

Welcome to the fourth of the research updates from the Joint Centre for Disaster Research. The centre opened in December 2006 and is a joint venture between Massey University and GNS Science within the School of Psychology, based at the Massey University campus in Wellington.

The centre undertakes multi-disciplinary applied teaching and research aimed at:

- gaining a better understanding of the impacts of natural, man-made, and environmental disasters on communities
- improving the way society manages natural, man-made and environmental risk
- enhancing community preparedness, response and recovery from the consequences of natural, man-made and environmental hazard events.

Natural hazard planner wins Joint Zonta/Building Research Award

Natural hazards planner and Massey PhD student, Wendy Saunders is a person worth getting to know in a disaster. For the past three years she has worked in the social sciences team at GNS Science, and now thanks to a philanthropic and industry grant, she will be able to advance her research into the best ways to offset the effects of natural disasters such as flooding and tsunamis.

In May she was named the winner of the Zonta/Building Research Award, which entitles her to \$25,000 a year for three years to carry out research toward a PhD in natural hazard planning. Ms Saunders has set her sights on working out ways to deal with water-borne disasters. She says flooding and coastal erosion have had a mountain of literature written about them, but tsunamis were largely overlooked till the December 26, 2004 devastation in Southeast Asia.

"I'm looking at one hazard which has got very little information and knowledge in New Zealand (tsunamis) and looking at another with heaps (flooding)." she said. For each, Ms Saunders who is based in Wellington, has identified selected areas of New Zealand to act as a case study of the hazards and to work out effective measures should a real disaster strike. With the focus on building design and use of the surrounding land, Ms Saunders said the challenge was to clearly address one key question arising from any development. "What new ideas can be incorporated into the design that reduce peoples risk to natural hazards?" In the case of a tsunami, such design imperatives would include the construction of road evacuation routes which do not run parallel to the beach, or properly built hillside walking tracks for people who are in a tsunami's path to make their escape.



She has already helped develop guidelines for building on landslide-prone land and earthquake faultlines, and is excited about how her award will expand into different fields. Enrolled part-time at Massey University for her PhD, Ms Saunders said the award, co-sponsored by Building Research, would allow her to devote more time to her research without neglecting her employment. "It kind of complements my work."

This story was originally published in the Dominion Post on Wednesday, May 28, 2008.

Visit our new website: <http://disasters.massey.ac.nz/>

Emerald Literati Network - the 2008 Award for Excellence

Recently six researchers associated with the centre received the Emerald Literati Network - the 2008 Award for Excellence for a paper entitled "Developing warning and disaster response capacity in the tourism sector in coastal Washington, USA" published in Disaster Prevention and Management in 2007. The research is part of a five-year research collaboration with the State of Washington.

Reference: Johnston, D., Becker, J., Gregg, C., Houghton, B., Paton, D., Leonard, G., Garside, R. 2007. Developing warning and disaster response capacity in the tourism sector in coastal Washington, USA. Disaster Prevention and Management 16: 210-216. (2008 Award for Excellence)



Massey staff and students attend Indonesia – New Zealand 50th commemoration of Diplomatic Relations in Jakarta

In early August David Johnston from the Centre for, along with PhD students Julia Becker and Heather Taylor (both from the School of Psychology), were amongst an invited group of twenty-two New Zealanders attending a conference on “Promoting Initiatives on Disaster Risk Management”, celebrating 50 years of Diplomatic Relations between Indonesia – New Zealand. The conference was supported by Indonesian Ministry of Foreign Affairs, New Zealand Ministry of Foreign Affairs and Trade, Agency of Rehabilitation and Reconstruction for Aceh and Nias (BRR NAD-Nias), Earthquake Engineering and Natural Hazards NZ.

The conference had several objectives:

- To bring together Indonesian and New Zealand expertise, experience, skills and approaches in managing post-disaster reconstruction in Aceh and Nias, and in reducing the risks of future disasters in both regions.
- To demonstrate to the Indonesian Government and Donors practical ways of empowering Indonesian and other Asian communities to be prepared and mitigate impacts of major earthquake, tsunami and volcanic disasters.
- To identify mutually beneficial areas of potential co-operation between New Zealand and Indonesia on disaster risk management.
- To identify particular areas or sectors where the combined expertise, experience, skills and approaches could be best applied in Indonesia but also in other countries in South East Asia and the Pacific.



Several new opportunities for Centre are expected to result from the meeting.

