

WATER LEVEL OBSERVATION NETWORK FOR CENTRAL AMERICA (RONMAC) QUARTERLY REPORT OCTOBER 1 – DECEMBER 31, 2000

**EXECUTED BY THE UNIT FOR SUSTAINABLE DEVELOPMENT AND ENVIRONMENT OF THE
ORGANIZATION OF AMERICAN STATES FOR THE CENTER FOR OPERATIONAL OCEANOGRAPHIC
PRODUCTS AND SERVICES, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

PROJECT DESCRIPTION

Background

In October 1998, Hurricane Mitch, the fourth most intense Atlantic Ocean hurricane on record, battered Central America, resulting in damage estimated in the range of US\$7.5 to US\$8.5 billion for the region. Studies indicate that extreme events such as Hurricane Mitch are common in Central America and are expected to increase in both frequency and severity. Accordingly, a strong commitment is being made by regional governments and donor agencies to strengthen infrastructure and capacity in order to address these issues. The Water Level Observation Network for Central America (RONMAC) project has been devised by the U.S. Government in direct response to the impact of Hurricane Mitch on four Central American countries: El Salvador, Guatemala, Honduras, and Nicaragua.

The Unit for Sustainable Development and Environment of the Organization of American States (OAS/USDE) is executing the project. Other participating agencies are:

- United States Agency for International Development (USAID), Funding Agency
- Center for Operational Oceanographic Products and Services, National Oceanic and Atmospheric Administration (CO-OPS/NOAA), of the US Department of Commerce, as Administrating Agency
- Regional Committee for Water Resources (CRRH), as Regional Coordinating Agency
- National agencies in El Salvador, Guatemala, Honduras, and Nicaragua, as direct counterparts and beneficiaries of the RONMAC project

Objective

To provide support for the development and improvement of the geodetic framework of Central America with direct benefits to coastal resources management, coastal hazard mitigation and emergency planning, design and development of coastal infrastructure and harbor facilities, and coastal navigation.

Time Frame

The RONMAC Project is being executed from June 2000 to December 31, 2001. It is fully expected that RONMAC will continue after the official participation of the OAS/USDE and CO-OPS/NOAA has ended, thanks to significant country buy-in and capacity-building activities. CRRH's role as the Regional Coordinating Agency will continue after the Project officially ends.

Activities

1. Install state-of-the-art sea-level and meteorological monitoring stations in El Salvador, Guatemala, Honduras, and Nicaragua;
2. Install ground station and facilitate real-time access to and distribution of information;
3. Update the local MSL data at these stations to support the development of a geodetic framework for Central America;

* Please note that some of the activities included in this report were carried out by the OAS in anticipation of the signing of the sub-agreement regarding the RONMAC Project. This permitted the project to remain on schedule and was carried out with the knowledge and approval of NOAA/NOS staff.

4. Develop a national and regional capacity to install and maintain the stations and to conduct data acquisition, analysis, archiving and dissemination using automated data-base management technology; and
5. Strengthen professional and technical skills of host-country agencies and national and regional institutions through technology transfer and capacity building.

KEY ACCOMPLISHMENTS

The key accomplishments during this reporting period include:

- Bidding process on tidal gauges and meteorological stations completed. Stations purchased and shipped to El Salvador, Honduras, and Nicaragua.
- Installation and training at Puerto Acajutla, El Salvador.
- Amendment to MOU with the Comité Regional de Recursos Hidráulicos
- MOUs with El Salvador, Guatemala, and Honduras drafted.
- The Intra-Americas Sea (IAS) Tsunami Warning System meeting
- IAG Commission XIV "Crustal Deformation Meeting"
- Establishment of Quality Control and Calibration Laboratory (Laboratorio de Control de Calidad de Datos y Calibración de Instrumentos, LABCCA).

They are described below in more detail.

