Appendix A: News Articles/Stories/Social Media from release.

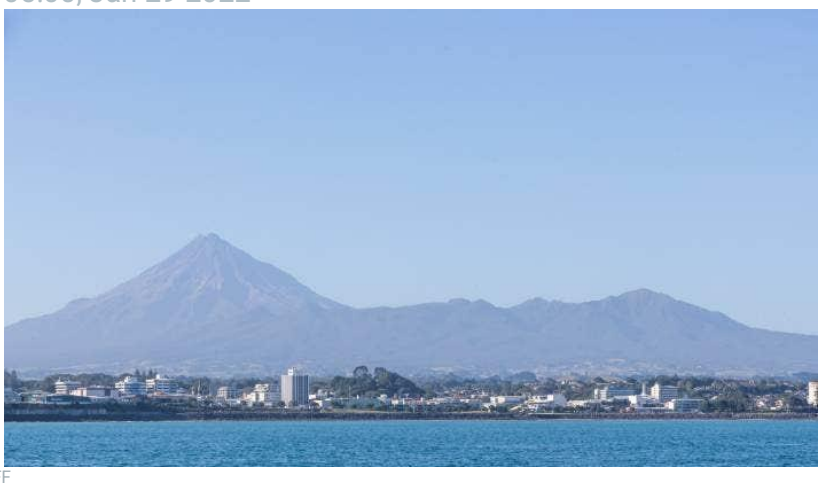
Media Counts

Facebook	159,313 impressions
Twitter	18,000 impressions
Linked In	9.494 views
Website hits	Over 2,000 page views of volcanic infographics page in first week of publication

Taranaki Daily News Article 29 January 2022

Latest modelling of Taranaki Maunga eruption released

Glenn McLean 05:00, Jan 29 2022

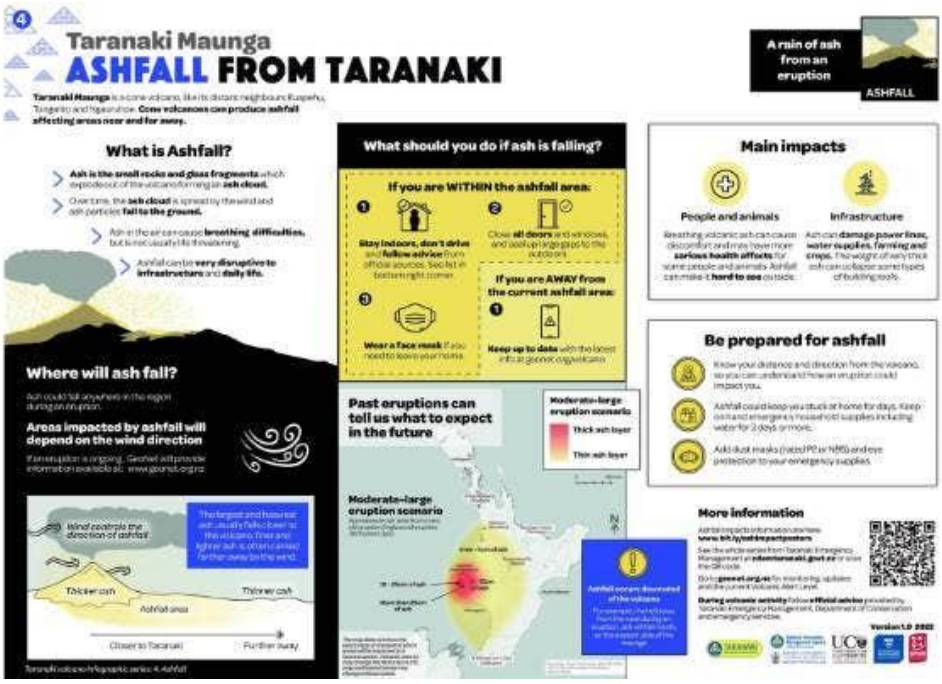


SIMON O'CONNOR/STUFF

Ashfall from a Taranaki Maunga eruption is considered the biggest danger.

Widespread ashfall from the next eruption of Taranaki Maunga has been identified as the greatest hazard for residents in the region after new modelling research.

Several new GNS Science infographics have been released by Civil Defence's Taranaki Emergency Management team after research from Auckland, Canterbury and Massey universities highlighted the main dangers associated with an eruption – ashfall, lava flows, ballistics, gases and avalanches.



STUFF

Ashfall would cover a large area.

They illustrate a potentially catastrophic event which would severely impact lives.

“The biggest risk is probably ashfall,” Taranaki Civil Defence manager Todd Velvin said.

“Ashfall is going to cover a lot of the region, depending on the wind direction, and that can be really detrimental to your health.

