

26 August 2011

Ms Sophie Dunstone
A/g Principal Research Officer
Senate Standing Committee on Environment and Communications
S1.57 PO Box 6100 Parliament House
CANBERRA ACT 2600

Dear Ms Dunstone,

Senate Inquiry into Emergency Communications – Questions on Notice

I refer to your emails dated 10 August 2011 and 18 August 2011 advising of Questions on Notice arising from the public hearing held on 9 August 2011 in relation to the above inquiry.

I provide my answers below. I would ask the Committee to appreciate that, as a body representing its members, AFAC depends on member consultation to provide factual and opinion information in relation to emergency service operations. We have carried out further consultation in the time available for answering these questions on notice, but this does not imply the specific endorsement of all 35 of our member agencies.

Accordingly the answers below represent AFAC's best understanding at this time of the industry's stance. I cannot rule out the possibility that some AFAC member agencies may have additional or divergent views.

Also I should point out that some states and territories have provided a jurisdictional submission to this inquiry. Nothing in the comments below should be read as suggesting that any state or territory fire or emergency service does not fully support its jurisdiction's submission where one has been made.

Question 1: In your opinion, how critical is it that respective State agencies' emergency radio services secure the ability to operate across State borders?

The requirement for state emergency radio services to operate across state borders is fundamental to allowing interoperability between state fire and emergency service agencies in time of need.

There is first of all a requirement for many states and territories to have interoperable communications systems, because they operate together on a day to day basis. NSW and the ACT, NSW and Queensland, NSW and Victoria, and Victoria and SA, all share borders across which emergency services travel on a day to day basis on the principle that the closest resources should respond to an emergency situation.

Radio communications between these responding resources are an operational necessity, and operability of systems across state borders on this local level is a requirement.

There is also the broader issue of states deploying capability to assist each other in times of larger emergencies. From the Sydney fires in the 1990s, to the 2003 Canberra fires, Black Saturday, the Queensland floods and Cyclone Yasi, emergency workers from other states travelled to assist the affected areas in their time of need. The principle of mutual support of this nature has recently been reaffirmed by state and territory Premiers and Chief Ministers through COAG.

Interstate deployments are dramatically simplified if all participants are working with interoperable communications facilities, so that workers being deployed can take their own radio equipment and be able to use them in the region to which they have been sent. In planning for emergency services radio facilities over the coming years, promoting interstate cooperation by securing interoperability should be a priority.

Question 2: Is there scope for refinement of the provision of emergency services to ensure that inefficient duplication does not occur between federal and state departments?

Generally we believe that the existing constitutional demarcations between state and federal responsibility have worked and are working well. We believe that the important point is that new initiatives that risk duplicating existing provisions or arrangements should not be instituted without full consultation with potentially affected parties.

By the nature of existing arrangements, this is more likely to be relevant to proposed initiatives by the Commonwealth that may overlap with existing state and territory provision of services. It is quite unlikely that a state or territory would embark on an initiative that covered matters already dealt with by the Commonwealth.

The field of communications is one where the interests of the states and the Commonwealth do cover some of the same ground and it would be appropriate for jurisdictions to ensure they are working together – for example if there was any proposal to construct ‘disaster-proof’ communications networks.

We would hope that through COAG arrangements, or through the existing relationships that the Australian Attorney-General’s Department has with AFAC, sufficient consultation and discussion would occur to make sure that the efforts of the jurisdictions were complementary, not duplicating each other.

Question 3: Is the 400Mhz spectrum insufficient in terms of the services that can be provided via this band or is it that this band is not used exclusively by emergency services that inhibits its credentials?

I preface my answer to this question by noting that many AFAC member agencies use frequencies below the 400Mhz band for voice communications. Lower frequencies may be optimal for voice communication over long distances in sparsely populated areas and rugged terrain, and agencies working in those conditions would wish to maintain the use of these frequencies.

Frequencies in the 400Mhz range are used extensively by AFAC member agencies for voice communications including trunking radio, and in some cases for longer range network links supporting voice networks operating on lower frequency bands.

Our members have noted the issues arising from the fact that 400Mhz spectrum is not dedicated to emergency services use and is finite. This non-exclusive use does limit this band’s credentials for emergency services.

Additionally, 400Mhz band frequencies do not support high-speed data transfer, and this aspect concerns fire and emergency services as we move into an era of ever-increasing expectations of information technology use.

The use of mobile data by fire and emergency services is constrained by the frequency spectrum available, and we believe that community expectations in the future will involve emergency services being able to send and transmit bulk data over their dedicated frequencies, for instance to transmit imagery from the fire back to a control centre, or even for the public to be able to submit images of an incident and have these forwarded to workers en route to the scene. Some services have potential capabilities, such as mobile dispatch centres, that would require the availability of dedicated mobile data carriage spectrum to operate effectively.

The stance of fire and emergency service authorities that an allocation of spectrum in a band suitable for bulk data transfer should be made for their purposes is based on the technical requirements for effective broadband data transmission, and the belief that this capability will become increasingly critical to effective emergency operations in the future.

In conclusion both of the propositions in the question are true: the credentials of 400Mhz are inhibited by its non-exclusive use; and it will not support the broadband data transfer that is likely to increasingly characterise emergency operations in the future.

Question 4: In your position paper “Bushfires and Community Safety” (September 2010), it is stated that fire agencies need to engage with at-risk communities. To what extent do you consider that fire authorities should provide fire-ready education services? Do you effectively liaise with local and State governments in the provision of appropriate education sessions & materials?

