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*Gender, masculinity and bushfire: Australia in an international context*

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# Gender, masculinity and bushfire: Australia in an international context

Dr Meagan Tyler, Victoria University and Professor Peter Fairbrother, RMIT University offer some reasons as to why a gendered analysis of disaster and emergency management is important and how this applies specifically to bushfire.

*“Emergency management has been, by tradition if not by right, a male prerogative in Australia.” Doone Robertson (1998).*

## ABSTRACT

The study of gender and associated questions about masculinity, femininity and inequality are important elements of social science research. While gender has often been a focus in disciplines such as sociology and anthropology, the social construction of gender is now analysed in areas ranging from criminology to international political economy. Disaster studies, however, adopted the use of gendered analysis quite late, and it was not until the 1990s that a substantial body of literature started to emerge. Since then, there has been a steady increase in international research dealing with the relationship between gender and disaster. Australian research on bushfire is yet to make significant use of the insights from this work. In this paper, we offer some reasons as to why a gendered analysis of disaster and emergency management is important and how this applies specifically to bushfire. We also highlight some of the shortcomings associated with previous attempts at understanding bushfire through a gendered lens and suggest that, in order to move forward, we must acknowledge that constructions of masculinity may affect bushfire preparation and response. <sup>R</sup>

## Introduction

There is little recognition in Australia, in either research or policy, that there are important gendered issues surrounding bushfire. This absence is in sharp contrast to international trends where varying social constructions of gendered norms, behaviours, and

inequalities are, increasingly, being identified and analysed. The aim of this paper is to outline the more important insights from the international literature on gender and disaster and then contrast these with emerging approaches to studying and explaining gender and bushfire in Australia. We argue that it is important to acknowledge the militarised and masculinised nature of emergency services in Australia and how particular constructions of masculinity may impact upon popular conceptions of appropriate actions for men and women during bushfire events.

## International research on gender and disaster

At the outset, it should be noted that the study of gender is not concerned with biological differences between men and women. Gender refers specifically to the “socially learned behaviour and expectations that distinguish masculinity and femininity” (Peterson and Runyan, 1999, p5). For some decades, the social construction of gender has been a focus in disciplines such as sociology and anthropology, with gendered analyses evident in areas ranging from criminology to international political economy. The importance of gender is also recognised in trends towards “gender mainstreaming”, evident in many national and international public policy discourses (Walby, 2005).

Disaster studies adopted the use of gendered analysis quite late. It was not until the late 1990s that the influential collection *The Gendered Terrain of Disaster* (Enarson and Morrow, 1998) was published. Since then, there has been a steady increase in international literature dealing with the relationship between gender (particularly women) and disaster. One of the most obvious ways in which the gendered nature of disaster tends to be recognised, is the heavily male-dominated nature of formal disaster response and emergency services organisations. While women’s actions are an important part of responses to disaster events (the international evidence suggests women’s contributions are crucial to disaster mitigation and recovery) women tend to be largely excluded from official emergency response agencies (Ariyabandu, 2009; Fothergill, 1998; Mishra, 2009; Robertson, 1998).

There are, however, a number of more complex and subtle ways in which disasters have gendered consequences. For instance, there is now substantial evidence to suggest that, globally, women are at greater risk from the effects of disaster than men.

The *Gendered Terrain of Disaster* (Enarson and Morrow, 1998) outlines gendered dimensions to the following nine stages of disaster:

1. Exposure to risk
2. Perception of risk
3. Preparedness behaviour
4. Warning communication and response
5. Physical impacts
6. Psychological impacts
7. Emergency response
8. Recovery
9. Reconstruction

What emerges from this work on gender and disaster is that women are, in a number of different ways, more vulnerable to the effects of disaster than men. Again, this is not thought to be the result of some innate or biological differences between men and women. Rather, these differences are understood as the result of socio-political factors, including gender inequality. Marginalised groups are more likely to suffer from the effects of disaster and women are often disadvantaged because of their social and economic positions in society.

