ORGANIZATION OF AMERICAN STATES
DEPARTMENT OF REGIONAL DEVELOPMENT
AND ENVIRONMENT

NATURAL HAZARD MANAGEMENT ACTIVITIES

The Department of Regional Development and Environment (DRDE) provides cooperation in natural hazard management to OAS member states through technical assistance, training and technology transfer. The activities are supported through funding from the Office of Foreign Disaster Assistance (OFDA) of the United States Agency for International Development and collaborative efforts with national and other international development assistance agencies, including UNDP, UNDRO, and IDB. The DRDE, based at OAS headquarters in Washington, D.C., has been involved in natural hazards risk assessment and disaster mitigation activities in Latin America and the Caribbean basin since 1983. Its initial scope has expanded to include activities involving participants from 25 OAS countries in the Caribbean, Central, and South America.

On October 10, 1990, the International Day for Natural Disaster Reduction, the Permanent Council of the Organization of American States passed, by consensus, a resolution declaring that the activities of the General Secretariat of the OAS in the area of natural hazard management and disaster mitigation are a contribution to the International Decade for Natural Disaster Reduction, and calling on the Secretary General of the OAS to make known to the Secretary General of the United Nations the past and programmed activities of the OAS in this area.

The resolution further encourages OAS member states to include natural hazard management and disaster mitigation in their socio-economic development, and to share through the OAS General Secretariat their experience and knowledge in this area.

A copy of the text of the resolution is attached in **Annex 1.**

The objective of DRDE's technical cooperation in this area is to avoid or reduce the impact of disasters through intervention in the development planning and project formulation processes. Specifically, the project focuses on:

a. Assessing natural hazard risk as part of ongoing natural resource evaluations and development strategy formulations;

b. Identifying and formulating mitigation measures for development investment projects;

c. Making information on natural hazards more accessible to emergency response and development planning entities; and

d. Training planning technicians and decision-makers in hazard assessment and disaster mitigation techniques.

Activities are generally carried out as part of ongoing technical cooperation programs of the DRDE at a national or regional level. When opportune, DRDE collaborates with national or regional institutions. With their focus on long term prevention and mitigation, DRDE activities in this area are clearly complementary to the disaster assistance provided by the General Secretariat through its Emergency Committee and Emergency Fund (FONDEM).

Annex 2 highlights main issues and arguments for lessening the economic impact of natural disasters in OAS member states.

Most recently, the DRDE has undertaken a series of sector specific vulnerability reduction studies at a national level for agriculture, transportation, tourism and energy. The objective is to prepare disaster reduction investment projects to protect the sector as well as identify vulnerable portions of the sector's infrastructure whose probable damage in case of a natural event will necessitate disaster response measures.

A list of natural hazard management activities carried out by DRDE in OAS member countries is attached in **Annex 3.**

ORGANIZATION OF AMERICAN STATES

PERMANENT COUNCIL

CP

Annex 1

OEA/Ser.G
CP/RES. 546 (834/90)
10 October 1990
Original: Spanish

CP/RES. 546 (834/90)

PARTICIPATION BY THE ORGANIZATION OF AMERICAN STATES
IN THE INTERNATIONAL DECADE FOR NATURAL DISASTERS REDUCTION

THE PERMANENT COUNCIL OF THE ORGANIZATION OF AMERICAN STATES,

CONSIDERING:

That since 1983 the Organization of American States has provided technical assistance to member States in the area of natural hazard management;

That by resolution 44/236 of December 22, 1989, the United Nations General Assembly proclaimed the International Decade for Natural Disasters Reduction as from January 1, 1990;

That this proclamation encourages national and international organizations to participate in the Decade by identifying and carrying appropriate activities;

That, according to document CIES/4462 of the Twenty-fourth Regular Meeting of CIES at the Ministerial Level, held from 23 to 25 October 1989, natural hazard management and measures to mitigate the adverse impact of natural disasters are to become an important component of the technical assistance provided by the Organization of American States;

