Supporting communication around the Canterbury earthquakes and other risks: A learning workshop 7th April 2011

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GNS Miscellaneous Series 37
July 2011

BIBLIOGRAPHIC REFERENCE

Winstanley, A.; Cronin, K.; Daly, M. 2011. Supporting communication around the Canterbury earthquakes and other risks: A learning workshop 7th April 2011, *GNS Miscellaneous Series* 37. 39 p.

DISCLAIMER

This document reports on what was said and discussed by the diversity of workshop participants six weeks following the Christchurch February 22nd earthquake. It does not necessarily represent the views of the Institute of Environmental Science and Research or the Institute of Geological and Nuclear Sciences on the post-earthquake response and recovery work.

ESR Report No: CSC 11003

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ISSN 1177-2441
ISBN 978-0-478-19824-9

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ABSTRACT

A workshop called “Supporting Communication around the Canterbury Earthquake and Other Risks: A Learning Workshop”, took place on 7 April 2011, in Christchurch 6 weeks after the devastating magnitude 6.2 earthquake in Canterbury on 22 February 2011. The workshop was organised by social scientists at the Institute of Environmental Science and Research (ESR) and the Institute of Geological and Nuclear Sciences (GNS Science), and brought together people with varying areas of expertise to generate a ‘big picture view’ of the communication dynamics at work around a major emergency.

The workshop organisers recognised that ‘risk’ meant different things to different people so did not offer a preconceived definition of ‘risk’ communication but anticipated a wide-ranging discussion around the subject. The workshop was predicated on the idea of linking risk communication theory and practice and it was anticipated that the resultant learning could support processes for improving linkages between policy and practice, as well as defining future priorities in the natural hazards and risk communication research domains.

This report provides a summary of the presentations and workshop participant discussions. Key messages emerging include; (i) the need for two-way communication to ensure relevance at individual suburb/community level as well as city-wide; (ii) the need for better integration across agencies; (iii) consistent risk communication messages delivered by trusted spokespersons; and (iv) a need to rethink the role and responsibility of local media.

Researchers noted a gap in the literature about early response phase communication, and potential research questions focused around how to widen and document the learning from the Canterbury experience; the role of the media; how to build community resilience; how to effectively communicate risk, and building adaptability and flexibility into organisational communication practices.

KEYWORDS

Risk, communication, earthquake, Christchurch, hazards, policy, practice.

1.0 INTRODUCTION

1.1 Background and Purpose of the Workshop

The workshop Supporting Communication around the Canterbury Earthquake and Other Risks: A Learning Workshop took place on 7 April 2011, at the Environmental Science and Research (ESR) Offices in Christchurch. The workshop took place just over 6 weeks after the devastating magnitude 6.2 earthquake in Canterbury on 22 February 2011 that claimed 182 lives and caused extensive damage throughout Christchurch.

The two hour workshop was organised by social scientists at ESR and GNS Science, to bring together people with different areas of expertise and experience to generate a 'big picture view' of the communication dynamics at work around a major emergency. Around forty participants took part, including government communications and emergency management staff, researchers from Crown Research Institutes and Universities, individuals from industry, community and iwi organisations, and experts in crisis and risk communication.

The aims of the workshop were:

- To create a supportive space for communication practitioners working on the ground in the response and recovery phase of the Canterbury earthquake, to share experiences and learning with researchers in risk communication.
- To explore communication processes, including the design of 'hazard messages'; the selection of communication channels, and uptake of messages.
- To explore the interplay between formal and informal communication processes emerging in response to the earthquake.

The workshop did not offer a preconceived definition of 'risk communication' or constrain the boundaries of participants' conversations. The organisers recognised that 'risk' means different things to different people, and frames of reference differ according to roles, responsibilities and experiences. A wide-ranging discussion was expected and this was borne out on the day: some people saw 'risk communication' as the communication of risk or hazard messages from experts to audiences, while others saw it more broadly as a process of communication among diverse stakeholders. The workshop was predicated on the idea of linking risk communication theory and practice. It was anticipated that the resultant learning could support processes for improving linkages between policy and practice, as well as defining future priorities in the natural hazards and risk communication research domain.

This report provides a summary of the presentations and discussion, for workshop participants and other interested parties. We hope this report will also serve to:

- promote individual, organisational and institutional reflections on recent hazardous events, and
- enable learning from both experience and research to enhance future communication around earthquakes and other risk events such as a public health emergency, biosecurity outbreak or extreme climate events.

1.2 Pre workshop preparation

To seek involvement before the workshop, invited participants were asked to respond by email to the question: *What is the most significant issue that you have noticed around the response and recovery phase of the earthquake?* The email responses received (5) have been incorporated into appropriate sections of this report below.

1.3 Workshop structure

The workshop structure included: a welcome and introductions; presentations by three speakers; small group facilitated discussions based around 7 specific questions; and a final general discussion.

The small group discussions were informed by 7 key questions.

1. What are the experiences of people doing risk communication on the ground, about how communication systems and processes are working? What are they noticing?
2. What can we learn from the current experiences of those doing risk communication in the response and recovery phase for future events? Focus on what has worked well.
3. What can we learn from the experiences of other disasters in N.Z., Australia and elsewhere, in designing effective risk communication processes?
4. What do we know from the risk communication literature internationally about what makes for successful risk communication – and what creates a 'risk' for risk communication?
5. What mental models are we using as we define 'risk communication' and the various dimensions involved – e.g. information sources; information channels; message content and design; audience analysis [needs/perceptions/segmentation]; evaluation?
6. What practical help can risk communication researchers in N.Z. provide right now for those dealing with the aftermath of the earthquake?
7. What can risk communication researchers learn from the current situation to generate future research questions/analyses that will be useful for government, industry and the community?

1.4 Attendees

Forty-one people pre- registered for the workshop and a further 3 people came on the day. A list of those who registered is provided in Appendix One, although not all who registered attended. A small group of 5 registrants joined the main meeting in Christchurch via videoconference link from the ESR offices in Kenepuru, Wellington.

2.0 WELCOME AND PRESENTATIONS

2.1 Opening session

Participants were welcomed to the workshop by Karen Cronin ESR and Michele Daly GNS Science. The workshop was facilitated by Graeme Nicholas, ESR.

The workshop came about as the result of early response and recovery work done by many in the room to identify pressing needs as part of the early recovery process. An opportunity had been seen to support those working on communications related to this event, and to create a space for discussion with those working in risk communication research.

The key points made during this opening session of the workshop were:

- Risk communication has been identified as an area for focus moving forward into the recovery phase.
- The importance of communication of risk and choices about future options for Christchurch as part of the public engagement process.
- The need to learn from both positive lessons and also risk communication practices that have not worked so well.
- Acknowledging those in the room, who had suffered personally in the earthquake event and who had been, and are still, in frontline response.
- Inviting everyone to be respectful of others at the workshop – and providing a safe environment to allow for openness.

2. 2 Presentations: reflections on current issues and observations from practice and theory

There were three presentations focused on (i) Information channels in the post-quake environment (ii) Organisational responsiveness and challenges; and (iii) Reflections on risk communication practice and theory (Full details in Appendices 2 and 3).

Information channels in the post-quake environment (Vicki and Peter Hyde, Web Centre Ltd, and local Redcliff residents)

Vicki and Peter Hyde gave presentations based on their expertise in the news media and communication, and as local residents. They outlined their experiences in Redcliff, a Christchurch sea-side suburb, during the recent earthquakes. They raised a number of issues about how risk communication systems had worked in a real world context, for example,

- questions about the efficacy and appropriateness of providing information on websites when some residents don't have power,
- a helpline with a 20-minute hold when you have 5 minutes left on your cell phone,
- telling people that 65% of the city has power when others need to know what's happening in their suburb and in their street, and
- focusing on the Central Business District static earthquake highlights and ignoring the people and problems in more occupied and dynamically changing areas of the city.

