Community communication during the Queensland floods

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Background

I am a former public relations practitioner who developed an interest in disaster communication while I was the manager of corporate communication at Toowoomba City Council during the 2002 bushfires. I now work at the University of Southern Queensland (USQ) as a lecturer in public relations and am an active researcher in disaster communication. I am completing a doctorate in disaster communication with the University of South Australia. One of the courses I teach is Issues and Crisis Management at under- and post-graduate level.

During the 2002 bushfires in Toowoomba, my communication team at Toowoomba City Council was seconded to the Local Disaster Management Group (LDMG) to deal with media enquiries. When I left Council to work for USQ in 2005, I was approached by the Toowoomba District Disaster Management Group (DDMG) executive officer to form a media liaison capability within that group. I now co-ordinate a volunteer group of 18 communicators from Toowoomba and Brisbane, providing a training session for this group each winter with the help of Emergency Management Queensland (EMQ). I am not paid by any organisation to do this; it forms a part of my community service obligation, mandated by my employer USQ. The group works to a written sub-plan and has a formal activation process. The group has a range of experience, but includes a former Department of Community Safety (DCS) communication manager, a former Defence Public Affairs staffer, a former Ergon Energy communication manager and a number of volunteers with extensive experience in public relations and crisis communication.

DDMG staff are given updated contact materials each year and the public information plan had been informally endorsed by DCS communication managers for the past six years until the changes to the Act in November last year moved communication responsibility to Queensland Police Service. This plan outlines activities for teams of at least four public affairs people, although six to eight are recommended, especially for a situation of international interest such as Toowoomba and the Lockyer Valley. The focus of this plan is community and media. I attend each DDMG meeting and am fortunate that the current and acting District Disaster Co-ordinators allow me to update the Group at each of those meetings on the volunteer communicators' activities and availability to LDMGs. The volunteer group acts as a support resource for LDMG media and public information staff, which in many cases across Queensland is just one or two people. The group is also available to neighbouring DDMGs. The public information volunteers have been activated once since 2005, for support of Lockyer Valley Regional Council for recovery communication after the January floods.

In addition to this I am studying disaster communication as part of my PhD with UniSA. My topic is how people seek information when their community is in a disaster, dealing specifically with the response phase (although I have collected information on warnings and recovery as a by-product). I have so far conducted interviews with members of the communities of St George for floods, Airlie Beach for cyclone and Gerogery in NSW for bushfire. I will also undertake interviews with Toowoomba residents in May and June. For the final stage of my research, I hope to include a number of survey questions that arise from these interviews in the Central Queensland University's Population Research Laboratory omnibus survey in July. This survey will secure 1200 responses from Queensland residents. My participation in this survey will depend on my ability to procure funding.

I am also a founding director of Emergency Media and Public Affairs, a membership organisation of emergency communicators that holds a conference every year. Funding from the conference is channeled to the EMPA research and development committee, which funds research projects each year on disaster communication. EMPA funded the interview stage of my PhD research. This organisation was formed in 2006.

On a personal note, I was in Toowoomba on the day of the flood and was stranded there until 10pm when the New England Highway to the north was reopened. The first news I was able to get of the highway situation was on ABC radio at 9.30pm via an interview with a Department of Transport and Main Roads official.

The January floods

Toowoomba DDMG

Toowoomba DDMG did not meet until Thursday 13 January, three full days after the flash floods in Toowoomba and the Lockyer Valley, and my team was not activated until that day. The activation related to the Lockyer Valley; we were not called upon to help Toowoomba Regional Council although I know that the Mayor at Toowoomba hired a consultant to handle the media for him. That consultant happened to be one of our communication volunteers. The Toowoomba LDMG did not call for media help, perhaps because the Toowoomba Regional Council communication team has about five people on staff who could do this job. I can not yet comment on how effective the communication from the Toowoomba LDMG was, although I did on a personal level have a great deal of trouble finding information on road closures in the evening after the flood and there seemed to be few updates coming out to the media, which seemed to rehash much of the same information all afternoon.

By the time we were activated, [redacted] who was the sole communication officer on the Lockyer Valley LDMG, had been working virtually 24 hours a day because of the international spread of interest around this story. In addition, he was involved in personal flood rescue and recovery. He eventually received help from Local Government Association of Queensland (LGAQ), who sent a communication officer to assist. With just two staff and a 24-hour news cycle, this media team would not have been able to set up a sustainable and proactive system of dealing with the media.

Anecdotal evidence from media I have spoken to suggests that the two were unable to cope with the volume of media calls and some calls were left with no response. There was no web presence that might have reduced the number of phone calls by media to LVRC. [redacted] and his colleague would not have had time to even think about community communication outside mainstream media channels. Two members of the Toowoomba media commented to me that they were unable to get comment via the LDMG's communication team. From experience I assume the reason for that would be that they were simply overwhelmed until the Council of Mayors sent experienced communication staff to support [redacted] and his LGAQ partner on January 13. My observation was, and this has been confirmed in conversations with the two Toowoomba journalists, that the other source of information, the Mayor of LVRC Steve Jones, had a clear preference for state and national media over local media outlets in terms of interviews. If this is correct, it goes against the findings of disaster research that supports the importance of prioritising local media as a conduit to the local community.

When the DDMG met on January 13, it was clear that the Lockyer Valley representatives were concerned that [redacted] was overwhelmed and physically exhausted. We activated the DDMG public information team that day and two very experienced volunteers went to Gatton the next day to assist. By this stage, media enquiries were petering out and the team was able to start work on a community newsletter, which was printed and distributed by LVRC, while [redacted] dealt with the incoming media calls. The LGAQ staffer was able to return to Brisbane. We continued to send volunteers, usually two each day, which then allowed [redacted] to take days off, I think the Sunday and Monday after the flood. The presence of a very experienced public relations practitioner, Francis Quinlivan from the Council of Mayors, meant that there was some oversight and a little strategic direction provided, but no real strategy was developed during our period of involvement for critical recovery communications for that week or for the next six months. While our group had intentions of helping develop such a strategy, it became clear the longer we were at LVRC that it would not be resourced. The provision of staff from the Council of Mayors was only possible in this particular disaster because virtually the whole of Queensland local government business had ground to a halt because of the state-wide floods and this team had no pressing work to be done in their day-to-day roles. Generally in a disaster, councils could not rely on this avenue of help.

At the DDMG meetings on 13 and 14 Janaury, I was charged with looking after the recovery communication. I then enlisted the help of a colleague, [redacted] from the Office of the Emergency Services Commissioner in Victoria who had been the driver of the development and operation of a very effective Joint Information Committee (JIC) that handled the recovery process of the Kinglake district after the Black Saturday bushfires. Our thoughts were that the recovery effort was really a communication effort and needed not a public relations team, but a team made up of knowledgeable people from every agency. The Kinglake model involved daily meetings at a number of traumatized communities for six weeks with a JIC made up of people from every agency so that questions could be answered immediately and problems and concerns taken on board and fixed quickly and effectively. Information needs of the communities were addressed very quickly in the communities around Kinglake under this model. The JIC met in each community at the same time each day and then weekly after the first six weeks. [redacted] and I considered this model suitable

because of the similarities between the two locations in terms of trauma and loss. While senior QPS staff at DDMG and LDMG level were keen on this model, it seemed beyond the capability or the desire of the LDMG, which by this stage was emerging from the initial intense four days of response. The DDMG did not seem to have the power to do more than answer direct requests for help – I had expected that some guidance might be provided given the wider disaster experience of people on the DDMG, and that the JIC approach might be recommended from DDMG level. While I asked that this happen and was assured that it would, I am not sure whether it did and if so, what the response of the LDMG was. I did send an email to the DDMG asking that agencies put forward the names of people for a JIC, but received no response. [redacted] spoke in depth with [redacted] about this process, but the model was never used.

The DDMG's public information group continued to send staff until Tuesday 25 January, at which stage [redacted] felt confident that his role was returning to 'normal', despite the recovery communication just starting. The recovery communication has, to my knowledge, consisted of weekly newsletter that I know has not reached affected people in the Murphy's Creek or Postman's Ridge areas.

Observations and insights:

1. The Toowoomba DDMG was activated too late and the help that [redacted] at Lockyer Valley Regional Council needed from January 10 dealing with media enquiries was not provided as a result. I made a mistake here in sitting back and relying on the process when I should have telephoned [redacted] to see what help he needed on the day the floods hit. However, even if I had done that, I think his request to LDMG and then to DDMG would have got lost in the system because of the the next point.
2. The Lockyer Valley Regional Council rarely sends a representative to the DDMG meetings and therefore key people in the LDMG from Council would not have been aware of the communication support that could have been provided.
3. In this case, the media support team of the LDMG consisted of one young and relatively inexperienced practitioner with a relatively low position of power in the LDMG and within Lockyer Valley Regional Council. This meant that communication was not taken as seriously as it should have been and reaction to the media was the primary focus of the LDMG instead of more holistic community communication. Councils tend to take communication seriously only when put under pressure by the media – communication with the community is consistently overlooked or relegated to people with no training or experience.
4. Visits by political VIPs dragged resources away from the communication (and operational) efforts on a number of occasions, further reducing the ability of the team to become pro-active. Politicians tend to visit disaster areas separately, possibly to maximise media coverage for individuals. These visits need to be better co-ordinated and resourced.
5. The web and resources such as Twitter and Facebook could have been used to reduce the number of media enquiries to LVRC, but the communication team was not well-enough resourced to set these up. All councils should have pre-

established accounts and "dark" websites set up in preparation for this activity and a social media policy template needs to be developed and distributed for councils to adapt and work to.

6. The LDMG considered the operational response its only role. As this drew to a close, committee members seemed to have no concept of the importance of the recovery role and did not take advantage of resources offered to get the community aspect of the recovery (as opposed to cleanup and reconstruction) underway apart from seeming pleased that Queensland Health had a large team of psychologists in the area.
7. The Black Saturday bushfires experience shows that communication is central to uncertainty reduction and hence the psychological recovery process – this is beyond the knowledge and expertise of most LDMGs and it was particularly evident in this case when the communication effort of the LDMG was winding down as it should have been ramping up. The LDMG members seemed physically and mentally exhausted and were focused on ending the situation.
8. The finance of the operational response does not recognise this either – LVRC should have AT LEAST one additional staff member to work on community engagement and recovery to ensure a council and other agencies' presence in all of the affected communities each week for the next 12 months. This person should work with councillors and senior staff (their physical presence will be important to the recovery of many communities), so the recovery process will take up considerable resources over that period.
9. The changes to the Disaster Management Act in November have resulted in communication being undertaken by Police Media. There are three problems with this that were evident after the Lockyer Valley flood:
    a. Communication officially stops when police involvement is terminated;
    b. Police media did not provide the same level of support to LDMGs that has been provided in the past by DCS (although in fairness, a state-wide disaster situation has not been seen before) and seems to take a more narrow view of the type of information it makes available;
    c. Police Media has a reputation among journalists as a roadblock to information, so journalists seek other sources – namely stretched LDMG members and people in the community. This was evidenced by the ABC's difficulty in getting comments from DDCs in the days after the floods. On at least three occasions spread over a week, I heard announcers say key police fro around the state were too busy to talk to them.
10. Anecdotal evidence that I have so far suggests the Police Media Facebook site was a valuable resource for those able to access the web. However, Police Media missed a valuable opportunity to enhance communication when the decision was made not to respond to questions by users desperate for information. I have since heard that the QPS Facebook site is operated by people in IT – it would be unlikely that these people have training in human behaviour or communication in a crisis or crisis communication.
11. The recovery process is considered by the Queensland Government via its legislation and political senior management team to be a physical/operational activity only, reflected by the appointment of logistics experts (Defence) to oversee the recovery process. However, community resilience and recovery is a psychological process and communication is the central tool for success. This is recognised in Victoria, and I believe it needs to be built somehow into the Act

to prevent lack of knowledge and lack of resources from derailing the recovery process as it has been in the Lockyer Valley. The Joint Information Committee model should be considered if this is recommendation is taken on board. Research will be done on the effect of the JIC in the Kinglake area later this year and the results should be of importance to all state governments. Any recovery process should be set up when the LDMG is activated ready to kick in as the response winds down.

