



A woman making her way over the ruins of her house in Bhaktapur, Nepal. Before this one, the last major earthquake to hit Kathmandu was in 1934. PHOTO: REUTERS

## NEPAL EARTHQUAKE

# Notes from the ground

By **HANNA RUSZCZYK,**  
**JONATHAN RIGG and KATIE OVEN**  
FOR THE STRAITS TIMES

**E**ARLIER this month, we joined around 50 natural and social scientists from China, France, India, Iran, Kazakhstan, Singapore and the United Kingdom in Kathmandu to discuss earthquake preparedness across the Asian continental interior as part of the Earthquakes without Frontiers research project. NSET-Nepal, the National Society for Earthquake Technology, a local NGO, hosted our event.

The last major earthquake to hit Kathmandu was in 1934, when around 10,000 people died. We knew that the next event could happen the following week, or not in our lifetimes; it is impossible to predict earthquakes, however much governments would like to imagine that you can.

The timing of our meeting was not prescience; it was coincidence.

Many earthquake scientists go to bed with their shoes beside their beds, away from furniture that might topple over, with windows curtained, and a bottle of water and head torch close to hand. They do this whenever they are in the field, even though they will probably never experience an earthquake. Others of us are more cavalier.

On April 11, a fortnight before the earthquake, NSET's local experts took us on a guided "earthquake walk" through Kathmandu's old town of tiny streets and courtyards, where houses have been divided vertically on inheritance, and additional stories added to already rickety structures as families have grown. Building codes exist on paper but not, often, on the ground. The old adage that "earthquakes don't kill, buildings do" came to mind as we worked our way through

the warren of lanes.

The following week, we went to see retrofitted and new, earthquake-proof schools. One new school on the outskirts of Kathmandu had been built with just one staircase and escape route; another had a storeroom for emergency equipment, locked and with just two keys held by goodness knows who while old computers were stacked on shelves, waiting to come crashing down.

One of our group bluntly told our local hosts that this level of preparedness was simply not good enough; the rest of us, unsettled, felt this was not the time or the place to voice such criticisms. How wrong we were.

Nepal is a least developed country, with a dysfunctional state, distinctly limited capacity, and reliant on a mix of remittances from migrant workers and assistance from donors. For many poor Nepalese investment in earthquake prevention was bottom of their list of priorities; education, health and livelihoods came first. Or they did until Saturday.

Two of us left Nepal just days before the earthquake. But one of us – Hanna – stayed to undertake PhD research on earthquakes and resilience in Bharatpur, slightly closer to the epicentre of the quake than Kathmandu.

These are extracts from Hanna's e-mail over last the few days:

■ **Saturday, 7.57pm**

No aftershocks for two hours. Last one was strong. Everyone calm. I am at Global Hotel in Bharatpur, it is a good place to be, near airport, hospital and army barracks. I am with Rajat and his friends. We will rotate who sleeps tonight.

■ **Sunday, 1.34am**

The earthquake started at 11.56am on the day of rest (Saturday), therefore there were not many vehicles travelling and shops closed and few people out in Bharatpur. My research assistant and I were

walking on a new road near the river. I heard (what I thought was) thunder. And the metal was shaking on the commercial building next to the road. I looked to the other side and the same was happening with that building. People were looking at the sky. I asked Rajat what he thought was going on. He said "earthquake".

I felt faint and not stable on the ground; there was a yellow haze and it appeared as if waves were coming from the ground, and the ground was shaking horizontally. It lasted around a minute and a half. I swayed, but did not fall.

People were and continue to be calm and smile, nine hours later. Everyone was outdoors for hours, I even conducted a focus group discussion with a women's group outside of a school. After the earthquake, we just continued to our meeting! I think we were in shock... I felt only one tremor until 14.30 but people said there had been up to five...

We were 60km from the epicentre but thankfully we had minimal deaths... We visited a social activist and his community to see if they were secure. We had tea and discussed EQ preparedness and response. They asked if I planned on changing my research to post-disaster. There was much laughter for the earthquake lady...

We made our way back to the hotel around 17.00. While I was preparing a bag for the night a strong aftershock startled... The continuing aftershocks are jarring and regular enough to keep my stomach in knots. The images on local and national TV are heart-breaking. I have stopped watching. I am too involved. I handed out orange whistles that I had purchased as a gift for the municipality to the hotel staff, fellow Americans staying at the hotel and my RA and his two friends.

It is 1am and I am going to nap soon... I hope this new day brings nothing interesting to report...

■ **Sunday, 10.03am**

It is 10am, I slept on a couch in the restaurant. There were tremors at 3 and 5 this morning. I went outdoors but they did not last very long...

A private TV station has caused panic in Kathmandu by saying another EQ of the same magnitude of yesterday is expected at noon today... Bharatpur is calm, quiet.

■ **Sunday, 9.34pm**

Do you think the aftershocks will calm down soon? Is this what people had anticipated?

■ **Monday, 7.31am**

We had a great night! There was very low grade shaking around 22.00. Birds are calling this morning, so a comforting sound. I think they have been quiet since the EQ.

At the end of our meeting before the earthquake, several of us were interviewed by Nepali TV. We were asked what we thought would be the single most important intervention that might prepare the country for an earthquake.

The common response: better buildings.

But even following this earthquake, there will be many who will see Nepal's major challenges as developmental: better nutrition, schooling, health facilities, livelihoods, roads, clean water... Integrating disaster preparedness into the mainstream of government and development work will only be slightly easier than it was before Saturday's events.

The sense of vulnerability to earthquakes will be greater, to be sure, but the precarity of life in so many other senses and ways will also be no less acute.

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

Hanna Ruszczuk is a PhD student and Katie Oven is a post-doctoral researcher at Durham University in the United Kingdom; Jonathan Rigg is a professor in the Department of Geography at the National University of Singapore.