

Community Energy Resilience in Nepal

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1st June 2018

LCEDN Annual Conference

Loughborough University

Nepal: 2015 Earthquakes

Nepal experienced two major earthquakes on April 25 and May 12, 2015 at magnitudes of 7.8 and 7.3 respectively.

Number of people killed
As of 26 May 2015

8,673

Number of people injured
Source: UNRCO/Gov. of Nepal

21,95

SHARE



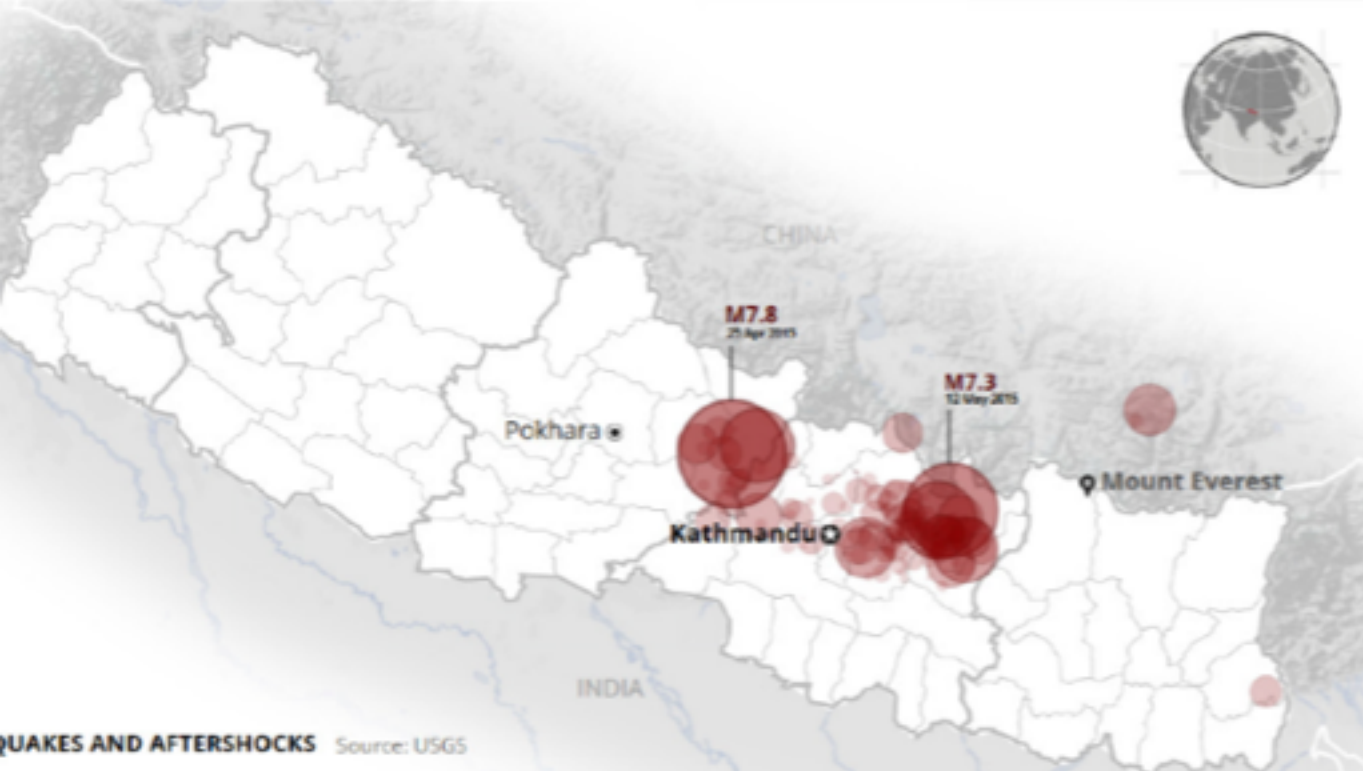
THE MAP

EARTHQUAKES AND AFTERSHOCKS

PEOPLE KILLED BY DISTRICT

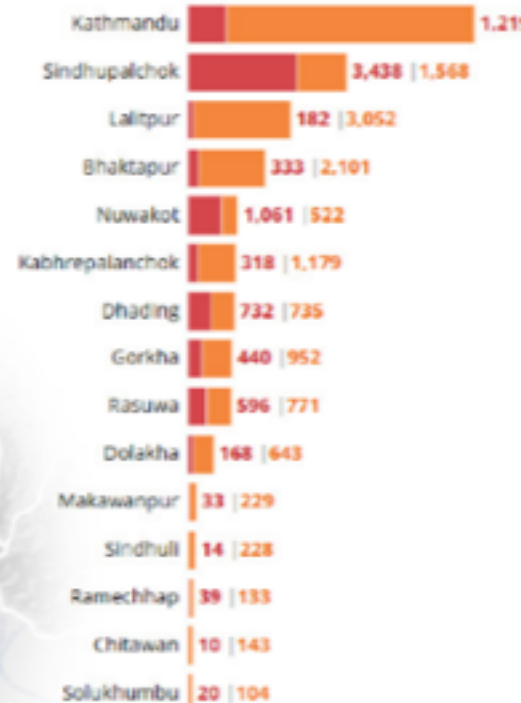
PEOPLE INJURED BY DISTRICT

PEOPLE KILLED AND INJURED BY DISTRICT

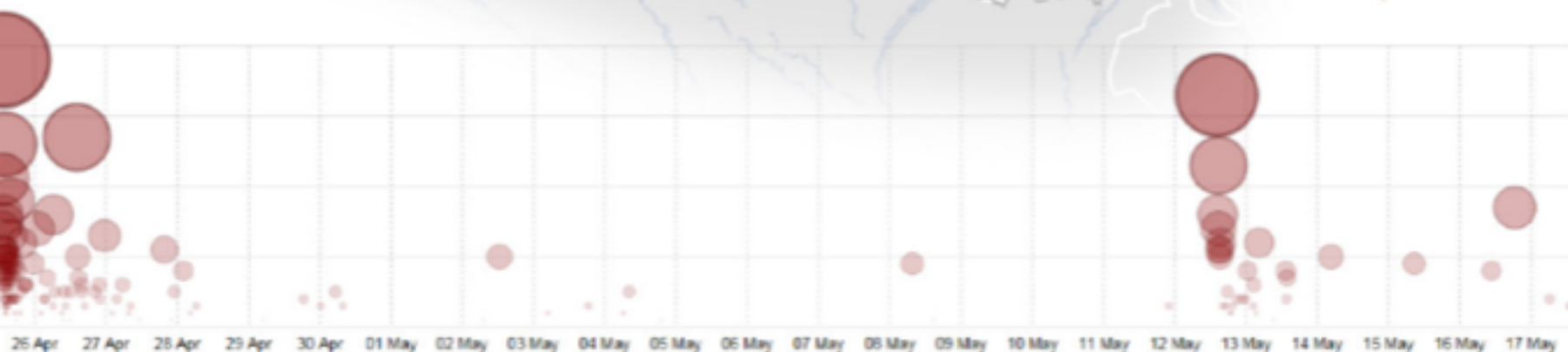


Number of people killed | Number of people injured

limited to the top 13 districts



EARTHQUAKES AND AFTERSHOCKS Source: USGS





People searching for belongings in Baktapur

Source: <http://www.nytimes.com/interactive/2015/world/asia/nepal-earthquake-photos.html>



Village in Gorkha District (29 April 2015)

Source: <http://time.com/3843436/these-are-the-5-facts-that-explain-nepals-devastating-earthquake/>

Research Questions

1. Were communities with existing small-scale renewable energy systems better able to deal with the earthquake in comparison to communities with access to centralised energy systems, or communities relying on traditional energy systems? What were the energy strategies of each group?
2. Could energy services be restored more quickly after a disaster? Could the design of energy systems be improved to enhance community resilience? What kind of support do communities need after disasters to implement their energy strategies?

