Chapter 3

Emergency warnings and community preparedness

3.1 The use of emergency warnings, as well as community preparedness for and responsibility in times of emergency, were discussed during the course of the inquiry.

3.2 The committee heard about current systems for warning the community about emergencies, for example warnings broadcast via radio and television as well as SMS and telephone alerts. Subsequently, the use of "informal sources" such as social media to distribute emergency information was raised, as were warning systems used overseas and devices designed specifically for the dissemination of emergency alerts.

3.3 The dissemination of emergency warnings and information to people with a disability, as well as emergency telecommunication arrangements for people with a disability were highlighted by a consumer group as specific concerns.

3.4 The committee was also informed about the importance of community preparedness and responsibility, and the role these play in determining how effectively a community responds to and recovers from an emergency.

Emergency warnings

3.5 The use of emergency warnings in Australia, and the importance Australians place on these, was raised by numerous submitters throughout the inquiry.

3.6 For example, the Australian Psychological Society emphasised the importance of well-crafted emergency warnings, and the trust the community places in such warnings:

Regarding trust, along both the formal and informal channels of communication, it is more likely for people to get an initial warning via an informal channel, but often they will then move to a more formal channel to try to verify some information—they will turn on the radio, the television or go to a website. The more that there is what the research calls 'source certainty' around a warning message the more likely it is to be taken up. In other words, the more there is trust in that source of information the more likely it is going to happen. I might add that it is not just trust in terms of the interface between the warning disseminator and the public; it is also between those who are behind the scenes and who are intended to be cooperating to produce a well crafted warning message.¹

3.7 The dissemination of emergency warnings through traditional channels (radio, television and telephone alerts) and increasingly via informal channels, for example

¹ Professor Kevin Ronan, Chair, Disaster Reference Group, Australian Psychological Society, *Proof Committee Hansard*, 8 August 2011, p. 39.
social media, is discussed below. Emergency alert systems used overseas, devices designed specifically to deliver emergency alerts as well as emergency warnings and telecommunications arrangements for people with a disability are also discussed in the following sections.

**Radio and television broadcasts**

3.8 Emergency warnings are routinely broadcast by both public and commercial radio and television stations in Australia.

3.9 The Australian Broadcasting Corporation (ABC) described radio and television as 'very effective methods of communicating important information to large groups of people before, during and after emergency situations'. \(^2\) The committee was informed by the public broadcaster that:

> There is no legislative requirement for the ABC to broadcast warnings, nor is the Corporation provided with any funding to assist with disaster coverage. However, there are strong audience expectations that the ABC will provide such services. It is well-recognised that listening to ABC radio services leaps during emergency periods, as there is very high community recognition of the ABC’s role in providing timely and accurate information. Research into emergency broadcasting has shown that listeners are inclined to seek out trusted local personalities and stay with them for the duration of the event. \(^3\)

3.10 The importance of emergency warnings broadcast by local radio was emphasised by the ABC: 'Local radio services are particularly effective, as broadcasters have established relationships with local communities and detailed local knowledge that may assist listeners'. \(^4\) The ABC went on to describe its '60 local radio stations throughout regional and metropolitan Australia' as the 'primary platform for emergency broadcasting'. \(^5\)

3.11 Similarly, Commercial Radio Australia (CRA) outlined the reach and penetration of its '260 member stations' of which '220 are based in regional and rural areas':

> These stations strive to achieve community engagement through a focus on local issues. Accordingly, the industry is very well placed to understand the needs of local communities and to communicate effectively with them during emergencies. \(^6\)

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\(^2\) Australian Broadcasting Corporation (ABC), *Submission 35*, p. 1.

\(^3\) ABC, *Submission 35*, p. 1.


\(^6\) Commercial Radio Australia (CRA), *Submission 14*, p. 3.
CRA cited several examples of the effectiveness of local commercial radio stations during various recent natural disasters.\(^7\)

The committee was informed by CRA that the Commercial Radio Code of Practice requires commercial radio stations to:

> ...in consultation with appropriate emergency and essential service organizations, implement a set of internal procedures to enable the timely and accurate broadcast of warnings and information supplied by such organizations relating to an existing or threatened emergency.

All commercial radio stations are bound by this Code.\(^8\)

In addition to the code of conduct described by CRA, both the ABC and CRA have entered into agreements with various state and territory ESOs to establish the parameters of their relationships for the purposes of broadcasting emergency warnings.

Consistent with a recommendation in the Council of Australian Governments (COAG) 2005 National Inquiry on Bushfire Mitigation and Management, the ABC has memoranda of understanding (MOUs) or partnerships with ESOs in all states and territories that 'commit the Corporation to use its best endeavours to provide emergency warnings and working to help emergency service agencies'.\(^9\) These MOUs are reviewed regularly.\(^10\)

CRA entered into an MOU with the Victorian government following the Black Saturday fires in 2009. At present, CRA has 'entered into MoUs in New South Wales, South Australia and Queensland, and an MoU is currently being negotiated in Tasmania'.\(^11\) Western Australia is the only state with which the commercial radio industry does not have an MOU.\(^12\)

By way of example, CRA provided the committee with a copy of the MOU with the Victorian government.\(^13\) The MOU 'constitutes an arrangement between the Coordinator-in-Chief and Commercial Radio Australia to facilitate the broadcasting of

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\(^7\) CRA, *Submission 14*, pp 3–7. For example the Victorian bushfires, Queensland floods and Cyclone Yasi.

\(^8\) CRA, *Submission 14*, p. 2.


\(^11\) CRA, *Submission 14*, p. 3.