Various gendered social restrictions impact upon women's responses to disaster. For example, women are less likely than their male counterparts to have been taught how to swim. They are also more likely to wear restrictive or inappropriate clothing, because of gendered expectations about dress (Enarson and Chakrabarti, 2009; Enarson and Morrow, 1998). It is therefore not surprising that women are over-represented in deaths from drowning during floods and tsunamis. Indeed, following the Asian tsunami in 2004, women made up as much as 80 per cent of the dead in certain parts of Indonesia, India and Sri Lanka (Ariyabandu, 2009, p11).

In some instances, regardless of the type of natural hazard, women are hampered in their attempts to flee because they are more likely to experience restrictions on their outdoor or public movements (Ariyabandu, 2009; Chakrabarti and Walia, 2009). Women are also more likely to take on care-giving responsibilities for children, the elderly and the infirm, and it has been theorised that these responsibilities often impede a woman's ability to escape imminent danger (Enarson and Morrow, 1998). Internationally, in terms of preparation and communication, women are less likely to be literate and therefore the chances of women being able to read and understand preparedness information are diminished (Enarson and Morrow, 1998).

While factors such as literacy and restrictions on public movement are less likely to impact upon women in secular, (post)industrialised states, there are still important gendered differences relating to social and economic inequality in the developed world. In Japan, for example, single mothers are substantially over-represented in injury and death-toll statistics from earthquakes (Masai, 2009). There are several issues which help to explain why this is the case. First of all, single parents are generally more vulnerable in disasters as there is often only one adult in the household. Second, there are significantly more single mothers than single fathers with care-giving responsibilities, so the risk for women is increased. Third, single mothers tend to have a lower than average income, and in the case of Japan (and numerous other places), single mothers are also socially stigmatised. They therefore tend to live in substandard housing, in poorer parts of cities, and in housing that is ultimately more likely to collapse, and injure or kill them, during an earthquake (Masai, 2009).

There are also substantial gendered differences in disaster preparation and response. One of the most prominent of these discrepancies is women's more common preference for evacuation (Bolin, *et al.*, 1998; Fothergill, 1998; Mozumder, *et al.*, 2008; Scanlon, *et al.*, 1996). The evidence for this difference comes mostly from developed or (post)industrial nations and focuses on instances of floods and earthquakes; of note, this finding is also found in some case study research on forest fire (e.g. Mozumder, 2008). This literature indicates that women are significantly more likely to favour preparation for evacuation, while men are more likely to want to stay in an area of danger (Bolin *et al.*, 1998; Mozumder, *et al.*, 2008; Scanlon, *et al.*, 1996). Women's preference for evacuation during a bushfire threat in Australia has similarly been noted by Proudley (2008), but this has not yet been supported by other studies with extensive data or in-depth research.

## Research on gender and bushfire in Australia

Despite the increasing body of international literature on gender and disaster, there is still only a limited amount of work that mentions gender in the context of bushfire in Australia (e.g. Beaston and McLennan, 2005; Beaston, *et al.*, 2008; Cox, 1998; DeLaine, *et al.*, 2008; Eriksen, *et al.*, 2010; Maleta, 2009; Poiner, 1990; Proudley, 2008). For the most part, gender remains a peripheral rather than central theme in bushfire research. To help rectify this neglect, we draw on research into gender and disaster, as well as literature dealing with masculinity, to propose ways in which insights from these areas may be used to better understand bushfire preparedness and response. The idea is to move beyond simply looking at 'women and bushfire' and to incorporate an analysis of constructions of masculinity as well.

There has been some attempt to make room for 'women's voices' and consider women's experiences of bushfire in Australia (e.g. Cox, 1998) but, until recently, there has been almost no attempt to understand how this relates more broadly to the social construction of gender. In other words, there has been a reluctance to question how gendered roles and understandings of masculinity and femininity put men and women at risk in different ways. A rare exception is work by Eriksen and colleagues (2010) who were responsible for the first peer-reviewed article dealing with bushfire and gender in Australia from a social constructionist perspective. A recent contribution from Goodman and Cottrell (2012) also highlights the importance of gender roles in determining bushfire response. In addition, we have outlined elsewhere (Tyler and Fairbrother, 2013) the need to account for Australian understandings of masculinity in bushfire preparation and response. However, advancing such a critical perspective on gender in bushfire research can prove a challenge.

