

A Case Study Of The Awareness Of The 2019-20 Bushfire Risk Communication Applied In New South Wales Australia

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ABSTRACT

Bushfires have shattered almost 2,000 homes, killed human lives in New South Wales, Victoria and South Australia and destroyed a total of 4,9 m hectares in New South Wales alone. Emergency warnings had been issued nationwide including in Armidale New South Wales. Efforts have been made to minimize the impact. Advanced information on how to prevent or how to survive a disaster is much needed in this situation. The research was to acknowledge how the bush fire risk communication was applied among the people in New South Wales Australia. The research conducted qualitative research with a case study approach. Data collection techniques used were in-depth interview and document studies. Nine informants that live in Armidale were interviewed. Result found bush fire communication included exchanged information in donation forms provided in dining places and volunteers' jobs. Baby boomers generation preferred the ABC local radio to access more thorough information about the bush fire, but a few of them were also satisfied with the online media application. Meanwhile, the millennials preferred online media to access more updated information. Risk communication provided information about how far was the fire with the informants' location, the level of fire, and the fire danger ratings and also what action should the people do. Risk communication should start first from the government level with a well-prepared plan; however, the people itself should also take control and have a fire plan and activate it when needed.

KEYWORDS: *ABC Local Radio; New South Wales; Australia; Risk Communication; Bush Fires*

1. INTRODUCTION

Australia bushfire is a regular occurrence where the people have been aware for many years. However, the Australian bush fire in 2019-20 was the most catastrophic in the 21st century.

Chris Dickman, an ecologist of the University of Sydney, stated that not only that the devastation had lost human lives, but it had killed over one billion animals (Werner, 2020). Bushfires have shattered almost 2,000 homes and killed at least 32 people in New South Wales, Victoria and South Australia and a total of 4,9 m hectares had been destroyed in New South Wales alone (Zhou, 2020).

The Rural Fire Service (RFS) had issued emergency warnings of bushfires out of control across the state, including four near Armidale. Even though Australians had experience years of Bush Fires, they were not prepared on the one that happened at the end of 2019. Climate changes had a role in this devastation, though the phenomenon is challenging to detect and track accurately based on personal experience Climate change risk perceptions and communication work is critical for future climate policy and decisions (Pidgeon, 2012).

Furthermore, emotion is one of the things that affect the understanding of climate change and risk communication. Emotions are necessary for understanding the moral impact of the risks of climate change, and they also paradigmatically provide for motivation. Emotions might be the missing link in effective communication about climate change (Roeser, 2012).

BC an informant who lives in Armidale was someone who did not expect that the fire would be this extreme, there had been warnings, and people had been prepared, but they weren't prepared for this one.

"We always have the bush fire, the park we have been through was an extreme bush fire. It was the drought condition, and so we always look what we have been through and what thing can be done better, but this time with our bush fire experience in previous years we have been ready for them, but we have not been ready for the extreme one".

This kind of phenomenon can not be detected precisely and how extreme it would be that could affect human lives. However, efforts have been made to minimize the impact. Advanced information on how to prevent or how to survive a disaster is much needed in this situation. This is where risk communication has a meaningful role in spreading rapid information.

Research on risk communication found that it impacts individual and organization actions in reducing vulnerability to hazards. Even though there is no perfect system in preparing individuals and happens on several levels which requires a multifaceted approach, however, the people appreciate on the role of risk communication (Pine & Guillot, 2014; Weitz & Benjamin, 2001). One of the imperfections regarding risk communication systems and methods emerged in Sweden, where the major problems were the lack of a constructive vertical feedback mechanism (which implements in one-way communication), and limited stakeholder partnerships and collaboration in the horizontal dimension (Lin & Abrahamsson, 2015).

Although research about risk communication is extensive, the topic remains compelling and will still evolve from years to come. Risk communication is about conveying the possibilities of both bad and good outcomes (Mercer, 2017). It is exchanging information, opinion and advice between frontline responders and people who are faced with the threat (Organization, 2018). The process of exchanging and sharing meanings about the physical dangers, for example, hazardous worksites, environmental pollution, and diseases by face-to-face or through mediated communication is risk communication (Puspito, 2014).

The information which includes the levels of risk, severity, and efficacy to produce more willingness to take actions in avoiding the hazard is also an addition for risk communication (Neuwirth, Dunwoody, & Griffin, 2000). Moreover, research conducted by Wachinger, et al. (2013) reveals that personal experience of a natural hazard and trust-or lack of trust in authorities and experts have the most substantial impact on risk perception(Wachinger, Renn, Begg, & Kuhlicke, 2013).

