



THE IMPACT ON WOMEN'S HEALTH OF CLIMATIC AND ECONOMIC DISASTER

Position Paper 2014

Australian Women's Health Network

The Impact on Women's Health of Climatic and Economic Disaster

A publication of the Australian Women's Health Network, based on a commissioned paper from Women's Health in the North and Women's Health Goulburn North East, written by Debra Parkinson, Alyssa Duncan and Cathy Weiss, with support from the AWHN Publication Review Panel, April 2014.

This publication may include subsequent alterations/additions which do not necessarily reflect the views of the original commissioned writers.

PO Box 188, Drysdale, Victoria 3222

Association number: A02383

www.awhn.org.au

© Australian Women's Health Network

This publication may be reproduced in whole or in part for study, research, criticism, training or review purposes subject to the inclusion of an acknowledgement of the source and authoring, and no commercial usage or sale.

ISBN: 978-0-9578645-4-2

Published April 2014

Acknowledgements

The Australian Women's Health Network gratefully acknowledges funding support provided by the Australian Government to develop this resource through the Department of Health Health Systems Capacity Development Fund.

AWHN would like to thank Debra Parkinson, Alyssa Duncan, Cathy Weiss, the AWHN Publication Review Panel (Fiona Armstrong; Marilyn Beaumont; Dr Wendy Abigail and Kelly Banister) and the design team at Gasoline.

This position paper is available for free download at:
www.awhn.org.au

Table of contents

Acknowledgements	2
Executive Summary	4
Recommendations.....	6
Definitions	7
Introduction	8
Climatic and economic drivers of inequality	10
Women and equality	12
Economic disaster	14
Vignette 1: Long-term economic disasters: Rural women and drought	15
Vignette 2: Short term economic disasters – Job loss.....	16
Vignette 3: Structural inequity in superannuation.....	17
Vignette 4: Long term economic disaster – Decline of the timber industry in Tasmania.....	17
Climatic disaster	19
Vignette 5: Long term climatic disaster – Catastrophic bushfire and its aftermath	20
Vignette 6: Short-term climatic disaster – Urban heat waves	22
Conclusion.....	24
References	25

Executive summary

“The issue of climate change ... is by far the greatest economic challenge of the 21st century. The science is sobering—the global temperature in 2012 was among the hottest since records began in 1880. Make no mistake: without concerted action, the very future of our planet is in peril.”

CHRISTINE LAGARDE, MANAGING DIRECTOR OF THE INTERNATIONAL MONETARY FUND (IMF)(1)

There is growing consensus that the world faces three major crises – climate change, global economic vulnerability and the widening gulf between rich and poor. This is a critical time for the women’s health sector to engage with the global politics that play a determining role in women’s health status. Economic and climatic disasters are inextricably linked, and women are most affected. Improvement to women’s health will not be effected – or effective – without tackling ‘the structural mechanisms that produce and maintain the inequitable distribution of power, prestige and resources between men and women (2).

A broad understanding of economic and political systems is a prerequisite for action on climate change and women’s inequality. In the same way that education and awareness-raising was central to the achievements of feminism, it is equally integral to effective action on women’s rights in the context of climatic and economic disaster.

Economic disasters

Economic systems based on free market economics and neo-liberalism disadvantage women. Women comprise the majority of the poor, and are made vulnerable by pregnancy, workplace discrimination, economic inequality, domestic violence, and – underpinning all else – by socially constructed caring roles.

For many Australian women, the consequences of economic disaster which emerge in large part from the free market economics of previous decades have been (and are):

- disproportionate loss of employment. Women occupy most of the low paid and low status jobs that were lost as private businesses increasingly outsourced cheap labour in developing countries (3); and as cuts were made in public sectors and non-government organisations – sectors which employ many more women than men (4). Flow-on effects meant that the retail and hospitality sectors, which employ mostly women, were affected by a reduction in consumer spending after the crisis (5)
- more women in economically precarious situations (6), particularly as many employers believe that when jobs are scarce, men have a greater right to paid work (4)
- a sharp decrease in wages after the 2007 Global Financial Crisis, which was more significant for women than men across all industries (7)
- higher levels of stress-related illness (7, 8); lower take-up of health-promoting activities (9) and a higher burden of unpaid care due to cuts to services (10)
- increased male violence against women (11).

Climatic disasters

Globally, women and children are at greater risk both during and after a disaster (12-17) and more women than men die in disasters (18-20). Climatic disaster affects women disproportionately as the risk is multiplied by women’s economic vulnerability. More women than men inhabit risk-prone localities and inadequate housing, and through poverty, have fewer resources for adaptation to climate or escape in catastrophic disasters (15, 16, 20-22). Women’s socially constructed role as primary carer further endangers women as escape is complicated by responsibility for dependents, and the notion of ‘women and children first’ in disasters has been refuted by a 2012 meta-analysis which concluded human behaviour in life-threatening situations is ‘every man for himself’ (23).

Impacts of climatic disaster on women in Australia are evident in a number of ways:

- Heatwaves cause more deaths of women than men, and appear to be associated with preterm births (24, 25).
- Women's poverty means women are being edged out to the cheaper peri-urban areas of metropolitan cities, many of which pose a greater threat of bushfire and entrench disadvantage by sub-standard provision of services, particularly public transport (18, 26). Women's mobility is further restricted through lower car ownership than men, and the increasing cost of fuel as the world edges to oil shortages (22, 27-29).
- The mortality rate of women in bushfires is gradually increasing to that of men. Despite the regularity of women escaping bushfire alone or with children, women have less access to survival and recovery resources e.g. to retrofit housing, or acquire skills in fire equipment operation (30-32), and women's ability (and preference) to evacuate early (33-35) may be restricted by gendered roles in which the man makes the decisions (36).

For both slow- and rapid-onset climatic disasters:

- Women are expected to work harder and longer than men, mostly unpaid, with the double shift tripled and quadrupled after disaster by additional caring responsibilities in the absence of supports which pre-existed the disaster, such as child-care, schools, buses and social service; care of family members recovering from the trauma of catastrophic disaster; and community recovery work (10, 17, 37, 38).
- Barriers to women's financial recovery emerge because of women's lower savings base, compounded by barriers to income production which exist because of women's socially constructed gender role of caring and discrimination (39).
- The focus on rebuilding buildings rather than communities and the pre-existing male domination of earth-moving and building industries result in men benefitting the most from paid reconstruction work (21, 37).
- There is increased conflict in the home, the community and the workplace (see next section).
- Threats to women's status and equal rights gain strength in the post-disaster chaos (40-42).

Increased male violence against women after disaster

Violence against women increases after both economic and climatic disaster (6, 14, 32, 43-52). In the aftermath of climatic disasters, gains over recent decades in community recognition of domestic violence as a crime seem to dissipate. Empathy for men who are 'good blokes' and were heroes in disasters silences women, especially where the men appear to be suffering or suicidal (53).

Categories of 'vulnerable people' currently focus on groups such as the elderly, babies and people with disabilities but women in domestic violence situations are clearly another vulnerable group. During the disaster and in the response period, women with intervention orders, or who otherwise are avoiding violent ex-partners, are at risk of sharing community refuges with them or seeing them at community hubs. For some women, there is no option but to return to violent men to house their children – ignorance of vulnerabilities like these by community and emergency management further endangers women (14, 43, 49, 54, 55).

Action

The chaos that follows a crisis is a window of opportunity for change – regressive or progressive – and disasters provide the environment for women and minority groups to lose ground in their hard-won progress towards equality, as traditional power bases reassert themselves (56, 57):

[W]hen something like a natural disaster destroys the institutions of the state, the workplace, and the home, men feel their hegemony is in crisis ... [and the] crisis situation provokes attempts to restore hegemonic masculinity (46).

In the wake of disaster, and more importantly in the periods between disasters, women's rights and ultimately women's health, will progress only if we understand what is at stake and are ready to press for equal rights and equitable treatment in the post-disaster chaos. The alternative is loss of hard-won progress as others work to reinforce the status quo and its attendant privileging of men.

Recommendations

These recommendations have been divided into structural, intermediary and individual factors, as outlined in 'Women's Health: Meaningful Measures For Population Planning' (2).

Structural

1. Governments to:

- i. legislate to prevent the production of greenhouse gases to help limit further climate change and promote renewable technology energy
- ii. revert policy away from free market economics and to a universal system of social support and healthcare
- iii. promote cultural change for equal participation and reward of men and women in employment, e.g. by strategies recommended by the Australian Human Rights Commission¹
- iv. improve infrastructure and resources to revitalize rural communities, such as networks and forums to encourage rural and Aboriginal women's participation (58)
- v. maintain and improve post-disaster funding to ensure adequate and fair distribution of grants for disaster victims
- vi. revise Aged Pension age for women back to 60 until financial analyses indicate women's superannuation balances have achieved parity with men's.

Intermediary

2. Increase the National Health and Medical Research Council budget allocations for research into the gendered health impact of climate change by 25%.
3. Set up a Centre of Excellence for Gender and Disaster Research incorporating both climatic and economic disasters (perhaps co-located with the Australian Emergency Management Institute or Monash Injury Research Institute) to have the following functions, amongst others:

- i. Run as a Clearinghouse to monitor, compile and disseminate gender and disaster research from universities and other organisations
- ii. Promote female participation at high levels of research for disasters and climate change
- iii. Fund research into gender and disaster, including:
 - the nature of Australian masculinity in these organisations, and
 - how male privilege is maintained and reproduced after disasters.
4. Through the Council of Australian Governments (COAG), incorporate a gender analysis, and awareness of increased domestic violence into the National Disaster Resilience Strategy, e.g. include women and children as vulnerable groups after disaster.
5. Establish a Gender and Disaster Taskforce to investigate gender and disaster and initiate supportive strategies, operating from the Emergency Service Commission or similar in each state.
6. Set up a national disaster audit body to:
 - i. oversee/conduct gendered audits in disaster contexts in Australia, e.g. assess the distribution of aid for women and men post-disaster, including training programs and employment contracts
 - ii. monitor increases in domestic violence after the disaster
 - iii. implement equal gender ratios in emergency management teams under the Anti-Discrimination Act 1977, allowing for equal decision-making, reduction of harmful masculine behaviours, and more women in power
 - iv. take action to ensure that women are supported for emergency front line roles - including ensuring language is inclusive and women are targeted for recruitment; protective clothing to be adapted for women's bodies to facilitate occupational health and safety.

¹ Australian Human Rights Commission. (2013). Investing in care: Recognising and valuing those who care (Vol. 1: Research Report). Sydney: Australian Human Rights Commission, and forthcoming Australia Human Rights Commission. (2013). Supporting Working Parents: Pregnancy and Return to Work National Review Retrieved 3 February, 2014, from <http://www.humanrights.gov.au/supporting-working-parents-pregnancy-and-return-work-national-review-0>

Definitions

Individual:

7. Develop knowledge and skills in individuals:
 - i. local governments to educate women in practical skills to assist survival during disaster conditions, for example ‘Weathering the Storm Kit’²
 - ii. as part of disaster recovery, educate post-disaster counsellors to identify and support women vulnerable to domestic violence, e.g. ‘Natural Disasters and Family Violence Training’³
 - iii. State Governments, through school curricula, to include education for all students on the social construction of gender, e.g. through Health Education subject areas
 - iv. State Governments, through school curricula, to include education for all students on basic global economics, such as free market economics and the effect they have on populations
 - v. Federal Government to fund women’s studies in universities.
8. Women’s sector organisations to encourage both funded and unfunded women’s groups led by interested community women. In this way, women become educated and able to advocate on the negative effects for women of both the social construction of gender and global economics.
9. Where possible, women to support green practices at home and in the workplace.
10. Women to increase skills and knowledge in personal finances, e.g. ‘Money Matters’.⁴

Activist:

11. Ensure the women’s sector is resourced and mobilised to advocate for women’s rights in the turbulence of future disasters
12. Replicate and update successful strategies used by women to win rights in the past, such as the vote, abortion, anti-discrimination legislation.