A key issue faced by Vicki was trying to find her mother who had been moved 'somewhere' but no-one in any of the agencies knew where: a simple note may have been the best communication channel rather than having to phone around the authorities.

In their presentation, Vicki and Peter drew attention to the dominant discourses apparent in the media, such as living in "the Rescue City" or "the Shower City", but largely ignoring "the Refugee City". From their experiences, they saw an 'information vacuum' in the first two days after the earthquake. Frustration at trying to get information resulted in Vicki and Peter setting up an 'information hub' on their local street corner with a focus on information relevant to their community. Communication methods included 'word of mouth' information, broadsheets on the street corner that provided information of other community initiatives (such as where to charge cell-phones, find washing machines etc.) and online citizen journalism.

In their experience, it was Day 8 before power was restored and Day 11 before any officials turned up. The point was made that if the communication void was frustrating in the more affluent communities, it must have been a lot worse for less affluent communities. Those people who left Christchurch immediately or soon after the earthquake could not access the information they needed to make a decision when – or if – to return.

Based on the Redcliff's community experience, Vicki and Peter provided key messages about what would be needed 'next time' (or in other disasters in New Zealand). These included the need for:

- Information that is relevant, clear and accurate, specific to each area.
- Designing communication channels to operate at local village as well as at a suburb or city wide level.
- Designated people who can pass information up and down the chain ("corner criers"). For the first few days these people didn't necessarily need to be locals.
- More robust communications support and usable technology e.g. for cellphones.

Houses teetering on the edge after landslides at Redcliffs following the 22 February quake
(Radio N.Z.28/2/2011)
PHOTO: AFP

Organisational responsiveness and challenges (Dr. Erica Seville, Resilient Organisations Research Project, Canterbury University)

Erica Seville has been working with local business organisations since the September 4th earthquake, and who are now facing new challenges since February 22nd. The key issues identified in Erica's presentation included:

- An increase in uncertainties[1] arising from the February 22nd earthquake – the *second* event.
- Questions being raised by business: "Were we unlucky?" "Was this a rare event?" "Will there be another one?" "Can we go back in (to the CBD)?"
- The need to try to understand the physical, environmental, infrastructural and social risks, *and* to communicate uncertainties.
- The need for organisations and institutions to make decisions *before* scientific information is available.
- How the above factors are implicated in building re-occupation.

Erica had been in contact with Peter Sandman, a U.S. expert in the risk communication area (http://www.psandman.com), and asked him "*How do we make people feel comfortable about re-occupying buildings?*" The key messages from Sandman's email response were:

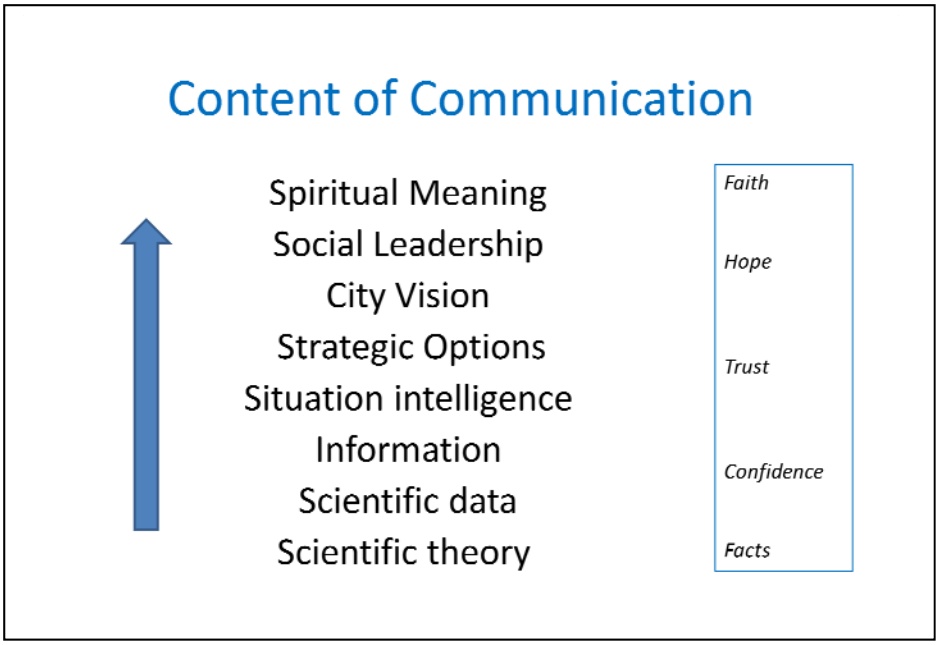
1. When things go wrong don't be afraid to apologise. An apology is expected and demanded. At the same time this is difficult because apologising implies that something is wrong and someone is to blame, rather than there being an unfortunate sequence of events.
2. Do not try to overly reassure people. The reality is that no building is safe, and over-reassurance will flip people into either challenging reassurance (disbelief) or over-realistic expectations (of safety). By not providing guarantees of safety, people will 'create' their own guarantees or make their own risk decisions.
3. Focus on the long-term objectives, not the short-term gains or "trying to look good". In the Canterbury context the desired outcome is that the community will eventually willingly reoccupy buildings.

24 February 2011 - The Grand Chancellor hotel in Christchurch is expected to collapse after the 6.3 magnitude earthquake which struck the city on February 22. Photo / Simon Baker (Hawkes Bay Today 26/2/2011)

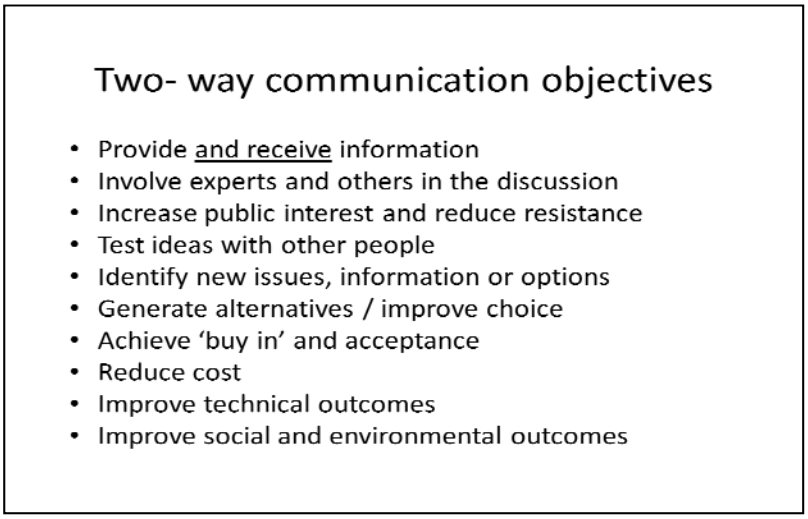
[1] For example: building safety, assessment and decision time-frames, demolition and rebuilding decisions and time-frames, insurance-related issues, impact of continued aftershocks, whether there will be another big earthquake – and when.