There is some recognition in Australia of the male-dominated nature of the emergency services. Emergency management has been described by Robertson (1998, p201), for example, as being: "[b]y tradition if not by right, a male prerogative in Australia. Emergency services organisations, so similar in nature and activity to the military, were regarded as very much a male domain." Australia is not unique in this regard and, as Fordham and Ketteridge (1998) point out, many emergency and disaster management organisations around the world have military-based histories and continue to maintain a militaristic, 'command and control' style of operation. This history continues to echo into the present. Recent research into rural fire services has shown that women make up less than a quarter of all rural fire volunteers in Australia and that many are placed in non-operational or supportive and administrative roles (Beaston and McLennan, 2005). Even into the early 2000s, some rural fire brigades did not admit female members (Tyler and Fairbrother, 2013).

## Women and bushfire

To try and rectify this substantial gender imbalance there have been intermittent attempts to recruit more women into rural, volunteer firefighting (Beaston, *et al.*, 2008) and a few isolated bushfire safety programs exist which specifically target women (e.g. DeLaine, *et al.*, 2008). There are, however, problems with both of these approaches.

Firstly, attempts to recruit women into the fire services, even if extremely successful, will not necessarily transform the masculinised construction of firefighting. Organisations have particular cultures, and the history of emergency management organisations as male-dominated has meant that they are seen as masculine institutions. Thus, firefighting has become associated with traditionally masculine attributes, and even if women become part of these organisations, they are largely expected to conform to masculine norms rather than challenge or transform them (Maleta, 2009). Thus, despite more inclusive recruitment practices,

**NSW FIRE BRIGADES**

### WOMEN IN FIREFIGHTING

Working as a firefighter can be a challenging journey, but if you ask Peta Doyle, one of the NSW Fire Brigades up-and-coming firefighters, plenty of women have what it takes to have long and rewarding careers with the NSWFB.

When most people think of firefighters they think of sirens, smoke and pulling people from a burning building, but being a firefighter involves so much more than this. Our firefighters not only manage major emergencies, but they often work in specialist fields and have a strong presence in the community, talking to residents about fire prevention and making communities safer.

With more than 92 full-time female firefighters and 165 part-time female firefighters in its ranks, the NSW Fire Brigades strongly encourages women to consider a career with the NSWFB.

Three years ago, Firefighter Peta Doyle, who is currently stationed at the busiest fire station in Australia, City of Sydney Fire Station, steered her life in a new direction, when she successfully applied for a role as a full-time firefighter after years of training as a professional athlete.

Peta competed at state, national and Olympic trials over the past 12 years, and represented Australia at various World Cup Swimming Championships during her swim career. Peta applied for a firefighting role with the NSWFB because she was attracted to the challenge of working as part of one of the leading fire and rescue organisations in Australia.

"I needed a new challenge in my life and I was craving job satisfaction. Many people told me it was really difficult to get a position with the NSW Fire Brigades, so I saw this as another challenge. I wasn't sure what I wanted to do with my life at that point, but knew I had to be working outdoors, working as part of a team, and helping people."

**“ I needed a new challenge in my life and I was craving job satisfaction. ”**

[www.fire.nsw.gov.au](http://www.fire.nsw.gov.au)

**NSWFB promotional campaign to attract female recruits.**

firefighting remains culturally masculinised and continues to reinforce particular ideas about what constitutes appropriate "masculine" behaviour.