\(^12\) CRA, *Submission 14*, p. 3.

emergency information and warnings during emergency events\textsuperscript{14} and includes (but is not limited to) the following provisions:

- co-operation and consultation between the parties;
- the broadcast of emergency warnings in a timely manner and in a form agreed by the relevant ESO;
- an undertaking by commercial broadcasters to break into programming in order to broadcast an emergency warning;
- the use of the standard emergency warning signal (SEWS) as requested by the relevant ESO;
- the availability of commercial radio broadcasters to broadcast emergency warnings 24 hours a day, seven days a week, 365 days of the year;
- the contact mechanism between commercial broadcasters and ESOs in the event of an emergency;
- the provision of emergency information and warnings by ESOs to commercial broadcasters in a timely and accurate fashion; and
- in collaboration with one another, the identification of critical infrastructure necessary for the broadcast of emergency information that could require protection during emergency events.\textsuperscript{15}

3.18 Of the MOUs, Ms Joan Warner, Chief Executive Officer of CRA, stated:

> We think the MOUs are working pretty well. We are pretty pleased with them. We have had to be proactive and we are still working on WA and Tasmania, but we think we will get there. Victoria has been the most engaged. It had the royal commission and had a lot of criticism made of its communications processes. The MOUs are very helpful to us and it is about educating our local radio station personnel so they know, yes, we have a code and "Here are a whole lot of processes that you now need to follow every year".\textsuperscript{16}

3.19 During the course of the inquiry, CRA made several recommendations intended to increase awareness about the role of commercial radio broadcasters in an emergency and to further improve relationships between the commercial radio industry and ESOs. Ms Warner explained:

> Our first one is that commercial radio's role be highlighted in any publicity around emergencies or from emergency services—that we do not hear ever

\textsuperscript{14} CRA, Memorandum of Understanding: Procedures for broadcasting of emergency information by Commercial Broadcasters in Victoria, October 2009, p. 2.

\textsuperscript{15} CRA, Memorandum of Understanding: Procedures for broadcasting of emergency information by Commercial Broadcasters in Victoria, October 2009, pp 4–6.

\textsuperscript{16} Ms Joan Warner, Chief Executive Officer, CRA, Proof Committee Hansard, 8 August 2011, p. 65.
again that the ABC is the official emergency services broadcaster, when the
ABC may be off air and you have got your local commercial station
broadcasting and most people are listening to that.

Our other suggestion, which we have made a few times in dealing with state
governments, is that there is a designated person who will always take calls
from whatever media, whether it is local commercial radio or the ABC or
Channel 7, and that that person—or two people—is always available.
Sometimes our members find that they will call and the person that they
spoke to two hours ago is not there...there needs to be a really clear
communication protocol and one or two identified spokespeople who will
always give the latest information to the media when they call, or who are
willing to do a few grabs and have them on a website so that people could
go to a website and take the latest grab from the emergency services
commissioner, who did it one minute ago...The other thing is that we would
like to actually know who is coordinating a disaster or an emergency. I
think we flagged it in our submission that, in some instances, some of our
broadcasters were told to play the emergency warning—and of course
people really spring to action when they hear the siren—and then they were
contacted a little bit later by another department saying: 'What on earth are
you doing playing that warning? Don't play it.' I think sometimes it is just
knowing who is the peak body. Who do you talk to in the bushfires? Is it
the fire brigade and you do not pay any attention to anyone else? In a
terrorism situation, is it the Federal Police or is it the state police?17

In addition to commercial radio, FreeTV Australia informed the committee
that free-to-air commercial television broadcasters had also played a role in the
dissemination of warnings and emergency information during recent natural disasters
such as the Victorian bushfires and Cyclone Yasi.18

Ms Julie Flynn, Chief Executive Officer of FreeTV Australia outlined the
industry's code that requires free-to-air commercial television stations to broadcast
emergency warnings:

[The national processes for cooperation between emergency management
services and all media sectors] are backed up by a range of regulatory
requirements designed to ensure the timely and accurate broadcast of
emergency information to their licensee's local community, and all free-to-
air commercial broadcasters comply with these requirements at a minimum.
There are requirements in the industry's code of practice which ensure
licensees have adequate procedures in place to enable prompt and accurate
broadcast of emergency information. The code includes requirements to
consult with emergency and essential service organisations within their
licensed area and to implement internal procedures to enable the

17  Ms Joan Warner, Chief Executive Officer, CRA, Proof Committee Hansard,

18  Ms Julie Flynn, Chief Executive Officer, FreeTV Australia, Proof Committee Hansard,
8 August 2011, pp 50–51.
dissemination of emergency information. The code also includes an appendix dealing specifically with the broadcast of emergency information, providing further guidance to licensees on their responsibilities and the need to develop and maintain effective lines of communication with emergency service organisations.19

3.22 FreeTV Australia shared CRA's concern regarding the availability and maintenance of up-to-date contact details for both emergency personnel and broadcasters that can be used during an emergency. Ms Flynn recommended a national database:

One of the issues that I have discussed with the Attorney-General's process is having an adequate list, a database—and we can do that now—of who all these emergency services people are and who the contacts are at the broadcaster. A database of that kind could be set up and established—and I know for a fact that we went through all of this here in the press gallery back in the early nineties when we had the first Gulf War. The defence department was establishing contacts so that when something happened there was a process and you could get in touch. You had a known person in the newsroom; you had a known person at the defence department. The same applies with emergency services.

What happens over time is that Joe Bloggs moves on and Mary Jane comes in to replace him, at either end, and nobody knows that the change has been made. The information is stored in someone's brain. That person moves on and the information is lost. It may be written down somewhere. There may be some sort of process, and there usually are manuals in newsrooms about these things. But a database that the states contributed to, that the Commonwealth contributed to and that broadcasters of all kinds contributed to I think would solve a lot of the issues that you are concerned about. If you know that I am sitting on the other end of the phone and that my telephone number is XYZ and you can ring me 24/7, you are going to pick up the phone and ring me and I am going to answer it.20

Telephone and SMS warnings

3.23 Australia's emergency alert system, "Emergency Alert", was launched in December 2009 and enables state and territory emergency service organisations (ESOs) to issue telephone-based warnings to both landline and mobile telephones.21 The Commonwealth Government provided $15 million for the development of Emergency Alert; participating states and territories (ACT, NSW, Northern Territory,

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19  Ms Julie Flynn, Chief Executive Officer, FreeTV Australia, *Proof Committee Hansard*, 8 August 2011, p. 50.