Risk communication, natural hazards and emergency management: a short tour of the territory (Dr. Karen Cronin, Social Systems Group, ESR)

Karen Cronin began by pointing out the wide variety of risk situations requiring risk communication. She summarized the content of recent risk discourses about the earthquake. There are many layers of content needed in risk communication messaging, from the practical level e.g. information on geological science, and updates about power and water, to higher order messages to do with trust and hope in the future, as in this slide:



Karen noted that risk communication can be seen as a function, primarily for experts, to communicate hazard or risk information to external audiences. However, with a natural hazard or emergency management situation, there are many sectors, organisations and actors, including industry, education, central and local government, Red Cross, science Institutions etc, all with a set of audiences and information needs. These multiple sites create a complex web of message design and delivery and variable processes of communication. The recent earthquake had shown new communication actors and messages 'popping up' across the landscape, in addition to the linear communication from emergency agencies. She contrasted the linear one-way model of risk communication with two way communication (information sharing), and the different techniques that can be used to get information in from stakeholders, as well as 'sending out' risk messages.



Key issues and challenges included:

- There is a need for a linear process of communication to deliver critical information, but this framing is not wide enough to encompass all the communication processes at work in a complex landscape. Many players will have input into the process, including new actors who have "popped up" (e.g. Vicki and Peter Hyde's community news-sheet, the CanCern website[2]).
- Given this landscape there can be a tension between messages and content being controlled from the centre, and emerging from other sources. These emergent sites represent a source of creativity and social responsiveness, which is itself an asset for community resilience. How can central risk communication planners encourage that as a social capital asset?

At the end of her presentation Karen raised three questions that could inform workshop discussion and/or future research agendas:

1. How can social technologies such as dialogue and deliberate governance be best used [before during and after emergencies] to improve governance and support efficient decision-making?
2. What is the role of the news media in hazards communication – e.g. using the event just as 'disaster wall paper' or taking a partnership role in recovery through a commitment to civic journalism?
3. What communication channels do we assume we should use, and what channels actually connect people? e.g. websites, TV, txt, word of mouth, community networks?

[2] Canterbury Communities' Earthquake Recovery Network – a web-based network of Residents Associations and community group representatives that aim for full community engagement in recovery processes.

3.0 GENERAL DISCUSSION - AFTER THE PRESENTATIONS

The question was raised about how to integrate risk communication that has taken place before an event compared to that after an event. Some participants in the workshop indicated that 'risk communication' is about the future, anything else is 'information communication', although other participants queried this.

Further questions were posed about how to condition expectations: Is there an unavoidable gap between what information is expected and what can actually be provided? Is there a need to change the mental model that people hold of what communication and information resources will be provided? Like water and power, information resources will be in short supply at least for a period of time.

The discussion resulting from these questions included the following comments:

- Authorities need to be honest about what information is available and tell people when they can expect more information.
- Māori had no expectations about getting information – they knew the focus would be somewhere else. Maori participants at the workshop noted that it is natural that information will be needed but this needs to be face-to-face communication. For Māori there really is no other way. For example, Ngai Tahu set up a network to provide information to about 7,000 people (registered with Ngai Tahu) and did a lot of door knocking to reach people. Information in first few days was confusing so people needed to get by and manage on their own. Should they expect that to be for three days, or a week? They needed to know how long they would have to cope without official help. We therefore need to manage public expectations for first week and recognise that different stages after the event need different kinds of information.

Questions about what risks people are experiencing or thinking about as a result of the quake also stimulated comments such as:

- People want to hear the bad news as well as the good. Important to have trusted people to deliver messages (e.g. Roger Sutton, Orion).
- There is a need to identify risks[3] and how to mitigate them, and then get trusted people to deliver the risk communication messages (e.g. Alastair Humphries, Medical Officer of Health, giving health message). Need to be able to name people responsible for water and sewerage, in the same way as health and power; most often councils adhere to hierarchy, but they need to find the right (trustworthy) people to deliver information/messages. Paradox: the focus on emergency information may have contributed to less preparedness because people think Civil Defence staff will look after them!
- Ministers of Parliament and experts were there on the spot – it was important for them to be seen.
- Information exchange is two-way. There is a need to understand what kinds of information people want, but people want to be able to respond. With only
- linear, one-way communication you can get information but there is no opportunity to provide information and no encouragement for feedback.

[3] Participants' reference to 'risks' here appear to relate to public health and essential infrastructure.

- Early experiences affect future responses. Anxiety levels go down with more practical, tangible information.
- There is a need to enable individual and/or community actions. People wanted to do something so they feel they have some sort of control.
- Make better use of schools (as community centres or hubs providing information and a place to meet/find support).

Comments were made about what was seen as the EAST-WEST divide[4] in Christchurch. Essential information needs to be provided about health, water and sewerage on an ongoing basis to those most affected.

[4] The East-West divide refers to the socio-economic status of those in different areas of the city which was also linked to the severity of damage to houses, infrastructure and the degree of liquefaction.

4.0 SMALL GROUP DISCUSSIONS

The workshop then divided into 8 small groups, each with a facilitator, a list of 7 questions and a notepad for recording comments. This section provides an overview of the key discussion points raised in the small groups. The comments below are taken from what was said by participants at the workshop, and are not necessarily the views of the report authors. Comments have been grouped under headings, for each of the questions below.

4.1 What are the experiences of people doing risk communication on the ground about how communication systems and processes are working? What are they noticing?

Defining risk communication:

- Some participants wanted to define risk communication and differentiate this from other forms of communication such as crisis management. One approach is to explore the range of communication experiences that people considered related to risk in some way.
- Others implicitly queried differences between risk (as defined by 'experts') and the risk perceptions of non-experts, and what factors led to differences in perceptions.
- There is a difference between risk communication, public information and crisis communication – communicating risk during an event is not the same as providing information on services and facilities.
- Some researchers questioned the degree to which risk perception is understood – perception of risk is not necessarily related to intelligence or other drivers.

Expectations, systems and processes:

- There is a public expectation that 'officialdom' will take control.
- Need to define who is the 'we' in risk communication – is it agencies and other groups? Need bottom-up and top-down collaboration.
- There appears to be an over-dependence on technology (by government departments) instead of face-to-face communication ("It's on the website")
- There were alternative media representations of the event – "Alice in Wonderland" compared to the reality of the experience, media afraid to "tell it like it is".

Community needs:

- Risk communication needs to recognize that disaster affects people differently and that everyone cannot be treated the same.
- There are multiple communication problems with hazard messages e.g.: What does 'red' mean? Why did the 'green' buildings fall down? What does this mark on my driveway mean?
- Residents are focused on land remediation: What will be mapped, when and by whom? What will happen to damaged land? So much hinges on what is going to happen to land property by property, street block by street block, and in some areas entire suburbs. This is a hugely contentious issue and one where a lack of communication is causing immense frustration.

Disjunctures between agencies and citizens:

- There is a perceived risk that 'bulldozed' political agendas will result in a loss of democracy, leading to poor process for recovery planning. This in itself will be squandering of social capital.
- A top-down approach may not effectively engage with people on the ground, two-way input is needed.
- Some attendees saw few connections being made between departments, silo behavior, when they could see other communicators and partners.[5]
- There is a disjuncture between formal and informal channels of communication and influence.

4.2 What can we learn from the current experiences of those doing risk communication in the response and recovery phase for future events? Focus on what has worked well.

Quick and relevant information:

- There is a need for quick action in providing information. This information needs to be clear, concise, and honest (i.e. acknowledge uncertainties) to enable communities to deal with emerging issues.
- Information demands relate to people's social, physical and socio-economic vulnerability, therefore there is a need to know what is happening in different suburbs or areas (crisis and recovery).
- Effective communication involves telling people in a way that's relevant to them and that can be understood.

Community networks:

- Schools are useful hubs for community action.
- Work with existing groups in the community – schools, churches, sports groups (i.e. groups that meet regularly).