12. In places where there is physical devastation, physical communication hubs need to be set up as a matter of course and urgency, using notice boards and hand-written notes if need be, letting the community know of developments, first in response and then in recovery. The aim of these hubs should be uncertainty reduction, and they need to be used by ALL agencies. This should be an automatic feature of any evacuation centre. The DDMG heard at a later meeting that while some evacuation centres had no evacuees, residents were still calling in to the evacuation centres for news of what was happening or to find out how to contact certain agencies.
13. The all agency approach was not evident in the recovery phase. Queensland Health, in particular, while providing terrific resources for recovery, was (and is) so anal about its communication that the LVRC community newsletter was held up for two days because approval was required for a story on a service provided by QH that had been announced at a LDMG meeting. There were breakdowns in communication between recovery agencies and some agencies seem to be reluctant to use the Department of Communities One Stop Shop. An example of this was the staging of vaccination clinics by Queensland Health in some of the affected communities that were not well publicised because the other agencies, Council in particular, were unaware of these. Use of a Joint Information Committee model would help prevent problems arising from this providing agencies are allowed to be forthcoming with information.
14. The centralised communication model employed by the State Government seemed to place an added burden on local mayors to respond to more than usual media enquiries. While research needs to be done on this aspect to confirm or refute my opinion, it seemed that fewer media interviews were conducted with District Disaster Controllers and other relevant operational people than in the past, and this then forced media to seek out mayors to get local updates. See my comments relating to Police Media on this.
15. Commercial radio was ignored by LDMG communicators in Toowoomba and had no information apart from locational information that listeners were phoning in. On several occasions listening to commercial radio, I heard the announcer make wild guesses about the situation or give out the wrong contact numbers for certain things that I know because of my DDMG work, was wrong. I suspect this was because announcers and producers on these stations do not have the expertise or contacts to find the information they need in an emergency because this is generally done by their remote news services located in Brisbane or the Gold Coast. This points to the need for LDMG media teams to have contacts for each radio station and to proactively provide information to allow local residents to make informed and safe decisions.
16. The Emergency Alert was used once that I know of, by Queensland Urban Untilities (QUU), which sent a message about the Lockyer Valley's precarious water supply and the need to preserve water (some communities in the alert area still had safe water supplies). This message was never rescinded with

another alert, and LVRC was forced to seek information for media updates. Sometimes it took three days to get a response so a release could be sent out. Water is critical infrastructure formerly held by Councils and in the past, LDMG communicators could talk freely about water supplies – QUU needs to have a representative on every LDMG that is located around water supply under its management. Like roads, information about water supplies should be a priority, something not seemingly understood by QUU. In addition, the Emergency Alert system needs to be better managed to make sure such messages are followed up.

...and unrelated to communication:

1. On two occasions I heard through reports to the DDMG of resources being diverted to Brisbane and while I understand that resource allocation is co-ordinated at State level in these circumstances, these particular situations were hard to understand:
    a. A helicopter had been procured to take supplies to Cecil Plains, which had been cut off for a number of days before January 10. The chopper was due to fly out on 12 or 13 January but was diverted at the last minute, possibly to Brisbane. This was a community suffering hardship before the Brisbane floods were on the radar;
    b. Two container loads of new white goods were destined from Sydney to (specifically) Grantham/Murphy's Creek. One of these was diverted to Brisbane after the company involved contacted the Premier's Office. The level of trauma and loss experienced by these two communities compared with Brisbane makes it very difficult for this decision to be understood.

Research into information-seeking and communication during floods

I have three research reports to contribute to the Commission of Inquiry. The first is the first stage of my PhD research in which I interviewed 13 residents of the St George community on how they got information during the March 2010 flood (Ryan, 2011). The second project was undertaken for NSW SES on media satisfaction with SES information provision during the 2009 and 2010 northern NSW floods (Ryan & Te'o 2010). The third piece of research was a review of the importance of communication in disasters evidenced by recommendations from Inquiries, debriefing documents and reviews of exercises and incidents (Ryan & Matheson, 2009).

I may be able to provide a fourth, from interviews of Toowoomba residents about the flood, before the inquiry closes. Survey research to be undertaken in July of 1,200 people across Queensland will not be available for the preliminary report, but may be available for the final report in January 2012. This survey will ask questions based on the results of the interviews.

I have attached copies of the three reports.

Observations and insights applying to the 2010-11Queensland floods from my research

1. Councils in flood areas should have flood maps ready for distribution to residents during a flood, similar to those made available by Brisbane City Council earlier this year. These should also be put up in evacuation centres/communication hubs around afftected and potentially affected communities.
2. Agencies that centralize their public affairs/media functions need to check with their local staff that messages containing locational information are correct and ask media to repeat the information verbatim, in order to prevent subtle changes to place names that can cause confusion.
3. Police manning roadblocks should be given up-to-date information on the disaster that they can impart to local residents, thereby making their job less confrontational. They are often the only source of information for people desperate of news relating to the safety of family, friends, animals and property. People often wait at road blocks until the road block is removed, particularly in bushfire situations. Such information could head off attempts by residents to get home or to reach family/friends.
4. Police implementing evacuations should be trained in human behaviour in such situations (ie that people will always look for confirmation of what police are saying before they act) and should be given written information to give out to residents in order to reinforce the message and allow people to process the information according to what it means for them. Such training and tools should allow police to move more effectively and calmly through neighbourhoods by anticipating people's questions and the need for people to confirm what they are hearing.
5. Bureau of Meteorology should be provded resources to ensure flood gauges are tested and maintained to ensure they work, particularly in urban areas where residents do not have local knowledge to realise that gauge readings on the BOM website could be faulty or subject to local eccentricities.
6. Mobile phones were the primary communication tool in each of the disasters studied. Research and development of this technology to eliminate the delay of texts and to cope with the added traffic volumes that are generated around disasters need to be a priority. In addition, Australians need to be trained to use short text messages rather than mobile phone calls into and out of disaster zones in order to preserve the stability and efficacy of the service at peak times.
7. Local councils need to publicise multiple methods for residents to secure information during a disaster – evacuation centres, websites, the local pub or shop, radio stations etc.
8. Communication teams at all levels should be well-enough staffed that they can put out information pro-actively through a number of sources: websites, opt-in email for journalists (a preferred source), Twitter, Facebook, hotline/call centre staff, evacuation centres, pro-actively telephoning each local media outlet, and keeping up to date communication hubs.
9. 20 per cent of the problems identified in the handling of disasters or disaster exercises relate to communication with media and the

community (Ryan & Matheson, 2009). This reflects a need for better resourcing of this function, particularly as many of the smaller LDMGs do not have access to anyone familiar with media and community communication. Balonne Shire Council in St George does not have a media/communication person to second to the LDMG and this function was looked after by an employee from engineering during the March 2010 floods. His task was to answer media enquiries.

10. Road closure information is critical to decision making processes of flood affected communities, especially those caught by surprise away from home and/or family members. This should be a priority for any LDMG communication team.

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How people seek information when their community is in a disaster

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Abstract

Purpose: To research information seeking behaviour and discover sources used by people whose community was in a disaster and what they wanted to know.

Design: In-depth interviews were conducted with 37 people in three communities that had suffered a disaster in the previous 12 months. The study covered St George in Queensland (flood), Airlie Beach in Queensland (cyclone) and Gerogery in NSW (bushfire). The interviews were transcribed and then analysed using the constant comparative technique (Wimmer & Dominick 2000).

Findings: There were clear preferences for information sources that differed between disaster types. Those in a bushfire found out about the fire by seeing the smoke or were notified by friends. Radio was a preferred source, for cyclone and bushfire, but in the Gerogery case radio was unable to supply reliable or up-to-date information. In flood and cyclone, the Bureau of Meteorology was the most cited source and was the way many people discovered they were facing a flood or a cyclone. In a flood, a visual of the river and the person's own experience or the flood experience of friends, family or neighbours were then drawn upon to interpret the possible effects on the individual. Radio was not a well used source of information in this particular flood. In a cyclone, however, radio was the second most popular source of information, particularly after the power went out and especially those stations featuring talk back from community members about local cyclone damage and other news. In the bushfire and cyclone, mobile phones were a constant tool for contact with others. Few used their mobile phones to get onto the web and only one person in Airlie Beach used Facebook as a source of information about the situation. Twitter was not used at all.

In all disasters, location, timing and strength/peak was the most prevalent information sought, followed by whereabouts and safety of friends, neighbours and family.

Practical implications: The Bureau of Meteorology provides an effective source of information for communities potentially affected by flood and cyclone. Flood mapping should also be a standard feature of local council communications. In cyclones, mobile phone service should be a priority and post-impact agency recovery texts be used. Radio should continue to be proactively used by agencies as a primary tool in order to build up trust in that media. In a bushfire situation, text or phone messages could be utilised more often for reporting of the location and direction of the fire and radio stations need to be proactively kept up to date.

For all disasters, mobile phones featured as a primary tool that was accessed by all interviewees. This points to the importance of developing mobile phone message technology that is not subject to delays or interruptions.

Originality and value: Very little research has been undertaken around the world on how people seek information in a disaster. Much of the research focus has been on what media sources people use (Greenberg, Hofschire & Lachlan 2002; Piotrowski & Armstrong 1998; Roeser & Schaefer 2002; Seeger et al. 2002; Stempel III & Hargrove 2002). Two very small studies have been undertaken in Australia (Cohen, Hughes & White 2007; King & Goudie 1997) but the study by King et al asked a small number of questions about sources of information as part of a wider study.

This study on information-seeking may provide data on which better communication plans can be built by emergency agencies.

Keywords: flood, bushfire, cyclone, river heights, tracking, radio, community networks, information-seeking, information source, messaging, community communication, emergency agencies, police, SES, Rural Fire Service, Bureau of Meteorology.

Background

Summer 2009-10 in Australia produced the usual bushfires, cyclone and floods.

On December 17, 2009, a fire started at the tip at Walla Walla, a small community about 30kms north of Albury. It was a high fire danger day at 37 degrees Celsius, 10% humidity and winds of 45-60kph and the fire soon zig-zagged its way south east to the community of Gerogery, traveling 11kms in one hour (Alexander 2010). Five homes were destroyed, 5,500ha were burnt, a large number of cattle and sheep lost and two firefighters injured ('Fire whirl: The startling Riverina bushfires' 2010).

In Queensland, widespread rain in February and March, 2010, resulted in flooding of the Balonne and Moonie River systems in south western Queensland. The flood particularly affected the Balonne Shire community where the Balonne and Moonie Rivers peaked, the Balonne at 13.28m at St George on March 6 (Norman 2010). Twenty houses were inundated in St George and St George Hospital and Warawee Aged Care Home evacuated. Just over two weeks later on Saturday, March 21, category 3 Cyclone Ului crossed the coast at Airlie Beach, passing directly over the tourist town at 1.30am (Bureau of Meteorology 2010). About 30 homes and buildings were damaged, 60,000 households were left without power and extensive vegetation blown onto roads and property.

The population of Balonne Shire, in which St George is the major centre, is 4,627 and the industry predominantly agriculture (Australian Bureau of Statistics 2007c). Gerogery has a population of 979 and is also a farming community (Australian Bureau of Statistics 2007b). Airlie Beach has a population of 2,751 and the dominant industry in the town is hospitality and tourism (Australian Bureau of Statistics 2007a).

The questions used during the interviews were developed from a review of existing literature and particularly related to seeking problem-specific information and the information-seeking model proposed by Savolainen (1995; 2008). This model considered information pathways rather than just sources and was one of the first attempts to describe information-seeking for a specific problem other than academic research or web searching (Case 2008). In particular it recognises the importance of context in information-seeking, an aspect that could be valuable when considering different disaster types. There is not room within the guidelines for this paper to expand further on the literature review.