That, according to resolution CIES/RES. 417 (XXIII-O/88), activities in the area of natural resource and infrastructure development will be oriented to the rational use of natural resources and environmental management with a view to sustainable development, and natural hazards are an aspect of the environment;

That the Agreement on coordination of disaster relief signed in October 1977 by the United Nations Disaster Relief Coordinator and the Secretary General of the OAS establishes a system for cooperation between UNDRO and the OAS "without prejudice to future agreement regarding predisaster planning";

That pursuant to the mandate given in AG/RES. 777 (XV-O/85), the Permanent Council is studying the draft Inter-American Convention to Facilitate Assistance in Cases of Disaster on the basis of the draft submitted by the Inter-American Juridical Committee and the views of the member States, and

That the activities of the Organization of American States in the eighties and those programmed for 1990-91 in the area of natural hazard management are in keeping with the objectives of the Decade and complement others of its activities.

RESOLVES:

1. To declare that the activities of the Organization of American States in the area of natural hazard management make a contribution to the International Decade for Natural Disasters Reduction.

2. To instruct the Secretary General of the Organization of American States to inform the Secretary-General of the United Nations on the past activities of the OAS and the program to be carried out in the area of natural hazard management and disaster relief.

3. To encourage member States to make natural hazard management and disaster relief integral components of their socioeconomic development activities.

4. To request member States to inform the Secretary General on the activities they are engaged in under United Nations General Assembly resolution 44/236, and to share their experience and know-how in natural hazard management and disaster relief through the General Secretariat.

5. To request the Secretary General to consult with member States on the possibility of coordinating regional projects on the basis of national projects with similar purposes.

6. To encourage continued cooperation by the General Secretariat with the activities of the United Nations in this field.

7. To request the Secretary General to undertake a study for the institutionalization of a mechanism for effective coordination within the Organization, between organizations and with donor agencies, of emergency assistance to member States struck by natural disasters, and to present that study, together with an estimate of the financial implications, if any, to the Permanent Council for consideration.

8. To recommend that, as the budgetary situation permits, surplus resources of the Regular Fund be assigned to the Inter-American Emergency Aid Fund (FONDEM), and that external resources be sought for this Fund in order to strengthen the Organization's capability for responding to requests for emergency aid.

9. To commit itself to an early conclusion of its work on the Draft Inter-American Convention to Facilitate Assistance in Cases of Disaster so that it may be adopted as soon as possible by the General Assembly.

ORGANIZATION OF AMERICAN STATES
DEPARTMENT OF REGIONAL DEVELOPMENT AND ENVIRONMENT

LESSENING THE ECONOMIC IMPACT OF NATURAL DISASTERS IN OAS MEMBER STATES

Managing natural hazards to reduce the impact of disasters caused by hurricanes, floods, drought, landslides, earthquakes and tsunami must be addressed by focusing on actions that lessen vulnerability where it counts: decisions to build new structures, to rebuild following disasters, and to mitigate vulnerability of existing structures -- all in relation to the building site.

Given the vulnerability reduction resources available and the characteristics of the development activities in Latin America and the Caribbean that result in capital investments in production facilities, infrastructure and settlements, a primary way to lessen the economic impact of disasters is through influencing development decisions early on in the planning process. Site vulnerability issues, whether at a large or small scale, must be examined before mitigation measures for individual structures, whether existing or programmed, are selected and implemented. This applies to activities in the private and public sector alike.

When a disaster strikes, commercial facilities, human settlements and supporting infrastructure are damaged or destroyed, investments in capital expenditures are lost, and the poor, whether poor governments or poor citizens, usually bear the greatest losses because their vulnerability is the greatest.

Lessening economic impact takes time because a capital investment project, whether a house, business or road, takes time to plan and build. Whether a sufficient measure of vulnerability reduction has been included in the project may not be known until enough time passes for the next event to occur, making "field tested" case studies difficult to come by in the short term. And knowledge of the results of certain events, such as tsunami, landslides and floods, dictate that staying out of harm's way is the best policy; structurally withstanding the event is an improbable if not inefficient use of resources.