Timing and processes of information flows:

- Information provision can be staged – if you can't immediately tell people the information they need, say so and tell them when further information can be provided, or when gaps in information will be filled.
- The content of crisis communication is different to that related to recovery, although the process might be the same.
- Information flows and interaction needs to be both top-down and bottom-up, and the participatory process should start early.
- Information channels are both formal and informal.
- The SITREP (situation or status report) used by the social science team at the Emergency Operations Centre was really useful and was disseminated to everyone.

Barriers and problems for best practice communication:

- There appears to be little learning from the September 4th earthquake - communication mistakes are being repeated.
- There could be improved interagency co-ordination.

[5] It was unclear from the workshop notes who or what the other communicators or partners were, but they could be referring to the 'Student army', the Salvation Army volunteers, the 'Farmy army'. Alternatively, people came in contact with representatives from different organisations with duplication of information, and communication receivers could point out where different organisations might work better together.

- Political issues impact on information flows including the need for sign-off in a bureaucratic hierarchy, and there is an over-emphasis on accuracy – both of which delay release of information.
- Need to thinking about when to release emotive information e.g. a list of buildings to be demolished was issued on a Friday which caused "people to go berserk over the weekend". They weren't able to follow-up until Monday which caused people unnecessary distress.

4.3 What can we learn from the experience of other disasters in New Zealand, Australia and elsewhere in designing effective risk communication processes?

- Ngai Tahu has huge household databases providing metrics [which can supplement anecdotal information] that can characterize community vulnerability and resilience. They are using the DASS 42 survey which measures levels of depression, stress and anxiety in a population to ascertain the impact of the earthquake on those households. [6]
- Ngai Tahu also has children's drawings of their houses – "Don't forget about the kids!"
- Need to re-evaluate how we communicate risk and the behaviours expected of communities. The Canterbury earthquakes have brought a sector of New Zealand to realize that they need to be prepared and be self-reliant, whereas in fire communication we assure the community by asking them to dial 111 and "wait for big red to arrive". Fire danger (including wildfires) communication needs to be evaluated and integrated with risk communication for other natural hazards.

4.4 What do we know from the risk communication literature internationally about what makes for successful risk communication – and what creates a 'risk' for risk communication?

This question was not addressed directly, but relevant responses were provided in answering other related questions.

4.5 What mental models are we using when we define 'risk communication' and the various dimensions involved e.g. information sources; information channels; message content and design; audience analysis [needs, perceptions, segmentation]; evaluation?

Shifts in beliefs:

- One group wondered if there was a shift in how people in Canterbury perceive risk – influencing how responsive people are now to disaster preparedness messages.
- There has been a shift in beliefs relating to when disaster can strike – people may be on their own, at home, at work, anywhere. What is the experiential learning?

Characteristics of messages:

- It is very important to manage people's expectations in the first stage and quickly get trusted spokespeople up front.
- Try to get consistency of messages – and repeat these.

[6] www.psy.unsw.edu.au/groups/dass
See also Dr Regan Potangaroa's list of publications on the Unitec website. www.unitech.ac.nz

Characteristics of processes:

- Lack of connection or sharing of information between the different groups – need designated people to do this connecting of information.
- Standard linear approach vs. a dynamic approach e.g. how to use social networks? Good to see more 2-way interaction – now is the time to better structure that interaction.
- Some local authorities were seen as organised with 'top-down' communication, whereas others were using engagement approaches.[7]

The meaning of words and their implications:

- There is a problem with the word "RISK" because it means different things to different people. May be addressed through conversations about hazard effects and mitigation – these things appear to be absent from communication messages.

4.6 What practical help can risk communication researchers in New Zealand provide right now for those dealing with the aftermath of the earthquake?

4.6.1 Immediately after a disaster

Risk communication researchers can provide insights into people's expectations. For example: cultural beliefs affect expectations in different settings people have different ideas about individual rights over collective rights; there are expectations about the immediacy of decisions, and entitlement for help (e.g. "someone else should be doing it for me").

Risk communication theorists need to recognise practical realities. In an emergency there is a need to push out messages. Even if most risk communication people have theories about the need for two-way interaction, in your organisational role you get pushed to one way communication. What is the link between one way and two way approaches?

Risk communication researchers could look at who the various actors are in an emergency situation and how they relate. There were many spontaneous volunteers and in the first days post the quake, Civil Defence and the City Council could not deal with offers of help. Pre-event planning could 'capture' (i.e. better manage) people who could help. A comment was made that volunteers from out of town could even fill the town crier role in some communities for the first few days before the locals themselves could take on this role.

4.6.2 Recovery phase

Risk communication researchers could look at processes of information demand and supply to support response agencies:

- Provision of myths and facts website.
- Local government is getting more enquiries on risks, local geography, facts and figures (e.g. tsunami maps). This has huge implications for insurance.
- Huge demand for detailed local scientific information – street, suburb, regional level –

[7] In the Resilient Futures mini conference, Lincoln University, 18th April, 2011, Sandra James (Earthquake Recovery Manager) provided an overview of the planning and recovery processes used in Kaiapoi in which she illustrated how all stakeholders and community groups and members participated in an integrated approach to recovery. This has included co-ordinating engineers and contractors, community development officers, insurance companies, community groups and leaders, and providing pastoral care alongside the plans, timelines and strategies for remedial work and rebuilding. See Resilient Futures website www.lincoln.ac.nz

this demand is coming from the audience that MCDEM (Ministry of Civil Defence and Emergency Management) have been trying to reach and now they have the public's attention.
- USGS and Geonet websites provide science information and advice to householders.
- Design of communication strategies that first use mass media dissemination then concentrate on particular interests, and then community ground-level work.

Research needed to provide advice on and design of new communication processes and strategies:
- The top-down need to "get on with it" (committee-based decisions) needs to be balanced with community involvement.
- e.g. CanCern is one avenue where people have access to the same levels of information and there is organised (i.e. 'framed') debate. At the same time, there are some myths out there in the community.
- What processes can be designed to draw on a mixture of professional, technical and local knowledge for decision-making?
- Public lectures are a good avenue for engagement, if they are innovative and community-based. Providing information this way is empowering.
- How to create an interactive environment for learning and preparedness e.g. "Know your Building"
- The recovery phase is difficult for communities. Action research to build resilience requires sensitivity. Empowering the community through engagement in recovery processes will do more than action research.
- How to translate learning from this event to other events and locations e.g. people in other parts of the country are blinkered, there is a degree of fatalism about earthquakes and tsunami.

General comments:
- Some things are already being done. But the window for action is now; we cannot wait for research such as detailed science on risk attributes as agencies are already stretched.
- In the recovery phase we start to get finger-pointing and all expectations cannot be met. What impact will this have on emergency service workers? How many will walk away disheartened after this? Street level accusations impact on personal relationships within small communities.
- It is easy for biophysical science to critique work relating to risk communication; it is more difficult to seek constructive ways forward.

4.7 What can risk communication researchers learn from the current situation to generate future research questions/analyses that will be useful for government, industry and the community?

Gaps:
- There is not enough in the literature about *immediate* risk communication when disaster first happens.
- More research needs to be undertaken about immediate communication and how to avoid a communication vacuum.

Opportunities:

- There is an opportunity *now* for communication with communities throughout New Zealand to let people know what they can expect when a disaster happens in their area so they have realistic expectations and strategies for management.
- There is an opportunity to generate a 'snapshot' view of how we think about risk – e.g. through a Colmar Brunton poll.
- Can social science and the science community work better together – perhaps through action research? There is a 6 month window of opportunity here now during the recovery phase which could generate new knowledge to roll out to other communities.