20  Ms Julie Flynn, Chief Executive Officer, FreeTV Australia, *Proof Committee Hansard*, 8 August 2011, p. 52.

South Australia, Tasmania, Victoria and Queensland)\(^{22}\) are responsible for the ongoing operational and usage costs associated with Emergency Alert.\(^{23}\)

3.24 Emergency Alert delivers warnings to telephones linked to properties in an area identified as being at risk.\(^{24}\) The location of the telephone to which the emergency warning is sent is determined using the address associated with the account for that telephone, that is, Emergency Alert does not determine the physical location of the handset.\(^{25}\)

3.25 Since Emergency Alert became operational it has been used 330 times and issued approximately 7.12 million messages.\(^{26}\) The system has been used in NSW, Victoria, South Australia, Queensland, the Northern Territory and the ACT for a range of emergencies including storm, flood, tsunami, bushfire, storm surge, chemical incident and missing person emergencies.\(^{27}\)

3.26 Telstra currently provides the systems for Emergency Alert.\(^{28}\) Telstra explained:

> The Emergency Alert solution was designed in accordance with the Solution Requirements specified by Victoria in consultation with the participating States and Territories. Telstra provides a managed service and continues to work closely with government agencies to ensure that Emergency Alert is a fully robust system that meets the operational needs of the users. The system is expected to be continually enhanced as the expertise of users and their requirements increase.\(^{29}\)

3.27 The decision to issue an emergency alert, as well as the content of each alert and the geographic area where an alert is sent, is determined by state and territory ESOs.\(^{30}\)

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22 Western Australia uses a state-based telephone alert system, "StateAlert".


24 Attorney-General's Department, Submission 24, p. 10.

25 Mr Anthony Goonan, Director, Network and Commercial Planning, Telstra, Proof Committee Hansard, 8 August 2011, p. 71.


28 Telstra, Submission 31, p. 5.

29 Telstra, Submission 31, pp 8–9.

30 Telstra, Submission 31, p. 8.
3.28 Numerous other submitters were critical of Emergency Alert: the absence of a capacity to determine the location of telephone handsets in the alert area, as well as the need for certain telephone handsets (cordless landline telephones and mobile telephones) to have access to power and be turned on in order to receive an alert were of specific concern.\(^\text{31}\) This led to discussion of location-based mobile telephone emergency alerts as well as other systems and technologies used to issue emergency alerts.

*Location-based mobile telephone emergency warning capability*

3.29 As discussed above, Emergency Alert does not have the capability to issue warnings to telephone handsets (specifically mobile phones) on the basis of the physical location of the handset at the time of an emergency, rather than the customer’s registered service address.

3.30 On 16 September 2011 and during the course of the inquiry, Emergency Alert was used in the ACT to alert residents in some northern Canberra suburbs to a toxic chemical fire.\(^\text{32}\) Many Canberrans in the affected area 'complained...they had not received the early-morning warning to stay inside, despite living in nearby suburbs...Others received a text message even though they were interstate or overseas'.\(^\text{33}\) This demonstrated some of the difficulties associated with the lack of a location-based mobile telephone emergency warning capability. However, it is also important to note that some of the problems associated with the use of Emergency Alert for the chemical fire arose because the ACT government did not use Emergency Alert in accordance with the 'Recommended Use Guidelines'.\(^\text{34}\)

3.31 The NSW State Emergency Service (SES), the Local Government Association of Queensland (LGAQ), Lake Macquarie City Council, Mr David Tones and Mr Kim Allen were among those who identified the absence of a capacity to issue warnings based on the physical location of a handset as a major weakness of Emergency Alert.\(^\text{35}\) Submitters argued this weakness needed to be addressed so that people ‘in the

\(^{31}\) See for example Professor Stephen Robson and Mr David Templeman, *Supplementary Submission 1*, p. 1; NSW State Emergency Service (SES), *Submission 17*, p. 6; Local Government Association of Queensland (LGAQ), *Submission 22*, p. 1; Lake Macquarie City Council, *Submission 26*, p. 3; Mr David Tones, *Submission 27*, pp 7–8 and Mr Kim Allen, *Submission 37*, p. 4.

\(^{32}\) Markus Manheim, 'Staying in the loop a key to emergency texts', *The Canberra Times*, 22 September 2011.

\(^{33}\) Markus Manheim, 'Staying in the loop a key to emergency texts', *The Canberra Times*, 22 September 2011.


foot print of an emergency receive 'reliable, timely early warning alerts to enable them to prepare for and respond to natural disasters and other emergencies'.

3.32 The governments of NSW, South Australia and the Northern Territory also discussed some of the limitations of the Emergency Alert system in this regard but recognised that a telephone emergency alert system is one tool amongst a suite of tools that should be used to alert members of the community. Mr Bruce McDonald, Chief Superintendent of the NSW Rural Fire Service stated:

The Emergency Alert system has two functions. It dials landline telephones based on the service address—that is, the address that the telephone was physically connected to. That is reasonably successful. For mobile phones it is based on the billing address which for me would be my organisation and not my residence. Some of the limitations are that unless the alerting polygon is drawn around the business address, I will not get a message no matter where I am.

As an organisation we have only used Emergency Alert on two occasions. It has had reasonable success, but we also believe that Emergency Alert is not the panacea to all ills. There needs to be a mixture of Facebook, Twitter, local media, community doorknocking, community meetings etcetera. Our experience has shown that different solutions work differently in different communities. You cannot take one of the suite of tools and isolate it. You must use all of the tools and whatever is appropriate for the best community outcome.

