

Since this article was published the Dominican Republic has a new law governing Risk Management which receives the ADMD's support.

**THE NECESSITY OF A LONG TERM, MULTI-SECTORAL PERSPECTIVE
FOR SUCCESS IN DISASTER MITIGATION**

The Dominican Disaster Mitigation Association (ADMD) is a direct result of the Caribbean Disaster Mitigation Project (CDMP), which was financed by the Office of Foreign Disaster Assistance (OFDA) and the United States Agency for International Development (USAID) and implemented in eleven Caribbean nations by the Organization of American States (OAS). As of late 1995, the ADMD, became a legally established NGO in the Dominican Republic to ensure the mid and long term continuation of the CDMP's vulnerability reduction activities. The ADMD's Board of Directors includes NGO's and companies as well as the Dominican Red Cross, the Armed Forces and the Civil Defense. The ADMD maintains a strong working relationship with many of the National Emergency Commission (NEC) member organizations and collaborating institutions. The ADMD's office is equipped and organized to permit efficient and effective access to project-related information, materials, and activities focusing on five areas: Information, Coordination and Communication, Training, Community Education and Community Initiatives. Since 1999, the ADMD has implemented projects worth at least US\$800,000 financed by the European Community Disaster Mitigation Program (DIPECHO), Plan International, the Federal Emergency Management Agency (FEMA), International Resources Group (IRG/USAID), the Housing and Urban Development Dept. of the US Government (HUD), and the Office of Foreign Disaster Assistance (OFDA). Thanks to a donation by the CDMP, the ADMD was able to initiate an endowment fund which has grown rapidly and whose dividends guarantee the existence of the organization.

Background:

Geographically, the Dominican Republic is located in the habitual path of hurricanes and tropical storms and is therefore subject to recurrent flooding, landslides and severe wind damage including tornado formation. The Dominican Republic is also located on the Tectonic Plate Border of the North American Plate and the Caribbean Plate and is thus the victim of severe earthquakes every century of 8.0 or higher on the Richter Scale, which have also been the cause of tsunamis on each of the D.R.'s coasts. Less severe events, between 6.0 and 8.0 on the Richter Scale, which can easily level substandard structures in under 15 seconds, occur at least once every thirty (30) to seventy five (75) years. The actual plate border known as the Septentrional Fault is considered to be more

dangerous than the San Andreas Fault System in California because it has been inactive for well over 800 years which induces experts to believe that it is due a severe event of 8.0 or higher to release the accumulated energy, enough to cause four to eight meters of left lateral slippage in 30 to 80 milliseconds. Experts believe that the epicenter will be at a depth of 5 kms or less generating g forces of 0.35 to 0.5. The unstable soil conditions and a high water table will magnify the impact of the shaking and cause severe damage in a radius of 100 to 200 kilometers from the origin adversely affecting buildings, highways, bridges, dams and other facilities.

The impact of Hurricane David and Tropical Storm Frederick in September of 1979 forced an improvised response from the Dominican Government, private and NGO sectors as well as the civil society and thus the National Emergency Commission (NEC) was formed. The NEC is comprised of 14 governmental agencies, directed by the Secretary of State of Public Works and Communications (SEOP&C), of which the Dominican Red Cross is an honorary and auxiliary member. The Civil Defense is the legally established authority in charge of directing all response related activities. The recent directors of these three leading agencies in the sector - Red Cross, Civil Defense and Public Works/NEC were political appointees with little training and/or experience in the sector who have not achieved internal nor inter-institutional cooperation or collaboration over the last decade. International training efforts to create an effective preparedness and response capacity have failed due to high turnover rates among political appointees and volunteers. Due to the lack of an institutional base and capacity, NGO's such as CARE were strategically equipped to assist in the provision of assistance to high risk and affected communities. The private sector, for its part, has been forced to shoulder the responsibility for its own protection since fire department and health facilities are limited in scope and capacity.

Recent changes in this panorama include the fact that CARE closed out its D.R. office in late 1996 and the Directors of the Dominican Red Cross, the National Meteorological Office and the Civil Defense have all been substituted within the last year and a half. The new Civil Defense Director took office just four weeks before Hurricane Georges passed over the D.R. on September 22, 1998. Said Director's inexperience and desire to minimize unnecessary concern led to the misrepresentation of meteorological bulletins and disorientation of the population as to the course of the hurricane. His actions have brought severe criticism and discredit to the institution. Since then, two other gentlemen, both Generals in the military, have directed the Civil Defense.

The lack of clear institutional contingency plans and capability as well as inter-institutional coordination with community participation led to the unfortunate incidents regarding dams in the San Juan de la Maguana Province which resulted in the flooding of entire communities and the unacceptable and tragic loss of life and property which could have been prevented.