Methodology

This research is part of a larger project that includes a literature review, the in-depth interviews conducted for this project, and an omnibus survey of 1200 respondents to be undertaken by telephone in Queensland later in 2011. The questions for the survey will be developed from this project. The reason for the survey is the difficulty in making generalisations across the population from a handful of interviews of people who may or may not be representative of the local population. While the interviews give us valuable insights

into how and why people do certain things, the survey will tell us how applicable this is to the general population (Phillips 2002).

This research was designed to consider information seeking pathways and sources during the impact and dislocation periods of a disaster, although for the purposes of interviewee narrative and drawing more information from interviewees, questions were asked about the detection of the threat phase through to the reaction and remedy phases.

In depth interviews were conducted within each community between October and December 2010. A statistical profile of each community was developed and efforts made to recruit respondents to correlate with the profile. Interviewees were recruited through contacts who were local to the area and via staff within local government. As each person was interviewed they were asked if they could recommend friends or neighbours who might be interviewed.

All interviews were face to face and were conducted at St George between Monday, October 11 and Friday, October 15. At Airlie Beach, they were held between Monday, October 24 and Friday, October 29 and at Gerogery between Wednesday, December 8 and Monday, December 13.

The following tables provide a picture of the profile of each community and the profile of the interviewees for that community.

Table 1 - Balonne Shire community and interviewees profiles

Feature	**Percentage of Balonne Shire population**	**Target number of interviewees**	**Number achieved**
Gender			
Male	51.2%	8	4
Female	48.8%	7	9
		15	***13***
Ethnicity			
Non-indigenous	85.1%	13	11
Indigenous	14.9%	2	2
		15	***13***
Age			
18-24 years	15.1%	2	1
25-54 years	57.6%	9	8
55-64 years	13.6%	2	2
65 years and over	13.7%	2	2
		15	***13***
Employment			
Employed	73%	11	10
Unemployed/not in workforce/retired	27%	4	3
		15	***13***
Industry of occupation	***As a percentage of employed***		
Agriculture & support services	32.9%	5	5
Education	6.5%	1	1
Other	60.7%	5	4
		11	***10***

Table 2 - Airlie Beach community and interviewees profiles

Feature	Percentage of Airlie Beach population 18+	Target number of interviewees	Profile of interviewees
Gender			
Male	51.2%	8	6
Female	48.8%	7	5
		15	***11***
Ethnicity			
Non-indigenous	99.2%	15	11
Indigenous	0.8%	0	0
		15	***11***
Age			
18-24 years	17.9%	3	0
25-54 years	62.6%	9	8
55-64 years	13.0%	2	1
65 years and over	6.5%	1	2
		15	***11***
Employment			
Employed	79.7%	12	9
Unemployed/not in workforce/retired	19.5%	3	2
		15	***11***
Industry of occupation	***As a percentage of employed***		
Hospitality/tourism	26.1%	3	5
Residential construction	3.7%	1	0
Other	70.2%	8	4
		12	***9***

Table 3 - Gerogery community and interviewees profiles

Feature	Percentage of Gerogery population 18+	Target number of interviewees	Number achieved
Gender			
Male	51.6%	8	5
Female	48.4%	7	8
		15	***13***
Ethnicity			
Non-indigenous	98.6%	15	13
Indigenous	1.4%	0	0
		15	***13***
Age			
18-24 years	13.8%	2	0
25-54 years	55.4%	8	9
55-64 years	18.8%	3	3
65 years and over	12.0%	2	1
		15	***13***
Employment			
Employed	71.8%	10	12
Unemployed/not in workforce/retired	28.2%	5	1
		15	***13***
Industry of occupation	***As a percentage of employed***		
Agriculture	18.7%	2	2

Education	8.5%	1	5
Hospitals	3.2%	1	2
Other	67.1%	8	3
		12	***12***

The tables show the lack of representation of people aged 18-25. Appointments were made with six suitable respondents across three communities, but only one interview was undertaken. While income and education were not identified in the profile of interviewees, it was felt by the researcher that people of the lower socio-economic section of the community were also under-represented despite community contacts working hard to secure interviews with people from this segment. It was felt that for future research including these segments of the community, payment should be made to respondents to encourage wider participation.

Respondents were interviewed in their homes, at work or at a convenient meeting place for the interviewee. Interviews lasted between 15 and 40 minutes and were recorded. The recordings were transcribed and the transcripts used to undertake analysis. Respondents were interviewed by themselves or with their partner. This situation necessitated careful guidance of the interview to make sure each partner was able to answer all of the questions. The benefit of interviewing couples was that memory was often reactivated in one person by what the other was saying and the points of view of more people could be canvassed in the time available.

The interview questions fell into three categories: where people got information about the flood, bushfire or cyclone; what sort of information they were looking for; and whether they were successful in obtaining that information.

The length of each incident was defined for the purposes of this research as from the time the threat was identified by interviewees to:

- The end of the Gerogery fire as defined by Rural Fire Service at 8pm on the day of the fire although the RFS did not lift its emergency classification until three days later (Alexander 2010);
- One day after peak flood levels at St George;
- Two days after Cyclone Ului crossed the coast at Airlie Beach.

These definitions were “self-setting”, as these time periods seemed to be when many interviewees stopped looking for information about the incident.

Analysis

The interview transcripts were analysed using constant comparative technique, explained by Wimmer and Dominick (2000) as a process with four steps:

1. Comparative assignment of incidents to categories
2. Elaboration and refinement of categories
3. Searching for relationships and themes among categories
4. Simplifying and integrating data into a coherent theoretical structure

At the time of writin further analysis by computer aided qualitative data analysis software had yet to be undertaken – it is intended that this analysis will be completed before the EMPA conference using Leximancer in order to better show relationships between categories and units.

Sources of information

The most significant category to emerge was the searching process from the time interviewees realised there was a threat to the time they believed the incident was no longer a threat. Interviewees identified their sources and the process they used to gather information.

Patterns emerged according to the type of disaster.

Table 4 - Information sources

Disaster type	Found out about	Then turned to	Also used
Cyclone	BOM (5) Radio (3) TV news/weather (2) Other people f2f (1) Other people via mobile /text/phone (1)	BOM (2) Other weather site (3) Other people via text/mobile/phone (2) Own experience (1) Facebook (1) Radio (1)	Radio (7) Visuals (5) Other people via text/mobile/phone (5) Agency person* (4) Flood maps (3)Council cyclone info booklet (2) People outside area on web (2) Other people f2f (2) TV news/weather (1) Other weather sites (1)
Flood	Visuals (3) Radio (3) Other people via text/mobile/phone (3) BOM (2) Own experience (rainfall) (2) Police (1)	Agency person (4) Other people via text/mobile/phone (3) Visuals (2) Radio (2) Police (2) Other weather sites (1) BOM (2)	Agency person (6) Other people via text/mobile/phone (6) Other people via email (4) Radio (3) TV (2) Historic information (flood heights) (2) Facebook (photos) (2) Other people outside area on web (2) Visuals (2) Own experience/(flood heights) (1) Police (1) BOM (2) Other people f2f (1)
Bushfire	Other people via text/mobile/phone (7) Visuals (4) Radio (1) Other people f2f (1)	Other people via text/mobile/phone (6) Agency person (5) Agency UHF radio (2) Radio (2) Visuals (1)	Other people via text/mobile/phone (8) Radio (5) Visuals (3) Agency person (3) Recorded message/text from emergency services (2) RFS website (1) Agency UHF radio (1) TV news/weather (1)

*"Agency person" means SES, local council or Sunwater staff.

The Bureau of Meteorology was a critical source of information for many of the interviewees from Airlie Beach, with radio becoming the preferred source for ongoing information, particularly post-impact. Radio at Airlie Beach was predominantly ABC local radio and

SEA FM, evenly spread between respondents. Information seeking at Airlie Beach stopped either when the power went out late on Saturday March 21 or when radio stations stopped giving live bulletins late at night and generally started again the next morning after interviewees had looked around outside. From that time, those that used radio commented that reporters on the ground and call-ins from people around the area gave them the most valuable information that allowed them to construct a picture of the damaged area and then put into context some time frames for restoration to normality.

In St George, people first heard about the flood from a number of sources or realised that the river would flood as they saw the water get higher, then sought information from other people and any agency contacts they had and returned to those sources for regular updates. Agency sources were reported by four people as their confirmation point and six interviewees used agency sources as a constant source. Other people were also a constant source:

> *"There were lots of people in town and I think there was lots of people ventured out in the beginning to find information...but it was mainly just talking to one-another on the street – we probably met all our neighbours in that few days, everyone was out doing their furniture or packing or sandbagging or out in the street checking everyone else" (SGF2, 2010).*

Visuals were an important confirmation tool during each event, with 20 of the 37 people interviewed using visuals as a source of information.

In St George, ABC local radio was the main radio source with one mention of a Roma commercial station, although five of those who used radio commented that it was either behind the times or concentrating on the Balonne River with no news of the Moonie. At least one interviewee hoped that people upstream on the Moonie would ring the ABC with news so she could work out what was happening further downstream at her own property. For those isolated from St George but still on the Balonne River, the ABC was an important source of information, particularly those without power. As SGF1 (2010) reported:

> *"(We listened to) Radio because it seemed up-to-date and they were doing one every 15 minutes or something pretty regular, every 15 or 30 minutes because they actually had a bloke in St George, Charleville and Roma and very much what they were saying they were getting from the locals."*

A number of people reported seeing or hearing of a flood map distributed by Balonne Shire Council, and in the previous tables, the source is recorded as an agency person. The map was helpful and seemed to contribute to the need for visual confirmation that featured across all three disasters.

At Gerogery, the most prevalent primary source of information was other people, followed by visuals (seeing the smoke). Every interviewee then contacted other people for information and to pass on information. Nine of the interviewees did not listen to radio at all.Four people turned eventually to radio, listening to ABC local radio, Radio 104.9 and 2AY. Each commented on the inaccuracy of the geographic information and/or the lack of currency of information. There seemed to be some confusion about the location of the fire, which was on Gerogery West Road near Gerogery, but actually reported on radio as Gerogery West. One respondent said:

> *"But the biggest worry was listening to the wireless they kept saying it was Gerogery West and I could see the smoke was up at Gerogery itself, but no, only that a neighbour rang up who had a relative in Gerogery West said he said it was on (the property of a Gerogery family) and God! That's what I thought"* (GF1, 2010)

Of the people interviewed, only people in the Gerogery West area received the automated text/phone messages.

The predominant source at any stage of the disaster was of friends, family and neighbours with every respondent mentioning such contact in their information seeking pathway. Four interviewees commented that they were too busy defending their property to be actively looking for information but that people rang them on mobiles and from those calls they received a form of update. Four people at Gerogery complained that the information received by radio was wrong, and it did cause some angst amongst those with friends and family in the area or who were trying to evacuate their family. One respondent had directed her son to her property at Gerogery because the radio reports said the fire was at Gerogery West.

> *"The only time I really panicked, it was the fact that I had sent my child, thinking that it was a million miles away when it was actually in my backyard" (GF2, 2010).*

This respondent lost her woolshed, which was 50m from the house.

Another respondent said she had no idea where to go after evacuating and sat in her car alongside the Hume Highway until a neighbour came along and they made a plan together.

What people were looking for

A second category centred on the type of information people sought, which was similar across disaster types. Information about the event, where it was and when it would peak/hit/reach the interviewees was the most prevalent, followed by information about the safety of family and friends. However, other themes emerged within this category including location of safe places, road closures, how workplaces fared, when the power would be back on, when other places would peak (in the case of a flood).

Table 5 - Information sought

Disaster type	Information sought
Cyclone – pre-impact	Track of the cyclone, category, wind speeds, crossing location (4) Checking on friends and family (5) Responding to concern of friends and family (5)
Cyclone post-impact	When the power would be back on (3) Getting post-cyclone supplies and equipment (6) When airport would be operating (2) Damage information (7)
Flood	Flood peak information (12) Information from neighbouring towns and close by rivers (2) What the flood peak information meant for the individual (what's going to happen) (1)
Bushfire	Where the fire was and where it was going (7) Whether family and friends were OK (3) Where there was somewhere safe to evacuate to (1) Road closures (1)

What they found

In all of the disasters studied, there was a lot of information-seeking around the safety and well-being of friends, family and neighbours, more so in the faster moving disasters such as the cyclone and bushfire. Six of the Gerogery interviewees said they contacted friends, family or neighbours when they heard about the fire and eight were in constant contact with this group throughout the event.

