

HUD'S POST-DISASTER RECONSTRUCTION IN NICARAGUA

Project Overview

In the fall of 1998, hurricanes Georges and Mitch battered Central America and the Caribbean, causing unprecedented damage. USAID transferred to HUD \$10 million as part of a \$621 million assistance bill. HUD used its expertise in housing and community redevelopment to rebuild communities in the region and help them become better able to resist the forces of natural disasters. All of the appropriated money was spent by January 1, 2002, including \$1.1 million for Nicaragua.

HUD's experimental program has been well received by local officials and communities; provided model projects in land use planning, disaster preparedness, housing construction training and housing finance; illustrated the critical importance of housing and land use planning in any effective reconstruction program; and highlighted how new and creative partnerships between the federal government and private technical expertise can contribute to the effectiveness of American intervention abroad for post-disaster recovery.

Nicaragua

Community Revitalization

HUD's largest projects in Nicaragua aimed to revitalize the communities of Sebaco and Ciudad Dario and to ensure that they are better prepared for future natural disasters. Working with the International Organization for Migration in both communities, HUD partnered with residents and municipal officials to create a comprehensive, long-term development plan to manage everything from the location of homes, roads and public space to making optimal use of existing resources. As both communities wanted to enhance their civic organization, HUD helped residents create a town government to manage the community and upgraded office facilities for the new civic leaders, by providing computers, software and Internet access. The communities also lacked garbage collection, so HUD provided receptacles and helped the residents create a trash collection system. HUD also paved the main roads, which were damaged from the hurricanes, of both communities.

However, the communities' characteristics and needs differed. Sebaco is an urban settlement with approximately 31,000 people – about 55 percent of which are less than 19 years of age. In the center of the city, a daily market is held, but its poor design created congestion and confusion. HUD funds helped the community design a new market to benefit buyers and sellers.

In Ciudad Dario, a more rural and historic community with 37,000 people, the greatest concern was to rebuild the flood damage caused by the nearby river, El Rio Grande de Matagalpa. Many homes were damaged and the agricultural sector was destroyed as crops and grazing land for cattle was flooded, causing residents to leave the community in search of work. As many other organizations were working to rebuild homes, HUD worked on the community itself by building new walkways, street lighting and public space. Also as part of this contract, HUD held a series of training workshops for municipal officials and the general public on basic disaster prevention measures, and evacuation procedures.

Housing Construction

The poor in Nicaragua, as in most other countries in the developing world, frequently build their own shelters using whatever materials are readily available – such as corrugated tin or wood pallets. As a result, these basic structures are exceptionally vulnerable to strong winds, heavy rains and other natural forces. To help teach people how to build sturdier and safer homes, HUD and the National Association of Home Builders (NAHB) Research Center developed a training manual to illustrate basic safe and durable construction practices for lower income families building their own homes. The Spanish language manual, *Reforzar y Conectar para Proteger: Ideas para Construir Mejor Desastres Naturales*, covers design, materials, technology and management. Written in user-friendly terms and advocating the use of local materials, such as cinder blocks, this manual helps the average resident build safer and more durable dwellings for his family. The manual is available from the Office of International Affairs. NAHB has also produced a companion video to reinforce the lessons in the book for both training sessions and for general television viewing in order to make the general public more aware of the need for building safely.

HUD and NAHB developed simple, low-cost housing construction technologies that strengthen the structural integrity of the home, increasing the chances that it will survive a hurricane. The basic methods being taught include: 1) using “hurricane clips,” which attach the various structures of a home together to withstand high winds; 2) doubling the number of nails used on the roof to minimize the chance that the roof will be blown off; 3) using “U” blocks on windows and doors, which reinforce the openings without needing additional materials; and 4) stressing that concrete should only be mixed with gravel and sand and without any foreign materials that could weaken the mixture. NAHB trained over 100 construction supervisors in three workshops, through a partnership with HABITAR, a local Nicaraguan non-governmental organization concerned with housing for the poor. The teachers and construction supervisors have become trainers in these methods, using the manual and video, and thus multiplying HUD’s impact on building practices among the poorest population.

Site Planning

HUD signed a cooperative agreement with the American Planning Association to develop a comprehensive training manual, *Los Fundamentos de Planificación de Sitios*, for instruction on basic land use planning techniques. The training material provides site solutions, better land use guidance, information about how to lower costs and incorporate ecological and social factors in the rebuilding of communities affected by hurricanes and earthquakes. Working locally with International Office on Migration and the Nicaraguan Engineering University faculty, APA was able to train over 100 municipal officials, planners, engineers and architects in the fundamentals of site planning. The workshops stressed the importance of site planning as a way to reduce the future effects of natural disasters. Topics included issues such as community orientation, existing site conditions, site preparation, soil mechanics and the relation to the existing community. The Engineering University and HABITAR, a local NGO, have continued the training workshops both at university and municipal levels.

Housing Finance

Under HUD's direction, the University of Colorado assembled a bi-national task force in mid-2001 to identify ways to strengthen the housing finance system in Nicaragua. Three forums were held to facilitate consensus on reforms of such key housing policy issues, including greater access to capital, requisite legal and regulatory changes, and more effective low-income programs. Senior government and private banking officials in Nicaragua joined representatives from Ginnie Mae, Freddie Mac, Fannie Mae, the Overseas Private Investment Corporation, the U.S. Agency for International Development, the State Department, and the U.S. Department of Commerce. The first forum was held in Nicaragua in July 2001 and the second was held in Colorado in October 2001. The third forum was held in Nicaragua in late January 2002, with officials from President Bolaños' new government. A number of proposals were presented as a result of these forums, and two key results have already taken shape: 1) Several U.S. companies are looking to start an employer housing program in Nicaragua; and 2) legislation is pending in the National Assembly to enact a Nicaraguan Institute for Housing and Urban Development (INVUR) and social fund to champion housing for the low-income population.

HUD's other housing finance expenditure in Nicaragua provided three Nicaraguan housing finance officials the opportunity to join a Central American/Caribbean team of housing experts who participated in a weeklong series of seminars, meetings, and site visits in Washington and Baltimore in September 2001. The study tour, done in cooperation with the Societas-International Institute for Real Estate Finance, analyzed both best practices in mortgage lending and public-private partnerships for meeting housing needs.