December 2019
Welcome

It has been a solemn few weeks in the natural hazards space in Aotearoa, our thoughts are with the whānau, first responders, medical personnel, science advisors and communication specialists affected by and responding to the Whakaari eruption, flooding in Timaru and landslides near Franz Josef. Kia kaha koutou.

In the last few weeks of the year we wanted to provide an update. In this newsletter:

- RiskScape 2.0 End-user requirements

- RiskScape 2.0 Software and User Interface Development Updates

- RiskScape and Social Vulnerability Indicators

- Building Database Standards

- Introducing New Team Members

RiskScape 2.0 Software and User Interface Development Updates

- Catalyst IT and the RiskScape team have delivered the first phase of work for EQC to replace their risk modelling software Minerva. RiskScape 2.0 can now undertake probabilistic risk analysis! EQC are currently testing RiskScape 2.0 and work is continuing to deliver further functionality.

- In 2020 we will be coding more vulnerability functions for other perils.

- New functionality includes developing a translator function for a multi-lingual RiskScape being tested in Te Reo Māori.

- We have set up an early user licence agreement for risk modelling Masters and PhD students to start using the command line version of RiskScape 2.0

- Scoping of the user interface will start in the new year incorporating feedback from the workshops and survey.

- The Governance Group are working through decisions around deployment options, user support systems and a launch date next year

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Want a 2-minute overview of RiskScape?

Check out our YouTube video:

https://www.youtube.com/watch?v=7YsiDk2dguw

CONTACT US

If you would like to find out more about RiskScape, please contact the team at helpdesk@riskscape.org.nz.
The RiskScape user manual is on the wiki:
https://wiki.riskscape.org.nz/index.php/Overview
If you have any questions whilst using RiskScape, you can lodge a help request through https://support.riskscape.org.nz/
www.riskscape.org.nz
RiskScape is a collaboration between GNS Science (www.gns.cri.nz) and NIWA (www.niwa.co.nz).

Building Database Standards

GNS have allocated core funding to create a NZ building type standard for RiskScape's National Building Dataset which includes building location and attributes (specific for different hazards but includes features such as frame type, age of construction, cladding, roof pitch, floor height). The data standard will be used to collect consistent data on buildings, for both pre-event situations and for post-disaster damage surveys.

RiskScape version 1 had a limited standard for building data, it is time for an update to best support post-disaster data collection and risk modelling. We have undertaken a literature review of building typologies from international standards to draft a New Zealand-specific template and would like feedback. If you are interested and wish to contribute feedback, please contact ShengLin Lin (s.lin@gns.cri.nz) from GNS for more details.

Images: Workshop participants from Auckland, Wellington,Christchurch and Dunedin workshops

RiskScape 2.0 End-user Requirements

During October - November the RiskScape team ran a roadshow of workshops in Tāmaki Makaurau, Te Whanganui-a-Tara, Ōtautahi and Ōtepoti to collect end-user requirements from targeted sector groups. We also ran an online survey for further reach. Thank you so much to everyone who participated, we really appreciate your inputs - the results will be used inform decisions around development and deployment.

We are in the process of analysing the data and will be writing the report in the new year. Once this is published we will share the results with you, but we are already identifying key themes around open data and interoperability, use and communication of risk outputs, specific functionality requirements for each sector, and an exciting list of research priorities for scientists to work towards!

Image: Survey results for Question 9 - the context in which people use risk outputs
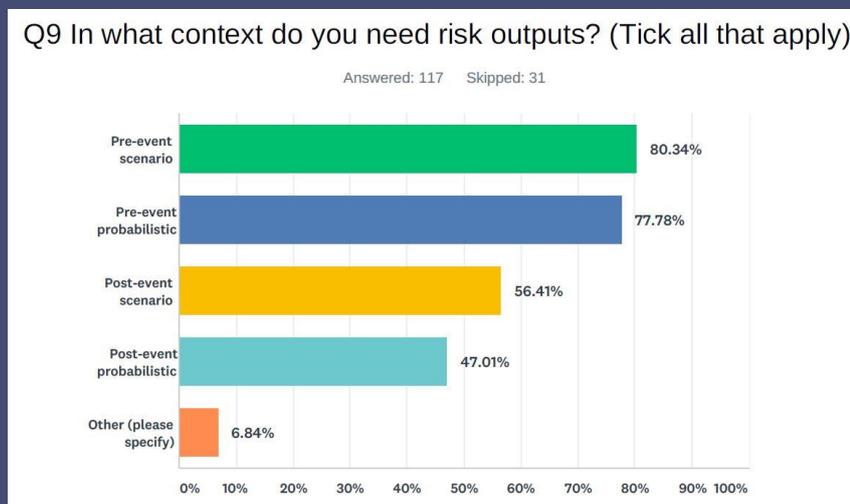
RiskScape Trainings

We will be conducting RiskScape trainings nationwide in 2020.