During the response and recovery phase, the ensuing lack of institutionality on behalf of the Dominican Government Authorities and its dependencies, the Dominican Red Cross, the International Federation of Red Cross and Red Crescent Societies, as well as private sector, religious and NGO communities led to isolated efforts made difficult by the inaccessibility and incommunication of communities as well as by the lack of experience and logistical capacity for deploying brigades and assistance. The lack of a transparent policy and procedures as to how to

channel international aid led to mistrust and the decision, by potential donors, to wait for a trustworthy mechanism which severely impeded a swift and sufficient response. To date, there are still affected communities which have not received any assistance after Hurricane Georges. Nor, in spite of over US\$227 million facilitated by the IADB and World Bank to the Dominican Government in Post-Hurricane Georges Recovery Loans, has the NEC been able to clarify the roles of each Ministry in the event of a disaster; establish an inter-institutional coordination mechanism; design or implement institutional contingency plans for Ministries that are responsible for such critical facilities as water, energy, ports, communications, dams and reservoirs, or health. No headway has been made regarding the restriction of human settlements in high-risk areas such as flood planes. The Ministries do not have detailed risk maps to identify and locate critical facilities and communities which would require assistance, in order to assign priorities (or even list potential response requirements). At the regional and provincial levels there is little leadership and the communities remain highly exposed and largely unaware. Short-term, pilot projects in disaster mitigation and preparedness have had limited success. Once external follow-up is no longer possible, the communities direct their attention toward more pressing matters. Communities must have long-term technical support and guidance in order to maintain and develop their emergency committees and vulnerability reduction activities. Businesses and organizations also need a consistent, long-term approach toward the development and implementation of contingency plans and other measures, abilities and techniques which will enable them to prevent, mitigate and prepare for the potential impact of the hurricanes, floods, earthquakes, fires and other events.

In light of the weaknesses displayed by the most recent disaster, it is clear that an all-encompassing multi-sectorial approach must be jointly designed and implemented to:

1. Define, assign and implement clear and coherent institutional roles (internally and inter-institutionally) for all member agencies, collaborating organizations, private sector companies, Non Governmental Organizations and Religious Institutions.
2. Train, equip and achieve proficiency for effective response capacity for high risk communities on the condition that participating agencies, organizations and institutions from all sectors guarantee the requisite stability of their human resources to assure sustainable results (i.e. institutional representatives will have secure positions/contracts for at least a 3 to 5 year period.)
3. Assess institutional needs, develop and implement a program to assist key organizations with sustainability issues and measures.
4. Improve disaster consciousness of the population as well as private, public and NGO sectors, and encourage the integration of disaster mitigation and planning measures in the culture - especially as relates to community based disaster preparedness, warning systems, evacuation plans and drills, proficiency in rescue and first aid skills. The private, public and NGO sectors must develop and implement disaster planning and mitigative measures to protect communities, investments, infrastructure and the environment.

5. Seek multisectoral commitment and support for the relocation of high risk communities with no viable mitigative options and convert high risk (especially flood prone areas and low lying areas downstream from dams) into State Parks.
6. Upgrade and enforce building, wind and seismic codes and practices in both the formal sector (approximately 20% of construction) and the informal sector (approximately 80% of construction), for infrastructure as well as for housing.
7. Improve access to accurate information and basic communication, energy and water systems for high risk communities by facilitating appropriate technology alternatives on credit to qualifying communities.
8. Influence and manage the role of the private sector - particularly the insurance and credit institutions to assure that consideration of the potential impact of natural disasters is a requisite part of feasibility studies and loan/policy approval procedures for the safety and financial protection of the clients, the insurance and credit institutions and the economic institutions which serve as a safety net.
9. Assist the governmental agencies and authorities in the development of a multi-sectoral legislative proposal to guarantee a formal government and private sector moral and financial commitment and support for vulnerability reduction activities in the D.R.
10. Seek financial and technical support in order to upgrade the institutional and technical capacity of the National Meteorological Office (ONAMET) and the Seismological Institute of the Autonomous University of Santo Domingo (ISU-UASD), the latter in conjunction with the National Institute of Hydrological Resources (INDRHI), the Ministry of Mining, and SODOSISMICA.

Implementation Strategy:

The key elements of strategy implementation include:

- 1 The use of local organizations and contacts, program capacity, lessons learned from results and successful techniques from more than three years of continuous work, in order to maximize the impact of the activities.
- 2 Emphasize the orientation and training of local facilitators in each sector so that each can replicate the acquired techniques and information.
- 3 Strengthen the local and institutional capacities in order to generate a constant proportional increase in local counterpart contributions.
- 4 Introduce legislation to obtain resources from the Dominican Government and Private Sector as well as the pursuit of grants and assistance from international agencies to establish an endowment fund and to finance vulnerability reduction activities over the mid and long term.

Main Results Anticipated:

- 1 Strengthened organizations and communities carrying out clear and coherent roles in a coordinated fashion to achieve an effective capacity to prepare, plan and mitigate.
- 2 Precise and valid base line data capacity providing more accurate predictions for meteorological, seismic and engineering activities with the goal of reducing damage and loss.
- 3 Achieve greater coordination among all sectors involved in disasters and work towards the sustainability of vulnerability reduction activities with the commitment of the Dominican Government and the private sector.
- 4 Include disaster preparedness and mitigative measures in the Dominican culture.

The ADMD is convinced that sustainable success in disaster mitigation is feasible if long-term, multi-sectoral alternatives are considered and implemented.