September 2019
Welcome

It's been a while since our last RiskScape newsletter – we have been super busy and have some exciting news about the future of the RiskScape platform.

In this newsletter:

- Read more about our work on the development of RiskScape version 2.0.

- Find out about EQC selecting RiskScape 2.0 as the platform they will use for risk modelling.

- Read about RiskScape 2.0 being used to help communities in the Asia Pacific region to understand their risk and how they might increase their resilience – including recent case studies from Apia, Samoa and Palu, Indonesia.

RiskScape selected as the risk modelling tool for EQC

EQC has selected RiskScape to replace their existing loss modelling tool and work has already begun on implementation. We are delighted as this will broaden the use of RiskScape to include more government, council, reinsurance and infrastructure company users as well as our existing researcher base.

Sid Miller, EQC Chief Executive, said that while EQC currently has its own tool to model damage and financial loss from earthquakes, "having all three organisations instead pooling resources into the same risk modelling tool (RiskScape) will create a centre of excellence for New Zealand."

Read more about this on EQC's website.

RiskScape version 2.0 is on its way

The first version of RiskScape has been used for some important and exciting work and has made a difference in understanding natural hazard risk in New Zealand and around the Pacific. We have learned a lot and would like to thank our partners who have worked with us along the journey.

But technology and user needs are changing so it's time for a revamp. This will give us the opportunity to build New Zealand's risk tool to better meet user needs.

Software development for RiskScape version 2.0 has been underway since last year. A programme of work has now been agreed for the next financial year – working towards a launch of version 2.0 in mid-2020. The work programme includes continuing to develop RiskScape's core engine, with a focus on risk model workflow functionality, optimisation and performance enhancements.

In the coming months we will begin national workshops and carry out a survey to identify requirements for the RiskScape 2.0 user interface before we move into development of this.

In the meantime, we will enable access for a limited number of New Zealand researchers who have expressed an interest in using the RiskScape 2.0 beta engine for their research. This will help us to get valuable feedback to further refine and develop the engine. Simultaneous to the development work, we'll be updating GNS Science and NIWA's joint RiskScape strategy. We'll be back in touch to let you know more later this year.

What if I'm still using RiskScape version 1?

RiskScape version 1 application is being discontinued and the software is being reconfigured as a web application. This will allow us to make RiskScape 2.0 available with both a graphical user interface (GUI) and a command line interface.

We are hard at work and focused on delivering RiskScape 2.0. As a result version 1.0 support is now only available from our technical wiki, which includes tutorials and work-arounds for known technical issues. If you require more information or for general enquiries please contact us.

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 support@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).

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

RiskScape 2 goes multi-lingual in Palu, Indonesia

RiskScape 2.0 (beta version) made its international debut at a workshop preceding the International Conference on Urban Disaster Resilience in Palu, Sulawesi, on 24 April 2019.

The workshop was a full-day event, covering the concepts of risk and impact modelling, the evolution of RiskScape from version 1 to 2, and using RiskScape 2.0 to assess building impacts from a tsunami affecting the coastal areas of Palu.

Image: Indonesian workshop participants try out RiskScape version 2.0

The tsunami hazard modelling used approximated the inundation extent of the 28 September 2018 tsunami, which devastated the coastal areas of Palu and Donggala. Approximately 30 participants from diverse backgrounds, including the Universitas Tadulako, Universitas Gadjah Mada and Palu City local government, attended the workshop.

Depending on user preferences, the RiskScape software was provided in two languages: English and Bahasa Indonesia. Participants came prepared with their own laptops. The current version of RiskScape is a command line interface, which requires users to type in commands rather than interact with a graphical user interface (planned for development later this year). Despite the learning curve, participants were able to successfully run the software and visualise the results using GIS software.

The workshop was not only the first time RiskScape 2.0 (beta) had been used outside New Zealand, but the first time it had been demonstrated and used beyond the research and development teams.

Participants were highly engaged throughout the day, and there was significant interest in how the software could assist with decision-making. The case study of tsunami inundation in Palu served as a useful example of the applicability of the tool to the local context.