Potential research areas:

- MCDEM – there are many different civil defence centres, mostly scattered around schools – is there any information about how well they are functioning, and what is the fit between demand and capacity?
- Research is needed on the capacity of resilient communities/social networks and how this can be enhanced and/or used in other contexts.
- What are the post-event stages influencing/impacting on information needs and how can information provision and/or exchange be appropriately facilitated (what is the role of the media?)
- What are people's/communities/decision-makers' expectations in first and consequent stages? Are they on the same page?
- What should be the role of the media throughout response and recovery phases?

5.0 SUB-TEXTS ARISING IN WORKSHOP DISCUSSIONS

In this section, the authors provide some observations on the nature of the discussion and exchanges that took place between participants in the workshop.

Many workshop participants, whether risk communication researchers or practitioners, have been and are still personally affected by the earthquakes of September 4th 2010 and February 22nd 2011, as well as by the continued aftershocks. These events have incrementally increased the damage to houses and land, creating continued uncertainty and anxiety, and challenges in adjusting to or being optimistic about this 'new normal' living environment. While participants were constructive and welcomed the opportunity to share views between risk communication researchers and practitioners, there were a number of emotive sub-texts evident within the discussion at the workshop which probably reflected the experiences and responses of the Canterbury community at large. We noticed that while the workshop itself was only meant to run for 2 hours, there was an intensity of discussion in the room and people stayed on and kept talking for up to an hour later, many sharing their personal stories and exchanging their contact details at the end. Recognising these dimensions of the risk communication experience allows us to better understand audience responses and communication receptivity - and can therefore help shape future work relating to risk communication.

From our observation, the two key 'sub-texts' evident in participants' discussion were frustration and anger. 'Sub-texts' consist of implicit messages contained within existing texts, which can be oral or written. This section of the report is not intended to indicate *what* people were frustrated or angry about or to imply any criticism of responses to date, but rather to illustrate how people were *feeling* on the day. Our reason for including this material is to highlight the underlying social responses that emerged during the discussion, and to provide what we hope will be a useful touchstone for those designing risk communication processes in the recovery phase of the Christchurch earthquakes and other future events. Quotes from participants have been drawn together from the earlier sections of this report and are represented below to illustrate these sub-texts. The quotes are in italics and the key words or phrases that indicate feelings of either frustration or anger have been emphasised in bold.

5.1 Frustration

There was frustration that the learning from the September 4th earthquake was not translated into better ways of providing clear, concise and area-specific help and information for households and communities 'on their own', where people stepped up to help and support neighbours and communities. While it was recognized that officials and workers had central city priorities, there were also significant risks for householders[8] – in other parts of the city, and people thought multiple communication channels were needed.

[8] For example, whether homes were safe, flooding, liquefied silt damage to properties, homes and roads (and cracks/potholes in road), making transport impossible or hazardous, potential for further rock-falls, inaccessibility or unavailability of food, water, supplies and health services, ensuring adults', children's and community safety in light of on-going aftershocks, inability to contact friends and family to see if they were safe, had shelter etc.

The following quotes from workshop participants highlight the nature of these frustrations:

*"In many suburbs, once it was realised there was no local CD (Civil Defence) coordination, "pop-up" **initiatives were launched by residents** to try and fill the gap. These initiatives were **neither recognised nor supported by** ... **Instead they had to rely on interrogating passing locals and response workers for whatever information they held**. Although such pop-up efforts soon had the best intelligence on what the main issues were in each suburb, most had **no adequate channel** for surfacing these **concerns**, or obtaining hard information on central response plans for their area (**assuming such existed**). Consequently, the response was far less effective than it might have been, because uncertainties multiplied at all levels. Portaloos went where they were not needed, or the local residents were given mixed messages, hence in some cases **did not know they needed to use them**. **Residents left suburbs** because they **had no idea when services or support would return**. And having left, they had little idea from official channels when the situation had improved - for a while, **hero/tragedy stories** about the central city and **spurious newspaper items about "ghost towns"** were **the best the traditional media could manage**."*

*"**Trust and confidence was lost through inconsistent or wrong official information** – should they try something different or do we need different channels?"*

*"Information in the first few days was confusing – **people need to get by themselves (with no help from outside) – three days, a week, how long?** Need to manage expectations for first week."*

"There were many spontaneous volunteers and in the first days post-quake [officials] couldn't deal with offers of help."

*"**The community is capable of making decisions** – need to know early about issues that are coming up – **need to contribute early to identifying the issues**."*

*"There is a linear, one-way flow of information - You can go to places to get information but **no opportunity to provide information, no encouragement for feedback**."*

*"Immediately post-quake **there seemed to be an expectation that people could send/ respond to voice messages & text messages** ... but the mobile network was severely overloaded & was needed for emergencies; the power & cellphone network was out in parts of the city (my area included) so I couldn't get voice messages & texting was intermittent. Also **people did not seem to realise** that without electricity, one cannot recharge phones."*

*"There was a lack of shared information between various organizations- EQC, T&T (Tonkin and Taylor Consultants), insurance assessors (assessors, structural engineers, builders doing costings etc) .... **a stream of people** through, **who all draw up their own plans & start from scratch**. In the **days of modern IT systems**, **there should be** better integration across databases & organisations; all the agencies and players should communicate with each other."*

*"**Land remediation ... what will be mapped, when and who by, what will happen to damaged land** etc. So much hinges on what is going to happen to land, property by property, street block by street block and in some areas, entire suburbs. This is a hugely contentious issue and one where a lack of communication is causing immense frustration."*

5.2 Anger

Anger appeared to be related to the lack of recognition of the need for a transition from the 'command and control' or 'one-way' communication approaches in the immediate response period post-earthquake - to a more two-way community engagement and involvement process in the recovery phase.

*"There is an **over-emphasis on technology** instead of face-to-face communication, **we get told** it's on the website, **go there to find it**."*

Another participant noted evidence of a "*simmering civil mood, resentment and backlash*", while others commented on the fear of "***bulldozed political agendas and poor process for recovery planning***" and the "potential loss of democracy" with "***CERA galloping in***".[9]

"*It's **not helpful talking about risk perceptions when the risks are real** – damaged houses, roads, boulders crashing down*."

The timing of building-related information was criticized. "*Timing – **don't release emotive info Friday when you don't have people over the weekend to deal with it**; for example the list of buildings to be demolished came out on a Friday – people went berserk over the weekend*."

Anger was also evident in the ways in which risks and realities were depicted.
"***Disaster was treated as an accident, not a disaster! Losing your house is a disaster*!"**
"*We got 'Alice in Wonderland' descriptions not the reality of experiences*".

Attention was drawn to media discourses about the city such as "rescue city" and "shower city" while the "refugee city" was largely ignored. "*Early Press **stories about laundry services in Hornby or Kaiapoi were simply risible to residents of the wrecked eastern suburbs***."

[9] Canterbury Earthquake Recovery Authority. Some participants commented that central government intervention in the form of CERA had followed the 2010 sacking of Environment Canterbury's elected councillors and replacing them with government appointed commissioners.

6.0 SUMMARY OF CLOSING GENERAL DISCUSSION

There were several key points made in the final session of the workshop:

- There is some urgency in getting this information/report out to workshop participants and to make it available via ESR and GNS websites.
- The importance of risk communication going forward needs to be recognized in CERA – a champion is needed now.
- The establishment of a risk communication leader in New Zealand is needed for the future – to both lead and build capacity in this area.
- A distinction needs to be made between 'crisis' risk communication and risk communication. The literature, needs, processes and outcomes are very different. The workshop focused on crisis communication – necessary and important in light of the Christchurch earthquake - but if there are to be future workshops and research, this distinction needs to be made.

