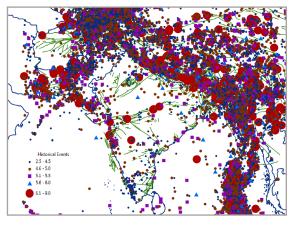


# Indian Sub-continent Earthquake Risk<sup>TM</sup>

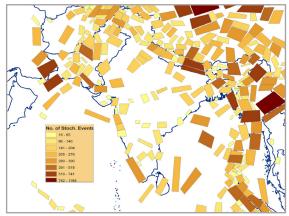
RMSI's Indian EarthquakeRisk™ is the most up to date high-resolution model that covers the entire Indian sub-continent comprising of India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka. The model derives understanding of earthquake risk for events from 718 AD to the most recent Nepal earthquake. It incorporates the most recent advancements in the area of earthquake engineering along with most up to date hazard and exposure data.

### **Key Features**

- Based on an up to date earthquake catalog that comprises of more than twenty five thousand events for better understanding of the earthquake frequency and severity
- Includes a stochastic event set comprising of more than ninety thousand events that helps reduce the uncertainty associated to the locations of future possible events
- Ground motion estimation using latest state-ofart NGA attenuation functions that gives a better assessment of earthquake associated ground shaking at any location compared to previously available attenuation functions
- Utilizes RMSI's India Exposure Model that provides building cluster level data for all major urban agglomerations across India (a resolution that is much higher than Pincode). This helps in better localization of the aggregated exposure thereby reducing the uncertainty in the loss estimates.
- Uses the latest 2011 Census data for distribution of economic exposure
- Validated against key historical events like -May 2015 Nepal earthquake, 2005 Kashmir earthquake, 2001 Bhuj Earthquake, 1999 Chamoli earthquake, 1993 Latur earthquake, 1991 Uttarkashi earthquake, 1905 Kangra earthquake, 1987 Assam earthquake



Historical Event Catalog of 25000 events

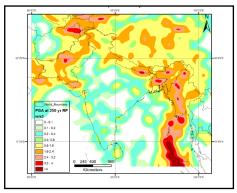


**Stochastic Event Set** 

#### **Outputs**

The model generates the following outputs:

- Exposure distribution maps
- EQ hazard maps for key return periods
- Event loss table for 10 to 10,000 year return periods
- Average Annual Loss (AAL) and Loss Cost
- Loss EP curves
- Representation of results on interactive maps



Peak Ground Acceleration (PGA) Map for 250 Year Return Period

#### RMSI - Risk and Insurance

RMSI provides solutions to global clients for managing risks associated with natural and man-made hazards, by applying innovative methods and global best practices. RMSI also has deep expertise in assessing the impact of climate change on hydro-meteorological hazards. RMSI focus areas are: urban risk, agriculture risk, earthquake, flood and windstorm hazard modeling and property risk.

RMSI has nearly two decades of experience in this domain and has worked extensively with insurers, reinsurers, state and federal governments and multilateral funding agencies that include: AIC, GIC, ICICI Lombard, HDFC Ergo, Reliance General Insurance, IAG, the World Bank, IFC, UNDP, UNISDR, ADB and FAO amongst others.

## **About RMSI**

RMSI was founded in 1992, with a mission to provide innovative technology enabled solutions that integrate business domain expertise with information, geospatial and remote sensing technologies. RMSI provides solutions for the following sectors: Risk and Insurance, Utilities, Telecom, Agriculture and Natural Resources and Land Management. RMSI is a CMMI level 5 assessed and ISO 27001 and 9001:2015 certified company.