3.33 The National Council on Intellectual Disability (NCID) agreed that telephone warning systems such as Emergency Alert must not be the sole mechanism by which people are alerted to an emergency, but must be used in the context of the ability of people with an intellectual disability to receive and respond to such an alert. NCID was concerned about people with an intellectual disability physically receiving an emergency alert, understanding the alert and taking appropriate action in response to an alert. To address these concerns, NCID emphasised the need for direct contact with people with an intellectual disability, including door knocking:

36 NSW SES, Submission 17, p. 6.
37 Lake Macquarie City Council, Submission 26, p. 1.
38 Mr Tony Gates, Director, Operations, NSW Telco Authority, Proof Committee Hansard, 8 August 2011, pp 24–25; Mr Peter Davies, Directory NT Emergency Service, Proof Committee Hansard, 8 August 2011, p. 25 and Mr David Place, Chief Executive, South Australian Fire and Emergency Services Commission (SAFECOM), Proof Committee Hansard, 8 August 2011, p. 26.
39 Mr Bruce McDonald, Chief Superintendent, NSW Rural Fire Service, Proof Committee Hansard, 8 August 2011, p. 25. Please note, Emergency Alert contacts the registered service address—and not the billing address—for both mobile telephones and landline telephones.
41 NCID, Submission 43, pp 6–7.
During an emergency or natural disaster a common way in which people are advised of safety concerns, including the need to evacuate, is through **door knocking**. There are important issues with this that must be considered:

- **this is a good way to have personal contact with people and to ensure that the situation and what people should do is understood by the person with intellectual disability, but,**
- for some people it may be difficult to stay calm, anyone approaching their door may have to spend some time both calming the person and making sure that the person understands what the situation is and what is expected of them.
- some people will not open their door to strangers ("use neighbours if this happens")
- some people do not trust people (even if they see them regularly) in uncertain or stressful situations – they have a history of being treated badly by people in authority ("the door knocker should wear a uniform with an id badge")

Training in disability awareness and communication strategies for emergency service personnel could also be included in emergency planning. For example, in NSW the Intellectual Disability Rights Service conducts education sessions for Police; this is delivered by trainers with intellectual disability.42

3.34 With respect to community satisfaction with Emergency Alert, a recent evaluation conducted by the Torrens Resilience Institute, commissioned by the South Australian Fire and Emergency Services Commission (SAFECOM) and funded by the Commonwealth Government, surveyed householders to ascertain the level of satisfaction with the telephone warning system. The survey found that:

- 83 per cent of people received emergency alerts;
- of those who received alerts, 98 per cent said the alert was delivered in full and 97 per cent said the alert was clear;
- 84 per cent of people understood and acted upon the emergency alert;
- on receiving an alert, approximately 87 per cent of people said they would seek further information; and
- 84 per cent said Emergency Alert fully met or exceeded their expectations.43

3.35 The Attorney-General's Department informed the committee:

No emergency warning mechanism is guaranteed to deliver warnings to all people in a given area at a given point in time. Thus it is critical that no

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42 NCID, *Submission 43*, p. 8, emphasis in original.
single mode of warning or communication is relied upon solely, in times of emergency – either by the public to receive warnings, or by warning agencies to disseminate them. States and territories have a suite of delivery mechanisms at their disposal that they may use to issue warnings.44

3.36 The Attorney-General's Department went on to explain that a location-based mobile phone emergency alert capability was currently being explored by the Commonwealth Government in conjunction with the states and territories:

The Commonwealth funding for the development of the national telephone-based emergency warning capability also provided $1.35 million for research into the feasibility of developing a location-based mobile telephone emergency warning capability. This capability would issue warnings to mobile telephones based on the physical location of the handset at the time of an emergency, rather than the customer’s registered service address.

Once this research confirmed that development of a location-based mobile warning capability was technically feasible, on 14 September 2010, the Prime Minister, the Hon Julia Gillard MP and the Attorney-General jointly announced that the Commonwealth would assist the States and Territories to fund the establishment costs associated with the development of the capability as an enhancement to Emergency Alert and State Alert. As the States and Territories will own and operate this capability in their capacity as first responders, the Commonwealth does not have a direct role in the procurement. This process is being led by Victoria on behalf of the States and Territories.

The timing of the deployment of the location-based mobile telephone emergency warning capability is subject to negotiations with each of the three national mobile telecommunications carriers.45

**Use of other technologies to issue emergency warnings**

3.37 As discussed above, it was recognised by various submitters to the inquiry, including state and territory governments, that existing systems for issuing emergency alerts—such as Emergency Alert—have limitations and are only part of the solution in ensuring the delivery of timely, accurate and effective warnings in an emergency situation. As a result, various submitters raised the use of other technologies such as the internet and social media as well as devices specifically designed to alert people to an emergency situation.

**The internet and social media**

3.38 Mr David Place, Chief Executive, South Australian Fire and Emergency Services Commission (SAFECOM) reflected on the increasing use of 'more informal processes...because [the public] are craving that information and they are not getting it
through the formal channels'.

In response to the public's desire to access information through "informal" means, the governments of South Australia, Western Australia and Tasmania informed the committee they were examining the use of the internet and social media to deliver emergency information and warnings.

3.39 The Bureau of Meteorology explained its increasing use of the internet to provide weather information and warnings. The Bureau informed the committee that a recent market survey, conducted in December 2010, had shown:

...around 53% of respondents had used the Bureau’s website in the past 6 months. Of these respondents, 35% indicated that the Bureau’s website was their most valued source of weather information. Knowledge of the Bureau’s website is steadily increasing with just 15% of respondents unaware of the Bureau’s website in December 2010, compared with 20% who were unaware of the site in a separate survey conducted in winter 2009.

3.40 The Bureau also informed the committee that it had recently commenced use of Really Simple Syndication (RSS) feeds that allow people to subscribe to warning information. The Bureau explained the RSS service 'alerts users to the presence of new warning data when it is issued, provided they have a web browser open on their devices'.

3.41 The NSW Government acknowledged the opportunities to disseminate information using the internet and social media but flagged that care was needed in the use of these:

It is not just copper, it is optic fibre, it is microwave, there is Twitter, there is Facebook and the internet. There is a whole range of technologies so that we have the choice of a lot more and we have to be very careful about their availability and how we use them.

