

Anthropologists search NASA data for migration and land use patterns in the Himalayas

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Turin and Shneiderman's home in Nepal was destroyed after a 2015 earthquake. Credit: University of British Columbia

Mark Turin and Sara Shneiderman know what it's like to have a home reduced to rubble.

The anthropologists at the University of British Columbia, who also happen to be husband and wife, had shared homes in Nepal with a local family in the capital Kathmandu and the rural district of Dolakha for

more than a decade until a 7.8 magnitude earthquake rocked the country in April 2015.

Almost 9,000 people died in the quake, which also injured 20,000 people and destroyed over 600,000 homes. The houses Turin and Shneiderman had helped build, and in which their two small children partly grew up in, were destroyed.

"It was devastating. Entire villages were wiped out," said Turin, who flew to Nepal soon after the disaster to help with relief efforts. "The destruction wreaked by the earthquakes affected those that we are close to in Nepal and our own family very deeply."

Turin and Shneiderman are now building upon their experiences in the region to work on a new research project based in the Himalayas.

The UBC researchers, who are part of a larger team led by Yale University, have received \$750,000 USD from NASA to investigate how social change and [natural disasters](#) affect patterns of mobility and urbanization in Bhutan, India and Nepal.



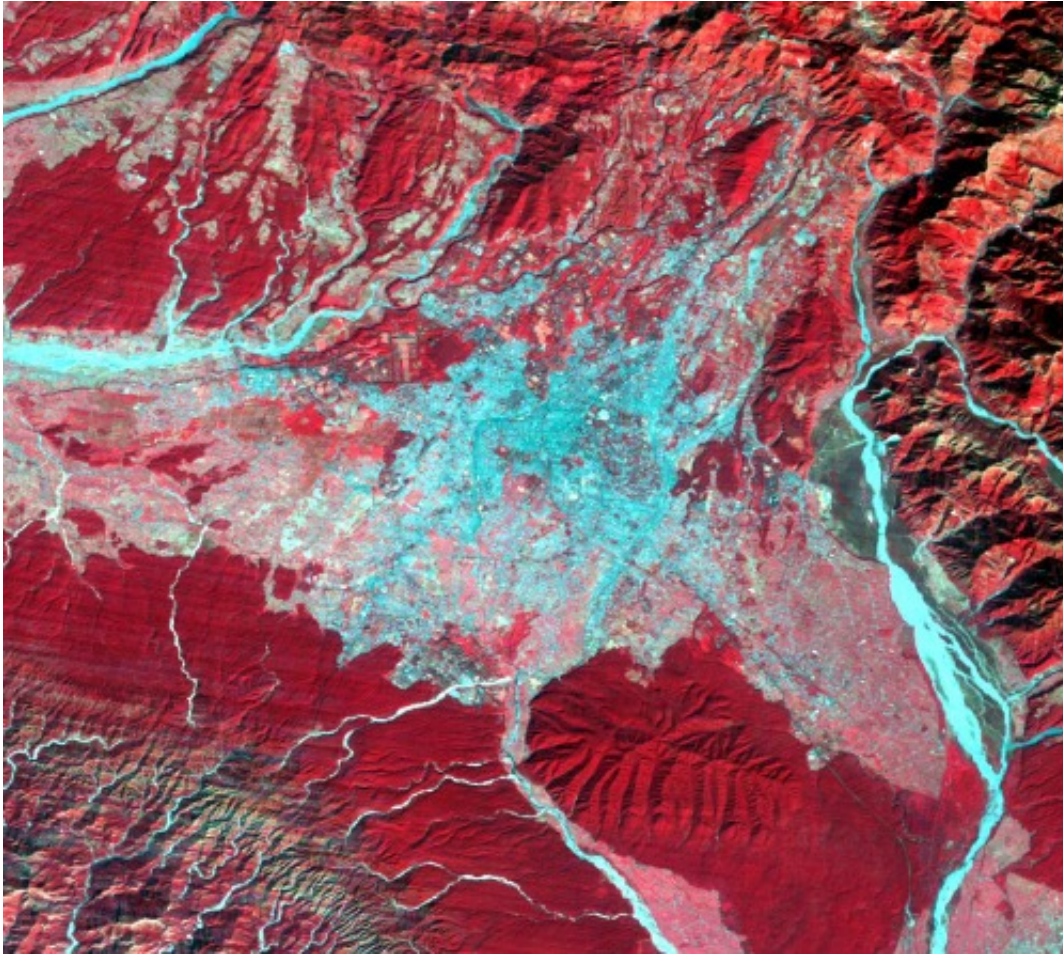
Turin and Shneiderman's home before the quake. Credit: University of British Columbia

They will use satellite images to track land use change and the impact of natural disasters, like earthquakes, fires, floods, and landslides, in the seismically active zone over the last 32 years and relate them to urbanization and migration.

Turin and Shneiderman's role will be to uncover the data's "social story" – providing the cultural, historical and political context for why the data might show shifts in populations in certain areas over time, and not in others.

"Remote sensing data sets don't reveal how trade routes change or the demographic impact of political instability," said Turin. "This project is an example of how collaborations that bring together bottom-up ethnographic knowledge with top-down big data can yield more nuanced understandings of social and environmental change than either one alone."

The research team will start the work next summer.



Satellite image scan. Credit: University of British Columbia

Provided by University of British Columbia

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