Methods

In 16 villages across 4 districts:

- 160 household survey and interviews
- 16 focus group discussions
- Key informant interviews
- governance mapping

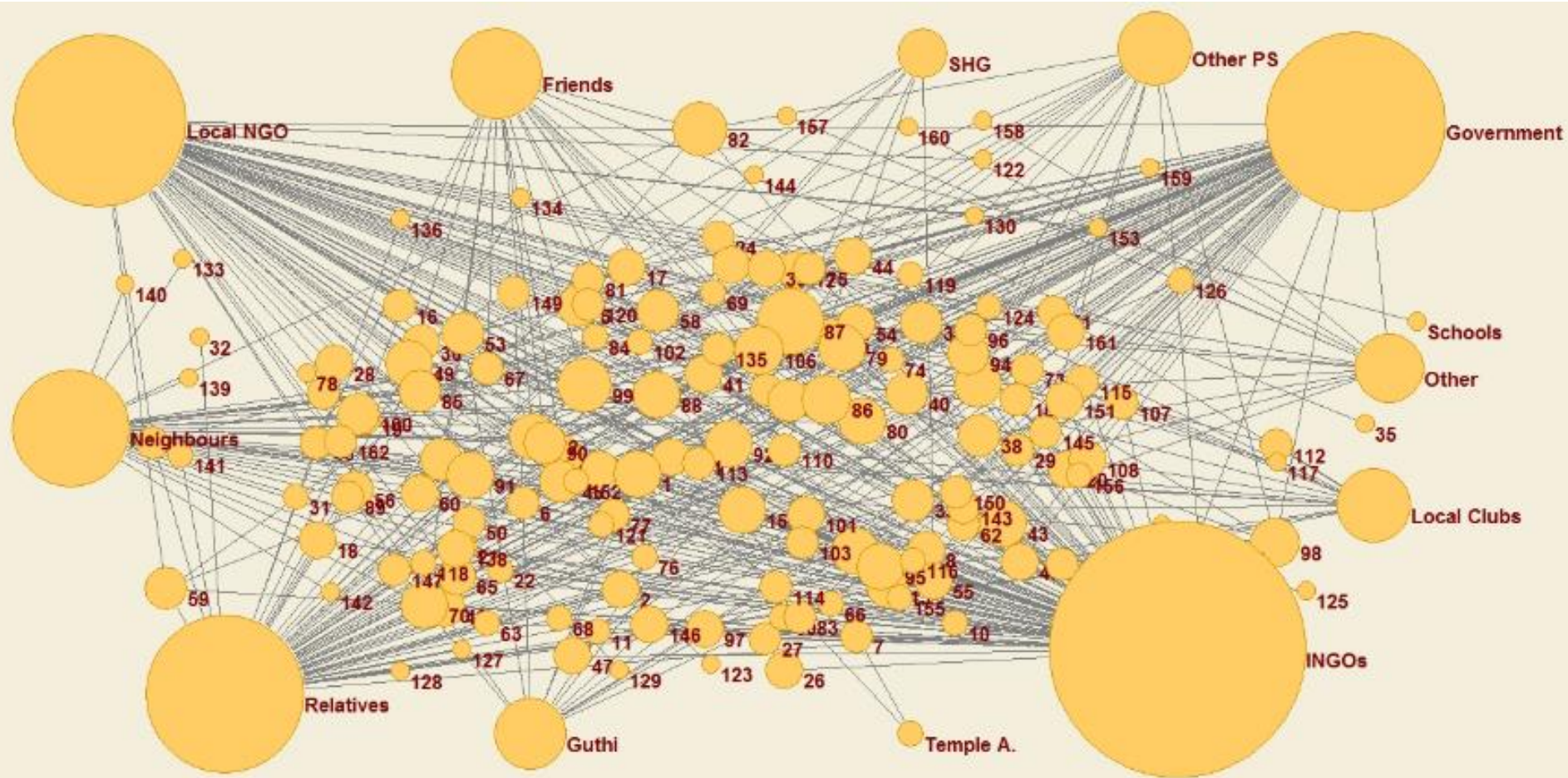
Results: Household Survey & Interviews

- Most households had re-established some form of energy access after the earthquake
- Most households are using multiple sources of energy or 'fuel stacking' as an energy resilience strategy

