Summary of

CETAVIP - SURVIVIENDA - INTERTECT

Workshop On A Housing Improvement Program

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During the month of November 1983, a workshop on housing improvement was conducted in Santo Domingo, Dominican Republic. This workshop was jointly organized and implemented by CETAVIP/CII-VIVIENDAS, SURVIVIENDA and INTERTECT, and in part fulfills recommendations made in a 1981 AID-sponsored study, Improvement of Rural Housing in the Dominican Republic to Resist Hurricanes and Earthquakes (INTERTECT, April 1981, Contract No. OTR-0000-0-00-1064-00).

SURVIVIENDA is currently implementing a program to improve housing in the Dominican Republic with the goal of increasing the level of safety of traditional and low-cost houses in the rural areas against hurricanes. The specific objective is the introduction of construction techniques that will increase safety at low cost and the diffusion of this technology in such a way as to make it an integral part of normal construction practices in the Dominican Republic.

As technical assistance to this program, CETAVIP (the Appropriate Technology Center for Low-cost Housing) and INTERTECT conducted a workshop, the goal of which was to train the staff members of SURVIVIENDA in hurricane resistant construction technology and how to train local construction workers in rural areas.

The workshop lasted four weeks and began with an introduction to the goals and objectives of a housing improvement program. The basic background material for these sessions was the AID Office of Housing-funded study, Mejoramiento de las Viviendas Rurales en la República

Dominicana para Resistir los Huracanes y Terremotos (Improvement of Rural Housing in the Dominican Republic to Withstand Hurricanes and Earthquakes). Recent experiences with vulnerability reduction in Colombia, Jamaica, Peru, India, the South Pacific and the Dominican Republic were discussed.

The workshop then focused on the technical aspects of safe housing construction. The lectures given included:

--- What is a Hurricane?
--- How do Hurricanes Affect Houses?
--- Principles of Safe Housing Construction.
--- How to Build a Safe Wooden House.
--- How to Build a Safe Block House.
--- How to Build a Safe "Concreto Armado" House.

The basic background materials for these lectures consisted of booklets published by Catholic Relief Services (CRS) and OXFAM with technical assistance from INTERTECT after Hurricanes David and Frederic in 1979. They include:

--- "Instrucciones para Construir Viviendas Mas Seguras y Resistentes";
--- "Fallas Producidos Por el Viento en las Viviendas Tradicionales";
--- "Como Construir Una Casa Segura de Madera";
--- "Como Construir Una Casa Segura de Concreto Armado"; and
--- "Como Construir Una Casa Segura de Bloques".

The workshop continued with a series of lectures which analyzed the vulnerability of the existing traditional and low-cost housing stock including "tejamani" (wattle-and-daub), "madera de palma" (houses with palm tree siding), "concreto armado" (poured concrete), etc. The weak points of each house were analyzed with recommendations on how to retrofit or modify existing houses to make them

stronger. Instructions were also given on how to inspect a house and determine its level of safety. The main background material for these lectures was "Como Mejorar las Viviendas Tradicionales en la República Dominicana" (from the CRS/OXFAM Series).

These classes were followed by a field visit to Sabana Grande de Palenque, a rural town about 100 km. from Santo Domingo. Workshop participants took turns analyzing houses and making recommendations for improvements. As Sabana Grande had been largely devastated by Hurricane David, the participants were also able to analyze houses that had been built by relief agencies after the hurricane and to hold discussions with community leaders regarding their experiences during that period.

With the technical theory covered, the participants then gained hands-on, practical experience building two low-cost hurricane resistant houses at the CETAVIP headquarters in Santo Domingo. One house was built with wood and the other with "concreto armado"; both are housing styles which are very popular in the southern part of the Dominican Republic. Each participant was able to physically work on the construction of these houses and learn how to make them safer with simple, inexpensive techniques. One example of this is the use of metal strips cut out of used vegetable oil containers as tie down or "hurricane" straps between the roof trusses and the tie beam.

Simultaneously with model construction, classes were given on the importance of education and training as a means of transferring hurricane resistant technology, as well as classes on the theory and technology of education. The classes given included:

--- Examples of housing education programs;
--- Principles of education;
--- Teaching techniques;
--- Training aids;
--- How to assess training needs in a specific community.

As part of this series of lectures, each participant did some practice teaching on different topics such as "what are hurricanes and how do they affect houses", or more practical topics such as "how to make a good foundation". These practicums were given both in the classroom and on the construction site, with the entire class giving constructive feedback on the effectiveness of each participant. The key background materials for the educational classes were the "Juan Martillo" training aid manuals developed specifically for a housing improvement program (prepared by INTERTECT for CETAVIP, 1983). These comic-book-style manuals are:

--- "Como Construir Una Casa de Concreto Armado"; and
--- "Como Mejorar Una Casa de Madera".

The workshop was completed with classroom sessions on community organization (with examples of different models of organization for housing construction) and classes on public awareness campaigns with a discussion on what has already been done in the Dominican Republic and what the future plans are. The uses of the print media, radio, T.V., posters, public meetings, audio-visual aids, etc., were explored.