Disaster The United Nations International Strategy for Disaster Risk Reduction (UNISDR) defines disaster as ‘a serious disruption of the functioning of a community or a society causing widespread human, material, economic, or environmental losses which exceed the ability of the affected community or society to cope using its own resources’ (59). Disasters can be naturally occurring with slow or abrupt onset, such as droughts and bushfires, or of human origin, such as the Global Financial Crisis (GFC) or a factory closure. It may be argued that climatic disasters do not entirely belong to the category of ‘natural disaster’ because of the link to human involvement in their causation. However this term is occasionally used in this paper as it is used in the literature being noted.

Social construction of gender is the concept that the enactment of being male or female is something that is learnt and then performed by people at varying levels of accomplishment. Evidence for the stance that masculinity and femininity are not intrinsic to humans, but rather are the results of social conditioning, begins with the acknowledgement that context determines how a man enacts masculinity and how a woman enacts femininity. For example, the freedoms and expected behaviours of women differ from country to country, and success as a man may largely be determined by occupation and class. The binary categories of male and female are also debated in recognition that all humans do not automatically claim one or the other category. Key theorists include Raewyn Connell (60), John Stoltenberg (61), Bob Pease (62), Candace West and Don Zimmerman (63), Judith Butler (64) and Francine Deutsch (65).

Conventions used in this paper

Where page numbers are absent, the reference is a webpage.

Women’s quotes in shaded boxes, where not referenced, are drawn from two research projects from Women’s Health Goulburn North East and Women’s Health In the North: ‘Living Longer on Less’ (66) and ‘The Way He Tells It: Relationships after Black Saturday’ (67).

² Weather the Storm: Women Prepare. <http://www.weatherthestorm.net.au/>

³ Family Violence after Natural Disaster Training. http://www.whealth.com.au/work_family_violence_after_disaster.html

⁴ Managing Money: Every Woman’s Business - A Guide to Increasing Women’s Financial Capability. See <http://www.whin.org.au/resources/economic-participation.html>

Introduction

“The issue of climate change ... is by far the greatest economic challenge of the 21st century. The science is sobering—the global temperature in 2012 was among the hottest since records began in 1880. Make no mistake: without concerted action, the very future of our planet is in peril.”

CHRISTINE LAGARDE, MANAGING DIRECTOR OF THE INTERNATIONAL MONETARY FUND (IMF) (1)

There is growing consensus that the world faces three major crises – climate change, global economic vulnerability and the widening gulf between rich and poor. This is a critical time for the women’s health sector to engage with the global politics that play a determining role in women’s health status. Health, environment, climate and the economy are inextricably linked. As the Australian Women’s Health Network (AWHN) writes:

Aligned with CSDH [World Health Organisation Commission on the social determinants of health], the conceptual framework for women’s health conveys the message that any action to improve women’s health cannot limit itself to the social determinants but must tackle the structural mechanisms that produce and maintain the inequitable distribution of power, prestige and resources between men and women in the first place. (2)

Climate and the economy dominate the socioeconomic and political context we inhabit. The global nature of the causes and consequences of climatic and economic disaster dictate a broad discussion in this paper before it narrows to consider women in Australia. Understanding the political issues that limit constructive response to climate change, and understanding the economic system that shapes women’s disadvantage are both prerequisite to action (68). In the same way that education and awareness-raising was central to feminism, it is equally integral to effective action by women in regard to climatic and economic disaster. This is particularly the case when opportunities to understand the nature of minimising both climate change risks and growing inequality are limited by mainstream media with vested interest (69, 70).

The changes caused by global warming increase the instability of our environment, leading to new patterns of weather unseen before in human history. Little has been done to avert climate change, despite evidence and much publicity about ‘the greenhouse effect’ beginning to emerge almost 50 years ago (68). There is no effective national policy to cut emissions in Australia, a situation echoed in some of the world’s biggest economies including the US, Russia and Japan (71). Despite the alarming circumstances, global initiatives such as the COP⁵ have lost momentum and commitment, with the 19th COP at Warsaw considered ‘the least consequential COP in several years’ (72). The third GLOBE report released in February 2014 found that developing countries are leading the way with legislation from China, Mexico, Bolivia, El Salvador, Guatemala, Kenya, Micronesia, Mozambique, Nigeria and Switzerland (73).

While many governments stall, the planet edges towards a 4 degree rise in temperatures by the end of this century, in some places up to 10 degrees – an increase that is unlikely to allow adaptation for all:

The 4°C scenarios are devastating: the inundation of coastal cities; increasing risks for food production potentially leading to higher malnutrition rates; many dry regions becoming dryer, wet regions wetter; unprecedented heat waves in many regions, especially in the tropics; substantially exacerbated water scarcity in many regions; increased frequency of high-intensity tropical cyclones; and irreversible loss of biodiversity, including coral reef systems. (74)

A briefing paper from the Climate and Health Alliance and The Climate Institute reports that climate change contributes to fatalities and morbidities from extreme weather events; exacerbates chronic and infectious diseases; increases pollution; and reduces food quality and availability (75). In Australia, health costs are estimated at \$6 billion a year due to increased lung, heart and nervous system diseases from coal-fired power and the effects of pollution from fossil-fuelled transport (75). The report concludes:

⁵ Conference of the Parties to the U.N. Framework Convention on Climate Change (UNFCCC) or COP. The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty negotiated at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992. The objective of the treaty is to “stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”. <http://www.cop19.gov.pl/unfccc>

In general, it is the world's poor who will suffer most. In Australia, the elderly, the very young, and rural and regional communities—including Indigenous Australians—are particularly vulnerable. (75)

Clearly, women will be disproportionately affected. Statistics continue to show that women comprise the majority of the poor, live in vulnerable housing, are less mobile and have fewer options than men (14, 15, 76, 77). There are risks to women's reproductive health, too, and infant and maternal mortality are both increased by climate change, especially in tropical areas and developing countries (78). Inevitably, women stand to lose the most in climatic disaster, as this paper explores (79). Understanding the inaction of successive Australian and international governments – inaction that ensures worse health outcomes for women – relies on an understanding of the economic drivers.

The paper begins with an overview of these drivers, then provides evidence of ongoing injustice for women – the context within which women experience climatic and economic disaster. Although both kinds of disasters are integrally linked, the sections that follow focus first on economic disaster and then on climatic disaster as they affect the health of Australian women, highlighting their impacts through quotes from individual women.⁶ Although it cannot address every circumstance, this paper includes vignettes to illustrate the experiences of both urban and rural women, while nevertheless recognising that rural women have borne the brunt of climate change earlier and more intensely than urban women (58). The conclusion points to opportunities for changing the impact on women's health of disaster. Detailed recommendations for structural, intermediary and individual change are included in the Executive Summary.

⁶ Unless otherwise cited, the shaded quotes and Bushfire Case Study in this paper are based Women's Health reports 66. Parkinson D, Zara C, Weiss C, Duncan A. Living Longer on Less. Melbourne: Women's Health in the North, 2013, 67. Parkinson D. The Way He Tells It - Vol. 1 Relationships After Black Saturday. Wangaratta: Women's Health Goulburn North East, 2012, 80. Parkinson D. The Way He Tells It - Vol. 2 Women and Disasters Literature Review. Wangaratta: Women's Health Goulburn North East, 2012, 81. Parkinson D. The Way He Tells It - Vol. 3 The Landscape of My Soul: Women's Accounts. Wangaratta: Women's Health Goulburn North East, 2012, 82. Parkinson D, Lancaster C, Stewart A. A numbers game: women and disaster. Health Promotion Journal of Australia. 2011;22(3), 83. Parkinson D, Zara C, editors. Beating the Flames. Wangaratta: Women's Health Goulburn North East. Available www.whealth.com.au/environmentaljustice; 2011, 84. Parkinson D, Zara C. The Way He Tells It - Vol. 4 A Gut Feeling: The Workers' Accounts. Wangaratta: Women's Health Goulburn North East, 2012, 85. Zara C, Parkinson D. Men on Black Saturday: Risks and Opportunities for Change. Melbourne: 2013.

Climatic and economic drivers of inequality

The climatic and economic drivers of inequality begin with ‘free market economics’ – a central tenet of neoliberalism – which promotes government policies of privatisation, deregulation, minimal role of government in society, and free trade (86-90). It assumes economic growth ‘trickles down’ through society from the rich to the poor, with the private sector being the dominant provider of essential public goods and services such as energy, communications and healthcare.

Over the past decade, it has been increasingly recognised that, in practice, the ‘trickle-down effect’ does not increase the wealth of all (91, 92). Instead, for the great majority of the population, the financial and health outcomes of this politico-economic theory are poor, especially for the most economically vulnerable, including women, single mothers and the elderly (93). Privatisation of essential services has resulted in worse population health outcomes in contrast to previous decades when government provided these services and there was less income variation (3, 94). Under free market economics, the rich have become richer and the poor (mostly women) poorer. The top 10% of the richest Australians benefited most, taking 50% of the income growth over the past three decades (95). The top 1% have done best of all (91, 96).

“ *All the jobs I’ve done all my life, teaching, nursing, community service, they all pay far less than anything else, and I’ve worked bloody hard.*

LORNA, 59

“ *I don’t know how much you know about the public housing situation but the supply is a fraction of the demand and the need ... [It is] in a shake-up at the moment and when it falls down a lot of people are going to fall out into the gutter.*

LESLEY, 60

“ *I had some savings and slowly but surely the pension didn’t supplement my bills. I mean I have a huge medication bill which is a worry because I’m getting to the point now where I’m going to have to drop some off.*

BRENDA, 59

Globalisation contributed to this exacerbation of inequality. With the entrance of China and Russia into the capitalist world market, free trade and multi-national corporations expanded as a result of globalisation’s integration of business, trade, ideas and movements (6). Enormously powerful politically, multi-national corporations provide donations to political parties with policies favourable to their interests (3). The term ‘corporatocracy’ has been coined to capture the subsequent compromised relationship between government and business (97). Corporations such as General Electric and Apple have bigger balance sheets than some poor countries, and current tax provisions can mean it is legal for some corporations to pay little tax, for example, on profits on intellectual property (98). The OECD began consideration of issues such as these at the 2013 G20 meeting (98). Utility companies, oil and mining companies, media organisations and those holding power in the current status quo stand to lose status and wealth with effective action on climate change (and with feminist gains) (3, 69, 70, 96). To avoid this, using their wealth and power, they shape ideology through control of political institutions, and influence over educational and religious establishments and the media.

In 2007, global economic integration led to the bankruptcy of some major banks in the US with worldwide consequences, and this signalled the start of the Global Financial Crisis (GFC). Before this, the US dollar was the dominant reserve currency globally. Following the crisis, as the US dollar weakened, the Australian dollar became a safe investment. This, combined with Chinese investment in the Australian iron ore industry, lifted the Australian dollar to above parity with the US dollar and Australian profits fell in line with the lower competitiveness of Australian exports, e.g. in agriculture and manufacturing (99-102). For many Australian women, the consequence was loss of employment as private businesses in the globalised free market economy increasingly outsourced to the cheapest labour available, often in developing countries (3).

“ *The [employers] say, ‘This is a function that you have to work voluntarily’ ... That is what the agency says, ‘Well you have a job, we have thousands apply’. So what do you say? That is when to shut the mouth and do.*

ANU, 55, MIGRANT

Traditionally conservative entities like the World Bank and the International Monetary Fund (IMF), which previously tied free market conditions to their loans, are now doubting the veracity of the trickle down effect (91, 103). Joseph Stiglitz, recipient of the Nobel memorial Prize in Economic Sciences in 2001, and senior vice president and chief economist of the World Bank, wrote in 2013:

The World Economic Forum's annual meeting in Davos has lost some of its pre-crisis panache. After all, before the meltdown in 2008, the captains of finance and industry could trumpet the virtues of globalization, technology, and financial liberalization, which supposedly heralded a new era of relentless growth. The benefits would be shared by all, if only they would do "the right thing." Those days are gone ... The shift in the debate from just a year ago seems dramatic: no one even mentions the notion of trickle-down economics anymore, and few are willing to argue that there is a close congruence between social contributions and private rewards. (104)

Yet, policies in Australia continue to reflect free market economics, and this ideology was an important factor in the crisis facing the Goulburn Valley in Victoria with the possible closure of SPC Ardmona, the last fruit cannery in Australia (105). Limiting government 'safety nets' (106) and ending the 'age of entitlement' (107) involves cost shifting to those least able to afford it, as in the 2013 changes to the single parent benefit, the progressively increasing age of pension eligibility and changes to superannuation tax concessions. All disproportionately affected women, as women head 82% of single parent households and an estimated 90% of beneficiaries are women (108, 109); as age pension eligibility for women was progressively raised seven years from age 60 to 67 (with the Productivity Commission mooted a future increase to age 70) (110); and as proposed changes to the superannuation system penalise low income earners and increase tax concessions to those on higher incomes (111).

