

Learning from Earthquakes

M_w 7.0 Machaze, Mozambique, Earthquake of 23 February 2006

A major earthquake occurred in the sparsely populated and remote Machaze District in the south of Manica province, western Mozambique, shortly after midnight on 23 February. EERI member Julian Bommer and Clark Fenton of Imperial College, London, carried out field studies of the area one week after the M_w 7.0 event in conjunction with geologists from the Provincial Geological Survey in Manica. The field reconnaissance identified surface rupture on a previously unknown fault. The normal-faulting rupture strikes NNW and dips to the west, with a maximum offset of just over 2 m, accompanied in places by a component of left-lateral strike-slip. There was extensive liquefaction in the epicentral region, but surprisingly little damage to housing. Vernacular construction (wattle-and-daub) is inherently earthquake resistant, but there are also many unreinforced masonry dwellings in the area, and many of these survived with very light damage. Nonetheless, almost 300 houses were damaged or destroyed. Four people were reported to have been killed in the epicentral region, with another 30 injured. The earthquake raises interesting questions about the southern extent of the East African rift and the seismic hazard in Mozambique. A report on the earthquake will appear in the July/August issue of *Seismological Research Letters*.



View of the fault scarp with one of the local guides who led the investigators to this particular section of the fault trace.

Publications

Earthquake Scenario Guidelines

An earthquake scenario is a powerful way to stimulate mitigation planning in a community that is vulnerable to earthquake damage. *Guidelines for Developing an Earthquake Scenario* is a new EERI product supported by a grant from the Endowment Fund. It is downloadable at no charge from www.eeri.org.

EERI supported the development of the 2005 *Scenario for a Magnitude 6.7 Earthquake on the Seattle Fault*, which formed the basis for the *Guidelines* to be used by other regions interested in improving public awareness of earthquake risk. The *Guidelines* leads a mitigation advocate through simple steps to create a comprehensive and credible story about a community's most likely seismic hazards and the damage and losses projected to result from an earthquake.

Who should be included in scenario planning? How should the planning effort be organized, managed, and funded? What are the critical components of an earthquake scenario? What are the most effective ways to present the scenario to the public? These questions are answered in the *Guidelines*. Communities without current mitigation programs as well as those with policies currently in place can use the *Guidelines* to motivate public mitigation action.

Guidelines for Development of an Earthquake Scenario was selected for an Endowment Fund grant by EERI's Special Projects and Initiatives (SPI) Committee. Each year, the committee reviews proposals for innovative projects that advance the mission of EERI to reduce earthquake impacts. Ideas for new projects are welcomed. Please contact James Godfrey, EERI Special Projects Manager, for more information: jgodfrey@eeri.org.