Mediated communication is assumed to be mass media where exchanging information relates to the development of technical communication. Technological determinism is relevant in this research because it explains how the technology of communication contributes to spreading information through mass media. Technological determinism is technology innovation which was caused by society, or it could affect social change (Ratmanto, 2005). This statement relates to which generation uses what technology in exchanging information.

There is an increasing amount of research related to bushfire risk communication. Researches underlined that bushfire communication is an essential system that is used by emergency managers to increase resilience and recovery from bushfires (Prior & Paton, 2008). It has increased people's awareness of the risk and increased acknowledgement on how to minimize chaos. One particular research focused on a film of lessons on bushfires where it happened in the Blue Mountain, New South Wales Australia. The film had contributed to the community resilience in areas of fire preparedness and response; it highlighted the need for alternatives to bushfire safety (Chapple, Blgnault, & Fitzgerald, 2017). Research also found that the practice of bushfire communication in Australia has not yet come to involved itself as a well and comprehensive planned approach to preparedness (Akama, Cooper, & Mees, 2016). This assumed that the bushfire risk communication in the year 2019/2020 might not be planned well.

Australians being aware of bushfire were not prepared on the most severe one in the year 2019-20. The act of bushfire risk communication applied among Australians should have become an essential tool, especially for those who were nearby the fire. The research focus was to acknowledge how the bush fire risk communication was applied in Australia regarding its significant role.

2. METHOD

This research was conducted through qualitative research, with a case study approach. Qualitative research suggests understanding the informants' meanings. It examines specific contexts where individuals are situated which then lead to particular outcomes (Maxwell & Reybold, 2015). Qualitative research is classified as exploratory research rather than collecting numerical data points, where analyzing and interpreting data are the core of the method. Case study as one of an approach allows in-depth, multi-faceted explorations of complex issues in their real-life settings (Crowe et al., 2011).

Besides literature studies and documentation in collecting data, the research also interviewed nine informants. These informants were interviewed at the end of February 2020 in Armidale, NSW Australia. Informants agreed to use initial names to protect their confidentiality. Table 1 shows the demographic data on the informants.

Table 1 Informants' Demographic Data

Initials	Age	Location
MC	70	Armidale, NSW
BC	80	Armidale, NSW
GA	67	Armidale, NSW
MA	67	Armidale, NSW
PD	36	Armidale, NSW
JE	56	Uralla, NSW
PP	36	Armidale, NSW
JA	37	Armidale, NSW
JO	76	Uralla, NSW

Technique analyses data started from collecting data from interviews, observation and also literature studies. Data then were reduced based on the focus research where issue-relevant meanings emerge and after researchers identify s based on a direct interpretation, researchers establish patterns then develops a naturalistic generalisation. (Cresswell, 2013).

3. RESULT AND DISCUSSION

Even though Australia has always experienced bushfire and a season called the 'fire season, in November 2019, Australia declared a state of emergency regarding in the bushfire. Fire season peaked in the late of January or in the early of February 2020 (Calma, 2020). The fire resulted in devastation, not only in Australia but also in the whole world. Recovery is still in the process until today and needs an ongoing engagement contributing observations and expertise to bushfire research.

This research focused more on the risk communication that was applied. Results show that all informants had received all the information needed through mass communication and the internet. Risk information is essential in avoiding the misinterpretation of warning information (Kammerbauer & Minnery, 2019).

However, it was found that the baby boomers generation preferred to get their first information through the radio, a more comprehensive one through the newspaper and then the television. The millennial generation, on the other hand, preferred to go online and access more thorough information. This revelation relates to how skilful people are in using communication media (Puspito, 2014).

The Baby-boom generation is people who were born from mid-1946 to 1964 (Hogan, Perez, & Bell, 2008). They are accustomed to getting information from the television, the radio and the newspaper.

The technological developments give birth to new media in a society that led to the trend and lifestyle in terms of a culture where communication is different from previous ones (Ratmanto, 2005). This revelation indicates that millennials and baby boomers were forced to engage with the new lifestyle and learn about the new media. One possible way to ensure appropriate risk communication is by using social media channels and ensuring an ongoing, consistent media presence (Abrams & Greenhawt, 2020).

