Whakaari Volcanic Eruption – December 2019

The eruption of Whakaari (White Island) on 9th December 2019 led to multiple fatalities from tour groups visiting the volcano. The owners of the island, and the Institute of Geological Nuclear Sciences were both prosecuted by WorkSafe New Zealand.

From a natural hazard perspective, the outcomes provide a case study of interpretation for management of risk "*in so far as reasonably practicable" (SFARP)* and for learnings on risk culture, systems, and monitoring.

Key findings were the lack of follow up from past safety recommendations, and the lack of a 'what if?' after the 2016 night-time eruption.

The snapshot of learnings below come from the written judgments and there are over 20 learnings that may apply to broader management of natural hazard risk.

Resources available

- Judgement

Useful to

- Regulators
- Dam owners
- Disaster & emergency managers
- Boards

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Governance Questions

How do previous safety rulings, judgments and recommendations get implemented, and embedded?

How does org. management of risk in SFARP compare against legal judgments?

Does organisational management of risk rely on external audits? If so, how good are the audits?

How is risk appetite and SFARP requirements demonstrated and documneted?

Event learning examples

Category	Event	Learning/prevention activity
Source for the event learnings is the Auckland District Court judgement. Prevention activities are broader industry learnings inferred from the event.		
Lessons learnt	An eruption on 27th April 2016 occurred at night and was not predicted – a similar event to the 2019 eruption. An opportunity to identify the risk and prevent the hazard was missed with the judge noting that every risk assessment, and risk management process had failed, and it should have been obvious after that eruption.	Learning lessons from events and posing the 'what if?' questions is a key aspect of risk management. Encouragement of the curious. Treating a near miss as an actual event for the purposes of risk management is used by many organisations to ensure continuous improvement.
Emergency plans	Lack of clarity by those who were party to the Whakaari emergency plan on when it applied - ongoing, or during periods of increased risk? Roles and responsibilities were unclear and therefore assumed by each party.	Emergency of incident response plans need a clear statement, or trigger for when they apply.
Due Diligence	Assessment of what is demonstrates risk management to a standard of *'so far as reasonably practicable'* (SFARP) focused on understanding the history, access to information, need for risk assessments, and availability of resources.	SFARP is not just what an organisation knows, its what it ought to know to ensure its risk is lowered to a point that is grossly disproportionate ie the value of the mitigation is disproportionate to the time, trouble, or cost involved. Have steps been taken to determine what a post event review might determine is reasonable management of risk through the lens of external parties?
OH&S	GNS failed to communicate risk to contractors. This was aggravated in the view of the Court by a recommendation that GNS should do exactly that after a similar incident in 2012. An opportunity to mitigate risk was missed.	Duty of care is the same for contractors and staff. Do contractors and employees get treated differently? If so, does this align with a duty of care?
Due Diligence	So Far As Reasonably Practical (SFARP) risk requirements detailed (for this context). Judgement advised requirement for continuing risk assessment through 'variable and unpredictable conditions'.	SFARP it is a way of ongoing risk management and requires periodic review as hazards conditions change. The periods of review are a matter of judgment for risk owners and any risk mitigation activity identified should be dealt with expeditiously.