If you are interested in having a training near you, please contact support@riskscape.org.nz

Social Vulnerability Indicators Compatible in RiskScape 2.0

More research is required to enhance risk modelling to evaluate how people's livelihood and wellbeing may be impacted from natural hazards and climate change, to better inform DRR action.

Kwok (2016) investigated how social vulnerability factors for earthquakes could be incorporated into RiskScape, recommending development of indicators and application through creating resource datasets to overlay with modelled losses in RiskScape. We thank Alan and JCDR for this work!

Image: Indicators for social connectedness and Porirua flood zones on Massey's project story map—visit: Massey GIS account

Following on from this, RiskScape team members Ben Popovich (NIWA) and Kristie-Lee Thomas (GNS) joined the Environmental Health Indicators team from Massey University on their NHRP project 'Indicators of vulnerable populations to natural hazards: a case study of flooding in the Porirua City Council area'.

This project developed a set of social vulnerability indicators for flooding in New Zealand. Indicators were identified for a range of aspects relating to people's exposure, susceptibility and resilience to flooding, and nation-wide indicator datasets were prepared.

As part of this project, the indicator datasets have been implemented as a resource layer in RiskScape 2.0. This resource layer will allow users to identify vulnerable populations and information about those populations, to inform risk analysis. The layer provides data to test and analyse evolving social vulnerability risk modelling methods as recommended by Kwok (2016). Once the user interface and user licence agreements have been set up a tutorial will be developed for using these indicators.

For more information:

- About the project: https://www.ehinz.ac.nz/our-projects/social-vulnerability-indicators/

- About the RiskScape resource layer: contact Ben (Benjamin.Popovich@niwa.co.nz) or Kristie-Lee (k.thomas@gns.cri.nz)

- Kwok A. 2016. Integrating Social Vulnerability Indicators in RiskScape's Earthquake Risk Modelling. GNS Science Report 2016/09 58p
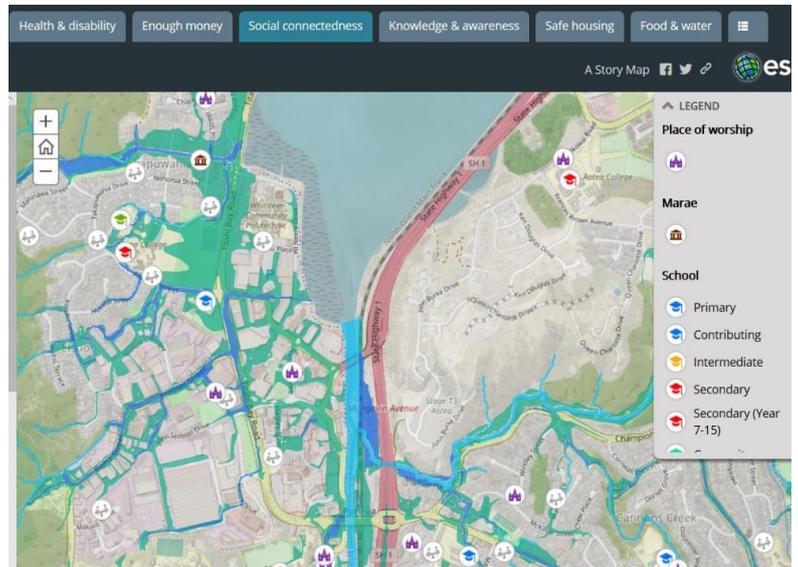
We welcome to the RiskScape team:

Risk Engineer Jose Moratalla from GNS Science. Jose works on Risk modelling, earthquake and liquefaction and vulnerability/fragility modelling.
Stacy Mohan joined NIWA this year as the Communications Lead for Climate, Atmosphere and Hazards Centre. Stacy has worked in science communication for around a decade and has also had stints in education and health comms. Her qualifications are in science (biochemistry and genetics) and journalism.