Caption: Associate Professor David Johnston from the Joint Centre for Disaster Research, along with PhD students Julia Becker and Heather Taylor, with the New Zealand Civil Defence Minister the Hon. Rick Barker.

From Science to Practice for Rural Risk Management

JCDR at Mystery Creek 11-14 June 2008

Tom Wilson, Dean Podolsky, and David Johnston organised and ran a successful exhibit at the National Fielddays at Mystery Creek, Hamilton between 11-14 June. Research associates of the Centre, Hannah Brackley, Jim Cole and Steven Kelly also participated at the exhibit.

Supported by the Ministry of Agriculture and Forestry and the Earthquake Commission, the exhibit presented at Fielddays promoted scientific and emergency management research which investigates how New Zealand farms and rural communities can better prepare and recover from natural disasters. Members and research associates of the Centre engaged with farmers and stakeholders at Fielddays to discuss experiences of, and preparation and planning for natural disasters. It was an excellent opportunity to outreach and discuss completed and current research, and identify future research areas.

Many people were interested in the GeoNet website which displays near real time natural hazard information. Many were fascinated by the seismic data capture and display of shaking information and reports following the Mw 5.3 earthquake south of White Island on 12 June. Riskscape was also demonstrated, with organisations involved in rural emergency management eagerly grasping the benefit and application of such a loss assessment platform.

The Joint Centre for Disaster Research is currently engaged in research which aims to understand how and why agriculture and rural communities are impacted by natural hazards, and how they can better prepare for and recover from natural disasters. Natural disasters have the potential to devastate farms and rural communities physically, economically and socially. In a short space of time New Zealand has experienced a diverse and increasingly frequent series of disasters to the agricultural sector, such as the 1995/96 Ruapehu volcanic eruptions, 2004 Manawatu and Bay of Plenty floods, , 2006 Canterbury snowstorm, and the recent drought affecting many areas throughout New Zealand. Climate change is likely to increase exposure of New Zealand's agricultural sector to hazardous events.



A key part of farming is managing risk, and key to managing that risk is understanding and assessing the risk that farms face. For New Zealand to continue as a world leading agricultural nation, our farmers must be equipped with the most current natural hazard information, so they are able to adequately deal with New Zealand's highly dynamic and often unpredictable climate and geophysical environment. They need the information to manage the risk! By benefiting from this research, farmers, rural communities and the wider agricultural sector will better cope with natural disasters, reducing economic loss and the huge social impact of natural disasters. New Zealand researchers and key international research partners lead the world in

natural hazard research and it is essential to communicate this highly valuable information to the appropriate beneficiaries.

For more information contact Tom Wilson (thomas.wilson@pg.canterbury.ac.nz)



2nd Australasian Hazards Management Conference

The storm that lashed New Zealand in the last week of July coincided with the start of a major gathering of disaster experts in Wellington for a four-day conference. About 300 emergency management specialists from many countries spent four days (28th to 31st July) at Te Papa discussing the nitty-gritty of dealing with natural disasters. The conference was coordinated by the Centre

Keynote speakers of the Australasian Natural Hazards Management Conference covered topics from land-use planning for natural hazards to effective warning systems for tsunamis and flooding.

- Gavin Smith, executive director of the Center for Natural Disasters, University of North Carolina, USA, talked about the lessons learnt from Hurricane Katrina in 2005, one of the deadliest and most costly hurricanes in the history of the US.
- Maureen Fordham, from the Disaster and Development Centre, University of Northumbria, England, outlined findings from a European Union project to measure the social, health and economic impacts of disasters.
- Michele Daly and Alisha Kidd, of Kestrel Group, discussed the task of evacuating Auckland in the event of a volcanic eruption in the City of Sails.
- Gisborne Mayor Meng Foon talked about the main lessons learnt from the magnitude 6.8 quake that hit Gisborne in December 2007.
- David Coetzee, of the Ministry of Civil Defence & Emergency Management, discussed ways to help coastal communities become more resilient to tsunamis.