Across the disaster types, the majority of people thought that their patterns of information seeking and the sources they used were the best available, although the most satisfied were those in the slower moving disasters, flood and cyclone. The Bureau of Meteorology seemed to be a trusted and respected source, although in St George several interviewees commented on faulty river gauges delivering information that required reinterpreting with the help of local knowledge. These comments were delivered as matter of fact and did not seem to dent BOM's reputation with these people as a source of information. In addition, in the flood and cyclone situations, certain experienced locals were considered an important source, usually older people or those with a scientific approach, although there seemed to be some filtering of this source with one respondent commenting that he would know next time which of the experienced locals to go to for information.

Of the cyclone, one respondent commented: "It was just a waiting game. Beforehand I think we had perfect information." ABM1 (2010) commented:

> *"I think we handled it very well and I think the information we got was as good as is available to be delivered, so yeah, other than finding a source to give you information on when power is restored, which I don't think is available, then no, we'd do the same again."*

Of the flood interviewees, nine of the 13 interviewed said they would do the same again in terms of looking for information and the type of information they sought. One person thought they might pay more attention to Council information during a future flood.

10 of the 11 interviewees who went through Cyclone Ului thought they would do exactly the same thing again, although a few commented that they would be better prepared to recharge their mobile phones next time a cyclone approached.

Many of the interviewees at Gerogery, however, thought they would add other sources to their search pattern, with only four thinking they might repeat their information searching patterns. The suggestions for more successful information-seeking including telephoning neighbours, getting a two-way radio to listen to the RFS traffic, listening to ABC local radio, listening to radio generally on "bushfire days" and getting online, particularly onto the RFS website.

Other themes

Police were mentioned across all locations as a possible but disappointing source of information. At Gerogery, seven people commented that police were manning road blocks but did not seem to know much, despite being the only source of information for people waiting at those road blocks to get to their homes. At St George, four interviewees commented on police who were canvassing neighbourhoods that were to be evacuated, using words such as "bombastic" and "panicked" in relation to the police approach. Again, police at St George were unable to give concrete information and without exception, interviewees continued the course of action they were on when the police arrived, relying on visuals of the water heights and the knowledge of their own or experienced locals to tell them when to finish packing and leave. According to SGM1 (2010), who emerged as an important source of information for three other interviewees because of his active use of GPS technology to do rough surveys during the flood:

> *"The police came around on Wednesday and I didn't like their attitude...I was packing up the trailer and they sort of barked at me and said I had 15 minutes. I knew this wasn't right because I'd been following the heights and knew how fast it was moving and this young girl, she was really*

throwing her weight around. She could see I was packing the trailer and ready to get out..."

The local knowledge and the historical aspects were also very important to the flood and cyclone interviewees. In St George, which, from anecdotal evidence from the interviewees is an old community with relatively few newcomers, the experiences of those who had been through any floods since the 1950s was well respected and an important source for processing individual interpretations of what the flood heights would mean. In Airlie Beach, which seems to be a community of more newcomers than born and bred locals, fishermen and established locals, particularly those with some connection to the ocean, were mentioned as sources of integrity. At Gerogery there was no mention of historical factors, possibly because of the speed of the fire and the preoccupation of interviewees with finding out where it was and where it was going.

Three of the 11 Airlie Beach interviewees commented on the value of the Whitsunday Regional Council cyclone information booklet, but two said that while the booklet was invaluable for preparation, it did nothing to prepare residents for what to expect during the impact of the cyclone. ABM1 (2010) said:

"The general consensus from the community here for those that hadn't been through a cyclone before, there was high levels of anxiety...there is a fair amount in the media, print, radio and television, telling people what they should do...but doesn't prepare them for what they are going to be feeling and thinking. I think it would be good to prepare people more psychologically for what they are going to go through than just taping up your windows and making sure you have got food in the fridge..."

Conclusions

While the data collected here needs to be confirmed or refuted by a large survey in order to allow legitimate generalisations to be made across the Australian population, a few cautious and preliminary observations and recommendations might be drawn from the interviews.

1. Agencies need to publicise methods for residents to secure information during a disaster, particularly in bushfire where it did not seem to occur to the community that the RFS website and Twitter feeds to mobile phones might be a source of information.
2. The Gerogery experience shows that it is critical for agencies to proactively contact radio stations at regular intervals to give recorded or live to air updates as opposed to a media advisory to be read out by announcers. Communication managers at such organisations need to use this and other research to lobby for the resources to allow this to occur.
3. Councils in flood areas should have flood maps ready for distribution to residents during a flood, similar to those made available by Brisbane City Council earlier this year.
4. Agencies need to check with their local staff that messages containing locational information are correct and ask media to repeat the information verbatim, in order to prevent subtle changes to place names that can cause confusion.
5. Police manning roadblocks should be given up-to-date information on the disaster that they can impart to local residents, thereby making their job less confrontational.
6. Police implementing evacuations should be trained in human behaviour in such situations and should be given written information to also give out to

residents in order to reinforce the message and allow people to process the information according to what it means for them. Such training and tools should allow police to move more quickly through neighbourhoods by anticipating people's questions and the need for people to confirm what they are hearing.

7. Bureau of Meteorology flood gauges should be tested and maintained to ensure they work, particularly in urban areas where residents do not have local knowledge to realise that gauge readings on the BOM website could be faulty.
8. Mobile phones were the primary communication tool in each disaster. Research and development of this technology to eliminate the delay of texts and to cope with the added traffic volumes that are generated around disasters need to be a priority. In addition, Australians need to be trained to use text messages rather than mobile phone calls into and out of disaster zones.

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Just what is the significance of communication in emergency management? An attempt to find empirical evidence by content analysis of reviews and debriefs of Australian emergency incidents and exercises.

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Introduction

Operational success in responding to an emergency might easily be measured in terms the number of lives and properties saved. Media images of fire fighters or State Emergency Services rescue boats in action during flood are evidence to the community, emergency managers and politicians that emergency agency resources are hard at work. Unfortunately, the effect of communication around the same emergency is hard to measure and such measurement not resourced. This may result in communication teams being starved of resources that can not easily be justified by emergency managers in terms of outcomes. Despite this, debriefing sessions often seem to be dominated by issues surrounding communication with the media and community.

This study was commissioned by the Emergency Media and Public Affairs Research and Development committee and investigates suspicions of practitioners that, while communication teams are small, communication is a large component of emergency management that can easily turn into an issue (Rekers, Delaney & Wilson 2008). It attempts to quantify the significance of communication to emergency management. It will undertake a content analysis of a sample of documents that have been produced in Australia as a result of emergency incident and emergency exercise debriefing sessions and reviews from 2003 to 2008 and will measure the number of recommendations specific to or relating to communications against the total number of recommendations.

The term 'communications' in this paper includes agency-community communication, community-agency communication, intra- and inter-agency communication and deals with messaging, channels and technology.

Research questions:

1. What is the identified significance of communication in management of emergencies?

2. How often does communication feature as a recommendation in the post-analysis of an incident or in an exercise debrief?

Method – content analysis

Content analysis was selected as the methodology for this study because "…it allows unobtrusive appraisal of communications (Kolbe & Burnett 1991, p. 244)." Kolbe and Burnett also maintain that content analysis provides a useful foundation for further research (p. 244).

A disadvantage of content analysis is its susceptibility to the subjective view of the researchers (Kolbe & Burnett 1991, p. 244; Wimmer & Dominick 2000, p. 138), making it difficult to compare studies unless detail is provided of the content analysis development.

In this case, Wimmer and Dominick's guidelines for a manual content analysis (2000, pp. 139-50) were used because of their simplicity, which was desirable given the small size of the sample of documents. The researchers decided against the use of computer software for the same reason. These guidelines include the following steps:

1. Formulating the research question (outlined previously)
2. Defining the population in question
3. Selecting the appropriate sample from the population
4. Selecting and defining the unit of analysis
5. Constructing the categories of content to be analysed
6. Establishing a quantification system

Selection of documents (defining the population) and selecting an appropriate sample

Emergencies and emergency exercises in Australia are usually discussed and reviewed once they are complete, with recommendations presented as a way of informing future activity. The documents that emerge from these reviews are generally presented in terms of "lessons learned" (Emergency Management Australia 2004, 2005; Office of Health Protection 2007) and better preparation (Asia-Pacific Economic Co-operation (APEC) 2006; Ellis, Kanowski & Whelan 2004; Smith 2006). These reviews range in scope and influence from a report on the debriefing session to those with more legal structure and powers such as a national inquiry or royal commission.

This content analysis will examine 12 such documents published since 2003. The following table provides a profile of the documents included in the study.

	Generic/ miscellns emergency	**Pandemic exercise**	**Bushfire/s**	**Tsunami**
Conference outcomes	1			
State review	2		1	
National review	2	1		1
International review		1		
State Inquiry			2	
National inquiry			1	
Sub Totals	**5**	**2**	**4**	**1**
Total				***12***

Table 1 - Nature of documents incorporated into the study

The documents were sourced by searching Australian emergency agency websites and making requests of the authors' contacts within agencies. A total of 20 documents were considered for this study, but eight were discarded: six because they recounted rather than reviewed an emergency and contained no solid recommendations; and two because their focus was communication and communication issues and therefore presented a concern regarding skewed data.

Selecting and defining the units of analysis

The units of analysis for this study were the recommendations made as part of the review and debriefing processes after an emergency or exercise. The total numbers of recommendations made in each document varied from five (Asia-Pacific Economic Co-operation (APEC) 2006) to 148 (Esplin, Gill & Enright 2003). Recommendations covered operation, strategic, technical communication and community communication issues. Recommendations were also termed in some reports "outcomes" (Emergency Management Australia 2003) or "issues for improvement" (Smith 2006) and were not always clearly presented or numbered.

In some cases, recommendations contained a number of sub-points, in which case these sub-points were counted as individual recommendations (see Emergency Management Australia 2003; High Level Group on the Review of Natural Disaster Relief and Mitigation Arrangements 2004). This was necessary because the umbrella recommendation in many cases did not contain the detail required to classify it using the methods outlined or because the sub-recommendations within one recommendation were too

varied when compared with the themes developed for the study. This approach was then used consistently through all the documents considered.

In order to draw out the recommendations that related directly to communication, the researchers used a number of keywords that were used to define community communication and interagency communication in disaster management texts (Barton 1969; Coppola 2007; Haddow & Bullock 2006; McEntire 2007). These were labels for media and message channels such as 'press' and 'information line' and words that described approaches, such as 'community engagement', 'community information' programs. A third category described target publics such as 'communities' and 'householders'.

Channels and messages:

- Media
- Press
- Radio (including ABC)
- State Emergency Warning Signal
- SEWS
- Call centre
- Information line
- Website
- Information packages
- Call centre
- Warning/s systems
- Communication networks

Approaches:

- Community engagement
- Community information
- Promote/promotion
- Community education
- Education programs
- Evacuation (including Stay or Go/Fireguard)
- Public education
- Information sharing
- Community partnerships
- Public information

Target publics:

- Householders
- Community/communities

The recommendations were sorted from non-communication related recommendations with the following result:

Report	Comm'n recomm'n	Total recomm'n	%
APEC Pandemic Response 2006	5	5	100%
Operation Tsunami Assist 2004-05: Lessons Learnt	3	6	50%
Mapping the Way Forward for large-scale urban disaster management in Australia: building on the lessons from September 11, 2001	5	20	25%
Conference Outcomes: 2003 Australian Disaster Conference, Canberra, 10-12 September, 2003	5	18	27.8%
National Pandemic Influenza Exercise: Exercise Cumpston 06 Report, 2007	4	12	33.3%
Natural Disasters in Australia, 2004	11	66	16.7%
McLeod Report, Inquiry into the Operational Response to the January Bushfires in the ACT, 2003	14	61	22.9%
A report of the response to an emergency at Melbourne Airport, 2005	1	9	11.1%
A Report of the Inquiry into the 2002-2003 Victorian Bushfires, 2003 (Esplin)	11	148	7.4%
Debrief outcomes: Significant Victorian Fires December 2005 and January 2006 (Smith)	3	23	13%
National Inquiry on Bushfire Mitigation and Management (Ellis, Kanowski and Whelan)	5	29	17.2%
Westpoint Chemical Fire: Report to the Community, 2008	11	18	61%
Totals	**79**	**415**	
Averages	**79/415**	**19%**	

Table 2 - Ratio of communication recommendations to total recommendations

Constructing content categories

Once the communication recommendations had been drawn out, researchers then attempted to develop mutually exclusive categories (Wimmer & Dominick 2000, p. 145), or themes, in which the recommendations could be grouped. The categories must also be exhaustive (p. 145), ensuring that every unit is covered by a category.

