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Mr. Stephen Palethorpe
Secretary
Senate Environment and Communications References Committee

Dear Mr. Palethorpe

Thank you for the opportunity to provide a submission to the Senate Environment and Communications Committee Inquiry into the capacity of communication networks and emergency warning systems to deal with emergencies and natural disasters.

The inquiry is timely and provides an opportunity for the wider Australian community to take stock of where we stand and to rethink, redesign and rebuild aspects of our preparedness and response capability for dealing with emergencies and natural disasters.

Emergency Response Environment

The role of emergency services is to respond to urgent requests for assistance from the public. Equally important is their role in raising public awareness of safe behaviors in potentially hazardous situations and practices and in working closely with municipal councils and other bodies to prevent such situations.

Emergency management is concerned with coordinating the capacity to prevent (where possible), mitigate the impact of, and respond to and help the community to recover from, a wide range of emergency events, including both natural and man-made situations.

Focus: Warnings to the Community

This submission seeks to establish the basis for developing an effective and efficient national approach to Warnings to the Community in terms of preparedness and response to emergency events.

The development of a nationally consistent approach across all emergency services is founded upon:

1. Recognition that emergency events can happen at any time and do not respect geographical, political or organizational boundaries;
2. That any protection measures will have to be put in place on some collaborative basis; and
3. The collaboration will be founded on the deep mutual interest in protecting Australia - its values and way of life.

It is about a partnership between emergency services, including Defence, and Civil Society. Such partnership is founded upon the shared values of *Trust*, *Mutuality* and *Co-operation*. *Trust* is essential for our social well being, because trust fosters the exploration and appreciation of genuine mutual interest, which in turn fosters co-operation.

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Foundations for Recommendations

The Australian Risk Policy Institute's (ARPI's) submission is anchored in the context of our recently released Risk Policy Model (RPM) and an Expert Opinion on the Nature, Context and Form of Warnings prepared by (ARPI Fellow) Dr Larry Cromwell. It is based on 25 years of professional practise as an independent consultant on risk identification and avoidance strategies, informed by professional training and original research in the anthropology of (human) communications. It takes as its point of reference the original, human obligation to warn others, found in all cultures from antiquity to the present.

Recommendations

In the view of the Australian Risk Policy Institute, the Australian community would be better protected by the development and adoption, through the Council of Australian Government (COAG), of:

- A Risk Policy on Warnings to the Community for the purpose of Protecting the Community in the context of emergencies and natural disasters;
- a Risk Policy framework for achieving this goal addressing what is needed and then who will do it with what authority and responsibility, for each step; and
- Guidance on the context and form of warnings to the community; such guidance would be anchored in the Expert Opinion provided by Dr Larry Cromwell.

The implementation of such a national agreement would assist in restoring public confidence and trust and help restore confidence in the management of risk associated with emergency events, including natural and man-made situations.

Background

The Australian Risk Policy Institute (ARPI) is a non-political and not-for-profit think-tank formed in 2008 to promote and encourage greater focus on risk policy in leadership, decision-making and management across all sectors in Australia and globally. ARPI was the first to formally recognise and respond to the gap in risk policy.

In 2009 ARPI and ScottCromwell Pty Ltd recognised the need for new thinking, new approaches and new frameworks to address major risks and actual failures of the systems the community benefits from and relies upon. ARPI and ScottCromwell recognised that together they could create a new and superior approach to addressing major risks to systems (systemic risk) and in that spirit entered into a strategic alliance.

The result of the collaboration was the *Risk Policy Model* (RPM) released publicly in August 2010 and is believed to be the first and only Risk Policy Model in the world. The Risk Policy Model responded to the call from the World Economic Forum and other august groups to rethink, redesign and rebuild systems to avoid future failures. The Risk Policy Model can be found at the ARPI website:

http://www.arpi.org.au/Docs/ARPI_Media_Release_Risk_Policy_Model_July_2010.pdf

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The RPM focuses actions on risks that can kill us, the catastrophic or really big ones – as well as being equally applicable to strategic leadership and business risks. It recognises that senior managers almost never anticipate major risk events that imperil their organisations while experts nearly always are able to explain in retrospect why the disaster happened. As a result, there is enough time, for most of the major risks, for risk treatment or at least mitigation to kick in. The time value metric associated with the use of the RPM is avoided expenditure, particularly the cost recovery for catastrophic events.

