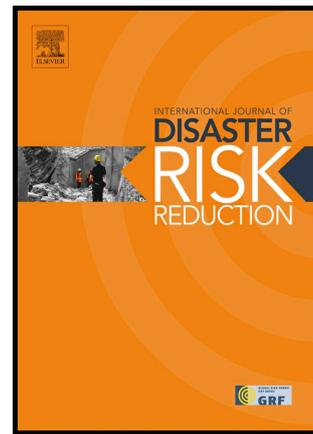


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Risk modelling as a tool to support natural hazard risk management in New Zealand local government

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Key words: Risk modelling; natural hazard risk management; emergency management; RiskScape; science-policy; local government.

1 Abstract

Due to New Zealand's exposure and vulnerability to natural hazards, it is important for local government to have tools that enable effective use of its natural hazard risk information. This paper explores the use of risk modelling as a tool that can support local government to better understand, manage, and communicate natural hazard risk. Focus group sessions were held with emergency management and other natural hazard practitioners in councils across New Zealand to understand their perceptions on the value of risk modelling tools, particularly 'RiskScape'. While practitioners see the value in the use of risk modelling relating to communication, decision making, planning and emergency response purposes, they also see a number of challenges. Challenges identified for the use of risk modelling relate to how emergency management and natural hazard risk is perceived and managed, issues with connecting information and developing data, and the capability of risk modelling software. Underlying these challenges is the recognition that while risk modelling can help span the science-policy interface, it is the problems with this interface that slow its development. However, with ongoing mutual engagement, risk modelling can become an effective tool to communicate natural hazard risk and better inform natural hazard policy and procedure.

2 Introduction

'Sometimes it does us a power of good to remind ourselves that we live ... where two tectonic plates meet, in a somewhat lonely stretch of windswept ocean just above the roaring forties. If you want drama – you've come to the right place' (Sir Geoffrey Palmer, cited in MCDEM, 2004. p.2).

New Zealand is an island nation in which events such as earthquake, volcanic activity, tsunami, flooding, storm, and landslide occur with sufficient intensity that substantial damage and loss of life results (King & Bell, 2006). Given the severity of natural hazard risks, it is an increasingly important focus for national and local government to ensure natural hazards are understood and managed effectively. However, local government understanding and management of natural hazard risk is fraught with challenges, including uncertainty over how natural hazards should be managed (LGNZ,

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