“We do have big nasty things like pyroclastic flows that come out of the mountain, but they don’t necessarily travel to places like Stratford, Hāwera, Opunake and New Plymouth. It’s more the ashfall and the impact on your health, our roading, our infrastructure and our water.

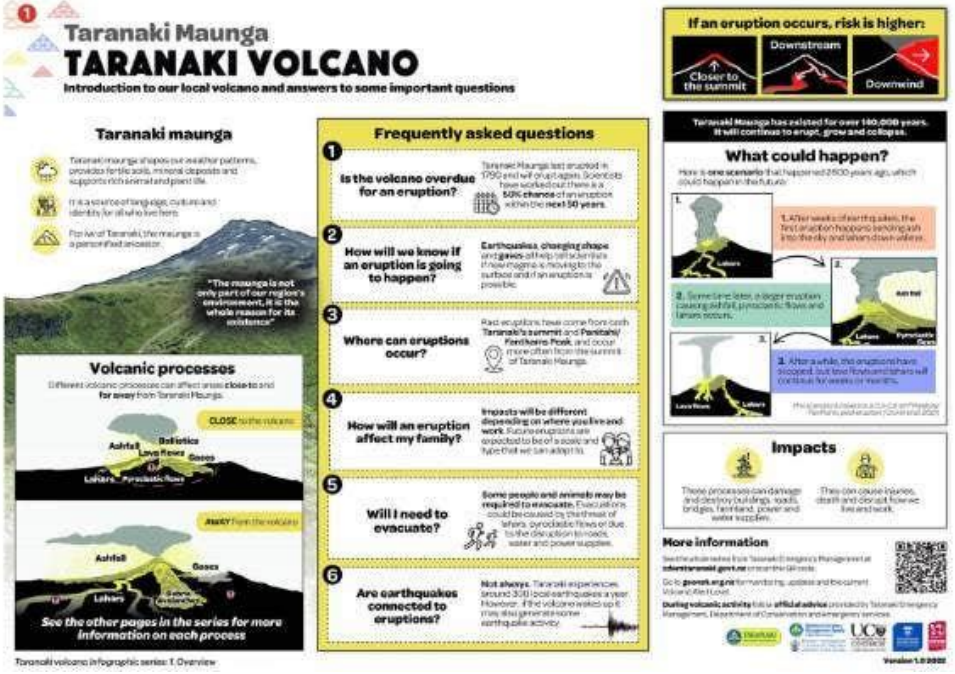
“That will have significant consequences for us.”

ANDY JACKSON/STUFF

Taranaki Civil Defence Emergency Regional Manager Todd Velvin says they continue to learn about potential scenarios associated with an eruption.

While Taranaki Maunga has not erupted since 1790, scientists estimate there is a 50 per cent chance of an eruption within the next 50 years.

Scientists warn ashfall could keep Taranaki residents in their homes for days and cover the entire region depending on wind strength and direction.

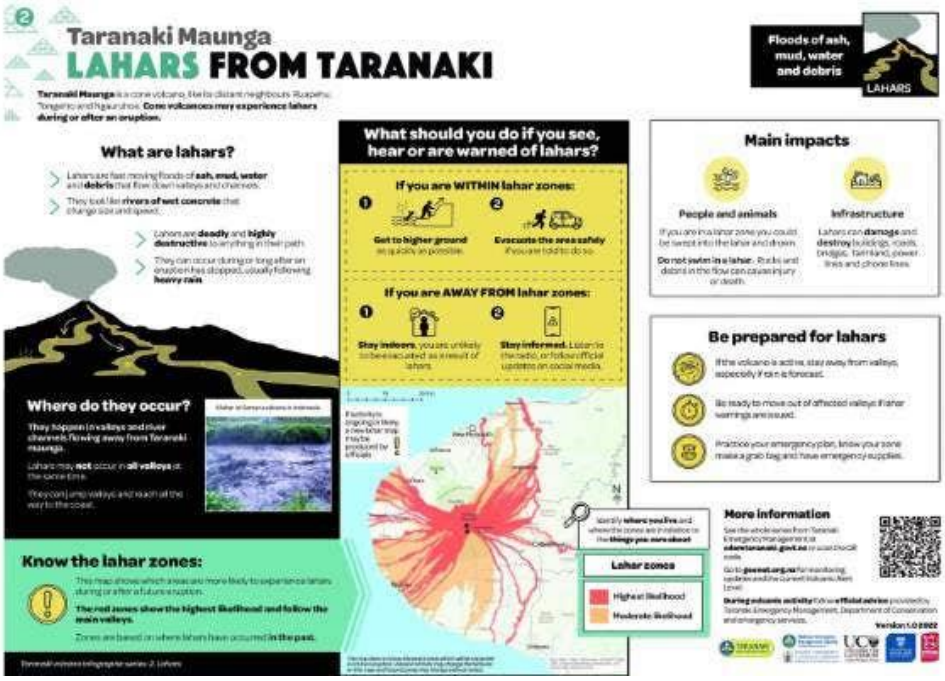


TARANAKI CIVIL DEFENCE

GNS Science infographics have been released by Civil Defence's Taranaki Emergency Management team after research from Auckland, Canterbury and Massey universities

However, before an actual eruption, there should at least be a reasonable amount of warning, with scientists predicting one scenario that would see weeks of earthquakes before a first eruption sends ash into the sky and lahars – floods of ash, mud, water and debris – down valleys.