Five informants (MC, BC, GA, JO and MA), were more aware of the bushfire by listening to all the information through the ABC local radio. They stated that the local radio was always updating new information through the radio. Informants also were informed more on other media, especially television, newspaper and online media. The risk communication through the radio had information about the level of fire, how far the fire was, and it also announced which village should prepare soon to evacuate. Emergency updates of the fire will interrupt radio programs it continued to update on any news about the fire. The five informants were between the age of 60-80 years old, which are included as baby boomers generation.

Besides the radio, some informants perceived that application online gave them advantages. MC stated that she would go online as well, besides listening to the radio. She found that it had been set primarily in the New South Wales area. She did not know whether it was an application or not, but when she typed 'bush fire near you' It would show a map how far they were from the fire. The webpage she mentioned was <https://www.rfs.nsw.gov.au/>. Around the nation, the RFS, and other fire services have made accurate maps of the fires they are fighting (Werner, 2020).

Six informants were included as baby boomers, despite the popularity of getting more updated information online, they have come to notice that the traditional media were more effective for them. Informants agreed that the newspaper and the television had graphic pictures of a bush fire that gave more sense on the danger of it. *"Newspaper would be the most detail. Television gives you a wider spread than the newspaper"* (MA, 2019).

MA aged 67 also stated that his primary source of information was the television. One *"ah.. we watch the news and watch shows, we don't watch much to tv. But hm.. That's my main source news I guess. As well as the news paper"* (MA, 2019).

However, their attitudes are mixed towards its use as a replacement for more traditional interaction. However, as what MC had stated, she also seemed satisfied with how the online media could provide information quickly. This statement relates to how Baby Boomers anticipate increasing their use of online communication technologies as they age (Gurzick, Ant Ozok, & Morris, 2007).

JE, despite her age, she had a mixed attitude towards traditional and online media. She used both as it had been beneficial for her. Generally, she turns to the radio, but she also downloaded an application which was called 'fire near me'. She stated that most Australian had downloaded this application. MC had said before; the application provided the location of the fire and how far they were with the fire. Level of fire could be seen, and what action was needed was informed in the application. *"So when the fires are burning around our house, we could see exactly where"* (JE, 2019). JE also mentioned that it was not 100% accurate and that was why she also needed to turn to the radio and listen to the news there, like other informants, it was the ABC local radio.

Informants who are included as the millennials generation had a different approach in getting updated information regarding the bush fire. Millennials are usually called as Generation Y; they were born between 1977 and 1994 (Smilansky, 2016). Millennials have been adapted to using social networking to take social and political action and engaging charitable solicitation and donation (Ferris, 2009). They turned to online information more often, and they seemed not to see the traditional media as an alternative. They likely also engaged with donation act through social media. PD, aged 36, access more information through social media. He mentioned Facebook, Instagram and online news to be effective in spreading information. PD had friends on Facebook that works in the fire department, so he could quickly obtain information. He believed that steps on risk communication should be added more online, especially on Facebook and Instagram so that the people could be more aware of the risk and the situation.

JA was also one of the informants who pointed out the 'Fire Near Me' application that she downloaded, but had always continually watched the ABC broadcast. 1.6 million people have downloaded the 'Fires Near Me' app since the bushfire season began (Byron, 2020).

PP aged 36 also turns to the ABC website to find more information about the bush fire. PP also works in a place where she makes disaster recovery, so she was very close to any activities related to the bush fire. GA, despite that he was included in the millennial generation, he still chose the radio to get information. *"well, we turn ABC and SBS all the time, but ABC radio would be the first time radio I heard about the bush fire."* (GA, 2019).

Most informants agreed that the first step of successful risk communication was through the government and what the government should do to.

"the government has the big picture and the people, individually has to make a target like in using the water, planting the tree, stop using the fossil fuel" (BC, 2019).

Steps of risk communication as stated by BC should at first be organised by the government, the government should be there from day one and lead the people, but the people should also take part on it more practical and contribute on the government's plan.

GA confirmed that he knew about the situation from the dining house, or when they join some community service or volunteering in something. There would be exchanged information about the bush fire, and they likely to get donation forms which have more information about the fire. This statement assumed that people have been contributing to risk communication—the dining places where they spread forms to donate for the victims or the animal sanctuaries, it could be in forms of money donation, items of clothing, or even a temporary place to stay. The forms gave people information about the situation and how people can help.

