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Exploring New Zealand’s Capability to Strategically Manage Logistical Responses to Major Civil Defence and Emergency Management Events

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

Master of Logistics and Supply Chain Management

at Massey University, Palmerston North, New Zealand.

Shaun Thomas Fogarty

April 2014
Declaration Confirming Content of Digital Version of Thesis

I confirm that the content of the digital version of this thesis

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Shaun Thomas Fogarty
April 2014
Abstract

Effective management and leadership in readiness for and response to disaster events can mean the difference between life and death, as well as shaping the scale of the impact that these events can have on the economy and social stability of New Zealand.

The purpose of the current study is to contribute to the research field of Humanitarian Logistics, with a particular focus on New Zealand’s management capability to logistically respond to civil defence and emergency management (CDEM) events. In the wake of the 22 February 2011 Christchurch earthquake, it is timely to contribute academic literature that focuses directly on New Zealand’s readiness and response, and assesses the country’s capabilities should such a significant scenario occur again.

The thesis focuses on three contributing research fields that set the foundation of the study’s research framework. These are Humanitarian Logistics, Emergency Management and Leadership, and Governance and Policy. An extensive literature review examines these areas with the aim of drawing together common themes and contemporary issues that have shaped the subsequent research questions. The research design is centred on a simplified model of research (without hypotheses), and used a ‘Hierarchy of Concepts’ to facilitate an inductive approach to data collection and analysis. Data collection resulted in a high response rate to a questionnaire survey that saw the contribution of 84 emergency management professionals, along with the cooperation of seven of New Zealand’s senior executives from the wider CDEM sector who agreed to participate in a thorough interview process. Audit assessments and independent performance reviews also provided a basis with which to compare and contrast the data collection set.
Research analysis found that New Zealand possesses the foundation of a robust framework of emergency management legislation, a National CDEM Plan, and other policies, yet implementation and performance against this framework indicated a range of deficiencies. In a number of cases these areas require urgent attention.

The main findings are categorised under six common and interrelated themes: Logistics Development, Enhancing Collaboration, Smart Integration, Strengthening Governance, Smarter Resource Management, and Enhancing Professional Development. Under each of these themes a number of potential improvements are identified that would benefit the wider CDEM sector as a whole. Analysis and associated deductions, conducted through the lens of these six themes, resulted in 17 key recommendations.
Acknowledgements

I would like to offer my sincere thanks to all those who have helped me during the course of my research into this important and stimulating topic. Humanitarian Logistics goes to the heart of how our nation can respond and support those in need at a time of crisis. The spirit of support that I have received as I’ve travelled New Zealand researching and interviewing CDEM professionals has demonstrated to me the strength of character that abounds in our country.

Importantly I pay my respects to the memory of those brave souls who have died in CDEM disaster events across New Zealand and overseas. A major focus area of this thesis has been on the 22 February 2011 Christchurch earthquake. The 184 lives that were lost on that tragic day will forever be remembered in the chronicles of New Zealand’s history. It is the hoped that the research contained in this thesis will assist in the future advancement of CDEM, and may add in someway to alleviating the heartache suffered by the families and friends of those lost or injured.

I thank the leadership of the New Zealand Defence Force (NZDF) who have allowed me full-time study leave to focus on this research project. The NZDF plays an important role as a supporting agency to CDEM. It is my hope that the analysis and recommendations of this research will assist in the development and effectiveness of the vital support the NZDF can provide in a time of need.

To my supervisors, Professor Paul Childerhouse and Walter Glass, I thank for their academic support and guidance. In particular, I thank Walter for finally convincing me to undertake the Masters degree some 10 years after he lectured me through the Massey University Diploma of Logistics.
A special acknowledgement is due to the leadership within CDEM, particularly John Hamilton, Bruce Pepperell and their executive teams who have been very open with information, both oral and written. I also thank the wider CDEM community, especially those who willingly participated in the data collection interviews and questionnaire survey that generated such a thorough data set with which to conduct analysis.

To Helen McDonald and Sam McCutcheon, I thank you both for assisting with proofreading the chapters as they rolled off the press. Gratitude also to Wally for the coffee and encouragement during our meetings at the BNZ Bank café, Clyde, Central Otago.

My last thank you goes to my wife, Felicity. Without her forbearance, understanding and support I would surely have struggled to complete what has been a wonderfully rewarding piece of work.