They could be followed by debris avalanches which have previously been the size of 34,000 rugby fields, silent and invisible gases that can form a weak acid rain over the region while lava could also flow from the top of the maunga.



TARANAKI CIVIL DEFENCE

An eruption would create lahars – floods of ash, mud, water and debris.

Velvin said the modelling gave them a better insight into where those collective hazards could reach.

“Some of it is the same science that existed 10 years ago, but we are learning things day by day,” he said.

While it was a “million-dollar question” to predict the variables between modelling and what could actually happen, Velvin said Tonga’s Hunga-Tonga-Hunga-Ha'apai volcano highlighted the widespread effect of any eruption.

“Mother nature can always throw up a lot of different scenarios and we saw that from the tsunamis associated with Tonga which went a lot further than traditional volcanic causing tsunamis,” he said.

From Resilience to Nature's Challenge Newsletter February 2022

New Poster Series to Help Build Resilience in Taranaki

By Jenny Stein

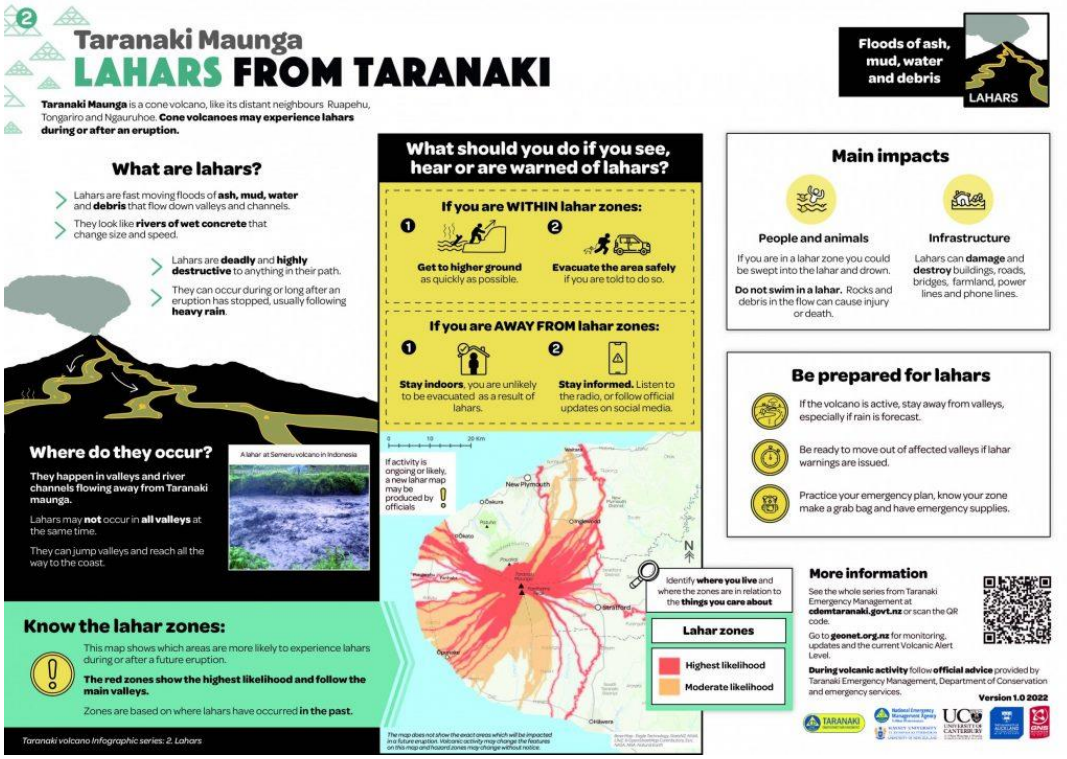
Last month the Taranaki Civil Defence and Emergency Management Group Office (TEMO) published a series of posters about volcanic processes associated with Taranaki Maunga. With contributions from Resilience Challenge researchers and funding from the National Emergency Management Agency (NEMA), GNS Science, and the Transitioning Taranaki to a Volcanic Future Endeavour Project, the posters address misconceptions about the risks associated with the volcano and deliver key messages about how to stay safe in the event of an eruption.