ARPI believes that society has to purposefully change the focus from the incessant debates over what risks are important, to focus on how we go about managing in times of increasing uncertainty.

ARPI's strategic intent is the elevation of risk policy and the shifting of risk management onto solid footings in order to avoid future system failures and to help restore public confidence and trust in risk management.

In 2009, ARPI provided a submission to the Victorian Bushfires Royal Commission which also spoke to the need for improvements in the managing systemic risk with particular focus on recommendations for maintaining a safe and resilient community.
http://www.arpi.org.au/Docs/ARPISubmissiontoBushfireRoyalCommission.doc

The ARPI global network is predicated on promoting risk policy development in the public interest. The members of ARPI are there by invitation. All are senior professionals drawn from many different disciplines.

Please see www.arpi.org.au for more information about the Institute. Our Patron is Admiral Chris Barrie AC RAN (R'td) and founding members include Tim Fischer AC and Neville Owen QC.

ARPI Submission

The ARPI Submission in respect of the Committee's Terms of Reference speaks to dot point (a) and particularly the effectiveness of Warnings to the Community.

Our submission is in three parts:

- Part 1 – Risk, Risk Policy and Risk Policy Framework
- Part 2 – An Expert Opinion on Warnings to the Community, and
- Part 3 – Recommendations.

Please contact the Institute if you wish to discuss or clarify any aspects of our submission. Further, ARPI officials are available to address the Committee on any aspect of this submission if the Committee considered it necessary or desirable.

Yours sincerely

Adjunct Associate Professor Tony Charge
President

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Part 1 - Risk, Risk Policy and Risk Policy Frameworks

Introduction

The ARPI Risk Policy Model is to the Institute's knowledge the world's first approach to addressing the problem of systemic risk.

The Risk Policy Model (RPM)

The RPM provides a rigorous framework elevating risk policy and shifting risk management onto solid footings, with clearly set out responsibilities, defined scope, and established governance.

The job of Risk Policy is to make sure that:

- All known risks are recognised, identified and under management;
- All presently unknown risks are recognised and brought under management as soon as they are known; and,
- Unknown risks are proactively looked for.

The Risk Policy Framework enables the building of capability to achieve the Risk Policy protection goal associated with the identified risk in the field of the policy.

Executive Perspective

From the Executive perspective, managing risks strategically is an issue of Risk Policy. Protection is what Risk Policy is for, with every Risk Policy protecting something.

A Risk Policy Framework is for building the capability to achieve the Policy Goal. The Policy Framework has to have the capability to address What is needed, then Who will do it (authority and responsibility), for each step.

Governance of risks is informed and guided by the risk policy and measured against fitness for purpose criteria in respect of the risk policy.

Risk Management is the manner by which the risk governance achieves the risk policy reliant upon a rigorous framework implemented with rigour.

Risk Policy - Catastrophic Public Risks

Catastrophic Public Risk (CPR) is a new policy concept that looks at the public, watching for and attempting to avert risks that could have catastrophic consequences (depending on threat behaviour and circumstances of vulnerability). There are no articulated CPR policies, though we are beginning to see the recognition of the need for them, as in the new National Bushfire Risk Standard which adds “Catastrophic” at a new Level 6, in the wake of Black Saturday.

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ARPI Position

In view of the absence of national risk policy, ARPI believes a risk policy specifically targeting Warnings to the Community should be developed for the purpose of protecting the community in the context of emergencies and natural disasters. Such a Risk Policy would be anchored in expert knowledge of the nature, context and form of warnings. Part 2 of ARPI's submission contains an Expert Opinion from Dr Larry Cromwell, PhD.

