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## Measuring the level of disaster preparedness in Auckland

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### Abstract

Auckland is susceptible to natural hazards. Over the years, there has been a growing interest in introducing a broader concept of disaster preparedness and resilience. The recent 2010 and 2011 earthquakes in the Canterbury region have emphasized this interest. Stemming out from a previous study of measuring the level of disaster preparedness in the CBD, this research intends to examine the validity and robustness of the measurement tool used. It answers the questions that relate to the preparedness levels and preparedness indicators of the communities in Auckland's suburban areas. The study revealed that the tool is robust, thus, may be used in other communities as well. It is found out through this research that around 23% of the participants are considered fully prepared while approximately 24%, 39%, and 15% of the respondents are found to be committed, aware, and unaware, respectively. Moreover, it is noted from this research that the respondents' interpretation of the term "being prepared" is more on awareness of the disasters that may occur.

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### 1. Introduction

Over the years, New Zealand has been proactively focusing on disaster risk management because its geographical location suggests that natural hazards may occur any time. Regulations and policies have been in place to make the country prepared for such events [1]. A national vision of "A Resilient New Zealand – communities understanding

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and managing their hazards”, under the Civil Defence Emergency Management (CDEM) Act of 2002 [2], has been the underlying idea for continuously creating and implementing initiatives that builds resilience amongst New Zealanders by the different CDEM groups, central and local government, lifeline utility providers, and emergency services.

For years, there has been there has been a growing interest in introducing a broader concept of disaster preparedness and resilience. For countries vulnerable to natural hazards, the consequences and effects of such events are already anticipated, thus, encouraging disaster risk management and reduction to mitigate risks and facilitate recovery from these hazards should disaster occur. For hazards that occur without warning, mitigation and preparedness initiatives are considerably more important. Moreover, developing the capability to mobilise preparedness or readiness plans quickly and effectively entails a lot of work and effort since it faces challenges such as how people understand hazards, interpret risks, and the extent to which people are willing to prepare for disasters. [3].

The 2010 and 2011 earthquakes in the Canterbury region have emphasized the need not only for resilient communities, but also for an improved community preparedness in handling and responding to unexpected disastrous events. The research conducted by McClure et.al. [4] regarding people’s judgements of earthquake risks before and after the Canterbury earthquakes and its relationship with preparedness revealed lessons for preparation strategies especially making it clear that the whole country of New Zealand is at risk to hazards (for example earthquakes) – not just Wellington or Christchurch.

Recent studies show that the Auckland region is below average (with only 9%) in terms of disaster preparedness compared to other regions even after the Canterbury earthquakes [5] inspite of initiatives from the Auckland Civil Defence and the Ministry of Civil Defence & Emergency Management in the form of online information, emergency hotline, message alerts, Civil Defence App, hazards quick reference guides, and drills.

This research builds on a previous study “Measuring disaster preparedness of Auckland inner city apartment residents” [6] which developed a measuring tool that can capture the level of disaster preparedness of the residents.

This study aims to examine the validity of the tool developed from a previous study in measuring the level of disaster preparedness of an Auckland suburban area. It intends to answer the following questions:

- How ready are the communities in Auckland’s suburban areas when it comes to natural hazards?
- What are the indicators of preparedness of these communities?

These questions will in turn give the researcher view in identifying the factors that indicate preparedness and the enablers and barriers in taking actions towards disaster preparedness.

## 2. What is disaster preparedness?

Disaster preparedness is often referred to as the measures taken prior an event that lessen or may help mitigate and eliminate the severity of natural disasters by preparing the community or people through development of emergency plans for response and recovery, translation of these plans quickly and effectively, and continuous public awareness regarding hazards and risks.

Looking into how three of the most influential countries (when it comes to disaster management) define preparedness, it is shown that different nations define disaster preparedness according to their own perceptions:

- Japan – “the capacities and knowledge developed by governments, professional response organisations, communities, and individuals to anticipate and respond effectively to the impact of likely, imminent, or current hazard events or conditions” (Hyogo Framework)
- New Zealand – “developing operational systems and capabilities before an emergency happens, including making arrangements with emergency services, lifeline utilities, and other agencies, and developing self-help and response programmes for the general public” (Ministry of Civil Defence and Emergency Management)
- USA – “a state of readiness to respond to a disaster, crisis, or any other type of emergency situation” (Federal Emergency Management Agency)

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