A further example is the Trans-Pacific Partnership (TPP), which at the time this paper was being written, was being negotiated in secret. Proposals under consideration could threaten access to medicines through patent monopolies and increased costs; challenge health promotion labelling initiatives; and potentially bypass Australia's legal system by allowing foreign corporations to sue the Australian government in international tribunals in regard to public health

and environmental laws (112-114). Australia's health promotion measures such as plain packaging of cigarettes, food labelling clarity and alcohol warnings on labels could be open to challenge. Concerns are emerging on many fronts with the underlying fear expressed by public health academics that free trade agreements reduce governments' authority in their own country (114). The TPP is a greater impost for women due to their role as primary and sometimes sole carer of children, those with disabilities or illnesses, and elderly parents, and would exacerbate a situation where even now, women on low incomes have no option but to forgo medicines because they are unable to afford them.

In contrast, the existence of a universal system of social support and healthcare, where it is government responsibility to provide these vital services, is more strongly correlated to positive health indicators than free market economics (106).

“ *Just living from day to day on virtually nothing, but I also think with my health, I'm not going to be around for much longer. I've got heart problems and my lungs and one kidney.* ”

BETTY

“ *I've been on a really low income for a long time and I've been losing sleep in recent years over what's going to happen over my housing prospects because I rent privately and I'm single.... The thought of homelessness ... is really scary.* ”

ANNA, 58

“ *My rent here is \$950 a month [and] I only get the normal pension ... it's a real desperate worry for me. I keep thinking I'm going to end up living in my car like I've seen some people.* ”

BRENDA, 59

“ *I know ladies that I used to look after in home care ... candles burning at night, they trip over. I said, 'Oh you can't do that', they said, 'But we can't afford electricity ... And you know they don't want to go and ask their children because their children are just as bad off ... and the women have to go without something to pay for the day care while they're trying to pay the power bill. It's very sad. I don't think the government thinks of this.* ”

ROSALIE, 77, ABORIGINAL WOMAN

Women and equality

Reducing inequality is essential for stable economic systems (91, 115, 116), and the failure of free market economics to offer security to all – particularly women – has been recognised at the top level of monetary regulation. For example, as one strategy in reducing financial inequality and restoring a stable world economy, IMF Managing Director Christine Lagarde emphasised the need to ‘tear down all obstacles in the path of women’:

Gender inclusion is critically important ... the evidence is clear, as is the message: when women do better, economies do better. So policymakers and economic leaders must do better in supporting women. (1)

The evidence of inequality for women is equally clear, as captured in the Australian Women’s Health Network’s 2012 paper on ‘Women and Health and Well-being’, which highlights additional burdens for Indigenous women, refugee women and women with disabilities:

Women in Australia have fewer financial resources, less wealth and property, and higher family burdens in the dual economies of paid and unpaid work than their male counterparts. They ensure the reproduction, well-being and survival of others, from newborn to old age, but often lack necessary support and financial independence. There are specific groups of women whose health is significantly compromised by their exposure to risk and social experiences. (117)

The privileging of men is well documented, if ubiquitously forgiven and ignored (118, 119). Its invisibility is its strength (60, 62, 120), as ‘belief in the naturalness of inequality leads most people to accept and live with existing inequalities in the same way that we live within the laws of gravity’ (62). Privilege has many dimensions – being White, male and middle class – and gender is just one, intersected as it is with other aspects of discrimination like race, religion and class (3, 121). Being male is, however, an undeniably powerful privilege.

*The source of the problem is **power**, with men enjoying more of everything: money, attention, influence, status, even leisure (60).*

The prevailing image of leadership in Australia continues to be male and White as reflected in the 2013 Federal Government Cabinet and many corporate boards. At Board and Chief Executive Officer (CEO) level, only 15.4 % of ASX 200⁷ directors and 9.2% of executives in Australia’s top 500 companies in 2012 were women (122). In the context of climate and the economy, men dominate at leadership levels with women’s perspectives rarely considered in policy (18, 76, 123). Despite comprising the majority of grassroots leaders and activists, women are underrepresented in environmental and economic leadership (124).

This dearth of women in leadership roles is reflected in disaster management (20). As in the US, women in Australia are included in the lower professional ranks but are not in positions of power. In New South Wales in 2011, 21% of ‘operational’ Rural Fire Service (RFS) volunteers, who include fire-fighters, team members, crew leaders, team leaders and officers were women, but only 4% of deputy captains and 2% of brigade captains were women (125). According to Eriksen (125) ‘This gendered division of both membership numbers and roles reflects the continual reliance on patriarchal structures for the control of both technology and nature’. In Victoria, the Country Fire Authority (CFA) is an equal opportunity employer but this legislation does not include volunteer fire-fighters. As a result in 2011, only 14% of volunteer firefighters were women, reflecting a culture of sexism and ‘gendered hostility’ towards women in the organisation that is unacceptable and unjust (126).

Surviving disasters, both natural and economic, is just the beginning, as women are at risk of both male violence and disproportionate financial penalty in disasters’ aftermath (48, 127-129). Short-term, the GFC exacerbated women’s poverty more than men’s through early job loss (93) and women had few options but to step in to caring roles when formal support services were cut (93). In Australia, too, women were reported to work harder and longer than men after both kinds of disasters (37).

⁷ The ASX 200 is a Stock market index that measures the performance of the 200 largest stocks present on the Australian Stock Exchange. http://www.investorwords.com/8349/SP_ASX_200.html

The chaos that follows a crisis is a window of opportunity for change – regressive or progressive – and disasters provide the environment for women and minority groups to lose ground in their hard-won progress towards equality, as patriarchy reasserts itself (56,57):

[W]hen something like a natural disaster destroys the institutions of the state, the workplace, and the home, men feel their hegemony is in crisis ... [and the] crisis situation provokes attempts to restore hegemonic masculinity. (46)

“ *Men don't do what we do ... the caring ... if a woman wants to do anything they have to make sure they have a babysitter, you know whether it's an uncle or an aunty.... Whereas a man can just get up, walk out the door, get in the car, turn the key.*

IRIS, 55, ABORIGINAL WOMAN

“ *He was a hard worker, but then he could be a hard worker because he come home [and] everything was clean.*

GIULIA, 68, MIGRANT

“ *I've got a brother.... He doesn't look after my mother ... My mother, her partner ... I do a lot of care of them. Even though they've got six kids, I'm the only one who really does anything, which gives me the shits as a feminist because most of them are boys.*

LESLEY, 60

Economic disaster

Economic disasters may take a number of forms from crises on a global scale, such as the GFC, through to small-scale economic changes that affect a specific geographic location and have primarily local effects. Economic crises may be further divided into sudden onset, such as the closing of a factory resulting in the loss of a large number of jobs within a single community (as occurred recently in Australia as a result of General Motors' decision to close its Australian Holden factories) and crises that have a slow onset, such as those caused by drought or industry downturn (as in the case of the gradual decline of the Tasmanian timber industry).

Women are disadvantaged at each stage of an economic crisis: planning, managing and rebuilding. During the planning stage, most macroeconomic policies are gender blind, neglecting to address the structural factors that construct women's economic vulnerability, and leaving women with no buffer for protection in the case of an economic crisis (130).

At the management stage, initial financial stimulus packages issued by governments tend to be similarly gender blind, targeting traditionally male-dominated industries such as construction (93), and subsequent austerity policies usually involve heavy cuts to social services and the public sector, which leads to the loss of jobs in sectors dominated by women and increases women's workloads to compensate for the loss of public support (3, 93).

During rebuilding, the absence of policies specifically targeting women and taking into account their specific circumstances serves to deepen inequality (131). Women can be forced into precarious social and employment situations, suffer ill-health, food insecurity and violence. Times of unemployment and economic recession have consequences that continue well past re-employment or economic recovery as strategies employed by struggling households (many of which are headed by women) such as selling assets, taking on additional debt or taking children out of school are difficult to reverse (132).

Short-term, the GFC exacerbated women's poverty more than men's through early job loss (93) and women had few options but to step in to caring roles when formal support services were cut (10). During the GFC,

a sharp decrease in wages took place generally, but the decrease was more significant for women across all industries (7). During this time, female labour force participation rates actually increased as women entered paid work to contribute to expenses such as mortgages and credit card repayments. Changes in labour markets overseas and in Australia resulted in more women entering precarious, low-paid, and/or informal work, with attendant exposure to greater health hazards at work than men (133) and an increased risk of exploitation (6).

Following the 1997 Asian financial crisis, women and girls were found to be particularly vulnerable to poor health and nutrition (10). Rates of prostitution or 'survival sex' were noted to increase, resulting in women's increased exposure to sexually transmitted disease and violence. Although conditions in the countries that suffered most from that financial crisis are very different to Australia, it is likely that similar effects occur here. Anecdotal evidence emerged of single mothers resorting to prostitution to support themselves and their families following the changes to the Sole Parent Benefit in 2013 (134), and it is known that women in Australia, as in the rest of the world, are the first to give up food under conditions of food insecurity (135).

The Global Financial Crisis (GFC) of 2007-2008 had a disproportionate impact on women (6). The initial effects of the crisis spread quickly to housing mortgage foreclosures, job losses, stress and poverty, and in many countries government stimulus packages were followed by austerity measures. Although Australia's alternative response in stimulating the economy avoided many of the negative effects that damaged overseas economies and people (136), funding cuts by government to charity organisations and loss of public sector jobs were experienced in the wake of the crisis. Both are sectors which tend to employ many more women than men (4). Women also predominate in retail and hospitality sectors, which were affected by a reduction in consumer spending after the crisis (5). Domestic workers, too – often migrant women – were among the first to lose their jobs as their work is considered dispensable (6). The result was more women in economically precarious situations (6).

In regard to more secure work, similar gender norms prevailed, with almost 40% of employers agreeing in a 2005 global survey that when jobs are scarce, men have a greater right to a paid job (4). Research from the UK Equalities Office found that 24% of men think it makes sense that ‘people’ on maternity leave are made redundant first (11), and Australian research found that their ideal employee profile is one that is male, young and unattached, with 40% preferring employees without children (137). Due to gender roles, women are much more likely to give work as a gift, rather than barter or trade like men (138), and men’s independent activities are generally more driven by profit, with the work of women usually enabling the leisure activities of men (139). Primarily, women’s roles as primary carers of children allow such discrepancy, as women who are primary carers do the equivalent of a full-time job (39, 140). A 2012 report indicated that Australian women’s unpaid care work was estimated to be worth AUD\$650 billion – half Australia’s gross domestic product (GDP) (39, 140).

Local and international research has shown that situations of economic insecurity can lead to increased violence against women as relationships become financially stressed (6, 14). This may be especially the case when women bring home a larger income to support the family, thereby gaining greater access to socio-economic opportunities and the independence that goes along with this. Some men perceive a threat to their role as masculine provider (138, 141-143). The necessity for women to take on extra paid work in cases of economic decline or loss of income for a family has been extensively documented in Australia (144, 145), and approximately 37% of farm income comes from off-farm employment and 73% of women need to seek off-farm work (38). It follows, therefore, that Australian women are exposed to this risk of male violence in economic disasters. Indeed, violence against women around the world rose after the GFC as families from all continents experienced the consequences, including in the United Kingdom, Ireland and the USA (6).

“ *There would be any number of farmers around here still farming purely because the wife is working outside the farm. I think it’s the only reason they are still farming.*

SONYA, 38

The following four vignettes highlight different circumstances in which women may experience economic disaster.