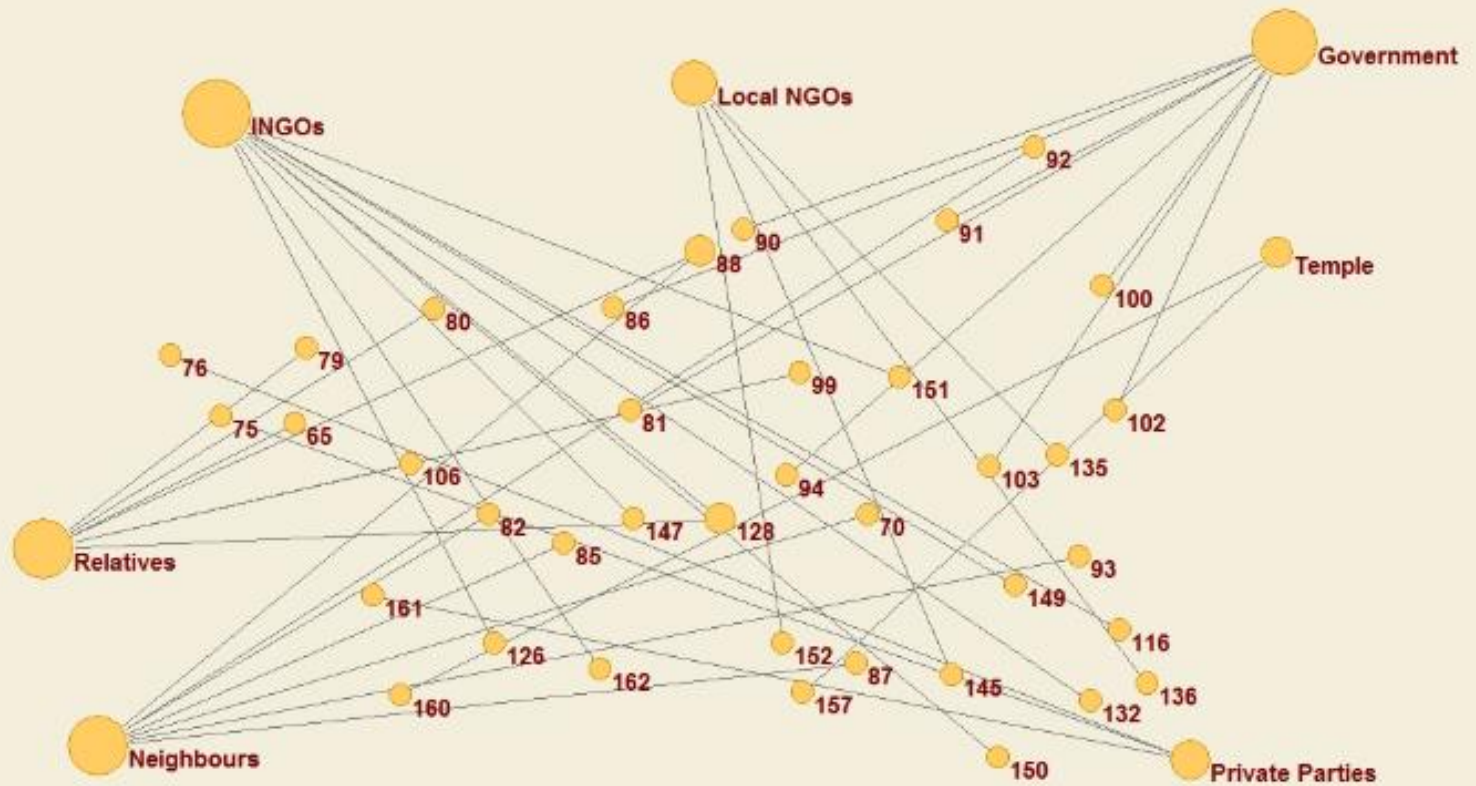
Results: Focus Group Discussion

- the sense of existential vulnerability, needing help in feeling safe, taking care of the injured, and disruption to normal life.
- the processes of engaging community-based resourcefulness
- the condition of 'make do' first stage recovery
- engaging the state

Results: Informal Network Activated After Earthquake



Results: Informal Network for Energy Access



Conclusions

- Households and communities are proactive in restoring some energy services
 - utilising grass root institutional resources
 - changes to energy routines
- Full restoration of energy services was slow
- Energy failure is a key idiom of continued disruption to people's everyday lives after the earthquake
- Inequalities in which communities have managed to restore energy services, e.g. micro hydro plants

Community Energy Resilience in Low-Income Countries

- Establish research collaborations
- Focus on opportunities to increase community energy resilience in on-grid, mini-grid and stand-alone electricity systems in South Asia and sub-Saharan Africa.
- 3 workshops
- June – November 2018