... There has been a lot of focus on alternative technologies, particularly the alerting system. We see that as really important, but we have to remember that not all parts of Australia and not everybody is internet savvy or has a mobile phone. There is still a really important role for the traditional ways of getting to people: radio and television; and telling people through

46 Mr David Place, Chief Executive, SAFECOM, Proof Committee Hansard, 8 August 2011, p. 26.
47 Government of South Australia, Submission 9, p. 5.
48 Fire and Emergency Services Authority of Western Australia (FESA), Submission 18, pp 4–5.
49 Tasmanian Government, Submission 39, p. 4.
50 Bureau of Meteorology, Submission 42, p. 8.
51 Bureau of Meteorology, Submission 42, p. 8.
52 Bureau of Meteorology, Submission 42, p. 9.
education systems to have a battery driven commercial radio and to know who to listen to is really important.53

3.42 Similarly, the Australian Psychological Society raised the risk of misinformation about an emergency being spread 'between friendship networks or informal networks' on 'public source applications'.54 The Psychological Society believed these risks could be minimised by making available 'up-to-date accurate quality information...distributed from reliable authoritative sources so that there is a possibility that people can be cross-checking their information'.55

3.43 The Attorney-General's Department expressed the federal government's support for the use of a variety of mechanisms to issue emergency warnings, including the use of the internet and social media:

States and territories have a suite of delivery mechanisms at their disposal that they may use to issue warnings. These range from more traditional methods such as television and radio broadcast, community meetings and loud hailers to utilising the latest technology, such as mobile texting and social networking tools.

All Australian governments are supportive of a multi-modal approach to issuing emergency warnings. Adopting such an approach to warning the community is crucial in the event of critical infrastructure failure and also for reasons of saturation and accessibility. It maximises the likelihood that as many people as possible receive and comprehend a warning regardless of the activity they are involved in or the mode of communication they are reliant on or prefer. This in turn makes it more likely that people will be in a position to take appropriate action to protect against loss of life, or injury, and mitigate against damage to property.56

Devices

3.44 In response to criticisms of Emergency Alert, and the requirement for televisions, radios and mobile phones to be turned on, and in the case of televisions and cordless landline phones to be connected to mains or generator power in order to receive an emergency warning, the committee was made aware of several technologies that may overcome some of these problems.


54  Dr Susie Burke, Senior Psychologist, Public Interest, Disasters and the Environment, Australian Psychological Society, *Proof Committee Hansard*, 8 August 2011, p. 36.


56  Attorney-General's Department, *Submission 24*, p. 5.
3.45 An example of the importance of an emergency alert capacity that wakes people at night and/or turns on the device to deliver a warning was provided by the Northern Territory government:

I note with SMSs, they do not wake people up at night. One of the big weaknesses in the whole system at the moment is if a tsunami comes in after dark then there is a very good likelihood that we will not be able to wake people up and alert them to move. This is probably one of the bigger holes in our alerting system as we speak.57

3.46 Both the Special Broadcasting Service (SBS) and the Australian Broadcasting Corporation (ABC) cited the emergency alert system used in Japan. Mr Hugh James, Manager, Transmission Services, SBS and Dr David Sutton, Head of Strategic Policy, ABC described the Japanese model and some possible implications for Australia:

In the recent Japanese earthquake and tsunami, the relatively low death toll was a testament to the work done particularly by the Japanese broadcasters on developing an emergency warning system that is now built into their radios. The radio sits there, off, and given the tsunami it comes to life and broadcasts the warning. That is now being put out across South-East Asia, and Australia should take note of that for the future.58

And:

Mr James: It has been developed by the Asian broadcasting union, particularly in conjunction with the Japanese broadcasters. They established it as a standard about two years ago. The Japanese have been using an earlier version of it for some years. My only concern about implementing it in Australia would be that it probably adds a few dollars to the cost of a radio, but given that we are moving to digital radios anyway a few dollars on $100 is relatively small.

Dr Sutton: While I am not exactly a technician I had an explanation of it when I visited the NHK [Japan Broadcasting Corporation] labs in Tokyo. Essentially it requires a very thin sliver of broadcasting spectrum to carry a signal that is able to wake up the device. You then need to have the necessary chip set in the device to respond to that signal. It would add a cost and would have to be effectively inserted into radios across the country, so there would be a fairly substantial replacement that would be required.59

57 Mr Peter Davies, Director, NT Emergency Service, *Proof Committee Hansard*, 8 August 2011, p. 25.
58 Mr Hugh James, Manager, Transmission Services, Special Broadcasting Service (SBS), *Proof Committee Hansard*, 8 August 2011, p. 43.
59 Mr Hugh James, Manager, Transmission Services, SBS and Dr David Sutton, Head of Strategic Policy, Australian Broadcasting Corporation (ABC), *Proof Committee Hansard*, 8 August 2011, p. 44.
3.47 The committee also heard about technologies developed in Australia, including:

- Sentinel Alert—a dedicated public emergency warning system that delivers via satellite and VHF channels, and within minutes of initiation of an alert, an audible, visual and text warning to a receiver unit that can be installed in homes;60 and

- YellowBird Automatic Linking to Emergency Radio Transmissions (ALERT)—a method (software and microchip) of using existing radio broadcast infrastructure to remotely switch on radios, and other mobile devices, in the event of an emergency to deliver emergency warnings.61

3.48 Both Sentinel Alert and YellowBird ALERT utilise location-based emergency warning capability to deliver emergency alerts to people in the footprint of an emergency.

**Emergency warnings and telecommunication arrangements for people with a disability**

3.49 The arrangements for people with a disability during times of emergency, including the impact of an emergency on communication services for people with a disability as well as emergency warning and evacuation procedures for people with a disability, were the subject of discussion during the course of the inquiry.