The proceedings volume is available on the conference website

<http://www.hazards-education.org/ahmc/2008/2008index.php>

Sustainable Disaster Recovery: Unlocking the Potential of Planning: Workshop at the 2nd Australasian Hazards Management Conference

Comparing experiences in the Gulf of Mexico, USA and New Zealand

This workshop explored the role and potential of land-use planning in promoting sustainable disaster recovery. This potential extends beyond reducing risks from hazards to life and property to open up the possibility of building more sustainable and resilient communities. Insights were drawn from first-hand experiences in post-Katrina recovery planning efforts in the Gulf Coast of Mexico, in the USA, and in New Zealand. These comparative experiences reveal key lessons and practical steps that can be taken to realize the potential of land-use planning. Participants played an active role in this workshop, sharing their experiences and contributing to a better understanding of the theory and practice of sustainable disaster recovery.



The workshop aimed to:

- Define Sustainable Recovery and Disaster Resilience and the role and potential of land-use planning
- Provide an overview and comparative assessment of disaster recovery experiences in Mississippi and Louisiana in the aftermath of Hurricane Katrina; and recovery experiences in New Zealand
- Explore key concepts and provide a conceptual framework for making sustainable disaster recovery a practical reality
- Identify factors that facilitate or hinder sustainable recovery and resilience
- Draw lessons from recovery experiences and identify practical actions that we can take to realize the potential of land-use planning.

We were fortunate to have had Gavin Smith, Executive Director, Center for Natural Disasters, Coastal Infrastructure and Emergency Management, University of North Carolina at Chapel Hill. Gavin was Director of the Governor's Office of Recovery and Renewal in the State of Mississippi following Hurricane Katrina.

Recovery from an Auckland eruption: lessons from the 1973 Heimaey eruption, Iceland

The island of Heimaey is part of an archipelago of 14 volcanic islands (the Westmann Islands) situated 10 km off the southshore of Iceland. The 1973 Eldfell eruption began as a lava eruption from a 1.6-km-long fountaining fissure on 21 January. Within a day the eruption reduced to one vent, Eldfell. The eruption style ranged from strombolian to passive lava effusion. During the eruption almost the entire population of Heimaey (c. 5,300 people) was evacuated. Livestock were also evacuated during the eruption crisis. Almost half the pre-eruption population had returned to the island by mid-1974 and 80% by March 1975. At the end of the eruption 60% of all houses in Vestmannaeyjar were buried, with 417 houses under lava and tephra and ~400 more damaged by tephra alone. The eruption did, however, provide some benefits: the island increased in size by 20% and the lava emplacement resulted in major improvements to the harbour, acting as a storm-break. A lava-thermal plant provided heat for heating houses and the tephra (and lava) provided much needed landfill material. This eruption is famous because of the attempt (heralded as successful) by locals to slow and stop the progression of the lava by spraying millions of cubic meters of sea water on to the flow front.



The 1973 eruption evacuation for sheep (by airplane) and people (by boat)

The local authorities have developed a range of land-use plans and policies to assist the recovery process. This event presented a unique opportunity to assess the long-term impacts and recovery from a basaltic eruption, similar to that which could happen in the Auckland Volcanic Field. In August a group from Massey University, GNS Science, University of Auckland and University of Hawaii visited the island to undertake an assessment of the eruption impacts and long-term recovery of the urban community and infrastructure. Specific areas of interest included:



- Community vulnerabilities and resilience during and after the eruption
- Psychosocial recovery of the population, such as health problems and social impacts in the communities, such as stress, suicide rates and domestic violence
- Recovery of the built environment and the restoration of housing and other public facilities
- Impacts on water supplies, transport, wastewater and electrical supply
- The role of land-use planning and public policy in post-eruption recovery
- The role of hazard maps in land-use and eruption contingency planning
- An investigation of the impacts on farms and subsequent recovery/rehabilitation
- Impacts on livestock in both short and long-term, including livestock evacuation during the volcanic crisis
- The role of local and central government, and NGO's in a volcanic crisis
- Factors helping or hindering physical and social recovery.

A report is due early 2009.

Health Sector Emergency Management in New Zealand: Promoting Adaptive Capacity in Emergency Response within Health Boards

In New Zealand, health services play a significant role in the response and recovery phases of disasters. Dealing with emergencies is an everyday occurrence for the health sector but the stressors which are inherent when managing the consequences of large scale disasters require additional capacity from the individuals, teams and organisations of which it comprises.