We believe that both fire authorities and emergency service authorities have a central role to play in engaging with their communities about all natural hazards, including but not limited to fire.

In AFAC’s view this is wholly consistent with the National Resilience Strategy agreed to by COAG, in which the importance of communities working together with government to build resilience is emphasised. We believe that there is no better way of building that partnership than for the response agencies that will be involved in mitigating a disaster to be involved in informing and preparing the community for how it should react in a disaster situation.

Individual fire and emergency services have for a long time worked with local and state government in providing these services. Initiatives such as FloodSafe and StormSafe (SES), work done by fire agencies to promote bushfire awareness and readiness, juvenile fire setter diversion programs run by fire agencies, and smoke alarm education programs, all represent education programs run by fire and emergency service agencies.

Many of our member agencies could testify to the extensive programs they run together with their state governments in the fields of bushfire safety, urban fire safety and natural hazards. Typically in this field providers are moving away from referring to ‘education’ which can have connotations of a one-way transfer of received wisdom. Instead, the principle of community engagement is coming to the fore, where programs are designed and delivered not just to impart information, but to understand the community and embed the necessary principles of resilience in a way suitable for the community’s needs.

This increasingly includes an understanding that different sections of the community face specific challenges, for example where people's main language is not English, or they face physical or intellectual disabilities that could compromise their ability to look after themselves in emergency situations. Fire and Emergency Service agencies should and do endeavour to make their programs as inclusive as possible for all sectors of the community.

Funding for these programs can of course be a challenge in circumstances where governments and agencies have competing demands on their resources. It is however AFAC's view that community engagement is an indispensable part of community resilience, and wherever possible, funding should be made available to fire and emergency management agencies to fulfil this role.

AFAC has recently been involved in this field on a national level with the SES Natural Hazards Children's Awareness and Education Program. This program, funded through the Federal Attorney-General's Department 2010-11 National Emergency Management Program, represented a truly national approach to providing natural hazards education (in this case, in the sense of imparting information, with the target audience being school students), and has been made available to schools throughout the country.

As a general rule, AFAC does not have any role in engaging with state or local governments in relation to the community engagement work that they do. That is the function of the fire and emergency services agencies in the jurisdiction in question. AFAC's role is to provide opportunities for state agencies to collaborate on a national basis, and to develop concepts and materials that state agencies can then take up, adapting if necessary, for use in their jurisdiction.

Many education programs are of course best developed and delivered on a local basis in tune with local needs. However we believe that there is an as yet unmet need for a national consistent approach to disaster resilience messaging, and were funding ever to become available for work to be done on an Australia-wide basis we believe that fire and emergency service agencies would willingly contribute to promoting national messages.

I would also like to mention the part that the Bushfire Cooperative Research Centre has played in helping to develop an understanding of community engagement on a national basis. A number of the projects on which Bushfire CRC researchers are working relate to effective communication with communities before and during a bushfire, and the learnings from that research will likely be applicable to the whole range of natural hazards as well.

Question 5: Could you take on notice to give any particular examples you have of serious failings in the system during any of these recent crises that we have faced which might have been addressed by a better configuration or outlay of infrastructure specifically for emergency service communications. It would help us to know where potential areas of shortfall are that we might recommend be looked at.

We note the specific examples that have been advanced in submissions to this inquiry by the Fire and Emergency Services Authority (FESA) of WA, the New South Wales SES, and the Local Government Association of Queensland, of circumstances in which existing emergency communications systems have not been equal to the expectations placed upon them.

I am aware also of the discussion that has taken place in the reports both of the Victorian Bushfires Royal Commission and the Queensland Floods Commission of Inquiry about the availability or otherwise of emergency communications to members of the public who were in distress.

The issues seem mostly to have related to those systems relied on by the public, such as 000, Emergency Alert/StateAlert, and the mobile telephony infrastructure itself, as opposed to the radio systems used by emergency services having broken down. Issues identified with emergency services radios (as in the FESA and Government of South Australia submissions to this Inquiry) related to interoperability on interstate deployments rather than systems breakdown per se.

Queensland Fire and Rescue Service (QFRS) has advised me of some specific issues that emergency workers encountered in operations during the early part of this year. Notable among these are the following:

- Congestion on existing voice radio networks which are only designed for 'normal' levels of traffic
- QFRS does not own its own radio sites and uses commercial, other government or private sites which are not built to high levels of resilience, and in some cases failed
- The lack of an emergency mobile data capability placed additional load on an already overloaded voice radio system. Public mobile broadband services could not be relied upon. The mobile telephone network failed in a number of places from overload or power loss
- Failure of the public telephone network impacted both QFRS' ability to use telephone communications for operational purposes, and the community's ability to obtain and provide information.

In summary, emergency services radio networks were overloaded and not as disaster resilient as they could have been owing to shared infrastructure; and public telephone networks lacked resilience which impacted both emergency responders and the community, and threw an even greater load onto emergency radio networks.

Where public systems have failed, a common theme has been capacity, whether for sending Alert messages, or where mobile networks or the 000 system have become overloaded. This may be taken as illustrating the increasing importance that communities place upon communications systems in times of peril, and the increasing expectations that communities have that those systems will remain operable and available in a disaster situation.

Whether this implies a need for greater community engagement around the availability of emergency communications, or whether it implies a need for more extensive and more resilient networks, is perhaps a matter of interpretation. It seems inevitable though that communities will increasingly assume that technologies that work on a day to day basis should remain available even under the stress of emergency and disaster conditions.

Thank you for the opportunity to submit a response.

Yours sincerely,

NAOMI BROWN
Chief Executive Officer