New measure evaluates human impact of Canterbury quake

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A new way of evaluating the immediate impact of natural disasters by a professor from Victoria University of Wellington shows that each person in Canterbury lost approximately 150 days of 'healthy life' in the aftermath of the 2011 earthquake.

Professor Ilan Noy, Victoria's Chair in the Economics of Disasters, has devised a measurement tool inspired by the World Health Organisation's Disability Adjusted Life Years (DALY) calculations, which assesses the

cumulative number of 'lifeyears', or healthy years, citizens have lost due to death, injuries, being otherwise significantly affected such as having to evacuate their homes, and the financial damages they have incurred.

By adopting a holistic approach that considers the impact of disasters on human welfare as well as the impact of financial losses on wellbeing, Professor Noy is able to calculate an aggregate measure of human lifeyears lost.

"By my calculations New Zealand as a nation lost 180,000 lifeyears because of the 2011 Canterbury earthquake. This amounts to about 15 days per person in New Zealand or around 150 days for each person in Canterbury if you break it down to that region," says Professor Noy.

"Globally, on average the world loses about 40 million lifeyears per year because of disasters, the vast majority in low- and middle-income countries."

The basic premise of the measuring tool is that the value of human life should ethically be considered as equal everywhere, while the value of monetary damages is not, says Professor Noy. This means a dollar lost in a high-income country such as New Zealand imposes a less adverse impact on society than a dollar lost in a lower-income country.

"This way of measuring allows us to more meaningfully talk about the global burden of natural disasters compared to the global burden of other threats and risks such as terrorism and diseases," says Professor Noy.

Professor Noy's measurement index is included in the new United Nations Global Assessment Report issued last week, featured on pages 40–42 of the main report (www.preventionweb.net/english/ … 5/en/home/index.html).

Professor Noy will present the index at the UN World Conference on Disaster Risk Reduction in Sendai, Japan, to be held 14–18 March, in which UN member states are negotiating a new agreement to replace the Hyogo Framework for Action—a 10-year plan to make the world safer from natural hazards, which is one of the three agreements being re-negotiated this year.

Provided by Victoria University of Wellington