Vignette 1: **Long-term economic disasters:** **Rural women and drought**

Sociologist Margaret Alston and others’ extensive work on the experiences of rural Australian women during drought reveals that not only are they forced to seek off-farm work to support the farm financially, but they will also experience an increase in on-farm work as capacity to hire outside help declines. Women may take annual leave from their paid work in order to work on the farm during times of high demand, and many keep working beyond the age when they would usually retire. In undertaking both on- and off-farm work, women are not exempt from their traditional gender role work of household labour and child-raising (7, 146). Fundamental farm family structures and the gender stereotyped division of labour remain the same, with women continuing to do the gardening, household work, child care, food preparation, and occasional farm work (139).

At the same time, women’s unpaid labour, caring and volunteer work must increase to compensate for cuts to public expenditure in sectors such as aged care (7, 146, 147). According to Alston, ‘pluriactivity has become a way of life’ (148). This overwork – often lasting years – has resulted in significant health consequences for rural women, particularly exhaustion (139, 144, 145, 149, 150). Despite their financial contribution to the family farm and the fact that women’s roles frequently extended to bookkeeping for the farm, women were mostly excluded from major decision-making (38, 139, 148). Many women report strain and heartache from their partners’ resistance to selling the property or leaving the industry – resistance that often entraps women (38, 151).

A further consequence of free market policies is the exodus of young women from rural areas as employment opportunities shrink beyond the discrimination that already restricts career opportunities for women (152). The ‘macho’ profile of rural areas leads to gendered work profiles (142, 146) and reductions to services restrict job opportunities in traditionally female dominated areas such as education, welfare and banking (7, 146, 151).

“ *The kids have got a great life – they’ve got everything they want – that’s coming out of her job. She pays the grocery bill so the kids are fed, everyone’s fed, everyone’s happy ... but if you look at her schedule – they’re stand up shifts ... she became a wreck and now she’s had a few little ailments and she’s in a fair bit of pain .*

ROBERT, IRRIGATION FARMER, 38

“ *My wife] is a lot ... [angrier] than she used to be and I see a grumpy person now instead of the person who was the fun-loving housewife that she used to be ... And she doesn’t help on the farm anymore whereas she used to ... [Before, when she’d come back from a full week working away] I’d be pulling half a day out of her.*

ROBERT, 38

“ *The more I’m successful the worse it is for him – it’s that sense of failure. I’m sure he’d ultimately like me to be back there and just run all of that [household and books] for him, but I’d go nuts because I’d have no money ... he’s not a bad farmer. But he’s overburdened and he’s not alone ... it’s catastrophic what’s happened to us ... I’m so tired ... I can’t speak to John about it. ... sometimes it gets overwhelming.*

CHLOE, WIFE OF JOHN, 38

“ *You’re talking to someone that lived on a beef stud farm ... I was an outdoor girl that would try to help my father until I reached puberty and then that wasn’t encouraged, and the succession of the farm goes automatically to the son ... it’s almost subliminal ... I do know of another family in that locality where the female is the farmer. She’s a great farmer and the son didn’t want to. So that family was able to foster that interest irrespective of the gender.*

FIONA

Vignette 2: Short term economic disasters – Job loss

According to neoliberal philosophy, inefficient industries create a drain on the system and fail if they are unproductive; therefore factory closures are a natural process and should not be prevented. Geelong (in Victoria), for example, faces imminent job losses in the hundreds from Alcoa, Ford, Qantas and possibly Shell. The following four vignettes highlight different circumstances in which women may experience economic disaster (153). In a culture of reduced public spending, there is minimal government support for newly unemployed workers, and cuts to government benefits and services particularly affect working women, especially single mothers and low-income families.

The consequences of a woman losing her job in such circumstances include higher levels of stress-related illness (7), lower take-up of health-promoting activities (9) and increased financial pressure when women are solely responsible for dependents (140, 154). Men’s violence against women may increase in times of financial stress (11) and women’s reduced financial capability may limit their options to leave (155). After economic crises, women trying to re-enter the job market after having children will find it more difficult in the increased competition for jobs (156), and where they are likely to face discrimination due to their age or skill level (7). Job loss has a flow-on effect to retirement savings (133, 157).

The *indirect* effects of such factory closures will also be significant for women. When economic conditions in the household worsen, women generally take on a larger share of the household work to compensate (7).

“ *I was retrenched in May and now after two months am in the uneasy position of being unemployed, having very little cash on hand, and \$20,000 in super ... I am not eligible for the age pension till August 2014 ... I was not entitled to a redundancy payout ... To lose my job so late in my working life is pretty scary.*

ELLEN FROM LLOL

For example, a woman whose male partner loses his job will be at greater risk of stress-related health problems due to a higher workload from having to increase paid work while continuing her gender role obligations of household work and childcare, and sometimes community work to maintain cohesion in the face of growing economic and social pressures at the community level (155, 158).

“ *The caring, I think women have always been less paid than men. And they aren't seen as employable as men because they have the babies and everything. I know they've got maternity allowance now and things like that but I know when Sally was working and she had her first child, and they said, 'You're not going to have another one soon are you?'... All employers do it.*

IRIS, 55, ABORIGINAL WOMAN

Vignette 3: Structural inequity in superannuation

The current hybrid pension/superannuation system in Australia wrongly assumes that men and women reach retirement with similar work histories. While past discrimination against women in the workplace was stated in policies and procedures and is now barred by anti-discrimination legislation, gender discrimination continues in less overt ways. For example, economic analyses continue to prove the vastly unequal retirement incomes for men and women which emerge principally from the gender wage gap and women's interrupted career paths through caring responsibilities (159).

The gender wage gap is estimated to result mostly from discrimination (160) – and a forthcoming research report from the Australian Human Rights Commission will formally document women's experiences of such discrimination (160). Other factors that contribute to lower superannuation balances for women include marital breakdown, domestic violence and social expectations that women will provide care to others. Even if women were to work full-time on average female earnings for 40 years, while contributing 15% to superannuation, they will likely outlive their super (161).

The persistent gap between male and female remuneration for similar work and the gendered nature of informal care work play an important role in determining labour market outcomes for women. It is hard, if not impossible, to incorporate such factors into conventional notions of choice ... This analysis shows that the current superannuation scheme effectively takes the gendered income inequalities that exist during people's working lives and magnifies them in retirement. (162)

After the GFC, fewer women chose to retire as they generally had fewer assets (7) and some had to return to the workforce after retirement as a result of the effect of the crisis on their superannuation (66).

Vignette 4: Long term economic disaster – Decline of the timber industry in Tasmania

The decline in the forestry industry in Tasmania is occurring amid a general rural economic downturn of around 1.3% annually (38). This is caused by a combination of factors including minimally subsidised family farms trading on a global market, low commodity prices, and the high Australian dollar (94, 146, 151, 155, 163, 164). The situation is exacerbated by unsympathetic free market policies because the Australian government sees agricultural decline as inevitable and policies that aid the industry as hindering the marketplace (38, 146, 165, 166).

A report conducted by the Cooperative Research Centre for Forestry in 2011 found women aged between 30-39 years of age suffered the worst health effects from the decline of the Tasmanian timber industry (155). As with job loss after factory closure, the general economic downturn in communities made re-entry into the labour market particularly difficult and women attempting to find new jobs were hindered from re-entering the labour market by lost skills (156, 167). Nevertheless, echoing the situation for women on farms, the declining productivity of the forestry industry forced women to take any job to subsidise the family income. In obtaining new employment, women frequently had no option but to live away from home and/or travel long distances (38, 58, 139, 146, 168). Many of these women did not have access to re-training programs

offered by the government, which were targeted at those who worked directly in the timber industry, thereby deepening gender inequality (58, 94, 155). In these circumstances, women reported exhaustion from travel and from supporting men and families psychologically. The final injustice was that women reported being viewed negatively by the community and seen as neglecting their duties as wives and mothers by working away from home (38).

Schirmer et al. (155) reported that much could have been done to help those who had lost work through the timber industry shutdown, and that a large proportion of those who had managed to find new work since losing their jobs were working in worse-paid, less-secure conditions. Approximately 20% of families in this industry in Tasmania experienced a fall in income, 68% had not had a pay increase since 2008 (in the face of rising costs of living), and 75% reported an increase in stress level from lack of job security (155). Where respondents found new employment, it was paid at a lower rate or casual. More than 50% of survey respondents had high impact stress, depression or anxiety about their future. Such stress (although not causal) has been linked to domestic violence and family break-up, amongst other negative changes (155). The decline in the timber industry has been accompanied by a significant drop in property values due to shrinking population and oversupply of properties on the market, leaving remaining residents at risk of considerable financial disadvantage if they decide to sell their property (167, 169).

Women affected by the timber industry decline, now unemployed, with strained or violent family situations and with subsequent health problems have made choices over their lifetime based in widely divergent government policy environments. Consequently, there is a high degree of distrust towards government policy by rural women (58). A potted history of the Tasmanian timber industry reveals the extent to which women's lives (and men's) are shaped by government policy, and the injustice of applying free market economics in capricious ways, supporting one industry or one factory and not another with decisions influenced by electoral implications (170). Federal policies encouraged timber plantations in the 1990s, as small agricultural farms

became less productive (169): approximately one in 25 dairy farms were turned into large-scale plantations, where less labour was needed. This has the unfortunate consequence that several plantations were foreign owned, thereby bypassing the local community in sharing profits. Environmental opposition to felling native forests saw a long, drawn out battle with the forestry industry which was only settled with a deal in 2013 under state and federal Labor governments (171). This deal is now threatened by the 2013 federal Coalition government's application to take a large part of the Tasmanian old growth forest off the UNESCO heritage listing, arguing that it restricts business (172).

The forestry industry decline has so far led to the loss of 3500 directly related timber jobs and other secondary employment, local economic recessions and outward migration (155, 169, 171). Tasmania now has the highest rate of unemployment of all states and territories (155, 173). Communities are further divided socio-politically by debates over the environmental damage caused by the timber industry (174) and these factors could lead to a heavier burden on women, including increased social isolation.

'A worker's ability to adapt successfully to change depend on a range of factors from human, social and financial capital ... in addition, their capacity to adapt may be constrained by considerations such as family commitments.' (155)

Climatic disaster

The estimated lifetime exposure to natural disaster is one in six for Australians (175), yet a gendered perspective is largely absent from planning for disaster prevention, management or reconstruction (21, 120, 176). Globally, women and children are at greater risk both during and after a disaster (12-16, 177) and more women than men die in disasters (18-20). Across the world, women are poorer than men and inhabit more risk-prone localities and housing (15, 16, 21, 32). In the immediate aftermath of climatic disasters such as floods and bushfires, one of the primary reasons for women's greater vulnerability is economic insecurity. Finances are vital to survive the interruption to income and severe financial strain due to losses caused by disasters (30).

The 2013 Intergovernmental Panel on Climate Change (IPCC) report:

... establishes with high levels of certainty that the planet is warming. The mean global temperature has risen by almost 1°C since pre-industrial times, with increasing temperatures over land and sea. Carbon pollution is already dangerously high. The atmospheric concentrations of carbon dioxide, methane, and other greenhouse gases are now higher than at any time in human history, and at any time for at least 800,000, if not millions of years. (178)

For Australians, every decade since the 70s has been warmer than the last; sea levels continue to rise, with displacement threatening low lying Pacific Island states; there is increasing risk from tropical insect borne diseases; and the nutritional quality of wheat is compromised by elevated CO₂ levels (178). Climate change has significantly increased the Forest Fire danger Index at 16 of 38 weather stations and the mental and physical health costs associated with extreme weather events has increased (178). While a 2014 report on Australian attitudes to climate change found that more than 80% of Australians believe climate change is underway, it is given relatively low priority by them, below cost of living, employment and education (179).

In coping with the immediate and evident effects of climate change, women have fewer resources to allow adaptation such as re-location or retrofitting homes to mitigate against extreme temperatures and weather

events or installing water tanks (22). Poverty and mental health are linked (93) and the effect of climate change on mental health has also been noted, particularly amongst people living in disaster-prone regions or where there is social or economic fragility (8, 180). Climate change acts as a risk multiplier (181). For rural women, especially, the necessary dependence on private motor vehicles can make access to services and social engagement unaffordable. The long distances lead to high and often unaffordable petrol costs. Those in rural areas face higher risk of floods, storms and bushfires, and the impacts that follow such extreme weather events and disasters are deeper as a result of the decades' long rural economic decline.