Of equal note is the institutional perception of women's responses to bushfire. This issue is well illustrated by the *Firey Women* program in South Australia. The program consists of four workshops and is ostensibly designed to teach women about bushfire safety and preparedness (DeLaine, *et al.*, 2008). While the first workshop covers the issue of deciding whether to 'stay or go' when bushfire threatens, the second workshop on 'preparing your property' is quite clearly about how to prepare the property if you want to stay during the fire, with topics including: 'creating a defensible space' and 'water supplies'. These workshops were deemed a success by researchers and representatives from the South Australian Country Fire Service (CFS) because while only "39.39% of the participants reported a 'stay and defend' bushfire strategy before the workshops... this increased to 84.84% at the conclusion of workshops" (DeLaine, *et al.*, 2008, p9). The use of these statistics quite clearly shows how, particularly prior to the Black Saturday fires in Victoria in 2009, some agencies equated appropriate bushfire education with a greater number of people taking the decision to 'stay and defend' a house during a fire.

The review of the *Firey Women* program (DeLaine, *et al.*, 2008) inadvertently shows, at least in part, how this misperception may have taken hold. The researchers claim that intervention is necessary to target women because they are likely to have a lack of knowledge

around bushfire. Given the significant lack of women in the firefighting services, such an assertion may be plausible, but the researchers rely primarily on a study by Beringer (2000), who makes unsupported claims about women's lack of bushfire safety knowledge. He states, for example, that:

*"When asked whether they would evacuate if another fire were to threaten, 23% [of residents surveyed] said they would evacuate their home. Of those respondents who would evacuate, 67% were female and 33% were male. The responses from females indicates [sic] that they may have a poor understanding of bushfire behaviour as well as the role of the CFA [Country Fire Authority] and hence may perceive the bushfire to be a greater threat which would lead to a greater likelihood of evacuation"* (Beringer, 2000, p12).

No evidence is presented in support of this statement. Beringer's assumption is that a preference for evacuation indicates a lack of knowledge about bushfire safety.

Such assumptions tend to underpin much of the agency-dominated discussion around bushfire in Australia, although the international conversation is markedly different. International studies on gender and disaster evacuation preference show that women are more likely than men to favour evacuation. In some places this is actually seen as a virtue. Enarson (2009), for example, shows that women's more common preference for evacuation is seen by many emergency agencies overseas as a valuable asset in promoting risk aversion. There is an understanding that a preference for evacuation is less likely to stem from ignorance, and more likely to stem from gendered norms of responsibility (e.g. care-giving).

This understanding, highlighting the social roots of gendered behavioural difference, is further supported by studies on risk perception, which show that the most privileged groups—in particular, wealthy, white men—are much more likely to have low risk perception (Finucane, *et al.*, 2000); while the poor, minority groups, and women are more likely to have high risk perception. Finucane and others (2000) suggest this stems, not from a lack of education, but rather from inequality, different environmental factors, and life experience. Those who are the most privileged tend to experience the least fear in their everyday lives and, as a consequence, may under-rate risks associated with events such as natural disasters.

The suggestion that women prefer evacuation because they are over-concerned or ill-educated about bushfire is not only an unfounded assertion; it may also be a dangerous one. Unlike the trend in disasters internationally, where women are over-represented in death tolls (Enarson and Chakrabarti, 2009), in Australia, more men than women die in bushfires. Indeed, a recent survey of bushfire deaths has shown that almost three times more civilian men than women died in bushfire events in Australia between 1900 and 2008 (Haynes, *et al.*, 2010). Haynes and colleagues (2010) suggest that one of the reasons men may be over-represented in bushfire fatalities is that they are

more likely to 'actively defend a house' during a fire while women are more likely to 'shelter passively'.

Evidence of disagreements between men and women within a household over the best course of action to take during a fire threat also demonstrates that more investigation is needed into women's preference for evacuation (see Goodman and Cottrell, 2012). For example, Professor John Handmer, in his review of fatalities from the Black Saturday fires, submitted the following to the Royal Commission:

*"There is evidence of disagreements as the fire approached. In virtually all cases this was between women who wanted to leave and take the men with them and men who either wanted to stay and defend or who felt they had to support others in that role. In some cases it appears that the difference in opinion was long standing, in other cases it was only acknowledged at the last minute. This led to some people changing their plans at the last minute. This appears particularly the case for couples. There are instances where women who fled under these circumstances survived. Conversely, there is also evidence of such disagreements where males refused to leave, but relatives decided to stay, leading to additional fatalities"* (Handmer, *et al.*, 2010).