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Part 2 - Expert Opinion

The Nature, Context and Form of Warnings for Catastrophic Events

Dr Larry Cromwell PhD

Introduction

This Expert Statement has been prepared at the specific request of the Australian Risk Policy Institute to form part of a Submission to the Australian Senate Environment and Communications References Committee Inquiry into the capacity of communication networks and emergency warning systems to deal with emergencies and natural disasters. It is based on 25 years of professional practise as an independent consultant on risk identification and avoidance strategies, informed by professional training and original research in the anthropology of (human) communications. It takes as its point of reference the original, human obligation to warn others, found in all cultures from antiquity to the present.

Structure of Expert Statement

The Expert Statement on Warnings is divided into three sections:

1. Nature of Warnings
2. Context of Use of Warnings
3. Form of Warnings

Sections two (2) and three (3) go to the heart of Warnings in Action.

It should be noted that I have used Bush Fires as the means to illustrate the key points, as examples of current national interest in the wake of the Canberra and Victorian bushfires. That said, Warnings to the Community can and should form the basis for helping to protect the community in all emergencies and natural disasters.

1. Nature of Warnings

Warnings are messages. Their only role and purpose is to signal danger to others. Not all warnings are words – they can be signs, signals or colours.

In the management of catastrophic events, most warnings delivered by those in authority to the public are in words.

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1.1 Warnings are Action Idioms

Warnings which are in words are a class of action idioms - special words or phrases which have only one meaning and which meaning carries the force of a command to act.[1] Each of these special action idioms is reserved by convention to be used if and only if what they are reserved for presents a threat and are used for warning others in the face of some imminent danger. An example is "Stop."

If action idioms are used, the person sending the message has in mind the action which is intended to be performed by the person receiving the message and the way the action should be performed. The message is formulated to contain both the action and the method of performance. It is this use of language to convey unambiguous meaning that enables another person to protect themselves by anticipating and avoiding some threat by simply hearing the words[2].

1.2 Warnings are about Harm

Warning messages are used when a threat may impact some person or thing, or when someone may find themselves in harm's way unless they are warned by someone else.

A warning is sounded when a threat is present that threatens some vulnerability. It is the foreseen consequences of the threat impacting on a known vulnerability that motivates the person foreseeing the consequences to sound the warning[3].

The person who foresees the consequences first is usually the first person[4] to warn others of the impending danger.[5]

[1] Cromwell 1982; 1993

[2] Cromwell 1982; 2000

[3] Cromwell 1999; 2000; Cromwell & Scott 2004

[4] "Sentinel" is the term Dr Cromwell applied to designate the instance of the earliest warning of a potential disaster or catastrophic risk, called a sentinel warning or sentinel event. Sentinel warnings are typically warnings of dire harm to human beings and are often marked by the use of unambiguous action idioms, often, though not always, in the special idiom of a workplace or profession or specialised activity; such as when the first combat soldier to sense or see or hear a mortar or rocket attack yells, "Incoming!". Dr Cromwell developed the Sentinel tool by applying his original work on action idioms (Cromwell n.d. 1982) to his research into the recorded forewarnings of the Challenger Disaster, and other catastrophic risks where forewarnings had gone unrecognised. (Cromwell 2000; 2001)

[5] Cromwell 2004 *The importance of the 'Lone Voice'*; inter al.

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1.3 Foreknowledge brings an Obligation to Warn

Foreknowledge brings the obligation to warn. It is the foreknowledge of consequences or potential consequences that characterises the obligation to warn others of danger.

Warnings are given in an effort to bring knowledge to bear in order to prevent, avert, or avoid danger, or, to mitigate the harm or damage. The categories of action required in response to the warnings form the basis for warnings intended to inform or trigger each action.

1.4 Bringing Expert Knowledge to Warnings

In the context of a risk of harm to people or assets, the purpose of warnings is to inform the appropriate action by the provision of information by those with expert knowledge. As a situation unfolds, people in the path of the danger, or who may find themselves potentially impacted by the danger, understand and expect that their actions should change appropriate to the changing situation. They will be warned when to do that by experts.

