



Chair in e-Government

Research project: 'The use of new media in managing natural disasters'

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Project Summary

Internationally and nationally, there is an increasing awareness that new media, such as the Internet, SMS, Twitter, Youtube and Facebook, can enable forms of collaborative action and even governance in managing natural disasters, by offering new ways of information sharing within and across agencies involved in the disaster management operation; with and across other agencies and organizations (e.g. NGOs); with businesses; and with and among members of the general public. For example, in the case of Hurricane Katrina, rescue workers in collaboration with the US Air Force used Google Earth to find people who were stranded. Other examples are collaborations that emerged immediately after the Haiti Earthquake and the Chile Earthquake respectively, where volunteers developed Web-based, publicly available crisis maps in near real-time, using tagged information gathered from reports (e.g. texts, photos) coming from inside the affected regions via SMS, Web, email, radio, phone, Twitter, Facebook, television, list-serves, and live streams, and offering a shared 'Person Finder' space where lost and found individuals could be reported.

Thus far, there is little empirical research on the ways, extent, and conditions under which new media are used for information sharing and collaborative action between various actors and stakeholders in managing natural disasters, with none to date in the context of the New Zealand public sector. Available research on information sharing in these situations, such as in the case of Hurricane Katrina, points at major information sharing failings of government agencies, leading to substantial changes of existing institutional arrangements, including the introduction of new legislation, changes to governance structures and leadership of government agencies, and the introduction of new information systems (e.g. Wetmore, 2007).

The two recent Christchurch earthquake experiences offer New Zealand-based opportunities to empirically explore the role of new media in information sharing and collaborative action between various actors and stakeholders in responding to a major natural disaster. Furthermore, an international, web-based study will be conducted to explore experiences with ICT-enabled forms of information sharing and collaboration in managing a variety of major natural disasters overseas, such as Hurricane Katrina, the Haiti Earthquake, Chile Earthquake, the Queensland floods, Cyclone Yasi, and more recently the Japan Earthquake. As there is not much theory available on the role of new media in information sharing and collaborative action in managing natural disasters, this research activity will take an inductive, qualitative research approach. A third stream of work will be focused on what government agencies and other stakeholders involved in the management of natural disasters in New Zealand, could learn from the research findings.

Research Design

The research focuses on the following three questions:

1. *How, why, and under what conditions, have new media been used for information sharing and collaborative action across government agencies, between government agencies, NGOs, businesses and members of the general public, and among members of the general public, in dealing with a major natural disaster?*
2. *How can these empirical findings be understood theoretically and conceptually?*
3. *What could government agencies and other stakeholders involved in the management of natural disasters in New Zealand, learn from the research findings?*

Research Methods

- Literature review
- Website analysis
- Semi-structured interviews with key stakeholders involved in ICT-enabled forms of information sharing and collaborative action in responding to the Christchurch earthquakes.
- Focus group meetings across New Zealand with government agencies and other key stakeholders to explore learning opportunities from the research.

Expected Research Outputs

- A final written report setting out research findings
- An academic paper for presentation at an international conference
- Two academic papers to be submitted to peer-reviewed journals
- An end-of-project seminar for presentation of key findings

For further information about this research project please contact Professor Miriam Lips on (04) 463 6588 or miriam.lips@vuw.ac.nz