To facilitate data collection for her PhD study, Debra Ellis has been working closely with the Auckland District Health Board (Auckland DHB) on a project entitled 'Health Sector Emergency Management in New Zealand: Promoting Adaptive Capacity in Emergency Response within Health Boards. Normally, resilience research is constrained by the lack of an event that can be used to assess adaptive capacity. However, two national exercises Exercise Cruickshank (pandemic influenza simulation - May 2007) and Exercise Ruaumoko (Auckland regional volcanic scenario Nov 07 - Mar 08) not only offered an all hazards approach to the research but also supplied appropriate contexts within which to assess the competencies in staff and systems associated with adaptive capacity. Repeating the research methodology post Exercise Ruaumoko provided a comparative case study for breadth of scope and in-depth analysis of health sector resilience. The final phase of data collection is almost complete; analysis of the data and findings will follow over the coming months with the project remaining on schedule.



Auckland DHB Emergency Operations Centre, the Emergency Management Team work through the challenges of Exercise Ruaumoko (March 08)

Alongside the data collection and research, Debra has been contracted to assist Emergency Management Services at Auckland DHB with a number of projects such as: the production of a comprehensive Evacuation Plan to sit alongside the DHB Major Incident Plan, and the development the Auckland DHB Health Emergency Plan (HEP). A requirement of the Ministry of Health, the HEP is a strategic document that creates a framework within which to manage a resilient and sustainable health sector during any potential health or civil defence emergency. The development of the HEP involved a wide ranging and robust consultation procedure which allowed services from across Auckland DHB to contribute to its development. Whilst bench-marking on this project is complete, the process highlighted future work streams for integration into the plan.

The Auckland DHB HEP can be accessed at:

<http://www.adhb.govt.nz/downloads/publications/reports/2008/Auckland%20DHB%20HEP.pdf>

Working within the case study organisation for the project is providing added value to the research whilst affording a rare occasion, to access information sources not normally available to researchers.

Mitigating Impacts of Natural Hazards on Fishery Ecosystems

An invited contribution has recently been published by Bruce Glavovic from the School of People, Environment & Planning following a symposium about mitigating impacts of hazards on fisheries.

Coastal ecosystems sustain the livelihoods of coastal communities around the world, and fisheries-dependent communities in particular. But these ecosystems are subject to intense and growing population and development pressure. Future prospects are bleak for many of these ecosystems and the communities that depend upon them. Moreover, with relentless development intensification, these communities are becoming increasingly vulnerable to coastal hazards, especially in the face of global warming and sea-level rise. The consequences of living in hazard-prone coastal areas has been exposed by graphic television coverage of the catastrophic 2004 Indian Ocean tsunami and the hurricanes that devastated the Gulf Coast of the United States of America in 2005. It is imperative that we learn to mitigate hazard impacts, and build more sustainable and hazard-resilient coastal communities.

The chapter presents case studies of recovery experiences in Indonesia and the Maldives in the aftermath of the Indian Ocean tsunami and recovery experiences related to hurricanes Katrina and Rita. Particular attention is focused on how fishing communities were impacted, are recovering, and what is being done to build the resilience of these communities.

More specifically, what should and can be done to mitigate future hazard impacts? Personal observations and interviews with planners, academics and others involved in recovery efforts inform this analysis. Notwithstanding significant cultural and contextual differences between these case studies, lessons can be learned from these experiences to improve future coastal policy, planning and



decision-making processes. These lessons, together with insights from diverse literatures, including coastal management, natural hazards planning, collaborative planning, sustainable communities, sustainable livelihoods, ecological economics, and co-management, are synthesised to develop a conceptual framework and outline principles and operational imperatives to guide action for mitigating hazard impacts and building sustainable, hazard-resilient communities. Such communities are founded upon robust 'critical infrastructure' that is secured by planning and decision-making processes that enable these communities to build 'layers of resilience' to overcome 'waves of adversity'. Sustainability and resilience will remain elusive unless unsustainable practices and community vulnerabilities are confronted by a transformational process of developmental planning.

For more details contact Bruce Glavovic (B.Glavovic@massey.ac.nz)

Complexities of volunteerism associated with New Zealand Emergency Management.

This study is part of a PhD project recently commenced by Chris Raine to explore the relationships between the community and key agencies (Community First Responders, emergency services and Civil Defence Emergency Management agencies) and how this influences community resilience, social capital and community capacity to deal with and recover from hazard impacts. The study will utilise an intra and inter-sectorial approach from both a membership and organisational perspective. The various linkages that volunteer response organisations have in place within communities and their volunteer ethos will be examined. How



does this relationship build or enhance resilience and information transfer?



