

# Nepal crisis offers chance to change negligence culture

By ASIT K. BISWAS and  
KRIS HARTLEY  
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**N**EPAL is one of the world's least developed countries, with a per capita gross domestic product of US\$694 (S\$920). With 40 per cent unemployment, the country is heavily reliant on citizens working overseas, whose remittances constitute nearly a third of economic activity.

In 2008, the dysfunctional 240-year monarchy was finally abolished, after a violent decade of Maoist insurgency.

This political turmoil weakened the effectiveness of Nepal's national and local governments, including institutions responsible for earthquake preparedness and related issues such as infrastructure and urban planning.

Last week's earthquake is a tragic reminder of the need to concurrently ensure good infrastructure, policy foresight, and functional institutions for disaster preparedness.

In Kathmandu's case, unstable geological conditions, together with high density and substandard building stock, create a dangerous environment.

According to Demographia, Kathmandu is the world's 33rd-densest city out of over 1,000 studied, unsurpassed by any Western city. Compounding this challenge, structural code enforcement and urban planning are weak. In a 2012 interview, a senior divisional engineer at Nepal's Department of Urban Development and Building Construction noted that construction often proceeds without zoning approval, and that

urban plans are rarely implemented.

Shockingly, 95 per cent of Nepal's own government offices violate national construction codes. The lack of compliance suggests a broader culture of negligence in adhering to construction regulations.

In some ways, Nepal was lucky. If this tragedy had occurred at night when more people were in their homes, the death toll would have been much higher.

Also, the earthquake happened on a Saturday, when children were not in school. Indeed, schools are often ill-suited to withstand earthquakes, due to physical configuration (for example, large classroom windows), budgetary constraints and corruption leading to shoddy construction, and scant awareness of risks, leading to inadequate preparation.

In Nepal, municipalities are responsible for land use planning, construction permits, and enforcement of compliance with national building codes. These codes have been applicable for at least two decades, but urgently need updating to incorporate new knowledge about earthquake-resistant design and materials.

This 20-year-old building code has been incorporated in the permitting processes of only three municipalities out of 58 nationwide. Even in these three, monitoring of code compliance is lax.

For all practical purposes, the code is irrelevant and buildings are constructed in any way convenient to developers. Thus, most buildings are of sub-standard quality, and are likely to collapse during moderate to severe earthquakes.

The death toll from the recent

earthquake has already exceeded 5,000. Preliminary estimates by the US Geological Survey indicate that the physical and economic damage may exceed Nepal's US\$20 billion-per-year GDP. With the current lack of information, it is unknown if the hydro-power dams near the earthquake's epicentre have been affected. Nepal already suffers from an electricity crisis, and the problem may now worsen. The earthquake will likely delay the construction of a proposed US\$1.6 billion hydroelectric dam funded by the Chinese, or even derail it.

Tourism, which accounts for about 8 per cent of the economy and 7 per cent of the workforce, is likely to suffer significantly over the next several months. In the medium term, the earthquake will dampen Nepal's economic development and social progress. Further, with Nepal's accelerated urbanisation and clustered commercial activities, the economic and human costs of disasters will increase exponentially in the longer term. Thus, it is essential that Nepal, and countries like it, boost preparedness.

Nepal's lack of preparedness is no mystery, as the data clearly shows. Indeed, population and economic growth continue to occur in high-risk disaster zones of many developing and overcrowded countries.

For infrastructure quality, a crucial determinant of disaster resilience, Nepal ranks 55 out of 132 in the Notre Dame Global Adaptation Index's measure of disaster vulnerability, and 122 out of 160 in the infrastructure sub-indicator of the World Bank's Logistics Performance Index.

Nepal and other developing



A search and rescue team at a destroyed building in Kathmandu on Thursday. Unstable geological conditions, together with high density and substandard building stock, create a dangerous environment in the city. PHOTO: AGENCE FRANCE-PRESSE

countries can learn lessons from the latest tragedy.

Donors and the Nepalese people must insist that the country's municipalities not only ensure new buildings are constructed to withstand earthquakes, but also address violations with strict penalties – including highly publicised demolition of non-compliant structures.

Essential public buildings such

as hospitals, schools and police stations should be constructed with the higher safety standards now used in other earthquake-prone countries like Japan and New Zealand.

Both the government and donors should demand a mix of hard options, such as earthquake-resistant buildings, and soft options, such as enhancing indigenous capacity for disaster manage-

ment and improving institutional functionality.

The country should use the crisis to jettison outdated practices and substantively address governance failures.

✉ [stopinion@sph.com.sg](mailto:stopinion@sph.com.sg)

Asit K. Biswas is a Distinguished Visiting Professor and Kris Hartley is a doctoral candidate at the Lee Kuan Yew School of Public Policy, National University of Singapore.