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# The role of Land-Use Planning in reducing the Vulnerability of the Bay of Plenty region to Natural Hazards

A thesis presented in partial fulfilment of the requirements for the degree of

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**“A prudent person foresees danger and takes precautions. The simpleton goes blindly on and suffers the consequences.”**

**- Proverbs 22:3 (New Living Translation)**

## **Abstract**

[This thesis analyses policies and plans used by local authorities in New Zealand's Bay of Plenty region to determine how well they address vulnerability](#)

to natural hazards. Interviews were conducted with planners, decision-makers and community leaders to find improvements necessary to reduce vulnerability. The Bay of Plenty was chosen as a case study due to the wide range and close proximity of natural hazards the region is exposed to. Following a literature review, policies, plans and interview data was coded, arranged into themes and findings written up. This research found that New Zealand has robust legislation that provide planners, decision-makers and individuals with the foundation and tools to avoid or mitigate hazard risk. However, the lack of use of the term vulnerability needs to be addressed. The 'existing use' rights conundrum presented by the Resource Management Act (1991) presents a challenge to meaningful locational decisions to reduce exposure. The absence of specifically addressing vulnerability in legislation filters down to Bay of Plenty policies and plans; it is difficult to plan for vulnerability reduction if there is no focus on it. The interviews found that access to financial resources and strong social ties are key determinants of vulnerability. However there were also a number of seemingly contradictory sources of vulnerability such as a greater vulnerability of wealthy and urban communities relative to poor or rural communities. This underlines how difficult it is to plan for complex social problems. The obvious implication of this research is that vulnerability is a complex and diverse problem that is not mitigated by placing people into broad categories divorced from the sum of their circumstances.

### **Key words**

Land-use planning, vulnerability, resilience, risk, advocacy planning, Bay of Plenty, New Zealand

## **Acknowledgements**

We live on a beautiful planet of magnificent vistas; however, the same forces that create these splendours we enjoy also pose great risk to our lives. It is my hope that this most minor of works will encourage planners and decision makers in the Bay of Plenty region to more adequately address the vulnerability of its residents.

My thanks go to Professor Bruce Glavovic for his supervision and wisdom along the long journey to the completion of this thesis. I also owe a debt of gratitude to the informants of this study for their generosity in time and candour about the challenges facing the region. To my long-suffering wife and family I thank you for giving me the time to complete this journey.

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## **List of abbreviations and acronyms**

<b>ALARP</b>	As low as reasonably practical
<b>AP</b>	Annual Plan
<b>APA</b>	American Planning Association
<b>BA</b>	Building Act (2004)
<b>BOP</b>	Bay of Plenty
<b>BOPCDEMG</b>	Bay of Plenty Civil Defence Emergency Management Group
<b>BOPRC</b>	Bay of Plenty Regional Council
<b>CDEM</b>	Civil Defence Emergency Management
<b>CDEMA</b>	Civil Defence Emergency Management Act (2002)
<b>CERZ</b>	Current Erosion Risk Zone
<b>CHEPA</b>	Coastal Hazard Erosion Plan Area
<b>CP</b>	City Plan
<b>DIA</b>	Department of Internal Affairs
<b>DP</b>	District Plan
<b>LGA</b>	Local Government Act (2002)
<b>LGOIMA</b>	Local Government Official Information and Meetings Act (1987)
<b>LIM</b>	Land Information Memoranda
<b>LTP</b>	Long Term Plan
<b>MCDEM</b>	Ministry of Civil Defence and Emergency Management
<b>MSD</b>	Ministry of Social Development
<b>NES</b>	National Environmental Standard
<b>NPS</b>	National Policy Statement
<b>NZCPS</b>	New Zealand Coastal Policy Statement
<b>NZPI</b>	New Zealand Planning Institute
<b>ODC</b>	Opotiki District Council
<b>PIA</b>	Planning Institute of Australia
<b>PIM</b>	Project Information Memoranda
<b>RMA</b>	Resource Management Act (1991)
<b>RPS</b>	Regional Policy Statement
<b>TCC</b>	Tauranga City Council
<b>UNISDR</b>	United Nations International Strategy for Disaster Reduction
<b>WBOPDC</b>	Western Bay of Plenty District Council

**WINZ** Work and Income New Zealand (social security)

### List of definitions

**Hapu** Sub tribe

**Hui** Meeting

**Iwi** Tribe

**Marae** The complex of buildings including a meeting house around a courtyard where formal greetings and discussions take place

**Puha** A small green leafy vegetable found native to New Zealand that is boiled and eaten

**READYNET** The emergency management database used by BOPCDEMG

**Runanga** Tribal council

**Whanau** Extended family

**Whare** House

Maori language definitions are based on translation sourced from Moorfield (2013).

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