribution of relief supplies are common; specific items may be lacking at the disaster site, while they are piling up at the point of entry. Critically needed supplies may be buried among the non-essential supplies. In the midst of this disorganization and confusion, the disaster-stricken country may not, in all likelihood, know what relief supplies are available, where they are, and how to move them to the impacted areas.

The donations problem is universal. In the aftermath of Hurricane Andrew, the initial outpouring of solicited and unsolicited goods and services constituted a "second disaster." Managing the "donations pipeline" was a priority of local, State and federal emergency response officials, a situation that was compounded by the intense media coverage of the disaster relief operation

A comprehensive donations management program must address a number of factors, including: prioritization of critically needed resources, by functional area (i.e. medical, food/beverages, personal needs, etc.); utilization of voluntary organizations, pre-disaster identification of staging areas for specific goods and services; and a sustained education program that addresses a range of issues, including a broad-based information campaign that sensitizes the public to the "do's" and "don'ts" donations practices.

SUMA - A Supply Management Project in the Aftermath of Disasters

The Pan American Health Organization (PAHO) has been actively engaged in improving the management of donations through the SUMA project. The objectives of the project are: 1) To develop and maintain a regional capacity to rapidly and efficiently assist a country affected by a major sudden-impact disaster to manage donated supplies (primarily medical); 2) To activate and mobilize a regional capacity in the aftermath of a disaster to train nationals to manage this project; 3) To improve the coordination of local response; 4) To speed up the distribution of key supplies by marking them with distinctive labels on site; and 5) To provide the disaster-affected country with a

mechanism to immediately inform donor countries and agencies on receipt of their donations

The SUMA project has the potential to bring some much needed order t the management of donations in Latin America and the Caribbean If properly implemented, as envisioned by PAHO, the system will provide a summary of donations at the port(s) of entry; will provide donors with better information regarding the receipt of donated supplies; will establish a mechanism to evaluate and measure the quality of the international health response to major disasters in Latin America and the Caribbean; and will stimulate nationals to improve monitoring and distribution of supplies once they have left the point of entry.

The following chapter turns to the problems, issues, and challenges associated with Reconstruction following a major earthquake, with emphasis on the implementation of measures that will reduce the vulnerability of high risk communities to future disasters.