3.50 The Australian Communications Consumer Action Network (ACCAN) was particularly concerned about 'the accessibility of emergency call services and emergency information to people with disability' and the difficulties encountered in this regard by people with a disability during the 2010-11 Queensland floods.62 Ms Danielle Fried, Disability Policy Advisor for ACCAN described disruptions to the National Relay Service (NRS) as a result of the Queensland floods:

...the flood affected the operations of the Australian Communication Exchange, including the National Relay Service, or NRS—a phone solution for people who are deaf, hearing impaired or speech impaired. Staff were unable to reach or work safely at the call centre, which is in Brisbane. The NRS worked closely with Telstra and the ACMA to ensure that emergency calls via the 106 emergency number could continue, and this meant that people with disability who use a TTY—a specialised telephone with a keyboard—were still able to make emergency calls. However, other people with disabilities throughout Australia—those who rely on the National Relay Service's Speak and Listen and internet relay services and the Australian Communication Exchange's video relay and caption telephony

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60 Sentinel Alert, *Submission 8*, p. 2.
61 Professor Stephen Robson and Mr David Templeman, *Submission 1*, p. 9.
services—were not able to make emergency calls for around 24 hours. All NRS users throughout the country were not able to make calls to the SES either throughout this period.63

3.51 ACCAN praised the work of the ACMA and Telstra for working 'in difficult circumstances' to 'ensure that the 106 service remained available throughout the almost 24 hours that other NRS call types were offline' for people who are deaf, hearing-impaired or speech-impaired and who use a teletypewriter (TTY) to make calls to emergency services.64 ACCAN was very concerned, however, that "Speak and Listen" and internet relay users were unable 'to call emergency services at all during this period'.65

3.52 To address the disruption to emergency call services for Speak and Listen and internet relay users, ACCAN recommended the ACMA ensure that:

- The National Relay Service (NRS) emergency site is in a location which is less prone to floods (or other risks)
- Users of the NRS’s internet relay and Speak and Listen services have guaranteed access to 000 at all times
- Users of ACE’s Video Relay and captioned telephony services have guaranteed access to 000 and that these services are incorporated into the legal framework for emergency calls
- Greater legal and regulatory obligations are required of the 106 Emergency Call Person (ECP), in order to provide stronger protections for consumers
- Emergency service organisations can call back all 000 or 106 users, regardless of the method initially used to make contact.66

3.53 At its meeting inaugural on 11 November 2011, the Standing Council on Police and Emergency Management (SCPEM) agreed to implement improvements to Triple Zero emergency call services67 including:

- the adoption of national phone numbers for State Emergency Services and police assistance;
- the development of national standardised qualifications for Triple Zero call takers;

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67 The Hon Robert McClelland MP, Attorney-General, 'Strengthening triple zero services during a disaster', media release, 11 November 2011.
• the introduction of recorded voice announcements (RVAs) directing people who have called Triple Zero to call state or territory emergency services, or police assistance if they do not require urgent assistance from police, fire or ambulance; and

• examining the establishment of an "all hazards" emergency information hotline to provide a single number to call about information for floods, bushfire and other serious events.  

3.54 However, SCPEM did not undertake to make changes to Triple Zero call services for people with a disability.

3.55 ACCAN also raised access to emergency information for people with a disability. Ms Fried cited the use of an Australian sign language (Auslan) interpreter by the Queensland state government during the 2010–11 floods as an example:

During the floods, we saw the Queensland government take the welcome decision to provide Auslan interpretation for the deaf community at emergency related media conferences. Unfortunately some TV networks initially chose to cut the interpreter out of their broadcast. ACCAN would like to see all state emergency communication strategies include Auslan-English interpreters in public broadcasts and all broadcasters include the interpretation on air. Broadcast emergency information also needs to be open captioned, and any written information on the screen, such as scrolling ticker tape or emergency phone numbers, has to be read out audibly so that viewers who are blind or vision impaired have access to this important information.  

3.56 ACCAN wanted to see the routine use of Auslan interpreters and envisaged a two part strategy to bring this to fruition:

• the provision of Auslan interpretation as part of emergency plan strategies at the local, state and national level; and

• a requirement for free-to-air television broadcasters to broadcast the Auslan interpreter when broadcasting emergency warnings and information.  

3.57 The ABC explained that it had been considering the use of Auslan interpreters during emergency warning broadcasts. Mr Michael Ward, Head, Operations Planning, ABC informed the committee:

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Mr Ward: Yes, we have thought about it. In fact, we have had some approaches since the Queensland floods. There are a number of issues, though, that need to be taken into account. You may recall that, during the floods, someone was providing Auslan signing at some of the broadcasts during the Queensland floods.

Senator BOYCE: That was at the Premier's and the police commissioner's press conferences?

Mr Ward: That is right. But there was also some criticism that, at times, the framing of the coverage did not include the person doing the signing. Just to go back to your question about cooperation, one point of cooperation is shared footage, pooled footage, so not every broadcaster is at every point and will share the footage from a news conference, for example. If another broadcaster has framed it in such a way that it has left the signing out, then clearly we would not be able to broadcast it. There was also a request to look at picture [in] picture kind of signing. There are two difficulties with that. So, at this stage, all I have is difficulties for you. It is certainly one that we are talking through. The difficulties concern spectrum. You require more spectrum and, currently, spectrum is at a premium. Secondly, you would have—

Senator BOYCE: That is something for the picture [in] picture?

Mr Ward: That is right, but not if it is live. One of the things here is guaranteeing that service. If we say we are going to do it, then we will do it. So we could not say we are going to do it, then take someone else's pool of footage live from an event, for example, and not have it. That would be a real problem for us. So the kind of technology solution starts to present itself. Spectrum issues arise and so, too, would the availability of someone who is able to do the signing at another point. Then there is the cost of providing that. At this stage it is in, if not the too-hard basket, certainly the very difficult basket and I do not quite know how to solve it. Plus, of course, all of that coverage is captured and live captioned.71

3.58 Ms Julie Flynn, Chief Executive Officer, FreeTV Australia responded on behalf of commercial free-to-air television broadcasters to ACCAN's concern:

On Auslan, we are very strongly of the view that if the emergency service provider or the police or the Queensland Premier or the New South Wales Premier or the Victorian Premier wish to provide Auslan coverage we will make sure that it is within frame. That did not happen at the beginning of the Queensland floods.