How do remote communities foresee their ability to build resilience? Is it possible that volunteer policies in organisations work against effective volunteerism impacting on building effective community resilience? Following a literature review, and the selection of a conceptual methodology to work within, two community case studies will be chosen. Interviews and focus group meetings with Community First Responders, emergency service and Civil Defence Emergency Management agencies will occur in Southland and Taranaki. The validity of the research findings will be tested against other volunteer emergency services in New Zealand, especially issues between urban and rural volunteers' recruitment, education and retention of operational staff and the relationship to comprehensive emergency management (including sub themes of integrated emergency management, community partnerships and resilience). A cross-community comparison will test the validity of the findings and will identify the relationship between community characteristics and how their relationship with an organisation influences sustained resilience.

The study framework will use a qualitative methodology and content thematic analysis to discover concepts and theories from the data collected. A research outcome is to identify best practice methods to recruit, and more importantly, retain trained operational volunteers within volunteer response agencies that can contribute to the New Zealand emergency response capacity and capability. The research aims to better understand what makes an effective community – emergency service /CDEM milieu, relationship and communication models(s).



For further information contact Chris Raine (chris.raine@stjohn.org.nz)

Disposal of debris following urban earthquakes: guiding the development comprehensive pre-event plans

At the time a natural disaster occurs the immediate concern is for the safety and wellbeing of the affected population. However, once the immediate threats to people have passed, or are being managed, it is necessary to remove debris as quickly as possible to allow communities to rebuild. Disaster events can generate large quantities of debris and the management of this debris can present a major challenge. Recent overseas earthquakes have highlighted a range of debris management issues within a post-earthquake recovery environment. Having guidelines and procedures in place for the management of disaster debris assists in the timely and efficient removal of debris, followed by appropriate recycling and/or disposal to appropriate locations. An inefficient or poorly planned response can impose additional social, economic and environmental burdens on an already impacted community.

New Zealand's last large scale urban earthquake was in the Hawke's Bay in 1931. The approach to debris disposal following that event was different to the way society would respond today. The environment was only first identified as a focus for policy in 1953, with the enactment of the Town and Country Planning Act, 22 years after the 1931 earthquake. Hence, with no planning regulations in place, earthquake debris was used to reclaim land around the coast. There was no consideration of Maori concerns, contaminated material, environmental effects of disposal on the surrounding environment, or implications for coastal processes. Today with the Resource Management Act 1991, such disposal could not be so easily achieved, particularly within the coastal marine area or a major waterway. In recent years many New Zealand councils have had experience with flooding events and have developed experience managing debris removal.



A new project has been initiated to explore the key issues of post earthquake debris disposal within the context of a Wellington earthquake scenario. Our research will address (1) the type and volume of earthquake debris; (2) strategies for debris collection; (3) temporary storage and staging areas, (4) recycling and disposal optimisation; (5) identification of and/or issues for development of suitable disposal sites; (6) hazardous waste identification and handling; (7) effective project management in a post-disaster environment, linked to CDEM recovery plans; (8) mutual aid arrangements; (9) coordination and dissemination of public information; and (10) land-use planning issues and instruments in Regional and District Plans.



Photos are from New Orleans in August 2006.

Outputs from this research are due in early 2009.

Fighting the Flu: Developing sustained community resilience and preparedness

A pandemic will impose considerable demands on communities over a period of several weeks; thus, people must develop means to facilitate their resilience in such an event. A recent research paper by Douglas Paton and colleagues describes the development and testing of a model to inform public education strategies to facilitate the sustained adoption of the preparedness and protective measures that underpin community resilience. This work was undertaken in Auckland in August 2006. The model is derived from the premise that decisions to act reflect how people interpret information to make it meaningful to them. The model describes how this outcome reflects the interaction among personal beliefs about preparing, community characteristics influencing how risk beliefs and risk management strategies are developed, and the relationship between the community and health information sources. It highlights a need to distinguish those who decide not to prepare from those who accept a need to prepare but need guidance. This research has significant implications for developing pandemic public education and risk communication programs.

Paton, D., Parkes, B. Daly, M., Smith, L. (in press) Fighting the Flu: developing sustained community resilience and preparedness. Health Promotion Practice

A second project undertaken by Petra Buergelt, Douglas Paton and David Johnston for the Ministry of Health and Ministry of Civil Defence and Emergency Management aims to explore the subjective meaning citizens assign to a bird flu outbreak and preparing for a pandemic. A qualitative study has been completed involving semi-structured interviews.