1.5 Knowledge of Experts

The knowledge of those experts includes threat assessment which is the appreciation of the strength, force, direction and time-to-impact of the threat concerned. Those assessments are made in the context of the vulnerabilities of people and assets to the threats concerned. For example, it is assumed by the public that an emergency service, such as a fire service, can and does, as a matter of course, make threat assessments. The assessments are used to inform the communications about the threat, provide warnings, and direct those warnings to the people and property and communities that may be vulnerable to a particular threat.

1.6 Absence of Communications is a signal of NO Present Danger

The absence of a communication sends a signal;[6] in the case of a potential threat, the absence of a warning sends a signal that there is no present danger. The community assumes that those who are in charge of the situation will issue warnings if warnings should be issued.

1.7 Public Expectations - Communications of the Said and Unsaid

The public expects to receive new information over the course of an event and to receive specific information on the location of the threat, its closeness and the timing to the expected impact which will provide them with reasons for acting. If this increasingly specific information on proximity and timing is missing, human listeners may not be prompted to act. This missing information is what we call the “unsaid” in the anthropology of language and culture.[7] For listeners, the meaning of every act of saying is a combination of what was said and what was not said. For example, a press release or statement about a threat which does not say something about how soon it may impact can be interpreted as general information and not as a prompt to

[6] Tyler 1978; Cromwell 1993

[7] Tyler 1978

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act 'yet'. Pragmatically the meaning of an act of communication is the action it prompts[8]. Communications which do not prompt action are not received or heard by the community as warnings.

1.8 Communications - Making a Difference to the Receiver

The field of knowledge and practice that anthropologists bring to understanding disasters focuses on the awareness of the community during and leading up to a disaster event and the awareness of communities and populations during emergency events (called disaster anthropology, the study of catastrophe and culture)[9]. Practitioners analyse the communications to the community during the event, to determine from practical experience of those impacted by the event what works and what does not, in order to improve the practice of preparation and management of human and man-caused disasters.[10]

The analysis of communications during such events focuses on practical information that has a demonstrable value to the receivers (that is, they find the information useful, by their own accounts). In order to be practical, information has to make a difference to the receiver.

2. Context of Warnings

2.1 Warning System - Facilitating a Timely and Effective Public Response

Paton has stated in the context of bushfires, [11] that:

> *The overarching objective of a warning system is facilitating a timely and effective public response. In this context, an emphasis on the need for a timely response reiterates the need for attention to be directed to the capability to respond and ensure that, given the potential for destruction and disruption from a bushfire, allow for maximum preparatory and protective behaviours on the part of those who reside in an endangered area (Anderson, 1969)*

[8] Cromwell 1993; see also Scheffler 1986; Thayer *Meaning and Action* 1981; Cromwell 1982

[9] See FEMA National Disaster Recovery Framework (US); Roper 2010; Oliver-Smith 1999; Hoffman 2002

[10] See e.g. O'Leary 2004; Paton 2006

[11] *Warning Systems : Issues and considerations for warning the public* D Paton Draft report Bushfire Co-operative Research Centre 2006

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2.2 PAMS Framework

Applying the anthropology of communication to threat assessment and response, four overall stages can be distinguished in the timing of a threatening event, such as a bushfire. These stages have been called the PAMS framework:[12]

- Predict/Prevent—when the threat is predicted, and therefore action can be directed to avoid it; or when it is preventable, and action can be focused on prevention.
- Avoid/Avert—when the fire danger can be avoided, such as by leaving the area or removing property or livestock from the path of the fire; or when the fire danger can be averted, such as by fire services containing it from spreading to vulnerable people or property, or by shielding vulnerable sites from the radiant heat or embers.
- Mitigate—when prevention or avoidance have failed, and the course of action is to mitigate or lessen the consequences of the fire, such as putting out spot fires before they spread too far or by strategically leaving some less threatening fires to burn themselves out in order to suppress more dangerous outbreaks; using first aid to quickly reduce the severity of burns, and so forth.
- Survive—when there is no action left but to try to save oneself or help others survive.