Other than donation forms in places, there are organisations where people can donate. Organisations that focus more in New South Wales are St. Vincent de Paul Society Bushfire Appeal, WIRE and Port Macquarie Koala Hospital (Masige, 2020).

Regarding on how people should act towards disaster and risk, JE stated that people should always have a plan and activate the fire plan while listening to the information on the radio. JE said that her mother, who stayed quite near the fire location had a backpack. People should also have a backpack with things packed. People with farm animals should choose which

animals they should take, or just one animal to take, plan a place to stay when things get worst.

"So everyone has a plan, We decide which animals to take and to leave. So every single person in Australia has to make a fire plan and has to be ready to carry on the radio you hear. Ok? Activate your fire plan. If you're an older person, you have to leave your home. If you're a member of the rural fire obligate or something like that then you take a horse and go to the track, and you go to fight the fires" (JE, 2019).

The statement above relates to risk communication for disaster preparedness on a person's physical and mental condition (Puspito, 2014). JE's mother is mentally aware, and she knew what she was facing. She was also physically ready.

MC and BC stated that the government was forced to think about what they should do. However, MC and BC believed that the emergency service worked very good and then many lives and houses that were lost was minimum, although population control was a difficult thing to do. Coordination among the government, the emergency service and community, could apply a systematic approach. The research found that the system approach can be the right way of managing disasters, coordination between communication and information (Budi, 2012).

D aged 36, on the other hand, disagreed on this, he was convinced that the government should have done better. The government knew that they had yet to come the driest years in the past years but had not planned a full readiness for the people.

There are three levels of Bush Fire Alerts, which are: Advice, Watch and Act and Emergency warning. On the Advice level, it is information that a fire has started, but there is no immediate danger. However, the community should stay alert and search updated information in case the situation changes. The Watch and Act level is a heightened level of threat. It means that the conditions are changing and the community around should start to take action to protect themselves and their family. The Emergency Warning level is the highest level of a bush fire alert. It needs immediate action because the community are in danger and their lives are at risk (nsw.gov, n.d.).



Advice Watch And Act Emergency Warning

Figure:1

Source: <https://www.rfs.nsw.gov.au/plan-and-prepare/alert-levels>

The 'Fire Near me' application also provided information on the fire danger ratings. It has six ratings from catastrophic until low moderate. There are also steps provided for the

people to act, starting from knowing what to do, preparation, knowing the fire level and how to keep updated.

The first step discusses what to do if a bush fire threatens the family at home. The recommendation stated that this discussion could be conducted over dinner when everyone is together and focus.

The second step is preparing the home itself. Australians usually have a back yard, so it recommends for the people to have their grass cut low, or having a clear area around the house. The third step is to know the fire levels around the area and keep updated using the 'Fire Near Me' application or listening to the local radio. The last step would have all the important numbers and websites.

All informants were confident that the leading cause of the bush fire was the drought, and how Australia had been dry for the past few years with no rain and had the hottest summer, but they believed that the year 2019 was the driest. So, anything can start the Fire. Any spark like lightning or someone threw a cigarette, or even just a glass reflection can easily trigger a fire which then can be fueled by the wind. Some informants also mentioned about climate change and how global warming had a part in this.

4. CONCLUSION

The bush fire risk communication was applied through ABC local radio, television, newspaper and online application. Exchanged information about the risk and how to donate/help were in forms provided in dining places and volunteers job. The baby boomers generation preferred the traditional mass media, but a few of them were also satisfied with the online media application, which provided thorough information. Meanwhile, the millennials preferred online media to access more updated information about the fire. They suggested that there should be more information on social media. The baby boomers generation seemed to be satisfied with how the fire department handled the situation. However, Millennials thought that the government could do better.

Risk communication through the ABC local radio and 'fire near me' application provided information about how far was the fire with the informants' location, the level of fire, the fire danger ratings and also what action should the people do. It was also pointed out that the success of risk communication should start first from the government level with a well-prepared plan. However, people should also take control and have a fire plan and activate it when needed.

5. LIMITATION AND STUDY FORWARD

This study has potential limitation related on the access of informants as they were in Armidale Australia, researchers had only a limited time in conducting interviews because of the pandemic that forced researchers to go back home to Indonesia. The interview could have met more informants not only in Armidale but also in other towns in New South Wales. Recommendation for the future study should focus more on the government's policy in evolving bushfire risk communication and what improvement has the government made after the aftermath.

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