

Reconnaissance Report of the May 28, 2009 Honduras Earthquake, M 7.3

A team sponsored by the Earthquake Engineering Research Institute (EERI) and the Geoengineering Extreme Event Reconnaissance (GEER) Association carried out a field investigation in conjunction with Honduran colleagues from June 18-23 to document effects of the May 28 earthquake. The EERI-GEER team was invited by Mr. Marco Sandoval, Executive Director of the Comisión Ejecutiva Valle de Sula (CEVS). Mr. Sandoval sent a team of engineers to accompany the EERI-GEER team. The team included experts in structural, geotechnical engineering, as well as in disaster response and recovery. The investigators were supported by EERI: Abdeldjelil Belarbi and GEER: Ronaldo Luna and Kermit Applegate, all from Missouri S&T, Rolla. The CEVS team consisted of Humberto Calderon, Osvaldo Rivera, and Luis Alonso Lopez. Observations of other individuals who visited the earthquake-affected region have also been incorporated in this report. This material is based upon work supported by the National Science Foundation through the GeoEnvironmental Engineering and GeoHazards Mitigation Program under Grant No. CMMI-0825734. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the NSF. The GEER Association is made possible by the vision and support of the NSF Geoenvironmental Engineering and GeoHazards Mitigation Program Directors: Dr. Richard Frigaszy and the late Dr. Cliff Astill. GEER members also donate their time, talent, and resources to collect time-sensitive field observations of the effects of earthquakes. The EERI efforts were supported through the Learning From Earthquakes (LFE) program which is also funded by the National Science Foundation.

Introduction

An earthquake of magnitude M 7.3 struck the Atlantic coast of Honduras on May 28, 2009. The epicenter was located 63 km north of Roatán (Bahía Islands) and 125 km NNE of La Ceiba. This has been the strongest earthquake felt in Honduras in the past 3 decades. The earthquake event and aftershocks were felt in Honduras, Belize, Nicaragua, El Salvador and Guatemala. Several smaller events followed the main event, such as the June 8th and 15th events with magnitudes 5.4 and 4.8, respectively. The earthquake event was of significant magnitude and with limited consequences. At least 7 people were killed and 40 injured with damage to more than 150 buildings. Some of the country's major infrastructure, such as port terminals, bridges and levees were seriously damaged. The following sections address the seismological setting, geotechnical and structural aspects and the socio-economic impact. Several GoogleEarth .kmz files complement this report, which contain GPS tracks, waypoints, and additional photographs for every day of the reconnaissance effort. They can be accessed at the following website: http://www.geerassociation.org/Post_EQ_Reports.html.