7.0 SYNTHESIS OF LEARNING FROM THE WORKSHOP

It is useful here to reiterate the key purposes of the workshop which were:

1. To create a supportive space for communication practitioners working on the ground in the response and recovery phase of the Canterbury earthquake; to share experiences and learning with researchers in risk communication.
2. To identify 'risks' to effective risk communication and how to apply the learning to enhance future communication around earthquakes and other risk events such as a public health emergency, biosecurity outbreaks or extreme climate events.

7.1 Messages and messengers

The concepts of 'response' and 'recovery' are useful in distinguishing between the immediate requirements post-disaster and the longer-term processes of recovery. Regarding communication in these phases participants agreed that issues relating to the *content* of messages are likely to be similar, but that processes will be different. The key point is the need to move from a top-down (command and control model) to a bottom-up process[10], although even in the response phase communication channels also need to be two-way.

There are further generic learnings relating to the content, timing and flows of risk communication messages as well as the required characteristics for those who deliver these messages. These include:

- The need for honest, clear, consistent, concise and relevant communication content.
- The need for messages to be delivered by a trusted spokesperson with the authority and leadership qualities to instill confidence in those receiving the messages.
- Specific areas where trusted spokespersons are needed were health, water and sewerage.
- There is a need for communicators to acknowledge uncertainties and, if necessary, provide a staged approach that informs people *when* further information can be provided, or when gaps in information will be filled.

[10] See also presentations of key speakers at the Resilient Futures conference at Lincoln University, 18th April, 2011. www.lincoln.ac.nz

Barriers or risks to effective communication included:

- Questions about the role of the media, with some participants pointing out the divisive and/or unhelpful media discourses that impacted negatively on the immediate post-quake experiences of some communities.
- While people acknowledged the need for top-down, one-way flows of information initially, the need for two-way flows was also identified, given the differential impact of the earthquake on different suburbs.
- Organisational silos leading to a lack of co-ordination across communication channels, and hierarchies (getting communication 'signed off') that delayed messages.

An apparent disjuncture between formal and informal information flows may be attributed to the lack of a *socio-spatial assessment of the risks* people faced, despite the learning from the September 4th earthquake.[11] For initial communication to be relevant to specific neighbourhoods, top-down communicators needed to have accurate information on different levels of need to feed into their assessments of what messages are required for different suburbs, and how this can be delivered when normal communication channels are disrupted.

Participants talked about the need for, and the ability of, communities to fend for themselves, building on existing social networks, new social networks, and innovative ways of disseminating and sharing contextually-useful information to provide support. Local response examples provided at the workshop indicated that key people and places could be quickly identified within neighbourhoods and communities with the ability to provide the bottom-up information needed to ensure communication was relevant at both suburb and city scales.

7.2 Messages and meanings

Workshop participants also pointed to the difficulties associated with developing shared meanings – stating for example, "there is a problem with the word 'RISK" because it means different things to different people". It was also noted that the term 'risk perception' as applied to public responses is probably not appropriate in the response phase given the realities of people's experiences. *"Disaster was treated as an accident, not a disaster! Losing your house is a disaster*!" One group did query whether there was a shift in how people in Canterbury now perceive risk (based on their experiences) and how this will influence their responsiveness to disaster preparedness messages.

The workshop findings also indicated that *how* the media, messengers etc. represented people's earthquake experiences is likely to affect their receptiveness to both messages and information. "*We got 'Alice in Wonderland' descriptions not the reality of experiences*". These representations also influence public responses to or engagement with information and activities in the recovery phase.

[11] For example, Maslow's Hierarchy of Needs provides one model or framework that could inform natural disaster risk assessment. This could be used in conjunction with an assessment of geographic and social vulnerability (e.g. impact on property, transport, infrastructure, ages and numbers of people in household, mobility, access to essential resources, family or neighbour support).

The final workshop comments also reflected what Karen Cronin referred to earlier as a tension between 'control' and 'creativity'. Participants reflected on the challenges arising from trying to create order out of disorder, and on how best practice risk communication can help stakeholders move from a chaotic state to a more simple state, while at the same time recognising that people and communities are affected differently and that "one size cannot fit all".

The learnings from this workshop suggest that there is an increasing convergence around the need for public engagement in the recovery phase.[12] A lack of public and community involvement in the recovery and rebuilding phase was identified as a risk both to democratic processes and to whether people will remain (and invest) in Christchurch.

7.3 Ideas for Future Research

7.3.1 Gaps in the literature

Participants noted that there is a gap in the literature about *immediate* risk communication when disaster first happens, and research to address this gap is needed in order to avoid a communication vacuum.

There is growing understanding about one way and two way communication processes, as described in the literature. But we need new research on the interplay and integration of 'one way' top down communication and 'two way' engagement communication strategies, and how these can be optimised at different stages in a disaster.

7.3.2 Opportunities

The Christchurch earthquakes have created a context in which communities throughout New Zealand could be (i) more receptive to planning and preparing for a disaster; (ii) adopting more realistic expectations; and (iii) developing improved strategies for disaster risk management.

Research opportunities include:

- Gathering information about how people conceptualise or think about risk and their role in preparedness, including responding to fatalism and dependency on public agencies.
- The roles and activities of recovery organisations including how existing sector posts or welfare centres are functioning around New Zealand, and assessment of the fit between demand and capacity.
- How to translate learnings from the Christchurch event to other parts of New Zealand.
- Developing better integration between biophysical and social science research communities to support future preparedness and response

7.3.3 Organisational communication

Risk communication researchers could look at processes of information demand and supply, to support agency responses e.g. reliance on websites and the news media, the use of public meetings and lectures, managing myths and rumours, responding to an increased public appetite for geological science information.

[12] For example, The Press 30/4/2011 contained a number of different articles relating to earthquake recovery all of which presented the need for public engagement and involvement in the recovery and rebuilding process.

A further research question related to understanding how the post-event stages influence information needs and how improved information provision and exchange should be appropriately facilitated between organizations, and between organisations and communities.

What are people's/communities/decision-makers' expectations in first and consequent stages? Are they on the same page?

Research could be done on the role of response agencies e.g. there are many different civil defence centres, mostly scattered around schools – is there any information about how well they are functioning, and what is the fit between demand and capacity?

And, how have those inside the various response and emergency agencies themselves experience the communication process, and what lessons can we take from their personal experience?

7.3.4 Wider communication processes

Research is needed on the capacity of resilient communities/social networks and how this can be enhanced and/or used in other contexts.

Research is needed to develop best practice design for hazard messages and content e.g. what do people understand by a red sticker? What do people understand as a 30% likelihood of another quake?

Another important research need is to understand the most effective channels for delivery of hazard messages and risk information e.g. website, txt, word of mouth, radio, community networking?

Research is needed to provide advice on and design of new processes to support public engagement and governance in the immediate and recovery phases.

Another research question is how professional, technical and local knowledge can be harmonized for decision-making?

Questions about the role of trust also emerged, including how to develop and maintain public trust in authorities and public messages, and how well those in decision-making authorities trust the public to deal with uncertainty or ambiguity.

Research should be done on the various actors in any given risk situation and how they interrelated, in a total communication landscape. This would include the interplay between formal and informal social institutions.

Evaluating the role of the media in the response and recovery stages was a commonly identified research need. How do the media perform, and regard their role as performing, as providers of commercial or public interest news v. acting as a key partner in the total communication system in an emergency on the basis of civic journalism?