The study has examined a range of issues around:

- Preparedness decision making: current levels of preparedness and factors that influence citizen's decisions regarding levels of preparedness.
- Factors influencing the priority assigned to preparing: how citizens prioritise pandemic flu issues relative to other demands on them and their communities; how risk perceptions influence prioritisation, perceived urgency and preparation decisions; personal and environmental influences on prioritisation and changes in levels of prioritisation; and citizen's imaginations regarding what they will have to contend with.
- Response beliefs: people's beliefs regarding the nature of response, responsibility for response, and response beliefs and levels of preparedness.



The provisional analysis highlighted the following key issues identified by respondents and the implications for risk management intervention strategies: information needs, personal versus social sources of information, beliefs regarding the impact of a pandemic outbreak on everyday life, information and levels of preparedness, attitudes to civic and government sources of information.

The project report will be available shortly.

Teaching and Outreach

Staff and associates of the centre currently contribute to elements of the Graduate Diploma in Emergency Services Management and MA, MPhil and PhDs in Psychology, Emergency Management and other related disciplines.

The Centre also plans to work with other organisations in the provision of training within the CDEM sectors. A series of Emergency Management short courses will be organised by the centre for the summer of 2009, as part of a summer school. More details of the summer school will be available in November 2008.

Graduate Students – linked to the Centre

Debra Ellis (PhD student, School of Psychology, Massey University)
“Health sector emergency management roles in New Zealand”

Julia Becker (PhD student, School of Psychology, Massey University)
“Increasing Community Resilience: Understanding how individuals make meaning of hazard information and how this relates to preparing for hazards”

Wendy Saunders (PhD student with School of People, Environment & Planning, Massey University)
“Effective land-use planning for natural hazard management”

Ian de Terte (PhD student, School of Psychology, Massey University)
“Resilience and the prevention of work related traumatic stress: testing an ecological model”

James Hudson (PhD student, School of Psychology and Te mata o te Tau, Massey University)
“The Quantification of Iwi Development: A Framework for Iwi Development & Resilience”

Heather Taylor (PhD student, School of Psychology, Massey University)
“The role of non-governmental organizations (NGOs) in long-term recovery from disaster”

Robyn Tuohy (MSc student, School of Psychology, Massey University)
“Older people’s experiences of the Kaitia flood evacuation: a narrative study with the residents of two communities.”

Abdur Rehman Cheema (PhD student, Institute of Development Studies School of People, Environment and Planning, Massey University)
“Role of good governance in addressing vulnerabilities in disaster management in Pakistan”

Chris Raine (PhD student, School of Psychology, Massey University)
“Complexities of volunteerism associated with New Zealand Emergency Management”

Rosalind Houghton (Victoria University PhD student – Department of Sociology and Social Policy)
“Domestic Violence following natural hazard events in New Zealand”

David McIvor (University of Tasmania PhD student – School of Psychology)
“Means-end Chain Modelling of Natural Hazard Preparedness.”

Tom Wilson (University of Canterbury PhD student – Department of Geological Sciences)
“Vulnerability of New Zealand’s pastoral farming systems and rural communities to volcanic hazards.”

Dean Podolsky (University of Canterbury PhD student – Department of Geological Sciences)
“Time-variant multi-hazard and risk communication analysis of the northern Whakatane District, Bay of Plenty, New Zealand”

Monica Gowan (University of Canterbury PhD student – Health Sciences Centre)
“Self-management of disaster risk and uncertainty: evaluating a personal health-based wellness paradigm for building disaster resistance.”

Scott Barnard (University of Canterbury PhD student – Department of Geological Sciences)
“A quantitative analysis of the vulnerability of components of infrastructure to volcanic ash.”

Caroline Orchiston (Departments of Tourism and Geology PhD student, University of Otago)
“Tourism and earthquakes in the zone of the Alpine Fault: risk perceptions and business resilience in the tourism industry”.

Scott Barnard (University of Canterbury PhD student – Department of Geological Sciences)
“A quantitative analysis of the vulnerability of components of infrastructure to volcanic ash.”