Handmer's submission to the Royal Commission and the research by Haynes and others (2010) quite clearly contradict the idea that the best model of bushfire safety is to teach women to adopt a masculinised model of 'stay and defend'. Any education programs promoting this model therefore warrant re-evaluation.

## **Masculinity and bushfire: moving forward**

*"A gender sensitive analysis of bushfires needs to go beyond understanding 'gendered vulnerabilities' and examine how the socially constructed societal expectations of women and men that underpin traditional views of bushfire management as 'men's business' persist today."*  
Christine Eriksen and colleagues (2010).

Part of the problem is that the issue of masculinity is rendered largely invisible in discussions of bushfire. The existing literature on gender and bushfire in Australia, though scarce, has tended to focus on women. There is also an assumption that policy and practice for bushfire response are based on objective and empirical, if not scientific, bases. These approaches have tended to overlook the potential effects of male-dominated and culturally-masculinised emergency management, bushfire response and firefighting (Beaston and McLennan, 2005; Eriksen, *et al.*, 2010; Poiner, 1990; Robertson, 1998). In programs like *Firey Women*, while women are obviously the focus, this is on the basis that they are seen as different and in need of special programs to teach them a 'correct' response to bushfire. Implicitly, it seems that the correct response was taken to be learning how to 'stay and defend'. This suggests that the largely masculinised activity of 'staying to defend'

has, in the past, occasionally slipped into becoming represented as the objective norm.

The focus on women as 'the other', compared to a masculine standard, can sometimes make it difficult to see how existing norms, approaches and policies are inevitably affected in particular ways when formed in heavily male-dominated environments. This process is often referred to in sociological literature as 'the invisibility of masculinity' (e.g. Campbell, *et al.*, 2006; Campbell and Bell, 2000). As Campbell and Bell (2000, p536) explain, masculinity is generally a "generic, unmarked category of power" and, as a result, masculinity remains invisible "while femininity is continually marked for special emphasis." It is therefore imperative that future research into gender and bushfire, and disaster events more generally, makes the social construction of masculinities visible.

The need to consider masculinities is also intertwined with the understanding that gender is relational, that is, gender roles are constructed in relation to each other rather than existing autonomously. Campbell and colleagues (2006) explain this aspect further in the context of rural masculinity by stating that: "rural masculinity is equally an aspect of the lives of men and women...The way rural men conduct their lives has a huge impact on how rural women live their lives, for gender is a relational matter" (p2). It is therefore important to understand the construction of both masculinity and femininity when considering gender and disaster.

We have argued elsewhere (Tyler and Fairbrother, 2012, 2013) that it is now vital to conceptualise and analyse specifically Australian constructions of masculinity in order to better understand individual behaviour with regard to bushfire preparation and response in this country. In particular, it is important to understand Australian constructions of hegemonic masculinity. The concept of hegemonic masculinity (Connell, 1995) is particularly useful as it acknowledges that there are often many ways in which men can be accepted as appropriately masculine, but it also highlights that some constructions of masculinity have more cultural weight than others. Connell (2003) states that hegemonic masculinity is "the most honoured or desired...it is connected with prominent institutions and cultural forms, such as business and sport, and is extensively promoted in the mass media" (p15). Campbell and Bell (2000) expand on Connell's original understanding and state that "[h]egemonic masculinity is therefore the version of masculinity that is considered legitimate, 'natural' or unquestionable..." (p535). The valorisation of particular types of masculinity therefore has consequences for determining what is seen as culturally appropriate behaviour and action.