The stages are defined by the actions available to reduce or protect vulnerability and are defined by the amount of time the experts assess is available until a threat might impact an area. The warnings given in the individual stages will inform those at risk what strategic stance they should take at each stage. Different warnings should be given in each of these stages to tell the people in the impact zone how much time they have before threat eventuates. With this knowledge they can make their own plans, preparations and decisions as to which actions they will take.

[12] Dr Larry Cromwell first developed the PAMS framework to integrate advances in risk prediction and early warning identification from his original research into the Challenger Disaster into risk management and crisis management practice, by focussing on the Predict/Prevent stages of crisis avoidance, in addition to the standard focus on avoidance, mitigation and survival.. He applied the PAMS framework to the development of Critical Infrastructure Protection and to integration of Sentinel warnings into risk management strategies (see e.g. Cromwell 2000, 2001). Dr Cromwell and his colleague John Scott developed PAMS applications for protection of civilian critical infrastructure by the Defence forces (ref. Cromwell & Scott 2004) and subsequent applications.

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2.3 Application of the PAMS Framework

The PAMS framework can be applied once there is a threat which threatens some vulnerability.

Application of the PAMS Framework assumes that:

1. Authorities will have provided information about the possibility of the threat to those who are vulnerable at an appropriate time. For example, it assumes that a bushfire authority will have provided general information to the community about preparedness for bushfires at the commencement of the bushfire season. That information is not characterized as a warning.
2. The authority should provide information to inform the community that warnings will be given in the event of and throughout a bushfire event and that the public should be alert for these warnings throughout the bushfire season.
3. The authority will have undertaken a risk assessment of the threat of damage or harm and an analysis of the consequences and potential consequences of that threat, coupled with an appreciation of the likelihood of the threat impacting and causing those consequences. The standard risk assessment process is set out in the International Standard augmented for emergency management in situations such as bushfires by Emergency Management Australia's *Emergency Risk Management Applications Guide*.
4. The authority will combine modern knowledge of fire behaviour with knowledge of humans in emergency situations from the social and behavioural sciences: this research has resulted in significant advancements in understanding how to communicate during public emergencies.[13]

2.3.1 Stage One: Predict

At the beginning of an incident and once the authorities are able to predict that certain people or assets might be at risk a warning should be issued alerting the public to the potential danger in the event that authorities are unsuccessful in preventing the risk from eventuating. During this first stage information should also be provided about the kind of warnings the community should expect to receive in the course of the incident. Those communications are not the same as the actual warnings or alerts which are issued during the incident. This preparation to be alert for warnings will allow the community to recognise and act without delay on escalating warnings as they are issued. The people and assets should be indentified and the prediction that they might be at risk during the incident should be informed.

[13] See e.g. Working Group on Natural Disaster Information Systems; National Wildfire Coordinating Group Communicator's Guide for Wildland Fire Management and *Warning Systems : Issues and considerations for warning the public* D Paton Draft report Bushfire Co-operative Research Centre 2006

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2.3.2 Stage Two: Avoid

The avoid stage of the PAMS framework occurs when prevention is unlikely or may not be possible and it is likely that people and assets will be impacted by the threat. The warning appropriate to that stage is that the community should take active measures to avoid or avert the threat or take active measures to prepare themselves for mitigation or evacuation, depending on the information or warning about the severity of the threat as it eventuates.

2.3.3 Stage Three: Mitigate

The mitigate stage occurs when avoidance of impact of the threat is determined to be unlikely but some consequences can be mitigated. At this stage the appropriate warning is that it is likely that the threat will impact with a predicted intensity and at an approximate time and that, if possible, warnings of its imminent impact will be provided. The warning should clearly advise that avoidance of impact is no longer possible and efforts should now be directed only at mitigation activities that can be done safely. Authorities should advise that no actions should be taken that might harm any chance of survival. The warning at this stage will specify things that experts now advise people should not try to do. For example in the case of a bushfire, this warning may include a recommendation that residents should not try to fight the fire without a safe refuge available. The warning at this stage should be very clear that residents who have not already made preparations to stay and mitigate fire damage should now abandon any fire fighting defence and instigate their survival plan. The warning at this stage will recommend that people make contingent preparations to evacuate or take refuge in a proper bunker or otherwise take measures to survive which they may have to do quickly.