Jennifer DuBois (University of Canterbury PhD student – Department of Geological Sciences)
“The plausibility of a submarine landslide generated tsunami at Kaikoura Canyon”

Johnny Wardman (University of Canterbury MSc student – Department of Geological Sciences)
“Quantitative analysis of “flashover” potential for high voltage transmission equipment exposed to volcanic ash”

2nd Australasian Mental Health and Psychosocial Disaster Conference

22 & 23 October 2008, Brisbane

*Incorporating the Foundation Course in Psychosocial Disaster Management
21 October 2008, Brisbane*

Foundation and Conference Venue:
The Sebel and Citigate, King George Square, Brisbane



Delivering the calm

Conference highlights

- Anticipating the different public responses to chemical, biological, radiological and explosive attacks and natural disasters
- Psychosocial responses to traumatic events
- Identifying special needs for population groups and developing
- The role of media and public communications in minimizing disaster stress
- Enhancing disaster resilience in communities and regions
- The field response of mental health in disasters
- Integrating mental health into large area operations
- Psychosocial peer support programs for first responders
- Selecting and using crisis counselling and other interventions
- Psychosocial impacts in Hurricane Katrina and lessons for Australia's disaster managers

Who should attend

- Psychiatrists
- Psychologists
- Social workers
- Human service workers
- Mental health nurses
- Corrections officials
- Counsellors
- Crisis workers
- Disaster response personnel
- Educators and school employees
- Emergency service administrators
- EMTs/paramedics
- Faith-based disaster support
- Fire-fighters
- Grief counsellors
- Law-enforcement officers
- Military personnel peer support organisers and leaders
- Physicians, nurses and medical facility staff
- Professional chaplains and clergy
- Risk managers
- Security professionals
- Suicidologists
- Victim's advocate

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JOINT CENTRE FOR DISASTER RESEARCH

School of Psychology, Massey University
and GNS Science

EMERGENCY MANAGEMENT Summer Institute

Massey University Campus,
Wellington, New Zealand

16 - 20 March 2009



Matata, 2005

Full details and booking information will be available in November 2008

See the Centre's website or email us!!!

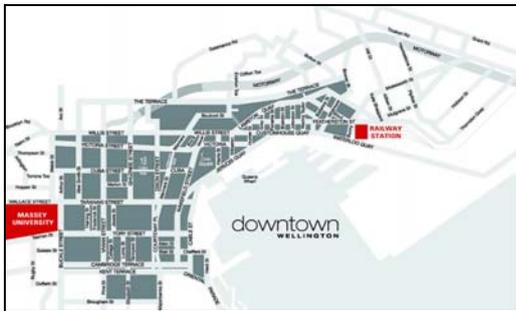
New Publications

- Becker, J., Johnston, D., Lazrus, H., Crawford, G., Nelson, D. (2008) Use of traditional knowledge in emergency management for tsunami hazard: A case study from Washington State, USA. *Disaster Prevention and Management* 17: 488-502
- Becker, J.S., Saunders, S.A., Leonard, G.S., Robertson, C.M., Johnston, D.M. (2008) Issues and opportunities for land-use planning for volcanic hazards. *Planning Quarterly* 170: 12-14.
- Finnis, K., Johnston, D., Becker, J., Ronan, J. & Paton, D. (2007). School and community-based hazards education and links to disaster resilient communities. *Regional Development Dialogue* 28: 99-1008.
- Glavovic, B.C. 2008. Waves of adversity, layers of resilience: Lessons learned for building sustainable, hazard-resilient communities, Mitigating Impacts of Natural Hazards on Fishery Ecosystems, Chapter in Proceedings of American Fisheries Symposium No. 64 held in San Francisco from the 2-6th of September 2007, McLaughlin, K.D. (editor), Published by the American Fisheries Society, pp395-419.
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- Paton, D., Parkes, B. Daly, M., Smith, L. (in press) Fighting the Flu: developing sustained community resilience and preparedness. *Health Promotion Practice*
- Patterson, M. & B.C. Glavovic (Eds.) 2008. The Ecological Economics of Oceans and Coasts, Edward Elgar. See http://ww.e-elgar-environment.com/Bookentry_DESCRIPTION.lasso?id=3802
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- Wilson, T., Cole, J., Stewart, C., Dewar, D., Johnston, D., Cronin, C. (2008) Assessment of long-term impacts on agriculture and infrastructure and recovery from the 1991 eruption of Hudson volcano, Chile. University of Canterbury progress report.



Location

The centre is part of the School of Psychology, in the College of Humanities & Social Sciences. The centre Director, staff and students are based at the Massey University campus in Wellington (Room T27N). However, the centre will draw on staff from other Massey campuses, GNS Science and other collaborating organisations. Visits to the centre are welcomed but by appointment only please.



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