Strategies for lessening the impact on what exists are strikingly similar to those for lessening the impact on what is to be built. First and foremost, there are similarities in the type of information needed to make the most effective use of available mitigation resources. There exists a private use of public interest. The former is the use of free information to make the best decisions possible concerning the investment of capital. Selection of a site for an investment or the understanding of the nature of the vulnerability that affects an existing investment is critical to compete in a marketplace where the consequences are bourn if all risks are not properly addressed. The latter is the interest in the health and safety of the country's citizens, and thus the preparation and dissemination of pertinent information about what is vulnerable to natural hazards and why.

Lessening the vulnerability of what exists, whether a house, factory or road, is the most difficult. To begin with, 90% of all investments expected to be in place at the end of the century already exist. Vulnerability reduction usually entails retrofitting (reinforcing) structures, if such an action is economically and physically, as well as socially, feasible. It also implies that there exists sufficient hazard information about the site, which there seldom is, to specify the type and quantity of retrofitting action needed, or to indicate that relocation measures are necessary.

Since the house, factory or road already exists, the point of departure on the long road to lessening economic impact is to identify the hazards that threaten what is built and what is vulnerable and why.

Lessening the vulnerability of what is to be built is the easier task. This is true, not because it will amount to no more than ten percent of the total in place capital investment in the region at the end of the century, but because it is much more efficient, when the vulnerability posed by natural hazards is known, to move the project to an alternative site (since there are almost always alternatives), selecting the site with full acceptance of the mitigation measures necessary to achieve a desired level of risk.

There is ample available technical knowledge about how to build once the vulnerability is known for the chosen building site. For the poor country or the poor individual, the issue is the private and public sectors using that knowledge to design and implement construction projects. As an example, there is more than enough technical information available -- free of charge to the public and private sectors alike -- concerning safe housing construction for any number of natural hazards if it would only be used by international and national development assistance agencies and NGOs, national and local lending institutions, and local professionals and tradespeople. The problem is that quite often this building construction information is never used because these same organizations or individuals seldom pay any attention to the hazards that threaten the site, which means, logically, they perceive little need for acquiring and using knowledge concerning safe building practices.[1]

The lessons learned from three decades of disasters and development in the region, including recent insights into the damage caused by earthquakes in Mexico City and Loma Prieta, point to the fact that serious efforts to lessen the economic impact of natural disasters for what exists or what is to be built, and particularly lessening the economic impact of disasters in poor countries and for poor people, must begin with planning. It makes little sense to spend scarce resources to train workmen or press for construction standards when ample information is already free of charge and in the hands of those who make individual structure design and construction decisions, while planning decisions involving billions of dollars of housing, factories and roads have been made and continue to be made with unnecessary vulnerability to natural hazards as a result.

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[1]For every thousand urban inhabitants of the region, it is estimated that 17 households are building new housing units through formal market mechanisms, 33 low income households are building new (permanent) structure through informal means, and 17 low to middle income households are enlarging their dwellings outside formal building approval channels. Because of the disparities in dwelling size and use of more elaborate materials, housing built through formal market mechanisms represents 80% of all housing square footage built each year and 90% of the value of housing construction. Most skilled labor used in informal permanent housing construction is actively involved in the formal construction sector.

DEPARTMENT OF REGIONAL DEVELOPMENT AND ENVIRONMENT ORGANIZATION OF AMERICAN STATES

SUMMARY OF NATURAL HAZARDS MANAGEMENT ACTIVITIES 1983-1992

Technical Assistance

Caribbean

Antigua and Barbuda

1990: Installation of an emergency information system and training of users in support of hazard mitigation and emergency management (in collaboration with PCDPPP).

Barbados

1991: As a regional collaborating institution, prepared and presented a regional Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

1990: Proposal prepared for institutional and operational strengthening related to natural disaster management in Barbados. This project was presented to the Inter-American Development Bank for financing.

