

CEEn-2017CPST- 011

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Nepal National Building Code Update

April 2018

Nepal National Building Code Update

Gorkha Earthquake

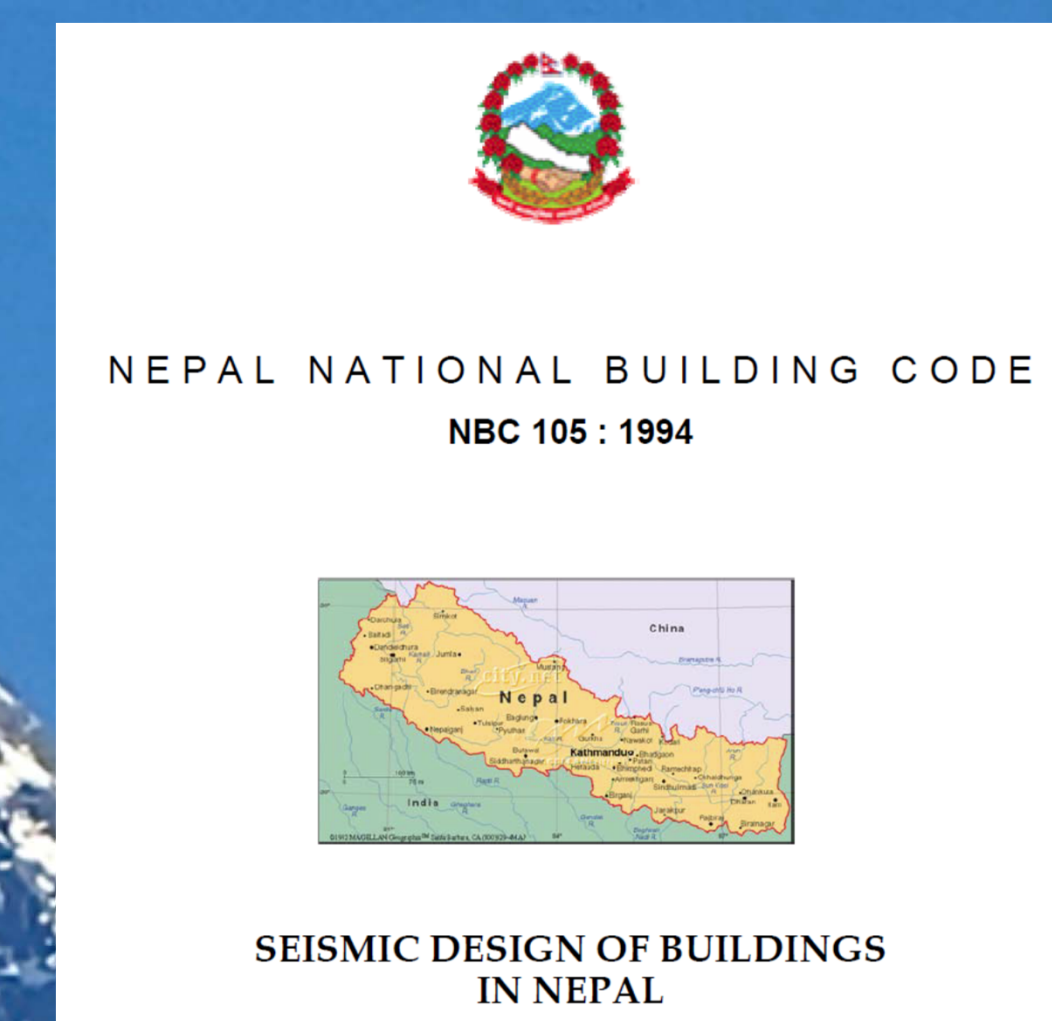
- The April 2015 earthquake killed nearly 9,000 and injured nearly 22,000 people in Nepal
- Damaged and destroyed 20,000 homes and buildings
- Estimated \$10 Billion in damage (50% of Nepal's GDP)

Problems

- Nepal National Building Code was written in 1994, and has not been updated.
- The building code is not widely enforced. Most buildings are built by their owners without knowledge of seismically resilient construction techniques
- Current international building codes contain updated research and best practices in building construction that are not found in NBC 1994.

Recommendations

- Update equations and coefficients to match newer methods of design
- Include minimum and maximum boundaries for equations where necessary
- Include a map from the Nepali Department of Mines of Geology that shows the epicenters of past earthquakes, principal tectonic features, lithological groups, and seismic zones
- Change the recurrence interval of the design earthquake from 475 years to 2500 years. This changes the probability of occurrence in 50 years from 1 in 10 to 1 in 50
- Update and clarify the formulas and methods used in the Seismic Coefficient Method and the Modal Response Spectrum Method for clarity and to bring them in accordance to current international building codes
- The preface should explain the purposes of the building code
- The introduction should explain the need for continuous development and improvement
- The section concerning the promulgation of redevelopment should include estimated time spans.
- The code should be written to avoid ambiguity and in a systematic and professional manner
- References to Indian Standard Code need to be updated to include section titles, not just numbers, to prevent confusion after an update



Sponsor

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