"The region wouldn't exist without the volcano," explains Teresa Gordon, an analyst at the TEMO office who initiated the poster development project. "But there's potential for quite a bit of disruption if the volcano goes up, and that would affect the whole country, not just the region."

Although it has not erupted in living memory, Taranaki Maunga is an active volcano and the TEMO's top priority for response planning for the future. Teresa wanted to make a poster series that would provide people with the information they needed to meaningfully engage in the response planning process, rather than just assuming there was nothing they could do if the volcano were to erupt.

"Resilience comes from self-agency," Teresa says. "People become resilient when they believe that they can make a difference through their individual actions."

Communicating what those actions should be required breaking down the complex nature of a volcanic eruption into different processes, each with their own ranges of potential impact and risk in different areas and over different periods of time. Each process then became a separate poster in the series, all informed by decades of scientific research.



A poster about lahars from Taranaki Maunga; one of six posters in the series. Credit: TEMO

“You have to distil down 30 years’ worth of work, hundreds of papers, all that information into a couple of posters. So that’s a hard job,” says Jon Procter, the lead science advisor on the project. A Professor of Natural Hazards at Massey University and Co-Leader of the Resilience Challenge’s Volcanoes programme, Jon says the biggest challenge was making sure that all the people contributing to the project were on board with the same clear and accurate messages about volcanic phenomena. “You just really want those simple key messages that are accurate and presented in a way which could be relevant to everyday people,” Jon says.

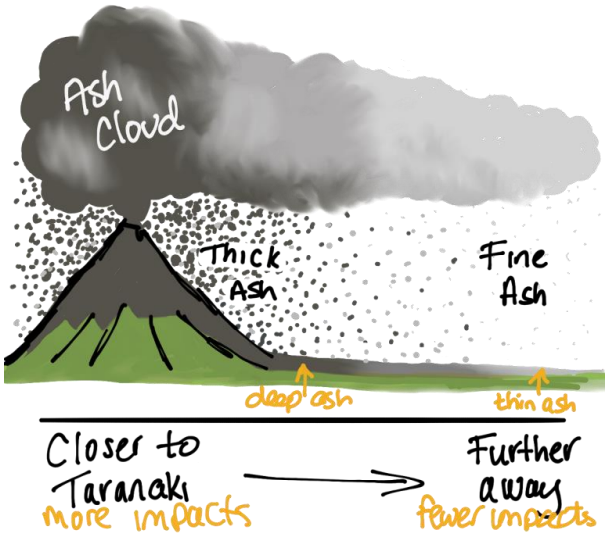
Public focus group mapping exercise. Credit: Danielle Charlton, GNS Science

To ensure their information was relevant to their target audiences, the poster development team conducted focus groups with council staff and the general public and found that people wanted to know two things: what they could do to keep themselves safe during an eruption, and what the impacts of that eruption would be.

“Starting off with that user perspective is not that common, so we were glad to bring that in, not just right at the end, but from the beginning,” says Danielle Charlton, a Hazard and Risk Management Scientist with GNS Science, who oversaw and led the design of the posters. To ensure that information was presented clearly and effectively, she used eye-tracking studies of how people view maps to determine where to put the most vital information, imposed a limit of 500 words per poster, and a reading age of 12 and up for the series.

“We wanted to make sure that someone might have remembered this information,” she says. “If we added something in, we’d have to cut something out somewhere else, so it really helped prioritize that information.”

“The things that happen around their volcanoes are not considered hazards (by Māori). They are considered expressions of that entity,” says Jon, who sees the move away from the use of ‘hazard’ in favour of words like ‘process’ or ‘phenomena’ as a proactive step in the communication of risk. “‘Hazards’ has that real negative connotation. We’re trying to build resilience by getting people to recognize that these are natural events in our environment.”



An early sketch for the ashfall poster. Credit: Danielle Charlton

Reflecting on the impact the posters have had in the short time since their publication, Teresa says “In environmental education there is Awareness, Knowledge, Intention to Act, and then Action. The response has been massive. It’s our biggest social media post we’ve ever had. So, I think we’ve obviously got the awareness bit ticked off. But it’s a whole trail to get down to the other end where people are truly more prepared as a result of the posters.”

One other crucial decision the team made was to not use the term ‘hazard’ anywhere on any of the posters. This was done primarily out of respect for local Iwi, who view the maunga as an ancestor, but also to avoid any anxiety such language provokes.

With requests from schools and others pouring in, it is hoped that the TEMO’s Taranaki Maunga poster series will prove to be a valuable tool in the ongoing effort to help build community resilience to future volcanic activity in the region.

View the complete poster series here.