## Conclusion

It is understood in the international literature that gendered norms and expectations contribute to particular patterns of disaster preparation and response. Bushfires in Australia are no exception to this phenomenon. Given the anomaly of men's over-representation in bushfire fatalities in Australia, it is imperative to consider the social construction of masculinity and, in particular, hegemonic masculinity (Tyler and Fairbrother, 2012). Understanding the gendered dynamics operating around bushfire may, quite literally, be a life or death issue. Since the Royal Commission into the Black Saturday fires, many fire agencies have begun sending out official communications that place a greater emphasis on plans to evacuate or 'leave early'. It must be recognised, however, that these modified messages are being transmitted into an existing cultural environment where 'staying to defend' tends to be valorised and masculinised, and is therefore seen as appropriate, while leaving is often seen as weak, ill-informed and feminised, and is therefore seen as inappropriate (Tyler and Fairbrother, 2013). A modification of the message alone is not enough to create cultural change. In order for models of bushfire preparation and response to be more effective in future, the social construction of masculinity must be taken into account and become a central focus in the development of messages, education programs, and public discussion.

## References

- Ariyabandu, M.**, 2009. *Sex, Gender and Gender Relations in Disasters*. In E. Enarson and P.G. Chakrabarti (eds). *Women, Gender and Disaster: Global issues and initiatives*. Sage Publications, London.
- Beaston, R. and McLennan, J.**, 2005. *Australia's Women Volunteer Firefighters: A literature review and research agenda*. *Australian Journal of Volunteering*, V10(2), pp18-27.
- Beaston, R. McLennan, J. Birch, A.**, 2008. *Recruiting and Retaining Women Fire Service Volunteers*. *Fire Note. Bushfire CRC and AFAC: Melbourne*.
- Beringer, J.** 2000. *Community Fire Safety at the Urban / Rural Interface: The bushfire risk*. *Fire Safety Journal*, V35(1), pp1-23.
- Bolin, R. Jackson, M. Crist, A.** 1998. *Gender Inequality, Vulnerability and Disaster: Issues in theory and research*. In E. Enarson and H. Morrow (eds). *The Gendered Terrain of Disaster: Through women's eyes*. Praeger, Santa Barbara.
- Campbell, H. and Bell, M.** 2000. *The Question of Rural Masculinities*. *Rural Sociology*, V65(4), pp532-547.
- Campbell, H. Bell, M. Finney, M.**, 2006. (eds). *Country Boys: Masculinity and rural life*. Pennsylvania State University Press, University Park: PA.
- Chakrabarti, P.G. and Walia, A.**, 2009. *Toolkit for Mainstreaming Gender in Emergency Response*. In E. Enarson and P.G. Chakrabarti (eds). *Women, Gender and Disaster: Global issues and initiatives*. Sage Publications, London.

**Connell, R.,** 1995. *Masculinities*. University of California Press, Los Angeles.

**Connell, R.,** 2003. Introduction. In M. Donaldson and S. Tomsen (eds). *Male Trouble: Looking at Australian Masculinities*. Pluto Press, Melbourne.

**Cox, H.,** 1998. *Women in Bushfire Territory*. In E. Enarson and H. Morrow (eds). *The Gendered Terrain of Disaster: Through women's eyes*. Praeger, Santa Barbara.

**DeLaine, D. Pedler, T. Probert, J.,** 2008. "Firey women": Consulting, designing, delivering and evaluating pilot women's bushfire safety skills workshops. Paper presented at The International Bushfire Research Conference. Adelaide Convention Centre, Australia. 1-3 September 2008.

**Enarson, E.,** 2009. *Gendering Disaster Risk Reduction: 57 steps from words to action*. In E. Enarson and P.G. Chakrabarti (eds). *Women, Gender and Disaster: Global issues and initiatives*. Sage Publications, London.

**Enarson, E. and Chakrabarti, P.G.,** 2009. (eds) *Women, Gender and Disaster: Global issues and initiatives*. Sage Publications, London.

**Enarson E. and Morrow, H.,** 1998. (eds) *The Gendered Terrain of Disaster: Through women's eyes*. Praeger, Santa Barbara.

**Eriksen, C. Gill, N. Head, L.,** 2010. *The Gendered Dimensions of Bushfire in Changing Rural Landscapes in Australia*. *Journal of Rural Studies*, V26(4), pp332-342.

**Finucane, M. Slovic, P. Mertz, G. Flynn, J. Satterfield, T.** 2000. *Gender, race and perceived risk: The "white male" effect*. *Health, Risk and Society*, V2(2), pp159-172.