Research is also needed on the hard systems needed for effective communication in an emergency including more robust communication technologies, or alternative technologies that can come into play e.g. the community radio caravan.

7.4 Synthesis of learnings from the workshop

One participant group stated that "research is needed on the capacity of resilient communities/social networks and how this can be enhanced and/or used in other contexts." This implies that we can learn about what made communities resilient and what capacity they had in relation to the Canterbury earthquakes, but there are prior as well as emerging factors contributing to resilience and capacity. This suggests a much wider remit for understanding and developing risk communication.

Given the content of the presentations, small group work and discussion or email contributions at this event, we suggest that attention should be paid to the wider context for risk assessment, communication and management. The following diagram attempts to synthesise the range of ideas emerging from the workshop within this wider frame of reference (see over page).

Using an *interactive* approach to risk assessment, communication and management, before, during and after a disaster event

Research foci

Assessment and how to build effective community and organisational networks (social, technical etc.) including looking into the role of volunteers in a communication setting.

Assessment of how existing data bases can be used (e.g. Ngai Tahu)

Building mechanisms and practices

Before

(Outcomes: Vulnerabilities identified)

Natural and built environment

Demographic (age, ethnicity, socio-economic)

Community (social networks, leaders)

Communication technology

Research foci

How can rapid risk assessment be carried out?

What content and processes of risk messages/information will support effective organisational and community action?

What forms of communication are needed and what will contribute to their robustness (technology, word of mouth)?

What is the role of the media?

During

(Outcomes: Effective response strategies)

Implementation of rapid risk assessment tools

Targeted, relevant and consistent risk communication messages and information are delivered by trusted spokespeople

Households and communities are supported in mitigating and managing risks

Research foci

How can the lessons from the response phase inform an improved recovery process?

What form of risk assessment better suits the long-term and dynamic recovery context?

How can risks be prioritized, communicated, mitigated and managed throughout the long-term recovery stage and by whom or what organisations?

How can learning be extrapolated and adapted for a wider context of disaster events and management?

After

(Outcomes: Inclusive, effective recovery)

Rapid analysis of learning

An inclusive, comprehensive and adaptable risk assessment process informs planning and action.

Risks are well communicated, mitigated and managed throughout the long-term recovery stage.

There is an informed and practical range of strategies and tools for managing disaster events in N.Z.

8.0 SUMMARY AND FUTURE DIRECTIONS

In summary, this workshop provided a valuable space for researchers, practitioners and policy-makers to discuss risk communication in the response and recovery phases of the February 22nd earthquake in Christchurch. Three presentations focused on (i) the experiences of Redcliff residents; (ii) building re-occupation issues facing central city businesses; and (iii) an overview of the theory informing risk communication approaches and practices. Following a brief plenary discussion, small groups focused on 7 questions relating to assessment of experiences, learning about what worked well to inform future events, the different meanings of risk communication, and research directions.

This report has provided a summary of the presentations and workshop participant discussions. Key messages emerging include; (i) the need for two-way communication to ensure relevance at individual suburb/community level as well as city-wide; (ii) the need for better integration across agencies; (iii) consistent risk communication messages delivered by trusted spokespersons; and (iv) a need to rethink the role and responsibility of local media. Researchers noted a gap in the literature about early response phase communication, and potential research questions focused around how to widen and document the learning from the Canterbury experience; the role of the media; how to build community resilience; how to effectively communicate risk; and building adaptability and flexibility into organisational communication practices.

Where to from here?

Following the workshop most people stayed on talking to each other and making connections that could be followed up in the future. Links between researchers, practitioners and policy-makers have been established, and there is the potential for future research to contribute to policy development and/or implementation, as well as build an evidence base for risk communication practice. The learning can also inform future theoretical understanding of risk communication for those participants working in academia or applied research institutes. Providing this forum for practitioners, researchers and policy-makers enables constructive shared learning, and future collaborative research programmes alongside similar workshop opportunities could continue to extend and consolidate this learning.

APPENDIX 1 WORKSHOP REGISTERED ATTENDEE LIST

Karen Cronin	Science Leader (Science Technology and Society), Social Systems Group ESR
Virginia Baker (by vidcon KSC)	Social Scientist Social Systems Group ESR
Ann Winstanley	Social Scientist Social Systems Group ESR
Jo Martin	Earthquake Commission
Suzanne Wilkinson	Engineering Dept. University of Auckland
Brenda Mackie	School of Psychology (Launceston) University of Tasmania
Margaret Kilvington	Independent Social Research, Evaluation and Facilitation
Rosemary Du Plessis	Sociology Programme School of Social and Political Science University of Canterbury
Joanne Stevenson	University of Canterbury Dept. of Geography
Shona van Zijll de Jong	Social Scientist NIWA
Dacia Herbulock	Media Advisor, Science Media Centre
Hlekiwe Kachali	PhD Candidate, University of Canterbury Dept. of Civil and Natural Resources Engineering
Tim Marshall	Communication by Design
Vivienne Bryner	Centre for Science Communication & Geology Dept. University of Otago
Vicki Hyde	Web Centre Ltd, local Redcliffs resident
Peter Hyde	Web Centre Ltd, local Redcliffs resident
Erik Brogt	Academic Development Group University of Canterbury
Jon Mitchell	Manager Regional Emergency Management Office Environment Canterbury
John Lindsay	Assoc. Professor, Dept. Applied Disaster and Emergency Studies, Brandon University, Canada & Joint Centre for Disaster Research, Massey University
Bob Frame	Principal Scientist (Sustainability & Society) Landcare Research New Zealand Ltd
Kelvin Berryman	Manager – Natural Hazards Research Platform GNS Science
Judy Grindell	Public Relations Manager Landcare Research
Bruce Glavovic	Professor in Natural Hazards Planning, Resource and Environmental Planning Massey University
Michele Daly	Team Leader: Social Sciences GNS Science
Rebecca Macfie	Senior writer NZ Listener
Kim Wright	Hazards Planning Scientist GNS Science
Graeme Nicholas	Senior Scientist: Service Innovation ESR
Paul Gorman	Journalist, The Press

Richard Smith	Team Leader - Hazard Risk Management and Research Ministry of Civil Defence & Emergency Management
Lisa Langer	Project Leader, Waste to Resource Co-leader, Design for Living Objective leader, Community resilience and recovery Scion, University of Canterbury
Bill Simpson	Environment Canterbury
Katherine Trought	Communication/Marketing Manager , Environment Canterbury
Marion Irwin	Hazards Manager, Auckland Council
Regan Potangaroa	Associate Professor School of Architecture (ScALA)
Katy McRae	Manager - Internal Communications AMI Insurance
Sheena Ewing-Brown	AMI Insurance
Erica Seville	Risk Strategies Research and Consulting
Maureen Mooney	Social Scientist Joint Centre for Disaster Research, Massey University
Brendan Doody (by vidcon KSC)	Environment and Hazards Social Science Researcher, GNS Science
Chandrika Kumaran (by vidcon KSC)	Public Education Manager Ministry of Civil Defence & Emergency Management
Dr Ljubica Mamula-Seadon (by vidcon KSC)	Team Leader: Sector Development Ministry of Civil Defence & Emergency Management
Julia Becker (by vidcon KSC)	Community Resilience and Hazards Planning GNS Science

APPENDIX 2 VICKI AND PETER HYDE'S PRESENTATION

Slide 1

The Information Channel
in a Post-Quake Environment

Photo courtesy of Motoki Yotsukura from the *Asahi Shimbun*

Slide 2

Word of Mouth

Broadsheets on the Street Corner

Online Citizen Journalism

Community Initiatives

Slide 3

What's the Use of...