2.3.4 Stage Four: Survive

The survive stage occurs when the threat is certain to impact on people and assets or where the consequences of harm in the case of likely impact is too great to risk. The warning should clearly state that the danger is great and that actions should now focus on survival and only on survival. The warning should inform the community of the time left until impact occurs and if in a range, the worst case scenario of time to impact. It should inform listeners of the worst case scenario of severity and it should be very clear that there is no possibility that individual action will avert the threat of damage. The warning should state very clearly that this is the point at which people stay or go, according to their predetermined plan.

2.3.5 Warning to Prepare for the Next Stage

At each stage, the community should be warned that they should be prepared for the next stage in the framework. In the initial stage of an incident the community should be informed about the threat, that they will be advised in the event that prevention of harm is unlikely and the steps which may then have to be taken to avoid or avert further threat. The community may at this point also be reminded that they may have to make plans to avoid any impact, and should remain alert for any change in the situation.

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This sequential order of warnings has the effect of both informing the community of the present threat and forewarning of the possibility that the management of the threat may move to the next stage. In this way, warnings use information to inform action, and forewarnings to signal that if the situation changes, the actions the community should then be considering will be different. This is an example of using warnings to signal the "difference that will make a difference" to what the community does at each stage of an emergency. At the same time, it informs the community what stage of an incident they are in and accustoms them to appreciate that the situation may change at any time and that actions which were appropriate to an earlier stage are no longer appropriate[14].

3. The form of warnings

3.1 Warnings - Provided by Respected and Knowledgeable Person of Authority

For the warnings to be effective they should be provided by a person known by the relevant community to be a person of authority who is already respected and perceived to be highly knowledgeable about the relevant threat and understood to be in command of the situation. If warnings are not given by an authoritative person, the warnings will have to be corroborated and precious time to act will be lost.[15] Once the stages in the PAMS framework have commenced, it is too late to establish the authority of the speaker.

3.2 Warnings via Live Television and Radio Appearances

Warnings should be in the form of live television and radio appearances. The appearances should be live so that the immediacy of the threat is constantly signalled. Such live appearances can be simultaneously podcast, posted on websites, and broadcast over social media such as Twitter and Facebook, and other multi-media channels. They may also be broadcast in brief over SMS and other text-based media. The delivery channel should be the most effective according to the intended receivers, and should always reiterate the authority of the live announcement they are re-broadcasting.

3.3 Measures of Appropriateness of Warning

There are three measures of an appropriate warning:

1. the information in the warning will be perceived by the audience to be important;
2. the warning should contain precise information that can be acted on without further interpretation about a subject which is already important, based on earlier information;
3. the warning should use words and phrases already known to the audience.

[14] Korzybski 1941 characterised *information* as "the difference that makes a difference"; Bateson 1973

[15] Cromwell 1993

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3.4 Role of Media Releases

Media releases can be used to confirm what has been conveyed in live appearances. Media releases should only be used to signal significant changes in the situation or new critical information. A media release should set out what listeners should understand is important and be framed in a way to convey that importance. For example, fires in remote locations are not perceived to be important so media releases should set out the areas likely to be impacted by the fires to confirm the importance of the information.

The media release should not contain words which have special meanings in the idiom of the experts involved in the management of the threat. Where words have ordinary meanings that differ from the precise meaning they have in the expert idiom, the words should only be used to convey the ordinary meaning.

