

State of California  
Seismic Safety Commission

Memo

To: Commissioners

From: Richard McCarthy  
Seismic Safety Commission  
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Date: November 7, 2013

Subject: Item IV: Update from the Global Earthquake Model Foundation

In the last few months, GEM has continued to broaden both its international reach and its engagement with partners in California. In September, GEM staff members offered OpenQuake software training in Kathmandu to scientists and engineers, and conducted an in-depth workshop with social scientists and policy makers regarding resilience modeling. GEM has welcomed OYO International as our first sponsor in the engineering domain, a critical sector to engage, to broaden the relevance of GEM. In addition, GEM is working toward forming potential partnerships with California-based firms who could offer services based on GEM and OpenQuake.

A recent relaxation of GEM's licensing policy has increased the potential for collaboration with public entities. Restrictions on commercial use of data, previously permanent, now expire 18 months after release. This has led to Canada, Italy, Australia, and New Zealand all stating intentions to use OpenQuake to produce the next generation of national seismic hazard maps, used as the basis of the building code.

Scientifically, GEM has built upon its global uniform model of seismic hazard to build a preliminary version of the first ever globally- uniform comparison of risk. The global databases of exposure (inventory) and building vulnerability are nearing completion later this year. The social vulnerability databases are populated and this team is now developing tools and methods to estimate social impacts and resilience. The software team is implementing OpenQuake user interfaces, and they are set to begin testing the integrated platform early next year.

Finally, following the lead of the Commission, associate partner World Bank is now working with GEM to develop a project of mutual interest and benefit, to be funded by the Bank and executed by GEM as well as other project partners, potentially including California-based Pacific Earthquake Engineering Research Center (PEER).

In closing, GEM gratefully acknowledges the associate sponsorship of the Commission, and your support of GEM projects on resilience and sensitivity studies. We remain cautiously optimistic about the final stages of authorization for these funds, and we look forward to continued collaboration.