On first pass through, the themes that emerged were:

1. Communication planning and plans
2. Agency/inter-organisation information sharing and relationships
3. Resourcing
4. Warnings and pre-disaster community education
5. Technology
6. Media
7. Community engagement and information

Intercoder reliability was then tested between authors, with the following amendments made.

1. Communication planning and plans
2. Communication, training, testing and exercises
3. Domestic agency/inter-organisation information sharing and relationships
4. International agency/inter-organisation information sharing and relationships
5. Resourcing
6. Warnings and pre-disaster community education
7. Technology
8. Media
9. Community engagement and information during and post-emergency

Results

Almost 20% of all recommendations made in the debriefing sessions we studied related to communication. 79 of the total 415 recommendations touched on the themes that were developed during the content analysis. Of these, 60 recommendations (14% of the total recommendations) had some impact on the jobs of public relations practitioners within emergency services. (To put this into some perspective, one emergency services department in this country says on its website that it employs 7,700 full time and part time staff, but employs between 18 and 24 communicators: that's between 0.002 and 0.003% of the total staff.)

The theme that tended to preoccupy reviews was warnings: 26 of the 79 recommendations, or 33%, related to warnings and pre-disaster education. During disaster and post-disaster communication and engagement had 12 recommendations, despite the concern about communication training and plan testing getting only two mentions.

Adding these two categories together (because of their prevalence in the work of public relations practitioners) they far outweigh the recommendations relating to the increased provision of communication resources, which, at 3 out of the 79 communication recommendations, were about staffing and technology. The summary of the number of recommendations within each theme is below:

Theme	Number	% total
Warnings and pre-disaster community education	26	32.9
Domestic agency/inter-organisation information sharing and relationships	12	15.1
Community engagement and information during and post-emergency	12	15.1
Media	11	13.9
Communication planning and plans	5	6.3
International agency/ inter-organisation information sharing and relationships	4	5.0
Technology	4	5.0
Resourcing	3	3.8
Communication training, testing and exercises	2	2.5

Table 3 - ratio of communication recommendations to the total recommendations

Conclusion

The methodology used in this research makes it difficult to replicate the study, and therefore puts a question mark over the validity of the findings. However, in a field in which measurement is not resourced or undertaken, this study provides us with a starting point from which we can further investigate the significance of communication in successful emergency management.

The data generated by this study shows a significant disconnect between governments' desires to improve emergency management in Australia and their commitment to actually doing so. Up to 20% of the flaws in emergency management in the past six years relate to one field that often comprises of one person, or for larger emergency organisations, less than 2% of total staffing (Department of Emergency Services 2008; NSW Fire Brigades 2008; State Emergency Service 2009). This must signify chronic problems with staffing, resourcing and/or training in that field and deserves further, more quantitative research.

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SES Information Delivery to the Media

Northern and north western NSW floods during 2009-10

A research report for the
New South Wales State Emergency Service

September 30, 2010

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Executive Summary

Widespread floods in New South Wales in the summer of 2009-10 generated intense media interest. Lead agency, NSW State Emergency Service (SES), dealt with hundreds of enquiries from international, national, regional and local media.

In an effort to improve services to media in such intense periods, the SES engaged University of Southern Queensland researchers to interview journalists to obtain qualitative insights into strengths, weaknesses and possible avenues of improvement of SES information provision. The 2009-10 floods were used in this instance as a reference point.

The research started at the end of June 2010 and was completed by the beginning of August. A literature review pointed to a number of issues faced by journalists when reporting on disasters and emergencies:

- Speed – how to keep the information flow going
- Accuracy
- Sources – consistency and reliability were particularly relevant
- Access to the scene – geographic information was particularly important
- Responsibilities – journalists faced two roles: analysis and provision of information
- Legalities and censorship – laws that limit access to information.

This list of issues was used as a structure for the survey and also influenced question content, while still accommodating the specific questions put forward by SES as part of the research project brief.

A list of 252 individual journalists who had contacted SES during the period of the floods was supplied to researchers, and each journalist contacted. Twenty seven journalists responded to the electronic survey, achieving a response rate of 12%.

While the statistically small sample size places limitations on the generalisability of the data, the results provide preliminary empirical data that tends to reinforce the existing literature. A number of possible trends emerged, and individuals presented ideas that could be taken up in development of the SES information delivery and media engagement process.

Key findings were:

- NSW SES was generally respected by journalists as responsive and accommodating, and mentioned as a superior information provider to other NSW agencies;
- Timeliness and currency of information, particularly for radio journalists, were viewed as critical to further improving service standards of the SES Public Communications team;
- The website currency was a source of frustration for electronic media, but suitable for print media's needs;
- Some 'pre-season' education of media outlets and journalists was needed on the different methods of obtaining information from SES during an incident or multiple incidents;
- Subscription email was a popular suggestion for increasing the effectiveness of communication with media;
- There is an overwhelming preference by journalists to have access to SES volunteers and staff during an incident.

Key recommendations were:

1. That the SES Public Communications team continue with, and build upon, its empathic and accommodating approach to the media. However, the team must remain conscious of the importance of deadlines to the team's improvement of its service.
2. The rate of updates available on the website should be increased in order to take some pressure off Public Communications staff to speak to the media, freeing up staff from information delivery and allowing them to undertake more interviews and provide more news grabs.
3. Contact lists and sources of SES information should be provided to all NSW media as part of pre-season preparation.
4. Development of an opt-in email list for journalists.
5. Development of SMS and Twitter updates of incident developments with geographical information included for reporters/teams in the field.
6. Continue to make efforts to provide journalists with vision/photographs or opportunities and to include reference to this aspect of working with the media as part of training within the volunteer SES structure.
7. Increased use of maps via the website to improve the geographical knowledge of journalists and the community in relation to the emergency.

Media and emergencies: a literature review

"The State Emergency Service is 'to protect persons from dangers to their safety and health...arising from floods and storms' (*State Emergency Service Act* 1989, s.8). Part of that protection is communication with the community with warnings and updates on the path of floods and storms. In partnership with the Bureau of Meteorology, NSW SES provides an important service in reducing the uncertainty felt by communities facing or in the midst of a storm or flood. Media is an important conduit for this information.

Stanbury (2007) says the three stages of the media info-seeking cycle are:

1. Relaying what has happened;
2. Trying to make some sense of what has happened;
3. Placing the crisis into a greater context.

A crisis-oriented estimation of the media cycle was developed by Howell and Miller (2006, p. 3) in which the media progresses through five phases of information seeking:

1. Initial decision to cover the crisis
2. Focus on one trigger or theme
3. Isolate one of these triggers of themes
4. Trigger or theme from the pool that might help explain the crisis
5. Assignment of responsibility and blame for the selected trigger theme
6. Focus on resolution of the trigger theme or trigger theme moves to latent status.

During the London bombings, the media was insatiable for background information on The Underground and on each agency's role, its people, equipment and services (Stanbury 2007) as it made an effort to isolate and legitimise the trigger theme.

In research on disaster reporting by media in Hawaii (Prizzia 2005, p. 298), researchers asked:

1. Is media more interested in damage reports or more human interest stories?
2. Does the media omit critical facts that could help other individuals?
3. Should news media be responsible to broadcast information broadcast by emergency services?

They found variations in the way reporting was undertaken, depending on type of disaster. They found there was a greater likelihood for exaggeration, omissions and distortions to occur in natural disaster than technological disaster (p. 299). "Soft" news reporting occurred most with natural disasters where there were available victims to interview. The more time for a story, the more likely soft news will have time to be developed. Respondents thought they reported on both damage and

human-interest stories, but tended to report more on human interest (p. 299).

Most respondents admitted critical facts were sometimes omitted and/or reported incorrectly, but never purposely, usually as a result of time pressures. Follow up stories usually corrected previous errors. The deadline pressures appeared to be more of a problem for TV reporters than print (p. 299)

While the media in this research didn't refer to the blame stage, emergency managers did when answering the same questions (p. 301).

In terms of the types of stories reported, broadcast outlets include more hard news and community service or bulletin board stories than newspapers, which include more features and human interest stories (Daniels & Loggins 2007).

In the Daniels and Loggins research, which examined four local television stations coverage of hurricanes in the US, journalists sought:

- Information from authoritative sources;
- An "information czar" to reduce possibility of public panic;
- Information on severity of disaster that would allow a judgement to be made. This information might include casualties, extent of property damage, geographic scope (p. 50).

This theme of time pressures and need for factual information is reflected in the three elements of journalistic practice: interest, timeliness and clarity. A number of issues present themselves to reporters in pursuit of these three elements in the natural disaster setting (Cunningham & Turner 1997; Mencher 2003):

- **Speed:** How to keep the information flow going, in most cases, quickly;
- **Accuracy:** How to maintain accuracy at minimal cost;
- **Sources:** Central information "repository" or multi-source model – consistency and reliability needed. Prime example of information mismanagement is Black Saturday bushfire experiences;
- **Access to the scene:** Provision of access to geographical locations/affected people for ongoing stories; and
- **Responsibilities:** Journalist has two different roles – to inform and to analyse. These require different information and approaches. This multi-layered approach must be recognised and supported by emergency service providers.

Speed

Primary considerations of the media are getting information from the provider AND getting it to the public. The speed of the information flow is controlled by the provider and this organisation's use of a range of media

and communication devices: mobile phone communication; Twitter; websites; and so on. Preference of journalists is for newer forms of media rather than telephone or facsimile. Eyre (2010, p. 1) maintains that since the Bradford and Hillsborough football stadia disasters in 1985 and 1989 respectively, "…the media coverage of disasters has become more sophisticated in terms of both the numbers and speed with which journalists are able to transmit images around the world."

Getting information to the public and being the first/best to do so is an important step in a journalistic process (Allan 2005). This speed is heavily linked to internal media issues such as technological capabilities and subsequent deadlines, with print journalists now working to even more intensive deadlines than broadcast journalists because of their organisation's news web sites (Mencher 2003). Major disasters generate intense media interest and representatives of the press, radio and television may be at the scene of an incident as quickly as the emergency services (Eyre 2010).

However, it was clear from reporters working specifically in the online area during the Black Saturday bushfires in Victoria in 2009 that the pressure to be first was much greater than the pressure to be right. In addition, the processes for verifying online content, except when it came directly from the associated newspaper's own reporters, were threadbare (Centre for Advanced Journalism 2009).

Accuracy

Journalists need to be credible with their audiences and any lack of accuracy constitutes a breach of trust owed by journalists to their audiences (Pearson & Patching 2008). Accuracy is paramount for credibility. It is directly linked to audience confidence (Mencher 2003), but media operate in a "time is money" atmosphere, therefore information must be provided at minimal cost to the organisation and with minimal effort, what Allan calls "bottom line pressures" (2005, p. 6).

These bottom line pressures mean that journalists require their sources to have up-to-the-minute information available on hand, with minimal wait for "the process" (for example, authorisations). In the field, there is little time or chance to check accuracy of information making journalists heavily reliant on emergency service providers. If a deadline approaches, journalists find they have to go with what they have.

Sources

Herman and Chomsky (cited in Pearson & Patching 2008) identified journalists' reliance on government sources for a steady, reliable, cost-effective and credible flow of news, which could also be linked to Allan's

concept of bottom line pressures. Herman and Chomsky explained: "The mass media are drawn into a symbiotic relationship with powerful sources of information by economic necessity and reciprocity of interest."