As I have said, we have a very close working relationship with the hearing and deaf community and they got in touch with me—I was on holidays—and I got in touch with the broadcasters and within the hour the matter was repaired. So we are more than happy to ensure that processes are in place for Auslan to be captured. We think it is totally impractical to expect

broadcasters to provide such and we certainly would not support the need for the provision of such in the news bulletins when we are already legislated to provide closed captioning.\textsuperscript{72}

3.59 A related concern, regarding the ability of people with an intellectual disability to understand and respond to an evacuation order, was raised by NCID. NCID explained that not only do people with an intellectual disability need to understand an emergency alert but they also need to be able to respond:

People have to be able to undertake the action; for example, if the text message, radio message, etc is to evacuate and the person does not have a car or public transport has stopped the person may become anxious and disorientated.\textsuperscript{73}

3.60 And:

Most people with an intellectual disability rely on public transport or the assistance of others. Suggestions that people leave their neighbourhood including evacuation orders will cause difficulty for people who have no transport and may cause distress and panic as they are unable to do as they have been asked.\textsuperscript{74}

\textit{Committee view}

3.61 The dissemination of emergency warnings in Australia via radio, television and telephone / SMS (Emergency Alert and StateAlert) is and will continue to be an important and effective tool to alert communities to emergencies and impending natural disasters.

3.62 Effective and co-operative working relationships between ESOs and radio and television broadcasters improve the timely and accurate dissemination of emergency warnings and information. The committee believes that agreements, such as MOUs, that establish the way in which ESOs and broadcasters share information during an emergency are a welcome development. However, the committee agrees with CRA and FreeTV Australia that up-to-date contact details for key personnel would assist both ESOs and broadcasters to establish contact with one another during an emergency.

\textbf{Recommendation 3}

3.63 The committee recommends that the Commonwealth Government together with national, state and territory emergency service organisations and radio and television broadcasters, develop a secure database of up-to-date contact details for key personnel to be used during an emergency.

\textsuperscript{72} Ms Julie Flynn, Chief Executive Officer, FreeTV Australia, \textit{Proof Committee Hansard}, 8 August 2011, pp 54–55.
\textsuperscript{73} NCID, \textit{Submission 43}, p. 7.
\textsuperscript{74} NCID, \textit{Submission 43}, p. 8.
3.64 The committee welcomes continued improvements to the Emergency Alert system, specifically the development of a location-based mobile telephone emergency warning capability. The committee urges Australian governments to implement a location-based mobile telephone emergency capability as soon as practicable so that telephone emergency alerts can be better targeted to those people located in the geographic area of an emergency.

3.65 The committee recognises the community's increasing desire to access information through the use of new and "informal" platforms, for example the internet and social media, and was pleased to hear that several state and territory governments are already taking steps to provide emergency information in these ways. The committee encourages federal, state and territory governments and ESOs to use these platforms to further engage with the community during each phase of an emergency (preparation, response and recovery).

3.66 However, the committee agrees with those submitters that indicated the use of new platforms should be an adjunct to and not a replacement for existing emergency warning systems. A suite of tools should be used to alert the community to an emergency, in recognition of the different ways in which people are able to or choose to access such information.

3.67 In regard to emergency alert systems used overseas, such as the Japanese example, as well as other technologies like Sentinel and YellowBird ALERT, the committee is of the view that genuine and careful consideration of their applicability in the Australian context is warranted. In this regard, the committee notes that SCPEM agreed on 11 November 2011 'to continue to harness the latest scientific and technical expertise by conducting another technology forum in 2012 and that the theme for the 2012 forum will 'be public warning and communication systems and situational awareness'.

3.68 Emergency telecommunication services and the effective dissemination of emergency alerts to people with a disability are vital. The committee was surprised to learn that the guarantees around service delivery for emergency Triple Zero phone calls are not also required for emergency call services available to people with a disability using TTY, Speak and Listen, internet relay, video relay and captioning telephony. The committee believes that emergency call services for people with a disability must be available at all times, as is the emergency Triple Zero service. This is particularly important during times of emergency when people with a disability may be more vulnerable and isolated than the wider community.

Recommendation 4

3.69 The committee recommends the Commonwealth Government require guaranteed access to emergency call services for people with a disability at all times.

3.70 The committee understands the provision of Auslan interpreters for emergency warnings and information broadcast on free-to-air television is a recent innovation. The committee praises the Queensland state government for taking this step during the 2010-11 floods in that state. The committee was also encouraged to hear that the ABC is considering the provision of Auslan services during emergency information broadcasts despite technical difficulties to do so.

3.71 The committee urges federal, state and territory governments and ESOs to consider the routine use of Auslan interpreters during emergency information bulletins and warnings broadcast on television. Equally, the committee hopes that public and commercial free-to-air television broadcasters undertake to show Auslan interpreters as part of their emergency information and warning broadcasts.

Community preparedness and responsibility

3.72 Community preparedness and responsibility were identified by some submitters as important factors in the ability of communities to prepare for, respond to and recover from an emergency effectively.

3.73 The South Australian government felt community expectations about where responsibility for emergency preparedness lay had shifted so that a greater emphasis was placed on the provision of information and support by government, at the expense of resilience in the community:

There seems to be an increasing expectation upon governments to provide the perfect information at the perfect time and in a manner that is perfectly tailored for each individual recipient. This is clearly not achievable and certainly not sustainable. If we are not careful, we will create an expectation that all responsibility rests with government, which is not in the best interests of community resilience. Resilience is achieved through a partnership between all levels of government, the community and business.76

3.74 This was also noted in the Torrens Resilience Institute's evaluation of Emergency Alert:

Perhaps the greatest challenge facing governments, organisations and communities today is satisfying society's needs and expectations in the event of a disaster...Over the past few decades we have benefitted greatly from improvements to our safety and occupational health, and we look to

76 Mr David Place, Chief Executive, SAFECOM, Proof Committee Hansard, 8 August 2011, p. 23.
our governments and others in authority to mitigate threats and reduce risks. We demand information to assist us in reducing the likelihood and consequences of a disruptive event, and we expect support to help us recover as quickly and completely as possible.77