Finally, I acknowledge the research approval obtained from the Massey University Ethics Committee. In doing so I make the following statement:

“This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University’s Human Ethics Committees. The researcher named above is responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher, please contact Professor John O’Neill, Director (Research Ethics), telephone 06 350 5249, email: humanethics@massey.ac.nz.”
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Glossary

ADF      Australian Defence Force
AFP      Australian Federal Police
AoG      All of Government
ASEAN    Association of Southeast Asian Nations
AUSAID   Australian Aid and International Development
CARE     Cooperative for Assistance and relief Everywhere
CBD      Central Business District
CDEM     Civil Defence Emergency Management
CERA     Canterbury Earthquake Recovery Authority
CIMS     Critical Information Management System
CIPD     Chartered Institute for Professional Development
CIVMIL   Civilian-Military
CoS      Chief of Staff
CRC      Christchurch Response Centre
C2       Command and Control
DDIS     Directorate of Defence Intelligence and Security
DESC     Domestic and External Security Coordination
DFID     Department for International Development
DHB      District Health Board
DIA      Department of Internal Affairs
DPMC     Department of Prime Minister and Cabinet
DVI      Disaster Victim Identification
EMIS     Emergency Management Information System
ECC      Emergency Coordination Centre
EOC      Emergency Operations Centre
FMCG     Fast Moving Consumer Goods
GCSB     Government Communications and Security Bureau
GFC      Global Financial Crisis
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tr>
<td>GR</td>
<td>General Research</td>
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<tr>
<td>HADR</td>
<td>Humanitarian Assistance and Disaster Relief</td>
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<td>HUMLOG</td>
<td>Humanitarian Logistics</td>
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<tr>
<td>HQ</td>
<td>Headquarters</td>
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<tr>
<td>ICG</td>
<td>Intelligence Coordination Group</td>
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<td>ICRC</td>
<td>International Committee of the Red Cross</td>
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<tr>
<td>IFRC</td>
<td>International Federation of the Red Cross</td>
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<tr>
<td>ILD</td>
<td>Institute for Leader Development</td>
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<tr>
<td>INCIS</td>
<td>Integrated National Crime Information System</td>
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<tr>
<td>INGO</td>
<td>International Non Governmental Organisation</td>
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<td>INTERFET</td>
<td>International Forces in East Timor</td>
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<td>ISL</td>
<td>Institute for Strategic Leadership</td>
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<td>JMAP</td>
<td>Joint Military Appreciation Process</td>
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<td>JSP</td>
<td>Joint Service Plan</td>
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<td>KPI</td>
<td>Key Performance Indicator</td>
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<td>LDC</td>
<td>Leadership Development Centre</td>
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<td>L&amp;SCM</td>
<td>Logistics &amp; Supply Chain Management</td>
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<tr>
<td>LUC</td>
<td>Lifeline Utility Coordinator</td>
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<td>LG</td>
<td>Lifeline Group</td>
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<td>MBIE</td>
<td>Ministry of Business, Innovation and Employment</td>
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<tr>
<td>MCDEM</td>
<td>Ministry of Civil Defence and Emergency Management</td>
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<tr>
<td>MFAT</td>
<td>Ministry of Foreign Affairs and Trade</td>
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<td>MNZ</td>
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<td>MoH</td>
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<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>NAB</td>
<td>National Assessment Bureau</td>
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<td>NCMC</td>
<td>National Crisis Management Centre</td>
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<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
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<td>National Security System</td>
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NZFS  New Zealand Fire Service
NZLC  New Zealand Lifelines Committee
NZP  New Zealand Police
NZRC  New Zealand Red Cross
NZSIS  New Zealand Security Intelligence Service
NZTA  New Zealand Transport Authority
ODESC  Officials Domestic & External Security Committee
OGA  Other Government Agency
RAAF  Royal Australian Air Force
RNZAF  Royal New Zealand Air Force
RNZN  Royal New Zealand Navy
SAR  Search and Rescue
SCM  Supply Chain Management
SR  Specified Research
SRG  Security and Risk Group
SSC  State Service Commission
TLA  Territorial Local Authority
UN  United Nations
UNOCHA  United Nations Office for the Coordination of Humanitarian Affairs
UNTAET  United Nations Transitional Administration in East Timor
WFP  World Food Programme
WoG  Whole of Government
WREMO  Wellington Region Emergency Management Office
4Rs  Reduction, Readiness, Response & Recovery