Dominica

1990: Follow-up landslide assessment and mitigation action plan following hurricane Hugo.

1987: Landslide hazard assessment and vulnerability reduction priorities for integrated development project.

Dominican Republic

1992: As a regional collaborating institution, prepared and presented the national Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

1989: Natural hazard assessment and vulnerability reduction measures as part of 5 province capitals' urban development plans.

1987-1988: Settlement infrastructure and lifeline natural hazards vulnerability assessment, mitigation measure identification, assessment manual for local officials, and workshop for vulnerability identification and reduction.

1987: Landslide assessment and identification of disaster mitigation measures for selected settlements in the frontier region.

1986: Natural hazard assessment overview of the frontier region for integrated development planning project.

Haiti

1986: Natural hazard assessment overview of the frontier region for integrated development planning project.

Jamaica

1992: As a regional collaborating institution, prepared and presented the national Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

1990-1989: A proposal was prepared for vulnerability reduction of the Tourism Sector in Jamaica. This proposal was presented to the Inter-American Development Bank for financing.

1989: Landslide hazard assessment course and initiation of mapping program (in collaboration with UWI and PCDPPP).

1988: Use of emergency information management system in post-disaster rehabilitation and reconstruction activities following hurricane Gilbert.

St. Kitts and Nevis

1986: Settlement and lifeline hazard assessment and identification of mitigation measures (island of St. Kitts).

Central America

Multinational

1987: Trifinio Area (El Salvador, Honduras, and Guatemala): General natural hazards assessment and vulnerability reduction for integrated development planning project.

Costa Rica

1989-1991: Energy sector vulnerability reduction to natural hazards study with definition of investment projects for mitigating disaster impact and implementation of reduction strategy.

1989-1990: Rio Banano Settlement Vulnerability Reduction and Natural Resource Management Program with identification of multisectoral investment projects.

1988: Emergency information management system installation and training with National Emergency Committee and Ministry of Natural Resources, Energy and Mines (MIRENEM).

1988: Use of geographic information systems (GIS) for national, sub-national, and metropolitan level analysis of natural hazard, natural resource, population, and infrastructure information by MIRENEM.

Guatemala

1992: Presented a workshop on natural hazards management to public and private sector agencies in Guatemala.

1992: Geographic Information System (GIS) installation and training for INSIVUMEH and the Dirección General de Caminos. A landslide hazard assessment activity was initiated.

1991: As a regional collaborating institution, prepared and presented the national Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

1991: A project portfolio review was undertaken for the USAID - Guatemala Mission in Washington, D.C., to evaluate the projects' content of natural hazard management issues.

Trinidad and Tobago

1990-1991: Natural hazard assessment and vulnerability reduction program for Tobago, which is the Government of Trinidad and Tobago's Pilot Program for the IDNDR.

1990: Installation of emergency information system and training of users in support of hazard mitigation and emergency management.

1989: Landslide hazard assessment course and mapping program initiation.

Saint Lucia

1990: Installation of emergency information system and training of users in support of hazard mitigation and emergency management (in collaboration with PCDPPP).

1989: Geographic Information System (GIS) for natural hazard, natural resource, population and infrastructure analysis.

1989: Hazard awareness and mitigation practices, recommendations for small farmer banana growers (in collaboration with PCDPPP).

1988: Identification of risk perception of small farmers and criteria for disaster mitigation programs.

1986-1987: Coastal settlement and lifeline natural hazard assessment, identification of mitigation measures, and assessment manual for local officials, and workshop for vulnerability identification and reduction.

1985: Landslide hazard assessment and vulnerability reduction priorities.

1985: Coastal zone natural hazards assessment.

1984: General natural hazards information assessment for integrated development planning project.

St. Vincent and The Grenadines

1987: Landslide hazard assessment and vulnerability reduction priorities for integrated development project.

Honduras

1990-1988: Planning strategy for urban watershed management to include natural hazard, natural resource, population, and infrastructure information for Tegucigalpa metropolitan zones under low-income settlement development pressure as part of integrated development project.

