

Roger G. Bilham

Professor of Geological Sciences

Cooperative Institute for Research in Environmental Sciences

University of Colorado, Boulder

"The Southern Edge of the Eurasian Plate: A Fatal Blend of Earthquakes and Corruption"

Abstract: The Eurasian plate is approached from the south and east by six colliding tectonic plates. Unlike most of the world's plate boundaries, that are typically fewer than 100 km wide, the collisional process in southern Europe and Asia is distributed across many thousands of km of populated land. It is thus not surprising that 85% of all global deaths from earthquakes in the past several thousands of years have occurred along the Eurasian plate's southern and eastern edge. Although a century of seismology and earthquake engineering have provided an intelligent response to mitigating future collapse of buildings in this region, much of the area is poor and/or ignorant of earthquake hazards. A recent quadrupling in population has resulted in unprecedented numbers of new construction projects in the developing cities of southern Asia, many devoid earthquake resistance despite local codes. In several of these countries corrupt practices have replaced governance, subverting the best efforts of seismologists and engineers to enforce sound construction methods. Corruption can be interpreted as much a component of building construction as cement and steel. But what is the engineering fix for corruption?