After disasters, the focus on rebuilding *buildings* rather than communities, and the pre-existing male domination of earth-moving and building industries result in men benefitting most from paid reconstruction work (21, 37). Barriers to women's financial recovery begin with women's lower savings base – itself a result of lifelong barriers to income production due to socially constructed gender roles and discrimination. Women's prescribed role as carer often precludes an early return to work through interruption to infrastructural supports such as schools and child-care (30, 133, 182). Other supports are removed too. Wholesale displacement of people, now homeless after disasters, reduced options such as childcare provision from extended family members or friends, or family day care. As in economic disasters, additional emotional labour is required of women more than men, to support suffering partners, children, friends and community members traumatised by the disaster.

In Australia, women may be both geographically and socially isolated though being edged out to the cheaper peri-urban areas of metropolitan cities, many of which pose a greater threat of bushfire, and entrench disadvantage by sub-standard provision of services, particularly public transport (18, 26). Already less mobile through caring for children and others, women's mobility is further restricted through their lower car ownership than men, and the increasing cost of fuel as the world edges to oil shortages (22, 27-29). Such practical disadvantages stemming from poverty and exacerbated by climate change can lead to social isolation for women (145).

The consequences of catastrophic disaster are different for women and men in that women suffer more psychological problems, while men tend to turn to aggressive behaviour and substance abuse (183). The link to socially acceptable gender behaviours is evident, as for men, anger is more acceptable than tears. For women, it is reversed. After a climatic disaster, some people return to their devastated locality, deeply disturbed by the loss of place, without jobs and without secure housing, and many turn to alcohol and drugs (14, 49, 55, 67, 184, 185).

“ *I had the care of four of my grandchildren at that time and one was a baby. And they ranged from ... eight months through ... to three [years] ... The three year old I had from when she was six months old, the twins I had from 18 months and then the little boy from eight months old. I've only got one left with me at the moment ... I had a couple of other kids stay with me that weren't related from time to time as well. So you just do what you have to do.*

IRIS, 55, ABORIGINAL WOMAN

“ *[After Black Saturday, he] had a virtual permanent binge drinking and he was aggressive ... I was concerned about [our daughter's] and the kids' safety because you hear things of blokes going completely off the rails and killing their families and then killing themselves or something.*

ROD

In developing countries, studies clearly indicate that physical and sexual violence against women increases after disaster (13, 16, 186-188). The evidence in developed countries began to emerge with a foundational text by Enarson and Morrow in 1998 – *The Gendered Terrain of Disaster* (189) which included a chapter by Alice Fothergill on domestic violence (190). Since then, a growing body of evidence from studies after disasters in the US, Canada and New Zealand confirms that violence against women increases (14, 32, 43-52). In Australia, research on violence after disasters is just beginning with a 2012 study that confirmed the link (48, 53, 82).

Increased *community* aggression and violence, too, was widely observed and upsetting to women, men and children (85). Twelve months after Black Saturday, a research participant said about her town: ‘I hardly recognise the place now. I look around and I don't know what ethos it is we hold on to’ (67). Family dynamics change too, shaken by the layered pressures of the aftermath of disaster (43, 49, 145). An informant to a study after Black Saturday commented:

People were at very different places than they were six months prior in how their relationship unfolded, their emotional status, all the different stressors they faced ... of being unemployed, of being homeless, of grieving lost friends and family, all of those different things that are high on your normal stress list but all compounding and all happening together. (Paul) (85).

The following vignettes focus on two different types of climatic disaster – catastrophic bushfire and its aftermath and urban heat waves.

Vignette 5: Long term climatic disaster – Catastrophic bushfire and its aftermath

Australia's unrelenting drought delivers summers with dry conditions and high risk of bushfire as the norm (38, 191, 192). Temperatures continue to climb each summer as they have each decade since the 1940s (68). Combined with gusty winds, catastrophic fire danger seems ever present.

Recovery after catastrophic bushfire is indeed a very long process. Recent months have seen commemoration of 30 years since Ash Wednesday fires in Victoria, 10 years since the Canberra Bushfires and five years since the Black Saturday fires. Recovery is slow and for some, practical and psychological problems are unabated by time passing (85). A report on 100 years of bushfire fatalities found that:

Most female fatalities occur while sheltering in the house or attempting to flee. The number of men killed by bushfires has decreased; however, this is not the case for women and children, who in recent years have died in relatively high numbers (36).

From 1956 to 2007/8, 146 males and 99 females (40%) were killed, and on Black Saturday in 2009, 100 males and 73 females (42%) died (36, 193). As in the case of economic disasters, women and men have different access to survival and recovery resources and different capacities to mitigate the effects of disasters (30). Socially constructed gender roles play a part with researchers suggesting men take greater risks than women and are more likely to be involved in outdoor activities and 'often take on defensive activities, while women and children are left to shelter passively in the home or evacuate at the last minute' (15, 32, 36).

Defined gender roles mean women receive less bushfire education resulting in a lower preparedness for bushfire and less skills in operating equipment and chainsaws to aid fire-fighting attempts and escape (31, 32). In 2010, Eriksen et al. (176, 194) confirmed that the myth of the 'male bushfire volunteer' remained strong; employed women with children had little time for bushfire preparation, and their absence contributed to male domination of this work and to the subsequent reinforcement of rural hegemonic masculinity. In bushfires, the stereotype is of heterosexual couples with the male partner fighting the fire and the woman and children protected (31, 126, 176). However, the Black Saturday Royal Commission found that only a third of fire-affected people attempted to protect properties (195). Indeed, the notion of 'women and children first' in disasters has been refuted by a 2012 meta-analysis which concluded human behaviour in life-threatening situations is 'every man for himself' (23). The reality in Australian bushfires, is that women are often left to protect the home or escape with dependents when men are not present - either through paid or volunteer fire-fighting or for other reasons (31, 34, 196).

Decision-making between couples in life-threatening situations has been studied and consensus reached that women generally prefer to evacuate early (31, 33). Their ability to do this is restricted by both a traditional yet unspoken expectation that the man makes the decisions (17, 35, 36). In the US, Fothergill (190) questioned whether more women died because 'their husbands had the decision-making powers and they did not dare leave without their husband's permission [and were ...] afraid of blame and punishment'. In Australian research, Lou, a male research participant,

clearly articulated the way cultural constraints here, too, endangered women:

'Look, there are a lot of tough women up here that made brilliant decisions, and are a little bit more logical than a lot of the blokes up here. But in general, the percentage of the women that would have said, 'Right, no, you're not staying, get in the car, we're going, it's only a bloody house', would have been 1 or 2%. Most of the blokes would have said, 'This is my bloody house, I built it, I worked my arse off the last 25 years, I'm not leaving this joint, blah, blah'. And the wife would say, 'Are you sure we're going to be alright?' 'Yeah, yeah, we'll be alright'. And I know a few families that perished like that. (Lou) (85)

In their Review of fatalities, Handmer et al. (195) write:

There is evidence of disagreement 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. (195)

In disasters, danger to women may also be intentional – caused by violent partners. Before flood waters, storms or bushfires strike, controlling men are in a position to dictate the terms of women's involvement, making evacuation even more challenging (14). An Australian domestic violence crisis line worker heard from one woman in this situation the night before Black Saturday. She said this memory continues to haunt her:

I received a call from a woman at around 3 in the morning. She told me the history of abuse from her partner - it is honestly, abuse that is much too gruesome and personal to repeat here ... Then she told me that people in her town were enacting their bushfire plans because it was a bushfire region. She said that her plan was always to leave early, but tonight, after abusing her, her partner took the keys to the car and said, "I hope there IS a bushfire tomorrow and I hope you die in it." And then he took the car and left. She had no other plan for getting away. (53)

Categories of vulnerable people currently focus on the elderly, babies, and people with disabilities but women in domestic violence situations are clearly another vulnerable group. During the disaster and in the response period, women with intervention orders or who

otherwise are avoiding violent ex-partners are at risk of sharing community refuges with them or seeing them at community hubs. For some women, there is no option but to return to violent men to house their children – lack of knowledge of such vulnerabilities by community and emergency management further endangers women (14, 43, 49, 54, 55).

Disaster intensifies the everyday excusing of men's violence in Australia; a 2006 report on Australian attitudes found that only 53% of Australians in 2009 viewed 'slapping or pushing a partner to cause harm or fear' as 'very serious' (197) and about one in five Australians 'believed that domestic violence can be excused if it results from a temporary loss of control' (18%) or if a perpetrator regrets their violence (22%) (197). In the aftermath of disasters, gains over recent decades in community recognition of domestic violence as a crime seem to dissipate. Empathy for men who are 'good blokes' and were heroes in the fires silences women, especially where the men appear to be suffering or suicidal (53, 182). The experience of disaster may be seen as reason enough for 'losing control' and behaving violently (45, 46, 55). And men's violence was rarely rebuked by the 'blokey' and 'mate' cultures in emergency organisations (62, 126, 198, 199), nor by local community members or service providers. Willer et al. (200) reported that perceived threats to masculinity evoke extreme masculine displays and Pease (198) writes that violence is one of the ways traditional manhood and patriarchy are maintained and reproduced. It appears that violence may emerge as men's response to what they see as challenges to their privileged position (198) and as men reclaim some level of control after catastrophic disaster (46).

In a post-disaster context where the usual institutional constraints of society are diminished, women's reporting of violence is not heard, or silenced before it is voiced (40, 46, 201). Unfortunately, the services established after disaster to support men and women suffering economic and physiological effects are seldom informed by an understanding of domestic violence and at times are inaccessible and ineffective (14, 48, 49, 51, 55, 77, 82).

“ *Whereas he would hold it back if we were in front of people normally, he really embraced the whole, I can be an absolute prick to everybody and I can get away with it because I can say I've been through the fires and I'm traumatised' ... You don't want to upset [him] because it just gets big ... At what point do you go, I'm sorry but your behaviour is bad and I'm pointing it out to you', instead of going, 'Let's not say anything 'cause he'll get upset'.*

KELLY

“ *So much has been justified as a result of the fires ... So much has been fobbed off. So many women have gone to police and been told by police, 'Things will settle down again'.*

CASE-MANAGER

Vignette 6: Short-term climatic disaster – Urban heat waves

Heatwaves kill more people than any other natural hazard (192) and affect women more than men (24).

If core body temperature rises to 38°C for several hours, heat exhaustion occurs, and mental and physical capacity becomes impaired (Parsons 2003; Berry et al. 2010). If core temperature goes above 42°C, even for just a few hours, heat stroke and death can result (Parsons 2003). (192)

The frequency and intensity of heatwaves is increasing as a result of climate change (68, 178). In the 2009 Victorian heatwaves, 374 people died in excess of normal expectations and demand on health and emergency services experienced significant increase in demand (202). Data analysis shows that 68% of the people who presented with heat related illnesses during this period were women, and more than half of those women were over the age of 75 (24). Brisbane, Adelaide and Sydney all recorded excess death rates

during heatwaves occurring in the past decade (192) with a further 6,214 deaths predicted by 2050 just in Victoria if no action is taken to reduce greenhouse gases (192). Heatwaves are dangerous for young women too. Queensland research indicates that when women endure heatwaves in the last weeks of pregnancy, they are almost twice as likely to have a preterm birth (25). Extreme heat has also been linked to violent behaviours (192), thereby increasing the risk of women and children to domestic violence.