1989: Installation of emergency information system and training of users from the Ministry of Planning (SECPLAN), National Emergency Council (COPEN) and Metropolitan Planning Agency (METROPLAN).

1988: Use of GIS in Tegucigalpa metropolitan area, natural hazard management, urban planning, settlement development, and the construction permission process.

1988: Integration of fuel-wood plantation activities in flood and landslide hazard zones in the Tegucigalpa metropolitan area as part of integrated development project.

1987: Landslide hazard assessment for the Tegucigalpa metropolitan area as part of integrated development project.

1985: Flood hazard assessment for the Department of Atlántida as part of integrated development project.

1985: Landslide hazard assessment for the Department of Atlántida and Islas de la Bahía as part of integrated development project.

1985: Lifeline natural hazards assessment for the Department of Atlántida as part of integrated development project.

1984: General natural hazard information assessment overview for integrated development planning.

Nicaragua

1990-1991: Vulnerability analysis of meteorological and seismic hazards, vulnerability reduction strategies for volcanic eruptions and landslides, and geographic information systems (GIS) installation and training.

South America

Multinational

1987-1988: San Miguel-Putumayo River valleys (Colombia and Ecuador): General natural hazards assessment and hazard impact on integrated projects as part of integrated development study.

Bolivia

1987: Flood hazard assessment and early flood alert system definition in the Mamoré River valley as part of an integrated development project.

1987: Flood hazard assessment and erosion control definition in the Parapetí River valley as part of an integrated development project.

Brazil

1989-1990: Flood disaster reconstruction, flood alert, and water resource management for Alagoas, as part of an integrated development project.

1987: Desertification hazard assessment for the San Francisco River valley as part of an integrated development planning project.

Colombia

1991: As a regional collaborating institution, prepared and presented a regional Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

1989: Installation of emergency information system and training of users in support of the system for natural hazard management and development planning.

Chile

1991: As a regional collaborating institution, prepared and presented the national Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

Ecuador

1992: In collaboration with the Ministry of Agriculture, a natural hazard vulnerability reduction training course for the agricultural sector was offered in Quito for participants from Ecuador, Peru, Colombia, and Bolivia.

1992 A project portfolio review was undertaken for the USAID-Ecuador Mission in Washington, D.C., to evaluate the projects' content of natural hazard management issues.

1991: Prepared and presented an energy sector vulnerability reduction workshop with the Ministry of Energy and Mines.

1990-1991: Vulnerability reduction to natural hazards studies for the agricultural and energy sectors. Identification of investment projects for disaster mitigation and installation and user training in geographic information systems (GIS).

Paraguay

1984: General natural hazards information assessment of the Chaco region for integrated development planning.

1984: Flood hazards assessment, Program Area 4, Chaco region for integrated development project.

1984: Desertification hazard assessment, Program Area 4, Chaco region for integrated development project.

Perú

1992: As a regional collaborating institution, prepared and presented the national Disaster Management Training Workshop (UNDP/UNDRO - DMTP) for the United Nations System and national counterparts.

Uruguay

1990: Natural hazards assessment, including ENSO and global climate change impact, as part of national environmental study for natural resource management and environmental project investment; installation and user training in geographic information systems (GIS).

Venezuela

1987: Seismic vulnerability and public building retroffiting evaluation.

1987: National Planning Secretariat (SECPLAN): Training workshop on geographic information systems (GIS) applied to natural hazards management (lifeline network mapping) and development planning. Total of ten participants from SECPLAN and the Municipality of Tegucigalpa (Tegucigalpa, Honduras).

1987: National Forestry Corporation (CONAF): Workshop on natural hazard assessments and integrated development planning (Pto. Montt, Chile).

1986: Inter-American Institute for Integral Development of Land and Water (CIDIAT): Design and execution of two pilot courses on the use of natural hazard information and investment project formulation, with 42 participants from eighteen countries (Merida, Venezuela).

1986: Oxford Polytechnic: Co-direction of workshop on housing and reconstruction planning (Oxford, England).