3.75 Professor Kevin Ronan, Chair, Disaster Reference Group, Australian Psychological Society discussed the importance of community preparedness and emergency warnings in combination:

A warning message on its own, from our view and from the research that has accumulated over the years, no matter how well crafted, is insufficient. A community has to be...prepared to take up the message in such a way that they are going to be able to use it to protect themselves and their families. One of the things we know about warning messages, for example, is that a finely crafted warning message can be sent to the public and members of the public who are not in risk areas, who are in fact in safe zones, and their high state of emotional arousal starts to compromise their decision-making capacity and they in fact move themselves from a safe zone into a higher hazard zone, or a high risk zone. In order to buttress against that kind of eventuality, it is really important that the human factor is taken into account prior to the need for an early warning and helping prepare communities themselves and also, really importantly, preparing across the various agencies that are somehow linked in with a warning message so that they are collectively all on the same page and are going to be providing the same kind of information that is consistent, accurate, clear, specific and provides specific guidance that is being put out by multiple sources that are trusted by the public.78

3.76 Both the ABC and SBS saw it as their role to help prepare Australian communities for emergencies and natural disasters. Mr Anthony Rasmussen, Manager, Regional Local Radio described the activities of ABC Local Radio to assist in the preparation phase:

Our approach is that we are with our communities before, during and after emergencies. In the 'before' part in particular, we make a point of seasonally running education campaigns through various short promotions on the radio at a regular frequency so that we are educating people to what that alert sounds like on the radio, what they should do when they hear it, how they can prepare their homes, how they can prepare an escape plan and things like that. We run those in the lead-up to seasonal events like cyclones and the bushfire seasons, and all our stations run those on a regular basis in the lead-up to what might be a time when people will need to know that


78 Professor Kevin Ronan, Chair, Disaster Reference Group, Australian Psychological Society, Proof Committee Hansard, 8 August 2011, pp 34–35.
3.77 Mr Hugh James, Manager, Transmission Services, SBS noted that emergency alerts issued on ABC radio are all in English and went on to discuss the SBS's role in educating non-English speakers about emergency warnings and how to appropriately respond to those warnings.

3.78 The NSW and South Australian state governments also highlighted the importance of community preparedness and responsibility, in particular the need for communities to partner with ESOs to enable effective preparation for, response to and recovery from emergencies:

**Mr Place:** ...there needs to be more emphasis on community self-reliance. It seems as though, when we take a step forward with each new product, the community takes a step back and just expects it to happen. I think there is a very concerted behavioural change issue. This is a partnership. We can supply some of the infrastructure in government. We can supply some of the education and the knowledge and the tools to do it but, without a partner from the community, we cannot respond to everywhere. We cannot have a fire truck or a message out on every corner on every day when there is a major incident.

...  

**Mr Gates:** I think there is an important point that South Australia make, and [Mr Andrew Edwards, NSW State Emergency Service] and [Mr Bruce McDonald, NSW Rural Fire Service] referred to it as well, about the mix of technologies. Looking at the emergency alerting system at night, if you can target a landline, you have a good chance of waking people up. That message, to pick up what Northern Territory said, might simply be, 'Hey, wake up and listen to your radio.' What the Northern Territory said about the timing of that message is important, but then South Australia also said part of the message might be, 'Check your neighbours.' Andrew made a comment to me while you were asking that question about the overreliance on technology. Technology is really important and we have to use it, but, to be effective, we have to rely on some good old community values. People need to be able to talk to one another. As much as I hate to say it, if this increasing trend in the number of emergencies continues, there is a limit to how government can respond. We have to respond as best we can, but the community has to respond as best they can too. Maybe we need to get back to basics and do some basic emergency training exercises and emergency education so that people know what to do in an emergency—who to ring, what to listen to and how to react.

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79 Mr Anthony Rasmussen, Manager, Regional Local Radio, ABC, *Proof Committee Hansard,* 8 August 2011, p. 45.

80 Mr Hugh James, Manager, Transmission Services, SBS, *Proof Committee Hansard,* 8 August 2011, p. 43.
Mr McDonald: That takes us down the path of community engagement. We believe that, beyond community education, there is community engagement, which will build the resilience of communities. As I said before, different communities react differently to different triggers. It is about working with those communities and understanding what their triggers are, what systems they are going to use and making that appropriate.  

Committee view

3.79 Community preparedness and responsibility are key factors in determining the resilience of a community to emergencies and natural disasters, and their subsequent ability to recover from such an event.

3.80 The committee acknowledges the challenges faced by ESOs as communities place increasing responsibility and expectations on governments to provide information and support during times of emergency: ESOs cannot be everywhere, all the time. The committee agrees that the public must be an active partner and actively participate in each phase of an emergency if communities are to effectively prepare, respond and recover. Regular, ongoing public education well in advance of an emergency (for example, at the start of each bushfire or flood season) should be used as an opportunity to teach the public about their responsibilities during an emergency and how they can appropriately prepare themselves for such an event.

Recommendation 5

3.81 The committee recommends emergency service organisations in collaboration with television and radio broadcasters, the print media and other relevant organisations, use regular and ongoing public education well in advance of an emergency situation as an opportunity to teach the public about their responsibilities during an emergency and how they can appropriately prepare themselves for such an event.

3.82 Further, the committee welcomes the suggestion by state ESOs that a sense of community and "good old community values" help build community resilience and foster a sense of responsibility amongst communities. Unfortunately, however, it is difficult for governments to "manufacture" a sense of community and community values. Despite the devastation and tragedy experienced by so many Australians, perhaps the silver lining from recent natural disasters has been an increased awareness in affected communities about the importance of good relationships between members of that community and the community's ability to effectively support one another and work together during the preparation, response and recovery phases of an emergency.

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81 Mr David Place, Chief Executive, SAFECOM, Mr Tony Gates, Director, Operations, NSW Telco Authority and Mr Bruce McDonald, Chief Superintendent, NSW Rural Fire Service, Proof Committee Hansard, 8 August 2011, p. 27.