In urban areas, heatwaves are harsh due to the Urban Heat Island Effect (203). This occurs when the dense collection of concrete and buildings with few trees creates a heat sink, trapping hot air. The city then becomes hotter than surrounding rural areas, making it particularly hard to get around for vulnerable people, such as pregnant or elderly women. Women's caring role further entraps women in homes during heatwaves as they care for babies, or sick or disabled family members. Their greater poverty can limit access to air-conditioning or suitable housing to withstand heatwaves, and limit mobility (192). Women in all roles have been shown to be more likely to take public transport if it is available to them (29). Yet taking public transport, especially with groceries or children, can be tiring and hot, and public transport is much less reliable during heatwaves (204) as experienced by thousands of Melbourne commuters who were stranded after a power outage during the heatwave of 2009 (192, 202). Electricity, rail and roads were most affected with consequences ranging from inconvenient to life-threatening (202). Heat waves are associated with increased hospitalisation of people with mental illness, behavioural disorders and dementia, and with cardiac, respiratory and renal illness (192, 205). Less direct health effects follow loss of refrigeration through power outages, causing gastrointestinal illness and poisoning. Reduced productivity is also emerging as economically significant (192).

Conclusion

In the wake of disaster, and more importantly in the periods between disasters, women's rights and ultimately women's health, will progress only if women understand what is at stake and are ready to press for equal rights and equitable treatment in the post-disaster chaos.

The alternative is loss of hard-won progress as others work to reinforce the status quo and its attendant privileging of men. Foundational contributor to free market economics theory and economics advisor to Ronald Reagan, Milton Friedman writes:

Only a crisis – actual or perceived – produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes politically inevitable (206).

Many others repeat this advice, notably, Barack Obama's chief of staff, Rahm Emmanuel, who said, 'You never want a serious crisis to go to waste' (103). Over a sustained period of time, positioning the women's health sector to advocate for women's rights in economic and climatic disaster demands every available strategy.

References

1. Lagarde C. A New Global Economy for a New Generation: International Monetary Fund; 2013 [2/2/14]. Available from: <http://www.imf.org/external/np/speeches/2013/012313.htm>.
2. AWHN. Women's Health: Meaningful Measure for Population Health Planning. Melbourne: Australian Women's Health Network, 2012.
3. True J. The political economy of violence against women: A feminist international relations perspective. *The Australian Feminist Law Journal* 2010;32:39-59.
4. Seguino S. The global economic crisis, its gender implications, and policy responses 2009 [updated 5/3/200928/2/14]. Available from: http://www.uvm.edu/~sseguino/pdf/global_crisis.pdf.
5. Rake K. Are women bearing the burden of the recession? London: Fawcett Society, 2009.
6. True J. *The Political Economy of Violence against Women*. New York: Oxford University Press; 2012.
7. Jefferson T, Preston A. Women's earnings security in a context of economic crisis. *Journal of Australian Political Economy*. 2009(64):117-40.
8. Clarke J. *The Health Impacts of Climate Change and Drought on Women in Loddon Mallee Region*. Women's Health Loddon Mallee, 2010.
9. Pampel FC, Krueger PM, Denney JT. Socioeconomic Disparities in Health Behaviors. *Annual Review of Sociology*. 2010;36(1):349-70.
10. Mohindra K, Labonté R, Spitzer D. The global financial crisis: whither women's health? *Critical Public Health*. 2011;21(3):273-87.
11. Gentleman A. Growth in violence against women feared as recession hits. *The Guardian* [Internet]. 2009 3/2/2014. Available from: <http://www.theguardian.com/society/2009/mar/04/domestic-violence-discrimination-women-recession>.
12. Phillips R. Food security and women's health: A feminist perspective for international social work. *International Social Work*. 2009;52(4):485-598.
13. Phillips B, Morrow BH, editors. *Women and Disasters: From Theory to Practice*. USA: International Research Committee on Disasters; 2008.
14. Enarson E. *Women confronting natural disaster: From vulnerability to resilience*. Boulder, Colorado: Lynne Rienner Publishers, Inc.; 2012.
15. Neumayer E, Plümper T. The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002. *Annals of the Association of American Geographers*. 2007;97(3):551-66.
16. Dasgupta S, Siriner I, Partha SD, editors. *Women's Encounter with Disaster*. London: Frontpage Publications; 2010.
17. WHO. *Gender, Climate and Health*. 2010.
18. Armstrong F. Climate change: How it will put women's health at risk globally. *Women's Agenda* [Internet]. 2013 3 February, 2014. Available from: <http://www.womensagenda.com.au/talking-about/opinions/climate-change-how-it-will-put-women-s-health-at-risk-globally/201305092120>.
19. Domeisen N. *Community Life and Disaster Reduction 1998*. Available from: http://www.reliefweb.int/ocha_ol/pub/dhanews/issue22/communit.html.
20. Neumayer E, Plümper T. *The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002*. London: Department of Geography and Environment, London School of Economics and Political Science and Department of Government, University of Essex and Max-Planck Institute of Economics, Jena, 2007.
21. Scanlon J. *The Perspective of Gender: A Missing Element in Disaster Response* In: Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Praeger Publishers; 1998.
22. Hansson S-O. Gender issues in climate adaptation. In: Ministry of Defence, editor. Stockholm: FOI (Swedish Defence Research Agency); 2007.
23. Elinder M, Erixson O. Gender, social norms, and survival in maritime disasters. *Proceedings of the National Academy of Sciences*. 2012;109(33):13220-4.
24. Department of Human Services. *January 2009 Heatwave in Victoria: an Assessment of Health Impacts* Melbourne: Department of Human Services; 2009. Available from: [http://docs.health.vic.gov.au/docs/doc/F7EEA4050981101ACA257AD80074AE8B/\\$FILE/heat_health_impact_rpt_Vic2009.pdf](http://docs.health.vic.gov.au/docs/doc/F7EEA4050981101ACA257AD80074AE8B/$FILE/heat_health_impact_rpt_Vic2009.pdf).
25. Hanrahan C. Heatwaves linked to preterm births Sydney2013 [8/2/2014]. Available from: <http://www.medicalobserver.com.au/news/heatwaves-linked-to-preterm-births>.
26. Essential Economics. *One Melbourne or Two? Final Report*. Carlton: Essential Economics, 2012.
27. Dobbs L. *Stuck in the Slow Lane: Reconceptualizing the Links between Gender, Transport and Employment*. *Gender, Work & Organization*. 2007;14(2):85-108.
28. Hamilton K, Jenkins L. *A Gender Audit for Public Transport: A New Policy Tool in the Tackling of Social Exclusion*. *Urban Studies* (Routledge). 2000;37(10):1793-800.
29. Johnsson-Latham G. *A study on gender equality as a prerequisite for sustainable development*. 2007.

30. Enarson E. *Gender and Natural Disasters*. Geneva: International Labour Organisation, 2000.
31. DeLaine D, Probert J, Pedler T, Goodman H, Rowe C, editors. *Fiery Women: Consulting, designing, delivering and evaluating pilot women's bushfire safety skills workshops*. The International Bushfire Research Conference 2008 - incorporating The 15th annual AFAC Conference, ; 2003; Adelaide, South Australia, Australia.
32. Henrici JM, Helmuth AS, Braun J. *Women, Disasters, and Hurricane Katrina*. Institute for Women's Policy Research Fact Sheet. Washington: Institute for Women's Policy Research; 2010.
33. Tyler M, Fairbrother P. *Gender, masculinity and bushfire: Australia in an international context*. Australian Journal of Emergency Management. 2013;28(2).
34. Proudley M. *Fire, families and decisions*. The Australian Journal of Emergency Management. 2008;23(1).
35. Enarson E, Chakrabarti P, editors. *Women, Gender and Disaster: Global Issues and Initiatives*. New Delhi: Sage Publications; 2009.
36. Haynes K, Tibbits A, Coates L, Ganewatta G, Handmer J, McAnerney J. *100 years of Australian civilian bushfire fatalities: exploring the trends in relation to the 'stay or go policy': Report for the Bushfire CRC*. 2008.
37. Hazeleger T. *Gender and disaster recovery*. Australian Journal of Emergency Management. 2013;28(e).
38. Alston M, Whittenbury. *Does climatic crisis in Australia's food bowl create a basis for change in agricultural gender relations?* Aricultural Human Values. 2013;30:115-28.
39. Broderick E. *Caring for the Carers*. The Australian. 2013.
40. Enarson E, Phillips B. *Invitation to a new feminist disaster sociology: integrating feminist theory and methods*. In: Phillips B, Morrow BH, editors. *Women and Disasters: From Theory to Practice*. USA: International Research Committee on Disasters; 2008. p. 41-74.
41. Hoffman S. *Eve and Adam among the Embers: Gender patterns after the Oakland Berkeley Firestorm*. In: Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes* London: Praeger; 1998. p. 55-61.
42. Shaw C, van Unen J, Lang V. *Women's voices from the floodplain*. North Sydney: economic Security4Women, 2012.
43. Wilson J, Phillips BD, Neal DM. *Domestic Violence after Disaster* In: Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes* Westport, CT: Praeger Publishers; 1998.
44. Enarson E. *Violence Against Women in Disasters: A Study of Domestic Violence Programs in the United States and Canada*. *Violence Against Women*. July 1999;5(7):742-68.
45. Anastario M, Shehab N, Lawry L. *Increased Gender-based Violence Among Women Internally Displaced in Mississippi Two Years Post-Hurricane Katrina*. *Disaster Med Public Health Preparedness*. 2009;3(1):18-26.
46. Austin DW. *Hyper-Masculinity and Disaster: Gender Role Construction in the Wake of Hurricane Katrina*. American Sociological Association Annual Meeting; 2008; Sheraton Boston and the Boston Marriott Copley Place 2008.
47. Houghton R. *Christchurch Earthquake and Domestic Violence*. In: *Gender and Disaster Network [GDNET-L@GROUPS.PREVENTIONWEB.NET]; on behalf of; Maureen Fordham [maureen.fordham@NORTHUMBRIA.AC.UK], editor*. Email ed. Christchurch: Gender and Disaster Network; 2010.
48. Sety M. *Domestic violence and natural disasters*. Australian Domestic and Family Violence Clearinghouse Thematic Review. 2012;3 (February):1-10.
49. Phillips B, Jenkins P, Enarson E. *Violence and disaster vulnerability*. In: Phillips B, Thomas D, Fothergill A, Blinn-Pike L, editors. *Social vulnerability to disasters*. Boca Raton: CRC Press; 2009.
50. Houghton R. *'Everything became a struggle, absolute struggle': post-flood increases in domestic violence in New Zealand*. In: Enarson E, Chakrabarti P, editors. *Women, gender and disaster: global issues and initiatives*. New Dehli: Sage; 2009. p. 99-111.
51. Houghton R. *Domestic violence reporting and disasters in New Zealand*. *Regional Development Dialogue*. 2009;30(1):79-90.
52. Fordham M. *The intersection of gender and social class in disaster: Balancing resilience and vulnerability*. In: Phillips BD, Morrow BH, editors. *Women and Disasters: From Theory to Practice*. USA: International Research Committee on Disasters; 2008. p. 75-98.
53. Parkinson D, Zara C. *The hidden disaster: domestic violence in the aftermath of natural disaster*. Australian Journal of Emergency Management. 2013;28(2):28-35.
54. Enarson E. *Violence Against Women in Disasters: A Study of Domestic Violence Programs in the United States and Canada*. *Violence Against Women*. 1999;5(7):742-68.
55. Fothergill A. *Domestic Violence after Disaster: Voices from the 1997 Grand Forks Flood*. In: Phillips BD, Morrow BH, editors. *Women and Disasters: From theory to practice*. USA: International Research Committee on Disasters; 2008. p. 131-54.

