

# THE EFFECTS OF THE 1976 GUATEMALAN EARTHQUAKE ON EARTHEN HOUSES IN GUATEMALA

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## ABSTRACT

This paper reports on what has happened to earthen structures in twenty-six Guatemalan communities studied over a four-year period since the 1976 earthquake. The data were obtained from three waves of personal interviews with 1472 randomly sampled household heads. The results show that adobe, which was the primary housing material before the earthquake was heavily damaged in that event. As a consequence the number of adobe structures and of other earthen structures has been drastically reduced. The people of Guatemala individually and because of agency housing programs have abandoned adobe as a building material and turned to concrete block and wood.

'Surviving earthen structures have not been improved substantially and remain with largely the same structural features as before the earthquake. The greatest improvement is in the use of corner posts or columns in the walls but most of these are made of untreated crude logs or lumber, subject to rot and termite damage. Little information on aseismic housing seems to have spread either within the earthquake area or in the unaffected areas surrounding it. A program to spread information on how to use adobe in aseismic designs needs to be conducted along with one to assist citizens to acquire the resources necessary to improve the earthquake vulnerability of houses.

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