A good example in the context of a bushfire is the use of the words *contained* and *controlled*. Contained ordinarily means that a substance or threat is held within a barrier, be it a container, a fence, a tamper-proof vessel, etc. To fire fighters, contained means that fire is burning within designated *containment lines*. Depending on the success of their efforts, the weather, and whether the containment lines designated on a map prove to be effective as containment lines around the actual fire, the fire may not remain within those lines. Relying on the ordinary meaning of the word, the public may understand that a fire 'burning within containment lines' is still burning but is contained which they take to mean that it is under control. The public may not appreciate that a fire that is said to be contained is not yet 'under control' and is understood by the fire fighters to be contained *for now*, depending on the weather and how the fire fighting goes. This shows also the ambiguity around the words 'control' and 'controlled' Fire fighters do not describe a fire as 'controlled' until control lines have been established and are expected to hold. The public can easily misconstrue a fire said to be burning within control lines as a fire that is under control.

3.5 New Warnings when Situation Changes

There should be a new warning whenever the threat situation changes. The community will be misinformed if the message understates or downplays the severity of a threat. If warnings do not change to reflect the changing threat, the community can presume that there is no change in the threat.

3.6 Value of "Near Misses"

References to past "near misses" are one of the most effective means known for making people aware of the reality of the dire consequences of a threat such as a bushfire. Reminders of these near miss events mobilise and motivate people to take precautions, pay attention to warnings, and more actively plan for and engage in preparation for the threat of bushfire. In relation to the Canberra fires of 2003, "near miss" bushfires occurred in 1939, 1952 and 2001.

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3.7 Messages are Appropriately Framed

Information provided to the community should be appropriately framed. Messages are distinguished by what is called the frame in which they present their content. The frame – for example a statement that "Authorities have issued a warning for the following areas" - carries no action information itself but characterises the information that follows.[16] A speaker or sender frames a communication in order to clarify the interpretation he or she wants the intended receiver to place on the message, and to remove any ambiguity that might confuse the meaning. As an example, a test of the fire alarms in a building is preceded by an announcement that frames the test as a test, to the effect that the following alarm is not to be taken as a real alarm.

Those managing emergency situations such as bushfires utilise message framing announcements to characterise the information which follows, with introductions such as, "Authorities have released the following important information for residents of...", or "Authorities have issued urgent warnings for the following locations...", or "A Category 4 Cyclone warning has been issued for coastal areas between..." The intent and function of these introductions is to frame the information or instruction or advice that follows as authoritative, urgent and instructive—and not open to interpretation. Such emergency framing is used to signal action, especially when in the absence of any action frame, the receivers will understand that the message is for information only.

3.8 Value of Establishing a Pattern of Incident Specific Alerts

Once a threat incident begins, information disseminated should be progressively more specific, and continue until warnings of imminent impact begin to be sounded. If they fail to establish a pattern of incident specific alerts, authorities lose the opportunity to escalate warnings in a progressive and meaningful way, naming specific locations and times of possible impact.

Except for the final signal to evacuate, residents do not expect warnings to tell them what to do. They expect and depend on the warnings to tell them to get ready (alert) to do what they intend to do, and then when to do what they have decided to do: how long they have until the fire hits, what the potential speed of the approach may be, and how long they have to get out if they need to flee.

4. Effective Warnings improve Consequences

The purposeful, predetermined use of effective warnings has been shown to significantly improve the survival of people, and the mitigation (and even avoidance) of damage to communities impacted by natural and man-made catastrophes. The use of well-researched, locally relevant, professionally crafted Warning Messages can be the difference that can make a difference to those caught in disasters—especially when the only aid possible is good advice, delivered through good communications.

[16] *Frame Analysis* Goffman 1975; Bateson 1973; Cromwell, "When your information absolutely has to get through" 1989.

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Part 3 - Recommendations

In the view of the Australian Risk Policy Institute, the Australian community would be better protected by the development and adoption, through the Council of Australian Government (COAG), of:

- A Risk Policy on Warnings to the Community for the purpose of Protecting the Community in the context of emergencies and natural disasters;
- a Risk Policy framework for achieving this goal addressing what is needed and then who will do it with what authority and responsibility, for each step; and
- Guidance on the context and form of warnings to the community; such guidance would be anchored in the Expert Opinion provided by Dr Larry Cromwell.

The implementation of such a national agreement would assist in restoring public confidence and trust and help restore confidence in the management of risk associated with emergency events, including natural and man-made situations.

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