56. Birkmann J, Buckle P, Jaeger J, Pelling M, Setiadi N, Garschagen M, et al. Extreme events and disasters: a window of opportunity for change? Analysis of organizational, institutional and political changes, formal and informal responses after mega-disasters. *Natural Hazards*. 2010;55(3):637-55.
57. Seib GF. In Crisis, Opportunity for Obama New York: *The Wall Street Journal*; 2008 [19/1/2014]. Available from: <http://online.wsj.com/news/articles/SB122721278056345271>.
58. DSS. Report from National Rural Women's Summit. Department of Social Services, 2008.
59. UNISDR. Terminology Geneva: United Nations Office for Disaster Risk Reduction; 2009 [8/1/2013]. Available from: <http://www.unisdr.org/we/inform/terminology>.
60. Connell RW. *Masculinities* (Second Edition). Berkeley and Los Angeles, California: University of California Press; 2005.
61. Stoltenberg J. *Refusing to be a Man*. Portland, OR: Breitenbush Books; 1989.
62. Pease B. *Undoing privilege: Unearned advantage in a divided world*. London: Zed books; 2010.
63. West C, Zimmerman D. *Doing Gender*. *Gender & Society*. 1987;1(2):125-51.
64. Butler J. *Undoing gender*. New York and London: Routledge; 2004.
65. Deutsch FM. *Undoing gender*. *Gender & Society*. 2007;21(1):106-27.
66. Parkinson D, Zara C, Weiss C, Duncan A. *Living Longer on Less*. Melbourne: Women's Health in the North, 2013.
67. Parkinson D. *The Way He Tells It - Vol. 1 Relationships After Black Saturday*. Wangaratta: Women's Health Goulburn North East, 2012.
68. Garnaut R. *Garnaut Review 2011*: Cambridge University Press; 2011.
69. Hamilton C. *Why We Resist the Truth About Climate Change: A paper to the Climate Controversies: Science and politics conference*. Museum of Natural Sciences; 28 October 2010; Brussels, 2010.
70. Herman ES, Chomsky N. *Manufacturing consent: The Political Economy of the Mass Media*. New York: Pantheon; 1988.
71. IMF. *World Economic Outlook Database: International Monetary Fund*; 2014 [cited 2014 3 February]. Available from: <http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/index.aspx>.
72. Center for Climate and Energy Solutions. *Outcomes of the U.N. Climate Change Conference in Warsaw*. Arlington, VA: Center for Climate and Energy Solutions, 2013.
73. GLOBE International 2013. *Climate Legislation Study: A Review of Climate Change Legislation in 33 countries*. Third Edition. Edited by Terry Townshend, Sam Fankhauser, Rafael Aybar, Murray Collins, Tucker Landesman, Michal Nachmany and Carolina Pavese. London: Climate and Development Knowledge Network, 2013.
74. Potsdam Institute. *Turn Down the Heat: Why a 4degreeC Warmer World Must Be Avoided*. 2012.
75. Armstrong F. *Our Uncashed Dividend: The health benefits of climate action*. Climate and Health Alliance and The Climate Institute, 2012.
76. Nellemann C, Verma R, Hislop L, editors. *Women at the frontline of climate change: gender risks and hopes*. GRID-Arendal: United Nations Environment Programme; 2011.
77. Enarson E. *Through women's eyes: a gendered research agenda for disaster social science*. *Disasters*. 1998;22(2):157-73.
78. Rylander C, Odland JØ, Sandanger TM. *Climate change and the potential effects on maternal and pregnancy outcomes: an assessment of the most vulnerable — the mother, fetus, and newborn child*. *Global Health Action*. 2013.
79. Alston M. *Gender and climate change in Australia*. *Journal of Sociology*. 2013;47(1):53-70.
80. Parkinson D. *The Way He Tells It - Vol. 2 Women and Disasters Literature Review*. Wangaratta: Women's Health Goulburn North East, 2012.
81. Parkinson D. *The Way He Tells It - Vol. 3 The Landscape of My Soul: Women's Accounts*. Wangaratta: Women's Health Goulburn North East, 2012.
82. Parkinson D, Lancaster C, Stewart A. *A numbers game: women and disaster*. *Health Promotion Journal of Australia*. 2011;22(3).
83. Parkinson D, Zara C, editors. *Beating the Flames*. Wangaratta: Women's Health Goulburn North East. Available www.whealth.com.au/environmentaljustice; 2011.
84. Parkinson D, Zara C. *The Way He Tells It - Vol. 4 A Gut Feeling: The Workers' Accounts*. Wangaratta: Women's Health Goulburn North East, 2012.
85. Zara C, Parkinson D. *Men on Black Saturday: Risks and Opportunities for Change*. Melbourne: 2013.
86. Alston M. *Gender and Climate Change in Australia and the Pacific*. In: Alston M, Whittenbury K, editors. *Research, Action, and Policy: Addressing the Gendered Impacts of Climate Change*. Melbourne: Springer; 2013. p. 175-88.
87. Berg C. *Happy birthday to free market liberalism* 2012. Available from: <http://ipa.org.au/news/2680/happy-birthday-to-free-market-liberalism>.

88. Bockman J. Neoliberalism. *Contexts*. 2013;12(3):14-5.
89. Henry JF. The Historic Roots of the Neoliberal Program. *Journal of Economic Issues*. 2010;XLIV(2):543-50.
90. Thorsen DE. The Neoliberal Challenge. *Contemporary Readings in Law and Social Justice*. 2010;2(3):188-214.
91. Reich RB. *Beyond Outrage: What has gone wrong with our economy and our democracy, and how to fix it*. New York: Vintage Books 2012.
92. Stiglitz J. America is no longer a land of opportunity. *Financial Times* (June 26, 2012). 2012.
93. UNAIDS. Impact of the global economic crisis on women, girls and gender equality Geneva: Joint United Nations Programme on HIV/AIDS (UNAIDS); 2012 [cited 2014 28/2]. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/document/2012/discussionpapers/JC2368_impact-economic-crisis-women_en.pdf
94. Tonts M. The restructuring of Australia's rural communities. In: Pritchard B, McManus P, editors. *Land of Discontent: The dynamics of change in rural and regional Australia*. Sydney: UNSW Press; 2000.
95. Colebatch T. Country's rich have lion's share of income growth 2013. Available from: <http://www.smh.com.au/federal-politics/political-news/countrys-rich-have-lions-share-of-income-growth-20131009-2v8q2.html#ixzz2sEZDDHty>.
96. Bornstein J. The politics of class warfare: from Sydney to Washington, the gulf is deepening. *The Guardian*. 2014.
97. Oxford Dictionaries. [17/3/14]. Available from: <http://www.oxforddictionaries.com/definition/english/corporatocracy>.
98. Chenoweth N. Tax me if you can: how multinationals clean up. *Australian Financial Review*. 2014 7/3/2014.
99. Ferguson A. Rising Aussie dollar hurting key industries. *Sydney Morning Herald* [Internet]. 2011 3/2/14. Available from: <http://www.smh.com.au/business/rising-aussie-dollar-hurting-key-industries-20110502-1e44r.html>.
100. Neaes S. High dollar, volatile prices pressure farm exports *The Australian* [Internet]. 2013 3/2/14. Available from: <http://www.theaustralian.com.au/business/economics/high-dollar-volatile-prices-pressure-farm-exports/story-e6frg926-1226591079586#>.
101. Dudman K. Strong Aussie dollar continues to hurt exporters 2012 3/2/14. Available from: <https://www.commbank.com.au/about-us/news/media-releases/2012/120613-strong-aussie-dollar-continues-to-hurt-exporters.html>.
102. Rennie R. To parity and beyond. *The Drum* [Internet]. 2010. Available from: <http://www.abc.net.au/unleashed/40116.html>.
103. Wade R. From global imbalances to global reorganisations. *Cambridge Journal of Economics*. 2009;33:539-62.
104. Stiglitz J. Complacency in a Leaderless World. *Social Europe Journal* [Internet]. 2013. Available from: <http://www.social-europe.eu/2013/02/complacency-in-a-leaderless-world/>.
105. Alford K. Shepparton victim of anti-labour ideology Sydney: *Sydney Morning Herald*; 2014 [7/2/2014]. Available from: <http://www.smh.com.au/comment/shepparton-victim-of-antilabour-ideology-20140206-322w1.html>.
106. Bezruchka S. The effect of economic recession on population health. *Canadian Medical Association Journal (CMAJ)*. 2009;181(5):281-5.
107. Hockey J. 'The End of the Age of Entitlement' Address to the Institute of Economic Affairs London. 17 April 2012 2012.
108. Census QuickStats [Internet]. Australian Bureau of Statistics. 2011. Available from: http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/0?opendocument&navpos=220
109. UN Special Rapporteur on Extreme Poverty and Human Rights and the UN Working Group on Discrimination against Women. UN letter to the Australian Government. Human Rights Law Centre 2012.
110. AIHW. Australian age pension [25/7/2013]. Available from: <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=6442475254>.
111. van Onselen L. The end of entitlements doesn't apply to the rich: ABC; 2013 [7/3/2014]. Available from: <http://www.abc.net.au/news/2013-11-06/lewellyn-smith-entitlement-spending/5073642>
112. Gleeson D. What you need to know about the Trans Pacific Partnership *The Conversation* 2013 [19/1/2014]. Available from: <http://theconversation.com/what-you-need-to-know-about-the-trans-pacific-partnership-21168>.
113. Gleeson D. Update from the latest Trans Pacific Partnership meeting: *The Conversation*; 2013 [19/1/2014]. Available from: <http://theconversation.com/update-from-the-latest-trans-pacific-partnership-meeting-21416>.
114. Baum F, Yeatman H, Daube M, Willis E, Sainsbury P, Hunter D, et al. Letter to Minister Dutton re TPPA from senior academics in public health & medicine 2013.
115. Stiglitz J. *The Price of Inequality: How Today's Divided Society Endangers Our Future*. New York: W.W. Norton; 2012.
116. Stiglitz JE. Inequality Is Holding Back The Recovery. (Sunday Review Desk). *The New York Times*. 2013.

117. Keleher H. Women and health and well-being. Drysdale, Victoria: Australian Women's Health Network, 2012.
118. Kahn JS. Feminist therapy for men: challenging assumptions and moving forward.(Author abstract) (Report). *Women & Therapy*. 2011;34(1 2):59.
119. Kimmel M. *Angry White Men: American masculinity at the end of an era*. New York: Nation Books; 2013.
120. Bolin R, Jackson M, Crist A. Gender Inequality, Vulnerability, and Disaster: Issues in Theory and Research. In: Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Praeger Publishers; 1998.
121. Coston BM, Kimmel M. Seeing Privilege Where It Isn't: Marginalized Masculinities and the Intersectionality of Privilege. *Journal of Social Issues*. 2012;68(1):97-111.
122. Summers A. *The Misogyny Factor*. Sydney: NewSouth Publishing; 2013.
123. Jefferson T. Women and Retirement Incomes in Australia: A Review. *Economic Record*. 2005;81(254):273-91.
124. Kurtz HE. Gender and Environmental Justice in Louisiana: Blurring the boundaries of public and private spheres: *Gender, Place & Culture A Journal of Feminist Geography* 2007;14(4).
125. Eriksen C. Gendered Risk Engagement: Challenging the Embedded Vulnerability, Social Norms and Power Relations in Conventional Australian Bushfire Education. *Geographical Research*. 2013.
126. Ainsworth S, Batty A, Burchielli R. Women Constructing Masculinity in Voluntary Firefighting. *Gender, Work & Organization*. 2014;21(1):37-56.
127. Jenkins P, Phillips B. Domestic violence and Hurricane Katrina. In: Willinger B, editor. *Katrina and the women of New Orleans*. New Orleans, LA: Newcomb College Center for Research on Women; 2008.
128. Fordham M, Ketteridge A-M. "Men Must Work and Women Must Weep": Examining Gender Stereotypes in Disasters In: Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Praeger Publisher; 1998.
129. Enarson E. Does domestic violence increase after disaster? 1998 [15.3.2010]. Available from: <http://www.emforum.org/vlibrary/domestic.htm>.
130. International Labour Organization. *Global Employment Trends for Women March 2009* Geneva: International Labour Organization; 2009. Available from: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/publication/wcms_103456.pdf.
131. WomenWatch. *Women, Gender Equality and Climate Change: Fact Sheet 2009*. Available from: http://www.un.org/womenwatch/feature/climate_change/factsheet.html#change.
132. Mendoza R. Crises and inequality: Lessons from the global food, fuel, financial and economic crises of 2008-10. *Global Policy*. 2011;2(3):259-71.
133. International Labour Organization. *Making the crisis recovery work for women!* Geneva: International Labour Organisation; 2011 [cited 2014 28/2]. Available from: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@gender/documents/briefingnote/wcms_151285.pdf.
134. Kleinman R. A single-minded struggle to get by. *The Sydney-Morning Herald*. 2013.
135. Tipper R. *Women and food insecurity Melbourne: Women's Health Victoria*; 2010 [cited 2014 28/2]. Available from: http://whv.org.au/static/files/assets/64793bc2/Women_and_food_insecurity_issues_paper.pdf.
136. Chalmers J. Dodging the austerity bullet *The Drum: ABC*; 2013 [9/2/2014]. Available from: <http://www.abc.net.au/unleashed/4572936.html>.
137. Zhu Howorth D. Australian Employers Fixated on 'Ideal Worker' Profile. *Kronos*. 2013.
138. Nelson M. Economic restructuring, gender, and informal work: a case study of a rural county. *Rural Sociology*. 1999;64(1):18-43.
139. Alston M. Women and their work on Australian farms. *Rural Sociology*. 1995;60(3):521-32.
140. Security4Women. *Counting on Care Work in Australia 2012*. Available from: <http://www.security4women.org.au/wp-content/uploads/eS4W-Counting-on-Care-Work-in-Australia-Final-Report.pdf>.
141. Jewkes R. Intimate partner violence: causes and prevention. *Lancet*. 2002;359:1423-9.
142. Pease B. Reconstructing violent rural masculinities: responding to fractures in the rural gender order in Australia. *Culture, Society & Masculinity*. 2010;2(2):154-64.
143. UNICEF. *Domestic violence against women and girls* Florence: Innocenti Research Centre: UNICEF; 2000 [cited 2014 28/2]. Available from: <http://www.unicef-irc.org/publications/pdf/digest6e.pdf>
144. Alston M. 'I'd just like to walk out of here': Australian women's experience of drought. *Sociologia Ruralis*. 2006;46(2):154-70.
145. Stehlik D, Lawrence G, Gray I. Gender and Drought: Experiences of Australian Women in the Drought of the 1990s. *Disasters*. 2000;24(1):38-53.
146. Alston M. Who is down on the farm? Social aspects of Australian agriculture in the 21st century. *Agriculture and Human Values*. 2004;21:37-46.
147. Packham B. Budget cuts to hit all Australians. *The Australian*. 2013 18 December;Sect. National Affairs.