Emergency services information should be available from central providers who have a cooperative relationship, to ensure consistency and accuracy (Leadbeater 2010). In addition, Posetti (cited in Davitt 2008) says the development of a co-operative relationship between news managers, working journalists, journalism academics and emergency services officials can only enhance the preparedness of the media to deal with reporting a crisis. Such an approach has the potential to enable the media to better appreciate the public safety goals of the emergency services and it should also aid the authorities' understanding of the incredible demands on news organisations during disasters and events like terrorist attacks (Posetti in Davitt 2008).

Despite shifting power relations between competing groups attempting to promote their version or position, official spokespersons remain powerfully placed to identify, shape and comment on 'the news' and their agenda will drive the reliability of the information they want to impart (Mencher 2003). This is particularly significant in the immediate aftermath of tragedy and disaster, when journalists are desperately seeking information, and it makes them vulnerable when they face inevitable time pressures. Reporting from Black Saturday Victorian bushfires highlighted this challenge of the credibility of agency information, and the devastating effect this had on public safety and confidence (Centre for Advanced Journalism 2009).

On Black Saturday, however, the official sources of information – the Country Fire Authority (CFA), the Department of Sustainability and Environment (DSE) and the State Emergency Services (SES) - were overwhelmed (Centre for Advanced Journalism 2009). The consequences of this for the decision-making in radio stations, which were trying to provide a comprehensive information service, were exceptionally challenging for the staff involved. As the official sources of information fell further and further behind what was happening on the ground, vast amounts of unofficial information began pouring in from phone calls, text messages and Twitter. One broadcaster received approximately 8,000 phone calls – ten times the usual daily number – and between 7,000 and 10,000 SMS messages on Black Saturday, mostly between mid-afternoon and early evening (Centre for Advanced Journalism 2009).

Responsibilities

"Responsibility is the reporter's commitment to the story, to journalism and the public. Responsibility demands of the reporter that the story be accurate, complete, fair and balanced..." (Mencher 2003, p. 59). While nothing in the law requires a journalist to be responsible (Mencher 2003), reporting stories on natural disaster present some added burden of

responsibility that is manifested in the partnership that should develop between media and agencies in an incident (Eyre 2010).

Literature review conclusion

The literature review demonstrates both the needs of journalists and the cycle of their activities during a crisis. This would therefore point organisations, particularly emergency agencies, to an information delivery model that accommodates the needs of both news outlets and the organisations themselves. The review also points to huge potential for deadline pressures to force journalists to use inaccurate or out of context information from unofficial sources if agency information is not current and accurate. The accuracy of information can now be verified by reports received by media from the community via various electronic sources.

This research intends to explore the expectations and experiences of journalists in their contact with the NSW SES. The outcomes should allow the SES to determine if gaps emerge between the two. Such information should help the organisation improve at least one major component of its delivery of information to the community and to safeguard against the creation of an information vacuum during any future event.

Research method

A survey, developed from the literature review and a number of themes on which the SES sought data, was conducted between July 12 and August 6. A copy of the media contact log developed in December 2009 and January 2010 by NSW SES was the source of participant details. This contact log contained the details of 352 calls made by journalists to the organisation during that time. Those journalists who agreed to participate in the survey were invited to undertake the survey by telephone or to use a web link to an online survey. All of the participants used the online survey.

The participants

The list was sorted and 'cleaned' to ensure that each journalist appeared on the list only once, with 232 individuals appearing on the final list in order of the date they first telephoned NSW SES. Sixty responses were sought. Using simple random sampling, every fourth name on the list was selected for contact by the researcher, although responses were poor and by the end of the survey period, an attempt had been made to contact every individual appearing on the list except 13 journalists from international media outlets.

The outcomes of the contacts were:

- 35 unknown or no longer working for the outlet
- 4 on leave
- 18 declined to take part
- 10 wrong numbers were supplied. Alternative numbers were not researched.
- 85 agreed to participate
- Access to 67 journalists was blocked by the outlet's receptionist, journalists were unavailable, no response was received to calls or messages, or contacts were discovered to be in the list twice (some journalists work for multiple outlets and a surname was not always provided on the initial list).

A 12% response rate was achieved. While this sample size does place limits on statistical generalisability of findings, it does give some helpful information.

The process for the research was:

1. At least three attempts were made to call each individual.
2. Those that indicated interest were given the choice of completing an online survey or to conduct the interview over the phone with the researcher. All of those who agreed to participate selected the electronic survey option.
3. A link to the web-based survey was emailed to the journalist.

4. Those who agreed to participate were emailed the link, then emailed twice (July 27 and August 4) with a copy of the link to remind them to participate.

The survey closed off on Friday, August 6, with 26 responses received. Not all of the questions were answered by each respondent. One response was clearly a duplication of another and hence was removed from the sample.

The breakdown of the types of media represented was:

Media type	Frequency
Radio	11
Print	8
TV	8
Web	4
Newswire	3
Other	0

Table 1 - Media types

There were more media types represented than journalists completing the survey because some journalists represented companies that operated more than one type of media. Four print outlets, two radio outlets and one television outlet also operated news websites, and one journalist's employer owned both radio and television outlets.

The majority of journalists said they worked for a national outlet (55%), but coverage of the media they worked for became confused with four reporting that they worked for an organisation with national, state, regional and local coverage. The table below shows the coverage picture:

Coverage	Frequency	Also National	Also State	Also regional	Also local
National	16		9	4	4
State	14	7		3	4
Regional	7	3	3		4
Local/community	7	4	4	4	
	44	**14**	**16**	**11**	**12**

Table 2 - Coverage by media outlets

The audiences/readership of each outlet varied widely, with between 4,000 and 220,000 readers/listeners for local outlets; 50,000 and 350,000 for regional outlets; 340,000 to 550,000 for state outlets; and between 500,000 and 1bn for national (and we can assume, international) outlets. Electronic media and wire services were more likely to report audiences of over 340,000. Fifteen journalists were not sure of their readership/listenership numbers.

As was expected because of the source of the list of journalists, all of the participants said they had contacted the SES during December and/or January. Five of the 27 reported they had been in the field during the floods, a further five gave no response.

Methods of contact with the SES

SES pager was the most popular method of contact for journalists, with 17 identifying the pager as one way they had attempted to get information from the SES. This was followed by contact with the SES office (15) and SES staff directly (10). The accompanying graph shows the breakdown in percentages.

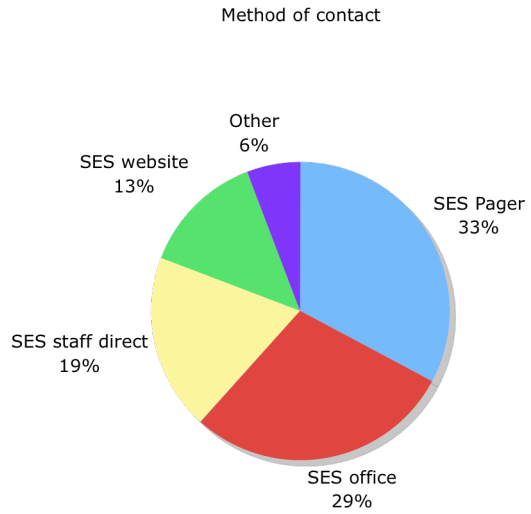

Figure 1 - methods of contact.

Three journalists nominated 'other' sources, identifying these points of contact as local SES personnel – all three respondents had earlier identified themselves as local/community media. One of these indicated that the local SES person was their only SES source of information, while the other two indicated that they also used the other four avenues of contact with the SES. Further research could show whether there was a transition stage from local SES controllers to SES media as the event progressed, or whether all channels were used throughout the event/s by these local reporters.

The reason for contacting the SES

This question asked what reporters were looking for from the SES in the form of information and included responses such as a news grab, interview, statistical information, background information, locations for footage or images and a range of other information types.

The most popular was request for interviews (21) followed by the need for background information (17). Information on operational responses and statistical information were also high on the list (16 and 14 respectively). The following chart clarifies the requests. Only two journalists identified the need for vision or images as a reason for calling the SES – one was a city-based state newspaper and the other a regional town daily newspaper.

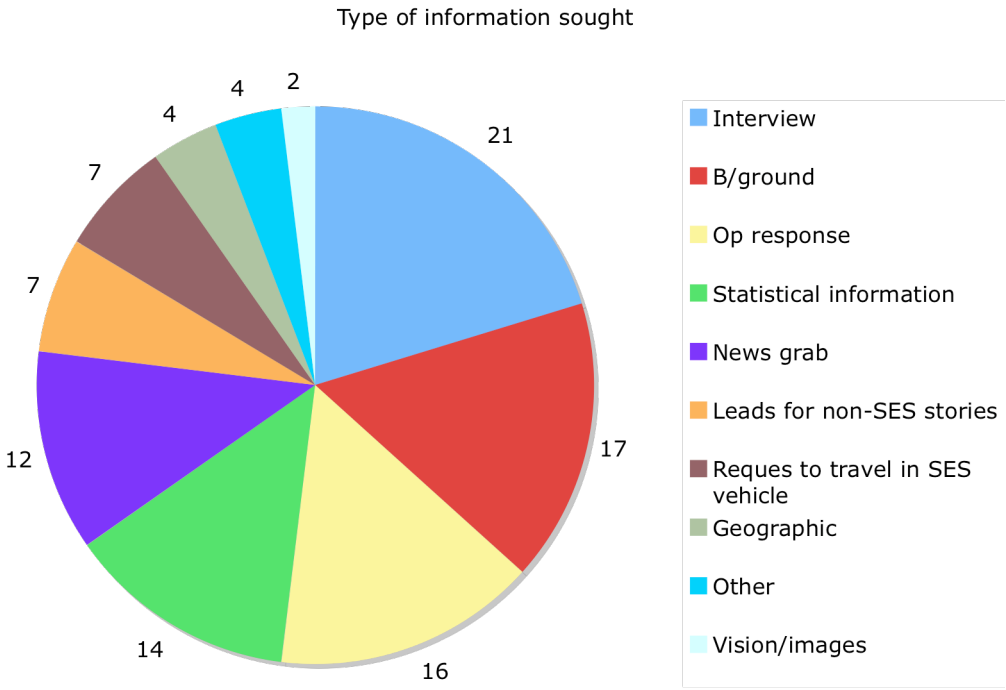

Figure 2 - What did you want from the SES?

Four respondents identified 'other' reasons for contacting SES. These included finding out whether local SES members were active and securing relevant pictures, public safety information and up-to-date flood bulletins.

Satisfaction levels

Satisfaction levels with the specific information secured from SES was measured. While the majority of reporters were satisfied with the material they received in response to their request (133 instances), in seven

instances (6.3% of total responses to this question), journalists were not satisfied. The following graph indicates the areas that were covered by the question and the responses by journalists.