Read more on the StIRRRD website: https://stirrrd.org/2019/05/07/new-zealand-risk-assessment-tool-workshop-help-at-icudr-conference-in-palu/
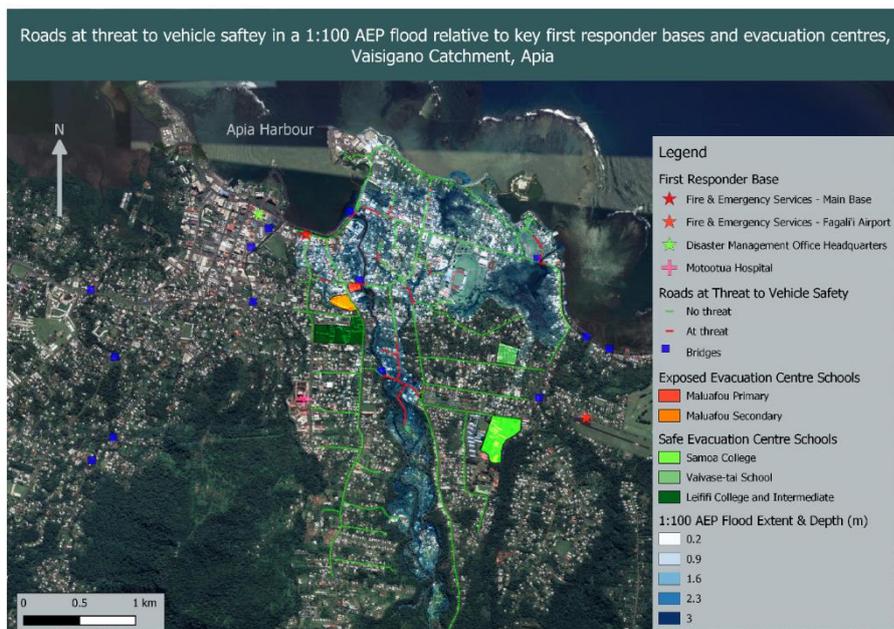
RiskScape Training - University of Canterbury

Matthew Hughes, James Williams and Jade Arnold ran a training session in July and August 2019 at the University of Canterbury (UoC) training Hub. The 60+ students who attended one of the two workshops completed a number of Wellington based earthquake, tsunami and storm surge scenarios. The exercises explored risk analysis, different types of asset data sets, a comparison of hazards and a multiple hazard scenario. Finn Scheele began the second training with a presentation on RiskScape in risk management and decision making. The students are studying Infrastructure Systems – Criticality and Lifelines, and Geographic Information Systems for Disaster Risk and Resilience and used their RiskScape tutorial results to create maps of the hypothetical scenarios for a course assessment. The workshops followed the same successful format as two delivered in 2018 at UoC using RiskScape 1.0.

*Image: James Williams, Jade Arnold and Finn Scheele*

Modelling flood risk now and under a changing climate in Apia, Samoa

The Samoa Disaster Management Office used RiskScape 2.0 (beta) to quantify flooding risk in the catchment of the Vaisigano River – the main waterway which flows through Apia – during existing and future climate scenarios. This information is informing emergency evacuation planning and flood response procedures. The work was part of the PARTneR (Pacific Risk Tool for Resilience) programme.

Roads at threat to vehicle saftey in a 1:100 AEP flood relative to key first responder bases and evacuation centres, Vaisigano Catchment, Apia

RiskScape version 2.0 (beta) was used to assess buildings and roads where there was a threat to human safety under 1 in 100-year flood conditions. They also assessed the total number of people threatened under the existing climate and a 2100 climate change scenario, compared with a 2012 tropical cyclone benchmark.
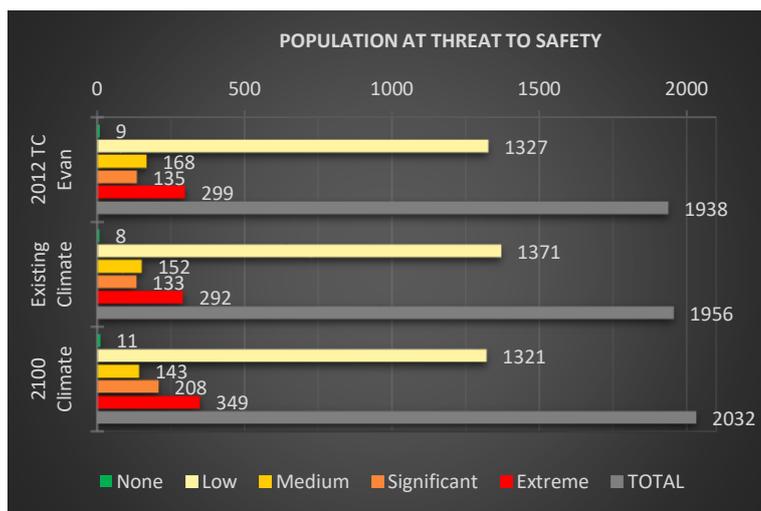
RiskScape version 1 was also used in the project and provided some complementary information about flooding extent under the same conditions and if flood protection barriers were installed along the river. Building levees for a 1 in 20 year flood reduced direct economic losses to buildings by 56 percent when modelled under the 2100 climate change scenario.

Read more about this work at https://www.riskscape.org.nz/international-projects.