... websites when people don't have power?

… a helpline with a 20-minute hold when you have 5 minutes left on your cellphone?

… telling me 65% of the city has power when I need to know what's happening in my suburb, in my street?

… focusing on the CBD static earthquake highlights and ignoring the people and problems in the less photogenic and more occupied and dynamically changing areas of the city?

Slide 4

The Mass Media Response

Focusing on the Rescue City

Living in the Shower City

Ignoring Refugee City

Slide 5

What is Needed Next Time?

Information that is relevant, clear and accurate, specific to each area

Designated people at a local level who can pass information up and down the chain

More robust communications support and technology

APPENDIX 3 KAREN CRONIN'S PRESENTATION

Slide 1

Risk Communication, Natural Hazards and Emergency Management – a short tour of the territory

Dr Karen Cronin
Science Leader (Science, Technology and Society)
Social Systems Group
Environmental Science and Research ESR
Kenepuru Wellington

Presentation to the ESR GNS Risk Communication Workshop
Christchurch 7 April 2011.

Slide 2

"Risk Communication" can be applied to a variety of risk situations

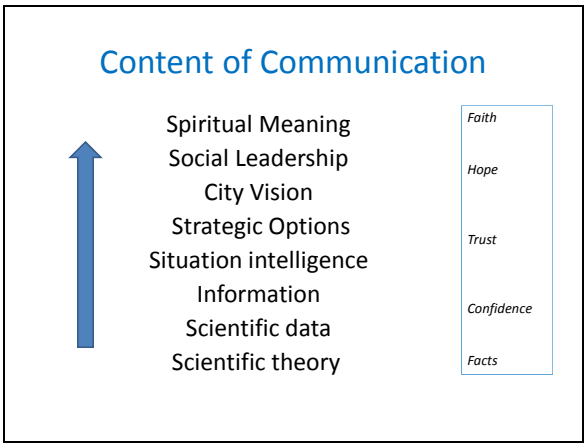
- Natural hazards
- Public health
- Environmental management
- Technological change
- Infrastructure development
- Social policy
- Financial risk
- Political risk

Slide 3

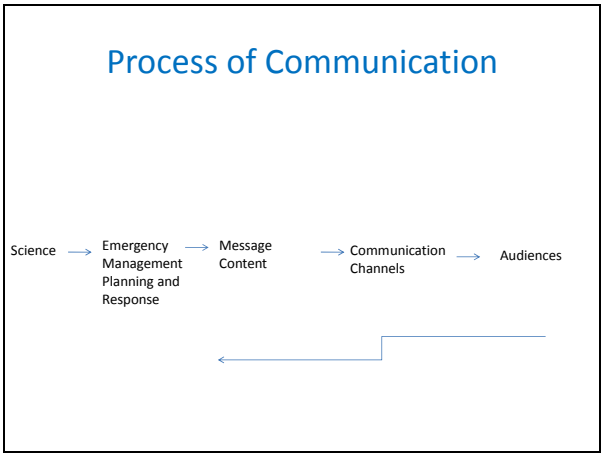
The territory of "Risk Communication" and Natural Hazards and Emergency Management

Communicate The Risk Increase public understanding of The Science Explain the facts
The news media should do better Facts v Fears Trust in Authority Look after yourself
Know what to do in an emergency Message of Hope Hazard messaging Safety in the Home
Crisis communication Public engagement Stakeholder dialogue
Public information campaign Getting the Facts Out to People Boil the Water
Communicate with our customers What is our vision of a future city? How can we have our say?
Correcting Public Misconceptions Overcoming fear When can I reopen my business?
Achieving Behaviour Change Building a new city Will there be another quake?
What is happening with Papa Tuanuku? Where is a safe place to stay? Is this quake related to Japan?
Where are the toilets? Who is controlling our city? Recovery = Business as usual or Transformation?
Is there a risk of public backlash? Frustration from uncertainty Don't forget all of us in the Eastern suburbs
Look after your neighbours Where is God? What are the poets saying?

Slide 4



Slide 5



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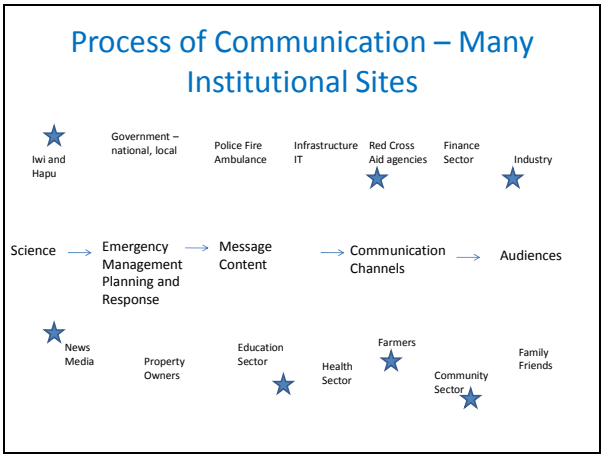


Slide 7

Risk communication –
communicating 'the risks'
to the public
or
communicating
with stakeholders about different
dimensions of risk?

Slide 8

Risk communication:

Conveying or transmitting information between interested parties about –
a) levels of health or environmental risks;
b) the significance or meaning of health or environmental risks;
or c) decisions, action or policies aimed at managing or controlling health or environmental risks.

Interested parties include government agencies, corporations and interest groups, unions, the media, scientists, professional organisations, public interest groups, and individual citizens.

Davies, J., Covello, V., & Allen, F. (Eds.). (1987). *Risk communication*. Washington DC: Conservation Foundation.

Slide 9

Source Channel Receiver

→ *Message* →

One-Way Communication

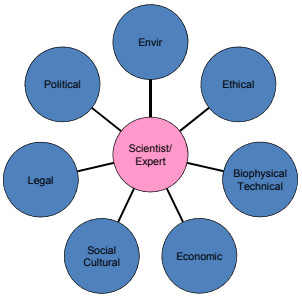
Information Transfer – Deficit Model

Slide 10

One way communication techniques:

Public meetings
Websites
Newsletters
Media stories
Information sheets
Education kits
Displays
Multi Media
Seminars

Slide 11



Two way communication

Information Sharing: Engagement Model

Slide 12

Two- way communication objectives

- Provide and receive information
- Involve experts and others in the discussion
- Increase public interest and reduce resistance
- Test ideas with other people
- Identify new issues, information or options
- Generate alternatives / improve choice
- Achieve 'buy in' and acceptance
- Reduce cost
- Improve technical outcomes
- Improve social and environmental outcomes

Slide 13

Two way communication techniques:

Focus groups/market research
Community meetings
Relationships with stakeholder groups
Interactive seminars/ workshops
Community advisory group
Negotiation/ Agreements/ Partnerships

Dialogue

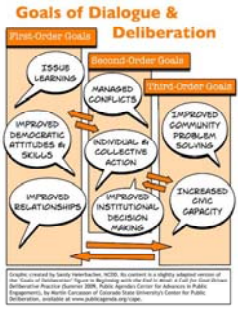
Slide 14

Use communication to support organisational and social learning

1. Engage early
2. Strategic not just operational goals
3. Consider alternatives
4. Participatory process
5. Community context/ social vision

Slide 15

Research Question – How can social technologies such as dialogue and deliberate governance be best used [before during and after emergencies] to improve governance and support efficient decision-making?



Slide 16

Slide 17

www.gns.cri.nz

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