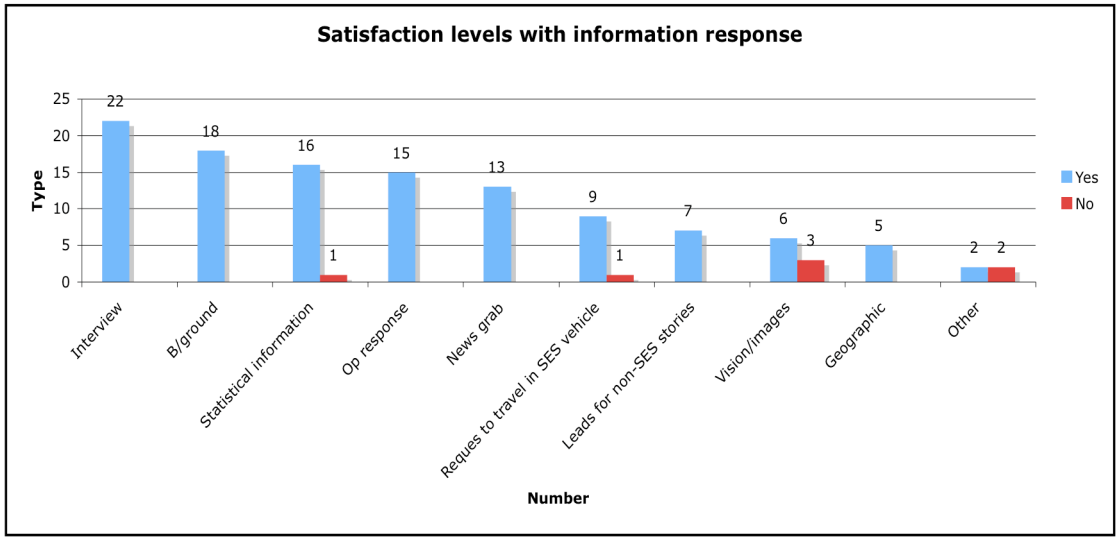

Figure 3 - Satisfaction levels with information response

NSW SES live broadcasting facility

Questions 11-15 dealt with knowledge and use of and potential use of the SES live broadcasting facility at the SES State Headquarters Operations Centre. Eight of the 26 journalists who answered this set of questions said they knew of the facility and four said they had used it. Of the 18 journalists who did not know of the facility, nine (almost one third of the total responses) were from broadcast media (although one of these was a western NSW-based outlet). Eleven reporters indicated interest in using the facility, although three of these also indicated they had already used it. Of the 11 who were interested, one was from a newspaper and two were from a newswire service. The remainder was from radio and television. This could indicate that broadcast facilities might be used to generate web content for print media – this is a topic that warrants further research.

When asked what could be done to improve the service, suggestions were supplied by six journalists and included providing the same facility for radio journalists. One comment was a suggestion on promoting the service to ABC journalists by email and one journalist commented that "talent in the field is ideal". Two other comments were not relevant to this question, pertaining more to SES enquiry response times than the broadcast facility.

Timeliness of access to information

This section began with questions relating to the time taken to access information specifically from RSS feed, the SES website, flood bulletins, a pager carried by an SES media officer and access directly to a SES media officer. The number of responses varied for each question as below in Table 3:

Item	Responses
RSS Feed	22
SES Website	21
Flood bulletins	24
Media pager	25
Call to SES media officers	26

Table 3 - responses to timeliness questions

Only three journalists had used the RSS feed facility linked to the SES website and of these, one was satisfied with the timeliness while two others had no opinion. Overall, journalists were satisfied or very satisfied with the timeliness of the other options, especially direct contact with SES media officers (23) followed by the response time via media pager (20) and the flood bulletins (19). All of the journalists who answered this question used direct contact with SES media officers, which could indicate a preference for a more direct conduit for information.

Dissatisfaction levels with the timeliness of information delivered through each of these channels was very low: no expressions of dissatisfaction were received for RSS feed, one for information published on the website, one for information received from the flood bulletins, one for media pager plus one very dissatisfied indication, and two dissatisfied with the timeliness of information received from SES media officers. Two broadcast journalists reported dissatisfaction levels with both pager and direct contact with officers, perhaps arising from single experiences close to deadline.

A standout feature of answers to this question was the lack of use of RSS feeds by journalists when sourcing information from SES.

The table below gives the details:

Item	Didn't use	Very satisfied	Satisfied	No opinion	Unsatisfied	Very unsatisfied
RSS feed	19	0	1	2	0	0
Website	3	2	15	0	1	0
Flood bulletins	4	7	12	0	1	0
Media pager	2	4	16	1	1	1
Call to SES officers	0	10	13	1	2	0
Totals		**23**	**57**	**4**	**5**	**1**

Table 4 - details of timeliness responses

The ideal waiting time for information varied with the type of information required and the format in which the information was sought. For instance, most journalists expected words in the form of a news grab (20) or interview (21) within 30 minutes of their contact. None of the respondents thought that a wait of more than 60 minutes was reasonable for these two forms of information. Those that allowed some latitude in the timing of 30-60 minutes (three for news grab and four for an interview) were predominantly print journalists, although one television reporter was included in this set of respondents.

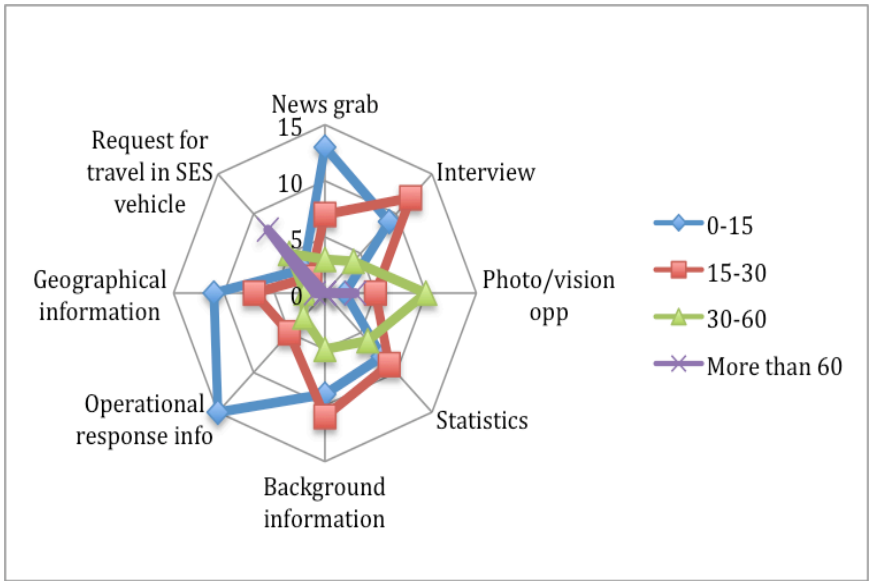

Figure 4 - What is a reasonable time to secure information or material?

Reporters tended to be more tolerant of delays when the request dealt with request for travel in a SES vehicle, aircraft or boat (8). One reporter thought that a request for geographical information might take longer, while three were accepting of vision/photo opportunity information taking longer to secure.

When seeking operational response and geographical information, however, reporters tended to have higher expectations: 15 of 23 expected the operational information within 15 minutes and 11 of 21 expected geographical information within that time. Summarised in order of urgency, the expectations were:

Within 15 minutes, delivery of:

1. Operational Information
2. News Grab
3. Geographical information

Within 30 minutes:

1. Interview
2. Background information
3. Statistics

Within 60 minutes:

1. Photo/vision opportunity

More than 60 minutes:

1. Request for travel in a SES craft/vehicle

Journalists seemed to have a positive experience with timeliness of provision of information by the SES, with the majority (20 of 26) indicating that they received the information/interaction they sought within 30 minutes. Five received information within 60 minutes and two waited longer than this. The point at which waiting time became unacceptable varied: two radio journalists indicated that more than 15 minutes was unacceptable, while 30 minutes and 60 minutes were the limit for six respondents for each category. Twelve journalists indicated that more than an hour was unacceptable. This would point to the SES setting one hour as the outside limit for a response benchmark.

Included in the data were responses from two journalists who indicated that both 0-15 minutes and 15-30 minutes was the average waiting time for a response. This may denote multiple experiences during the period studied. These data were separated and included in a new category, 0-30 minutes.

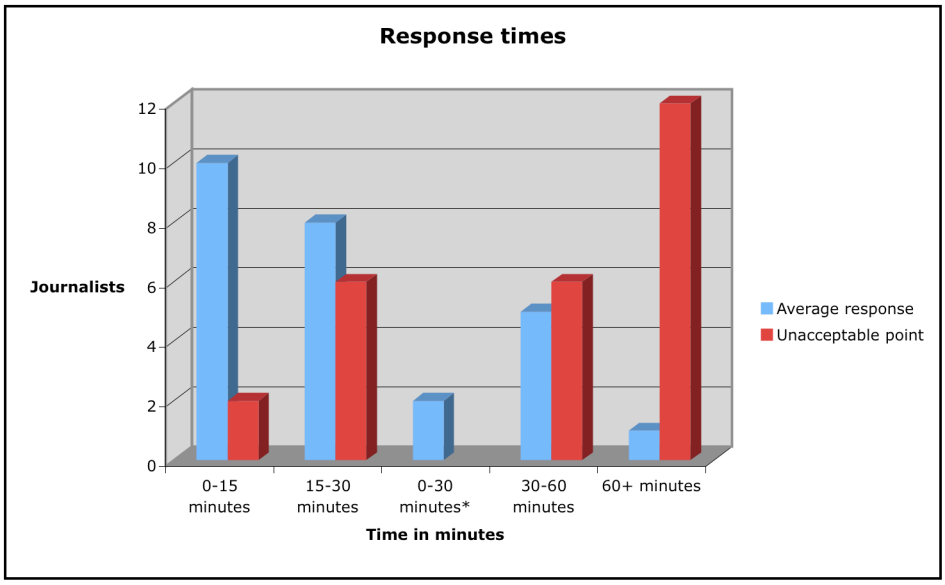

Figure 5 - Waiting times: average and unacceptable

Information currency, quality and accuracy

Journalists tended to be more confident in information currency if it came directly from staff or through the flood bulletins, although the highest registration of dissatisfaction with information currency (3) was awarded to the media pager as well as the website. One person reported that he/she was unsatisfied with the information received from a media officer.

RSS feed was not well used with only six journalists reporting this as a source of information, two confident with the information received and four with no opinion. The most trusted sources for information currency were:

	Didn't use	Very satisfied	Satisfied	No opinion	Unsatisfied	Very unsatisfied	Total responses
Media officers	1	12	12	1	1	0	27
Flood bulletins	5	8	11	0	1	0	25
Media pager	2	8	8	4	2	1	25
Website	2	3	15	1	3	0	24
RSS Feed	17	0	2	4	0	0	23

Table 5 - confidence levels in information received from certain sources

Twenty three people responded to the RSS feeds question, 24 answered the website question, 25 each for the flood bulletins and media pager, and 27 answered the question on the SES media officers.

Two comments were received on confidence of information currency although the option was given: that the website did not seem to update very fast and that while media officers were sometimes not available, they always called back.

Almost the same picture was presented relating to quality and appropriateness of the information provided, although there were fewer respondents registering dissatisfaction. Two were unsatisfied with the website's information quality and appropriateness.

The satisfaction responses are summarised below. A number of respondents indicated that they had no opinion or did not use the service, with 23 responding to the RSS feed, website and flood bulletins questions, 24 responding to the media pager question and 25 people responding to the media officer question.

	Didn't use	Very satisfied	Satisfied	No opinion	Unsatisfied	Very unsatisfied	Total responses
Call to SES officers	1	12	10	2	0	0	25
Flood bulletins	5	9	8	1	0	0	23
Media pager	3	8	10	3	0	0	24
Website	3	4	12	2	2	0	23
RSS feed	18	1	0	4	0	0	23

Table 6 - satisfaction levels with quality/appropriateness of information

One comment was received in this question relating to seemingly slow updates on the website.

Question 21 related to whether any incorrect information had been supplied during the floods. 14 journalists responded that they had not received incorrect information. One person commented that he or she could not remember and the comments from the remaining four respondents were:

> *During the emergency it wasn't an issue. In hindsight it appears that much more was going on that we weren't aware of, particularly the flood around Brewarrina. Much of the effort was focused on Coonamble. It wasn't so much a case of misinformation than it was a case of missing information. This perhaps had everything to do with the various SES control offices that were operating, one in Dubbo for the Coonamble event and one in Cobar for the Brewarrina event. Having said that the Brewarrina flood turned out to be more than significant and yet they didn't get much of a hearing during*

our emergency coverage, simply because we weren't made aware of the problem at the time.

The December/January floods occurred at a time when many, many people were on holidays and staffing levels in every organisation were reduced. The SES did a magnificent job in spite of this, calling back many people; interrupting holidays and deploying people to remote locations to assist out-of-area units…If information was incorrect it was not the fault of SES staff. The one issue that plagued the ABC after the floods were complaints about road closures. Unfortunately, for the SES the lead agencies on road closures were the RTA, local police and local councils. That was problematic in securing up to date information for our Emergency Broadcasts.

Young boys went missing in floods - we were told they were in the water but they turned out to be at a friend's house. This wasn't SES's fault though - everyone thought they were in the water.