**Fordham, M. and Ketteridge, A.,** 1998. "Men Must Work and Women Must Weep": Examining gender stereotypes in disasters. In E. Enarson and H. Morrow (eds). *The Gendered Terrain of Disaster: Through women's eyes*. Praeger, Santa Barbara.

**Fothergill, A.,** 1998. *The Neglect of Gender in Disaster Work: An overview of the literature*. In E. Enarson and H. Morrow (eds). *The Gendered Terrain of Disaster: Through women's eyes*. Praeger, Santa Barbara.

**Goodman, H. and Cottrell, A.,** 2012. *Responding to Fire Threat: Gender roles, dependency and responsibility*. In: D. Paton and F. Tedim *Wildfire and Community: Facilitating Preparedness and Resilience*. Charles C Thomas Publishers, Springfield: IL.

**Handmer, J. O'Neil, S. Killalea, D.,** 2010. *Review of fatalities in the February 7, 2009 Bushfires*. Prepared for the Victorian Bushfires Royal Commission. Bushfire CRC, Melbourne. Available at [www.bushfirecrc.com/managed/resource/review-fatalities-february-7.pdf](http://www.bushfirecrc.com/managed/resource/review-fatalities-february-7.pdf), accessed: 14/03/2013.

**Haynes, K. Handmer, J. McAneney, J. Tibbits, A. Coates, L.,** 2010. *Australian Bushfire Fatalities 1900-2008: Exploring trends in relation to the "prepare, stay and defend or leave early" policy*. *Environmental Science and Policy*, V13(3), pp185-194.

**Maleta, Y.,** 2009. *Playing with Fire: Gender at work and the Australian female cultural experience within rural firefighting*. *Journal of Sociology*, V45(3), pp291-306.

**Masai, R.,** 2009. *Women in the Great Hanshin Earthquake*. In E. Enarson and P.G. Chakrabarti (eds). *Women, Gender and Disaster: Global issues and initiatives*. Sage Publications, London.

**Mishra, P.,** 2009. *Let's Share the Stage: Involving men in gender equality and disaster risk reduction*. In E. Enarson and P.G. Chakrabarti (eds). *Women, Gender and Disaster: Global issues and initiatives*. Sage Publications, London.

**Mozumder, P. Raheer, N. Talberth, J. Berrens, R.,** 2008. *Investigating Intended Evacuation from Wildfires in the Wildland-Urban Interface: Application of a bivariate probit model*. *Forest Policy and Economics*, P.G. 10(6), pp415-423.

**Peterson, V.S. and Runyan, A.,** 1999. (eds) *Global Gender Issues*. Westview Press, New York.

**Poiner, G.,** 1990. *The Good Old Rule: Gender and other power relationships in a rural community*. Sydney University Press, Sydney.

**Robertson, D.,** 1998. *Women in Emergency Management: An Australian perspective*. In E. Enarson and H. Morrow (eds). *The Gendered Terrain of Disaster: Through women's eyes*. Praeger, Santa Barbara.

**Proudley, M.,** 2008. *Fire, Families, Decisions*. *Australian Journal of Emergency Management*, V23(1), pp37-43.

**Scanlon, J. Osbourne, G. McClennan, S.** 1996. *The 1992 Peace River Ice Jam and Evacuation: An Alberta Town adapts to a sudden emergency*. *Emergency Communications Unit: Ottawa*.

**Tyler, M. and Fairbrother, P.,** 2013. *Bushfires are "Men's Business": The importance of gender and rural hegemonic masculinity in Australian understandings of bushfire*. *Rural Studies*, V30(2), pp110-119.

**Tyler, M. and Fairbrother, P.,** 2012. *Gender Matters: Applying gendered analysis to bushfire research in Australia*. Working Paper No. 3. August. Centre for Sustainable Organisations and Work at RMIT, Melbourne.

**Walby, S.,** 2005. *Comparative Gender Mainstreaming in a Global Era*. *International Feminist Journal of Politics*, V7(4), pp453-470.

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