Tidal Gauge/Meteorological Station Bidding Process Executed and Equipment Shipped to El Salvador, Honduras, and Nicaragua

During this period, the procurement process for the purchase of one digital ground station and seventeen state-of-the-art sea-level and meteorological monitoring and data dissemination systems was completed. This consisted of inspection, testing and acceptance of all equipment components from the manufacturer (Vitel, Inc.). Project staff coordinated the packing and logistical arrangements for the delivery of equipment. Equipment was shipped and cleared customs in El Salvador and Honduras. It has been shipped to Nicaragua, but due to the holiday season, has not yet cleared customs. Equipment has also been shipped to Guatemala.

Installation and training in Puerto Acajutla, El Salvador

A sea-level and meteorological monitoring and data dissemination system was installed by staff from the Organization of American States (OAS), the Comité Regional de Recursos Hidráulicos (CRRH), and the Instituto Nacional de Geografía (ING) of El Salvador in Puerto Acajutla. The ING personnel performed differential digital 1st Order levels to the Sea-level sensor and nearby BM's. The sea-level data is recording on NOS Datum of Tabulation. The data was reported to be successfully transmitting data via GOES and archived on DPAS. ING personnel were trained on the installation procedures and system operation and maintenance. The ING Director was agreeable with the commitment of resources to the Acajutla monitoring station.

Amendment to MOU with CRRH signed

The OAS and CRRH signed an amendment to the MOU regarding RONMAC. This provides for the contracting of an Assistant Technical Coordinator for the RONMAC Project. The Assistant Technical Coordinator works under the supervision of the OAS and CRRH. The principal role of the Assistant Technical Coordinator is to assist the OAS and CRRH in the execution of the RONMAC Project. The staff person assuming this position began his responsibilities in November 2000. Additionally, as per the amendment, CRRH has acquired the adequate space needed for a data/calibration center. The responsibilities of the position and details regarding the data/calibration center are outlined in the attached MOU.

MOUs with participating countries

An MOU with the Government of Nicaragua was signed. This document outlined the responsibilities of both the Nicaraguan Government and the Organization of American States. The MOU is attached. MOUs between the governments of El Salvador, Guatemala, and Honduras and the OAS have been drafted and are currently under consideration. They are based on the MOU with the Government of Nicaragua. The draft MOUs are attached.

The Intra-Americas Sea (IAS) Tsunami Warning System meeting

The Intra-Americas Sea (IAS) Tsunami Warning System meeting took place at the University of Puerto Rico, Mayaguez from December 19 to 21, 2000. The meeting was sponsored by the Puerto Rico Sea Grant College Program, the Pacific Branch of the U.S. National Weather Service, and the International Ocean Committee (IOC). The objective of the meeting was to finalize the tsunami warning system project proposal for the IAS, and to establish coordination mechanisms between the Pacific and the Caribbean in this area. The meeting was attended by representatives from the IOC, IOCARIBE, NOAA-NWS, U of Puerto Rico, International Tsunami Warning System, Universidad del Valle -Colombia, Governments of St. Kitts and Nevis, Dominica, St. Vincent and the Grenadines, France, Puerto Rico, the Central American Sea-level Observing system and RONMAC, and the OAS. At this meeting, Alejandro Gutierrez made a presentation on the RONMAC Project, and how it could play a role in the proposed tsunami monitoring network.

IAG Commission XIV “Crustal Deformation Meeting”

This meeting’s purpose was to present the technical requirements regarding sea-level data collection for the Central and South American water-level networks, of which RONMAC is part. Additionally, this opportunity was used to establish mechanisms for information exchange between the various networks. At this meeting, Doug Martin of NOAA and Alejandro Gutierrez of CRRH presented on the operational and technical aspects of RONMAC as well as collaborative activities.

Establishment of Quality Control and Calibration Laboratory (Laboratorio de Control de Calidad de Datos y Calibración de Instrumentos, LABCCA)

Space was identified and prepared at the Oceanographic and Coastal Management Laboratory of the National University (LAOCOS) of Costa Rica for the establishment for a Quality Control and Calibration Laboratory (LABCCA). Additionally CRRH drafted a formal agreement with LAOCOS, which will be signed at the next meeting of CRRH in April, 2001.