148. Alston M. Farm women and their work: why is it not recognised? *Journal of Sociology*. 1998;34(1):23-34.
149. Pini B, Panelli R, Dale-Hallett L. The Victorian women on farm gatherings: A case study of the Australian "Women in Agriculture" movement. *Australian Journal of Politics and History*. 2007;53(4):569-80.
150. Boetto H, McKinnon J. Gender and climate change in rural Australia: a review of differences. *Critical Social Work*. 2013;14(1).
151. Jones R, Tonts M. Rural restructuring and social sustainability: some reflections on the Western Australian wheatbelt. *Australian Geographer*. 1995;26(2):133-40.
152. Kettlewell N. The Financial and Non-Financial Outcomes of Rural to Urban Migration in Australia Wollongong: Melbourne Institute; 2009 [cited 2013 16 January]. Available from: http://www.melbourneinstitute.com/downloads/hilda/Bibliography/Student_Essays_Dissertations/NKettlewell.pdf.
153. Lucas C. Geelong optimistic about jobs despite factory closures. *The Age*. 2014 19 February, 2014.
154. Martin B, King D. Who Cares for Older Australians? A Picture of the Residential and Community Based Aged Care Workforce, 2007. Adelaide, AU: Natioanl Institute of Labour Studies, 2008.
155. Schirmer J, Dunn C, Loxton E, Dare M. Socioeconomic impacts of forest industry change: a baseline study of the Tasmanian forest industry (interim report). Hobart: Cooperative Research Centre for Forestry, 2011.
156. Sweet R. A competent recovery? Economic downturn and Australia's vocational education and training system. Adelaide: National Centre for Vocational Education Research (NCVER), 2009.
157. Sadiq K. Equity for Taxpayers within Australia's Retirement Savings Regime: A Dissenting Opinion. *Pandora's Box*. 2010(2010):7.
158. Russell R, Dilorio A, Banks M. Women and Money: Factors influencing women's financial decision-making. RMIT University & La Trobe 2013.
159. Cerise S. Accumulating poverty? Women's experiences of inequality over the lifecycle. *Australian Human Rights Commission* 2009.
160. Australian Human Rights Commission. Investing in care: Recognising and valuing those who care. Sydney: Australian Human Rights Commission, 2013.
161. Hodgson H, Medd R. Do major parties address women's super disadvantage? 2013. Available from: <http://www.abc.net.au/unleashed/4767118.html>.
162. Cameron P. What's choice got to do with it? Women's lifetime financial disadvantage and the superannuation gender pay gap. Policy brief No. 55. Canberra: The Australia Insititue; 2013.
163. Hunter F. The only thing worse than a strong dollar is a weak dollar. *Crikey*. 2013 10 July.
164. Long W. Dollar drives export markets. *ABC*. 2013 9 September;Sect. Rural.
165. Neales S, Maher S. Barnaby Joyce pushes for \$7bn in relief aid to farmers. *The Australia* [Internet]. 2014 3 Febuary 2014. Available from: <http://www.theaustralian.com.au/national-affairs/barnaby-joyce-pushes-for-7bn-in-relief-aid-to-farmers/story-fn59niix-1226816252928#>.
166. Alston M. Environmental Social Work: Accounting for Gender in Climate Disasters. *Australian Social Work*. 2013;66(2):218-33.
167. ABC. Tas house prices 'worst in years'. *ABC News*. 2012.
168. Harvey D. Conceptualising the mental health of rural women: A social work and health promotion perspective. *Rural Society*. 2009;19(4):353-62.
169. Black A, Tonts M. The social and economic implications of farm plantation forestry: A review of some key issues. *Rural Society*. 2003;13(2):174-92.
170. Matthewson P. More than one message in SPC decision: *ABC*; 2014 [9/2/2014]. Available from: <http://www.abc.net.au/news/2014-01-31/matthewson-spc/5229740>.
171. Schirmer J. Still here: Why Tasmanian Forest Industry Job Figures are Misleading: *The Conversation*; 2012 [cited 2013 12 December]. Available from: <http://theconversation.com/still-here-why-tasmanian-forest-industry-job-figures-are-misleading-10827>.
172. Darby A. Conservation groups believe UNESCO's World Heritage Committee will reject government plans to delist parts of Tasmania's world heritage forests. *The Age* [Internet]. 2014 28/2/14. Available from: <http://www.theage.com.au/environment/conservation/conservation-groups-believe-unescos-world-heritage-committee-will-reject-government-plans-to-delist-parts-of-tasmanias-world-heritage-forests-20140203-31xb3.html>.
173. McGrath P. Australia's unemployment rates climbs to its highest level in four years *ABC*. 2013 12 September.
174. Barlow K, Cocklin C. Reconstructing rurality and community: plantation forestry in Victoria, Australia. *Journal of Rural Studies*. 2003;19(4):503-19.
175. McFarlane A. Psychiatric morbidity following disasters: Epidemiology, risk and protective factors. In: López-Ibor JJ, G. Christodolou G, M. Maj M, N. Sartorius N, Okasha A, editors. *Disasters and mental health* West Sussex: Wiley; 2005. p. 37-63.
176. Eriksen C, Gill N, Head L. The gendered dimensions of bushfire in changing rural landscapes in Australia. *Journal of Rural Studies*. 2010;26(4):332-42.

177. Tranter K. Gender, climate change and natural disaster Brisbane: On Line Opinion; 2008 [cited 2014 25 Febuary]. Available from: <http://www.onlineopinion.com.au/view.asp?article=6948&page=2>.
178. The Climate Institute. Australia Climate Impacts from 4th IPCC Report. The Climate Institute, 2013.
179. Leviston Z, Price J, Malkin S, McCrea R. Fourth annual survey of Australian attitudes to climate change: Interim report. Perth: CSIRO, 2014.
180. Fritze JG, Blashki GA, Burke S, Wiseman J. Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing. *International Journal of Mental Health Systems*. 2008;2(13).
181. Global Facility for Disaster Reduction and Recovery. Climate change adaptation 2014 [17/3/2014]. Available from: <https://www.gfdr.org/cca>
182. Durey R. Climate change and women. Intouch [Internet]. 2009; 26(11):[12 p.]. Available from: <http://whv.org.au/static/files/assets/107404c9/Climate-change-and-women-article-2009.pdf>.
183. Needham B, Hill TD. Do gender differences in mental health contribute to gender differences in physical health? *Social Science & Medicine*. 2010;71(8):1472-9.
184. Jenkins P, Phillips B. Battered Women, Catastrophe, and the Context of Safety after Hurricane Katrina. 20. 2008;3:49-68.
185. Proudley M. Place matters. *Australian Journal of Emergency Management*. 2013;28(2).
186. Palinkas LA, Downs MA, Petterson JS, Russell J. Social, Cultural, and Psychological Impacts of the Exxon Valdez Oil Spill. *Human Organization*. 1993;52(1):1-13.
187. Enarson E. Gender issues in natural disasters: Talking points and research needs. ILO InFocus Programme on Crisis Response and Reconstruction Workshop; May 3-5 2000; Geneva2000.
188. Molin Valdés H. A gender perspective on disaster risk reduction. In: Enarson E, Dhar Chakrabarti PG, editors. *Women, gender and disaster: global issues and initiatives*. Los Angeles: Sage; 2009. p. 18-28.
189. Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes*. Miami, Florida: Laboratory for social and behavioural research, Florida International University; 1998.
190. Fothergill A. The neglect of gender in disaster work: an overview of the literature. In: Enarson E, Morrow BH, editors. *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Praeger Publishers; 1998.
191. Hannam P. Weather: Farmers feel the heat as drought advances. *The Age* [Internet]. 2014. Available from: <http://www.theage.com.au/environment/weather/weather-farmers-feel-the-heat-as-drought-advances-20140203-31xgf.html>.
192. Steffen W, Hughes L, Perkins S. Heatwaves: Hotter, longer, more often. The Climate Council of Australia, 2014.
193. Victorian Bushfires Royal Commission. The people who died. 2009 Victorian Bushfires Royal Commission, 2009 Contract No.: 14/2/2012.
194. Eriksen C, Gill N. Bushfire and everyday life: Examining the awareness-action 'gap' in changing rural landscapes. *Geoforum*. 2010;41:814-25.
195. Handmer J, O'Neil S, Killalea D. Review of fatalities in the February 7, 2009, bushfires Final Report. Melbourne: Centre for Risk and Community Safety RMIT University & Bushfire CRC 2010.
196. Raphael B, Taylor M, McAndrew V. Women, catastrophe and mental health. *Australian and New Zealand Journal of Psychiatry*. 2008;42(1):13-23.
197. VicHealth. National Survey on Community Attitudes to Violence Against Women 2009 Changing cultures, changing attitudes – preventing violence against women: A summary of findings. Carlton: Victorian Health Promotion Foundation, 2009.
198. Pease B. The politics of gendered emotions: disrupting men's emotional investment in privilege. *Australian Journal of Social Issues*. 2012;47(1):125+.
199. Pacholok S. Into the fire: Disaster and the remaking of gender. Toronto: University of Toronto Press; 2013.
200. Willer R, Rogalin CL, Conlon B, Wojnowicz MT. Overdoing Gender: A Test of the Masculine Overcompensation Thesis. *American Journal of Sociology*. 2013;118(4):980-1022.
201. Bradshaw S. Socio-economic impacts of natural disasters: a gender analysis. Santiago, Chile: United Nations Publications, 2004.
202. McEvoy D, Ahmed I, Mullett J. The impact of the 2009 heat wave on Melbourne's critical infrastructure. *Local Environment: The International Journal of Justice and Sustainability*. 2012;17(8):783-96.
203. Vaneckova P, Hart MA, Beggs PJ, de Dear RJ. Synoptic analysis of heat-related mortality in Sydney, Australia, 1993-2001. *International Journal of Biometeorology*. 2008.
204. Carey A, Preiss B, Cooper M, Willingham R. Heatwave chaos: More of the same as trains, trams go into meltdown. *The Age*. 2014.
205. Hansen APMPDG. The Effect of Heat Waves on Mental Health in a Temperate Australian City. *Environmental Health Perspectives*. 2008;116(10):1369-75.
206. Friedman M. *Capitalism and freedom*. University of Chicago Press: London (Original work published 1962); 2002.