There was great confusion, and inaccurate information, supplied about the possible disappearance of two boys thought to have gone missing while swimming in the Castlereagh River at Coonamble on January 4. It was an emergency situation and the SES provided much-needed information as the story unfolded, however some of the information proved to be wrong.

This question proved to be flawed as it attempted to report in a yes/no answer a situation that included more than just the supply of correct information by the SES: it did not recognize that other sources, including those that informed the SES, could be incorrect. Journalists recognised that some information that was supplied was incorrect, but some believed this was not the fault of the SES.

SES media officers, flood bulletins and the media pager proved to be the most trusted sources of accurate information. 24 of 26 respondents were either confident or very confident that the SES media officers supplied correct information. One person was not confident. 19 of 25 respondents trusted the flood bulletins for accurate information while one had reservations about accuracy from this source; and 18 people were either confident or very confident that information they received via the media pager was accurate. However, three people had reservations about

the accuracy of information received via this method of contact.

Again, RSS feed suffered because of lack of use of the service. The website as a source of information recorded the lowest rates of confidence, although still in small numbers: three people had reservations about accuracy of information found on the web and one person was not confident in web information accuracy.

The responses to this question are summarized below.

	Didn't use	Very confident	Conf-ident	No opinion	Reser-vations	Not conf-ident	Total responses
SES media officers	1	10	14	0	0	1	26
Flood bulletins	5	9	10	0	1	0	25
Media pager	2	8	10	2	3	0	25
Website	2	5	13	1	3	1	25
RSS feed	19	0	2	3	0	0	24

Table 7 - confidence in the accuracy of information

No additional comments were supplied by respondents to this question.

What can be done to improve these sources?

On average, about 25% of the respondents offered comments or ideas for improvements. Regarding RSS feeds, three comments were received that all related to lack of knowledge of the service and/or the need for wider promotion to journalists. Five comments were received on the website:

- "Make it more simple and easier to use…"
- "…it's too cumbersome…difficult to navigate…"
- "It simply needs to be updated faster. Our studio has internet facilities and we constantly monitor sites for updated data."
- "Visual maps of affected rivers, towns and valleys (were needed)"
- "I prefer to call and speak to the media person but do refer to the site when needed so it needs to be kept up to date."

Four comments on flood bulletins were received. Two were positive about the service ("Good" and "Satisfied with all if this"). One asked for the bulletins to be updated more frequently and one asked for a map of affected areas. This request came from the same print and radio journalist who asked for maps on the website.

The media pager generated useful comment: two of the seven journalists who responded to this question wrote comments that indicated they did not know about the service or have the media pager contact details, including one person who suggested that media training be undertaken to ensure journalists know that the pager exists. Two others made comments that indicated they had not been able to get a satisfactory response: "…return the calls…" and "…has on occasion been lost or taken considerable time to respond." Two journalists appreciated the service: "…usually provides quick responses which are great…" and "The pager system works very well because there is an on-call person and I work nights. It is great to be able to call if something breaks late." One person asked for "Separate tab for media pager/contact", which might relate to availability of media pager contact details on the web and could contribute to increased knowledge of how to contact the SES.

The seven comments received on interaction with the media officers also varied from positive to negative:

- "The pager system works very well because there is an on-call person and I work nights. It is great to be able to call if something breaks late."
- "…usually helpful..."
- "…satisfactory…"
- "(We'd like)… List of units, what suburbs they cover and which region they belong to."
- "Update contact names 7 number and issue to relevant media…"
- "Occasionally they didn't seem to understand the urgency of our situation. We had deadlines to meet and on one occasion couldn't get an SES person on air. They simply didn't call in time."
- "…answer the calls…"

Use of the website

Nineteen respondents gave details of the information they looked for on the website. Of these, three said they couldn't find the information they were looking for, nine said they had and a further seven said "mostly", "sometimes" or "some things yes, others no". The information sought on the website fell into eight key themes:

- Currency of information
- Contacts
- Threats and predictions for specific locations
- Ministerial releases and statements
- Resource allocations
- Flood and incident specifics such as current levels
- Maps

These have been tabulated for ease of analysis:

Theme	Comment
Flood incident specifics	▪ Locations of floodwaters….towns affected. ▪ …river height predictions time/depth ▪ …flood information... ▪ Previous flood levels ▪ Latest updates on flood situation, various measurements at locations around our reading district. ▪ Flood updates. ▪ More details on incidents ▪ Background information on specific incidents ▪ …what's the problem, where is it… ▪ Specific information on the location and nature of areas affected by the emergency.
Currency of information	▪ Info on what was currently happening – where it was happening and info that was being provided for people in the affected zone. ▪ Up to date latest information… ▪ More updates ▪ Current flood/weather info ▪ What is happening at the moment… ▪ Up to date information as a first point of call
Threats and predictions for specific locations	▪ …who is at risk, what should they do… ▪ … communities affected, predicted threats… ▪ … and likely to happen in the next 24 hours at any given location. ▪ …expected flood-peak times… ▪ Flood predictions
Maps	▪ …maps… ▪ Exactly where the problem areas are…
Contacts	▪ Contact list ▪ Contact numbers

Resource allocations	▪ Updates on allocations of resources to floods, disasters, etc.
Ministerial releases and statements	▪ Ministerial media releases and other information on situation.

Exploring other channels

Journalists were asked directly to identify other methods that SES could use to get them information. Fifteen reporters answered the question and 10 had suggestions for improvements. Predominant among these were direct email, mentioned by nine respondents. One journalist suggested a subscribe service in order for journalists to 'opt in' to an email alert system.

Other ideas were the AAP "digital disseminator", used by police and fire services (mentioned once), twitter (1) and social media (1). The remaining comments that were not suggestions for improvements related to the current system "working pretty well".

Journalists were asked to consider whether they would use or not use a range of technologies and channels for contact with the SES. Direct contact with SES media officers was the most popular intention, with all 25 responses to that question selecting the "would use" option. Subscription email, suggested earlier in the survey by a number of journalists, was also popular, with 23 out of 25 respondents selecting this as a "would use". Social media, such as Youtube (12 out of 22 would not use this option), Facebook (13 out of 22) and blogs (16 out of 20) were not favoured, although Twitter would be used by 16 of the 23 respondents (or 70%) if it was offered as a means of securing information.

The results are summarised as follows:

	Would use	Would not use	Total responses
Call to SES media officers	25	0	25
SES website	23	1	24
Flood bulletins	23	1	24
Subscription email list	23	2	25
Media pager	22	3	25
Personal/work email	22	3	25
SMS/Texts for media	19	4	23
SES twitter account for media	16	7	23
Youtube/videostreaming	10	12	22
RSS feeds	9	12	21
SES media facebook page	9	13	22
Video conference	7	15	22
Faxstream	6	14	20
AAP Media Net	6	6	12
Chumby box	4	14	18
Blogs	4	16	20
Other	1	5	6

Table 8 - Indicated use of technology and channels by media as a source of information

The same technologies were used to ask journalists what they would prefer. However, the structure of this question was weak, manifesting poor response rates (less than half of the participants). This question was discarded from the data analysis as a result of the poor response.

Question 28 was open response and required content analysis, asking journalists what sort of information they would like SES to put out specifically for them using social media. Fourteen journalists responded with suggestions. It is worth noting that three of these thought that social media would not be relevant or useful (one from television, two from print).

From the remaining 11 responses, eight types of information were distilled. These are contained in the table on the next page:

Item	Number of responses
Updates, including Twitter updates	11
Warnings and specifics of communities at risk, evacuation details	4
Contact information	2
In-field updates from controllers (non-SES media staff)/locations of local work crews and what they are doing	2
Statistics, including casualties/injuries/affected	2
Links to relevant online materials	1
Road closures	1
Photo opportunities, locations for vision	1

Table 9 - what information could be delivered using social media?

These responses, in addition to the earlier questions relating to social media, would indicate that any use of social media by NSW SES should incorporate a wide range, including SMS, Twitter and Facebook, but anchored by the organisation's website. While only five of 22 reporters said they had worked in the field, this is a significant number in a small sample that would warrant more mobile and accessible avenues of communication.

What went well and what could be improved?

The final three questions were designed to determine the strengths and weaknesses of the current approach by the SES communication team.

A recurring theme throughout the survey was that overall, the SES team were responsive and accommodating, and this was supported by the comments received in the questions relating to how well SES does its job in providing information to media. Five themes emerged.

Item	Number of responses
Very helpful, outstanding, accessible, quick, accurate	9
Ability to source local talent/local units, making people available to speak	5
Sympathetic to the media rather than hostile	3
Facts/figures/flood height predictions and other information	2
Up to date information on the website	1

Table 10 - What does SES do well?

The apparent contradiction of some journalists requiring more regular web updates while another journalist was satisfied with the regularity of updates is most likely due to the deadlines worked to by the respondents who commented on the web content. The journalist who identified as a strength the currency of information on the website worked for a daily newspaper, while comments on the lack of currency came from radio journalists.

Suggestions on ways SES could do better were constructive and reflected the results of the rest of the survey. Fourteen responses were received, although four people gave responses that indicated satisfaction rather than areas that could be improved. Seven themes were drawn from the answers of the ten other journalists, analysed (next page):

Item	Number of responses
Understand deadlines, be more sympathetic/understanding/return calls	3
Contact numbers (also relating to missing a call from a SES media officer and then having to use pager to get them back); provide contacts of people who were rescued	3
Rescue vision, vision of local crews at work especially rural and remote	2
Better response times to calls	2
Maps	2
Web more up to date/make it easier to navigate	2
SMS alerts	1

Table 11 - What could be done better?

Again, a contradiction emerges here about the empathy of SES media officers: this can not be explained by the pressure of deadlines, as the respondent in this case was from print media. The comment on the need for SMS alerts was supported by responses to Question 27, in which 19 people said they would use SMS communication by SES during an incident.

Two respondents suggested the use of maps in information provision. While not all media would use such a facility, there is evidence that in moving disasters such as flood, local communities seek maps as part of their decision making processes, so provision of these visual aids to a wider audience would be beneficial.

Recommendations

Key recommendations are:

1. That the SES Public Communications team continues to build on its empathic and accommodating approach to the media. However, the team must remain conscious of the importance of deadlines to the team's improvement of its service.

   It is advised that new staff to the team be encouraged in the off-season to visit media outlets to cement their knowledge of the pressures of the news cycle in radio, television and print, with particular attention to the websites of these outlets.

2. The rate of updates available on the website should be increased in order to take some pressure off Public Communications staff to speak to the media for general fact delivery and free them up for more interviews. While the overwhelming preference was for media to speak to SES personnel, there will be some instances where electronic media would like to give more regular updates for which contact with SES personnel is not necessary. For instance, a radio station may require a grab or interview for its hourly news bulletin, but may want to deliver in-program updates by the program announcer – more regular web updates would facilitate this.

3. As the summer approaches, a list of the means of contact with the SES and sources of information should be sent to the editors and chiefs-of-staff of each media outlet in NSW in the hope that these will be passed on to journalists during incidents. Information on RSS feeds and subscription email should be included in this list, as well as publicised on the website.

4. Development of an opt-in email list for journalists. Such a facility would be low maintenance way of ensuring that journalists were able to access updates and then to unsubscribe when their coverage of the incident was over. It also allows some journalists to get the big picture of activity across NSW, which may not currently occur when journalists ask questions that are specific to their community or region or when they gather the information from different sources for different communities.

5. Development of SMS and Twitter updates of incident developments with geographical information included for reporters/teams in the field. Access to vision/picture opportunities could be particularly enhanced using this service. Links to the website would be important, but information should also be stand alone for those with mobile web access. SMS will be particularly important for areas with patchy mobile coverage and therefore limited mobile web usability.

6. Continue to make efforts to provide journalists with vision/photos or opportunities and to include this as part of training within the volunteer SES structure. There was a particular request for provision of vision/photos of incidents in isolated areas, where it is more difficult for media to access. This could also be important for wider community support for affected areas in the recovery phase.

7. Increased use of maps via the website to improve the geographical knowledge of journalists and the community in relation to the emergency.

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