



Dedication

This report is dedicated to all the women and gender diverse people who have come before us.

To Mother Nature in all her manifestations and guises.

To the matriarchal figures and stories of First Nations cultures across Australia and around the world.

To the many battling the impacts of environmental change: the Indigenous women rangers caring for Country the female care workers serving vulnerable people on the frontlines of extreme weather events, the mothers raising children in an era of radical uncertainty, and the families torn apart by increased housing insecurity and gender-based violence.

To those striving for a better future: like the women who led the campaign to save the Franklin, who fought uranium mining at Jabiluka, who initiated the School Strikes for Climate.

We thank you and dedicate these words to your efforts.

Acknowledgement of Country

WELA acknowledges First Nations peoples as the Traditional Custodians of the unceded lands and seas on which we live, learn and work. We value their ongoing connections to Country and we pay our respects to Elders past and present. WELA honours the leadership of women of First Nations and we commit to building relationships that support self-determination and the healing of Country.

Acknowledgements

This project was funded by Lord Mayor's Charitable Foundation and Equity Trustees and supported by Environment Victoria.





Women's Environmental Leadership Australia (WELA) would like to acknowledge the expert contributions of our Reference Group:

Melissa Bungcaras (Oxfam) Amanda Cahill (Next Economy) Steph Cunio (United Workers Union) Sarah Eccles (Conservation Management) Naomi Godden (Edith Cowan University) Asmaa Guedira (WELA) Susan Harris Rimmer (Griffith University) Robyn James (The Nature Conservancy) Bronya Lipski (Environment Victoria) Kat Lucas-Healey (Environment Victoria) Bianca McNeair (National First Peoples Gathering on Climate Change) Emma O'Neill (Good Shepherd)

www.wela.org.au

Contact: info@wela.org.au



@we_are_wela



/company/wela-aus/

Report research and writing by Carla Pascoe Leahy with input from Victoria McKenzie-McHarg and Nat Lowrey.

Design and layout by Sharon France of Looking Glass Press.

This work is licensed under Creative Commons Attribution 4.0 International. To view a copy of this license, visit https://creativecommons.org/licenses/ by/4.0/.

All images included in Case Studies have been supplied by those individuals featured.

All other images, unless noted, are via iStockphoto.com.

WELA would also like to thank the many stakeholders across the non-profit, government, industry and university sectors who provided advice and support to this project.

Stakeholders:

Kirsten Anker (Women's Climate Congress)

Emma Bacon (Sweltering Cities)

Betty Barkha (Australian National University)

Kathryn Bowen (University of Melbourne)

Maddy Braddon (Climate and Health Alliance)

Simon Bradshaw (Climate Council)

Vanessa Cavanagh (University of Wollongong)

Heather Champion (Science in Australia Gender Equity)

Madeleine Clark (Equality Rights Alliance)

Lisa Conley (City of Whittlesea)

Sandra Creamer (University of Queensland)

Danielle Croci (Victorian Office for Women)

Helen Dalley-Fisher (Equality Rights Alliance)

Brianna Davidson (Victorian Office for Women)

Jane Edquist (Commonwealth Department of Climate

Change, Energy, the Environment and Water)

Nilmini Fernando (Griffith University, consultant)

Kaye Graves (Bendigo Community Health Services)

Paula Hanasz (Commonwealth Department of Climate

Change, Energy, the Environment and Water)

Toni Hassan (Equality Rights Alliance)

Rachel Hay (Australia ReMADE)

Leonie Horrocks (Commonwealth Department of Climate

Change, Energy, the Environment and Water)

Kirstin Hunter (Techstars)

Nicky Ison (Boundless)

Tamsin Jones (Small Giants)

Tanja Kovac (Gender Lens Australia)

Scott McKinnon (La Trobe University)

Alex Merory (Environment Victoria)

Richard Merzian (Smart Energy Council)

James Norman (Environment Victoria)

Steve O'Malley (Gender and Disaster Australia)

Angela Priestley (Women's Agenda) Mary Lou Rasmussen (Australian National University)

Janet Salisbury (Women's Climate Congress)

Shelby Schofield (Office for Women)

Anita Talberg (Clean Energy Council)

Katherine Tu (ActionAid)

Contents

Executive summary	iv
Introduction International policy context Australian domestic policy context Aims Methods and approach	1 1 2 6
Gendered impacts of climate and environmental issues Australian gender context Health and safety In the home In the community In the workplace	10 10 11 18 21 24
Gendered responses and solutions to climate and environmental issues What difference does gender diversity make to climate and biodiversity solutions? Feminist approaches Gender in conservation and environmental work Gender in science and technology Gender in politics and policy-making Gender in business and industry Gender in energy Gender and disasters	30 30 31 34 37 40 44 45
Conclusions Leadership and decision-making influence Gender lens on Australian climate and environmental policy Gendering climate and environmental finance International commitments – Gender, Climate and Environment Strategy Gender and disasters Diverse voices and sectors Clean and caring economy	54 54 54 55 56 57 58
Recommendations	60
References	64

Executive summary

Climate crisis and biodiversity loss represent a profound challenge to people and our planet in the twenty-first century. Harnessing gender diverse leadership to tackle climate and environmental issues is a powerful and essential opportunity to ensure Australia's response to this challenge is more equitable and effective.

Women¹ are disproportionately impacted by climate change: they are 14 times more likely to perish in a disaster and represent 80 percent of people displaced by extreme weather. Uneven climate and environmental impacts upon women and gender diverse people are a direct result of structural and systemic factors including the unjust gendered power relations produced by the overlapping forces of patriarchy, colonialism, racism, and unfettered capitalism. Recognition has grown internationally that women's and gender diverse leadership on climate and environmental issues is urgently needed to preserve a habitable, beautiful, equitable and inclusive planet.

Currently, there is only limited recognition in the Australian domestic policy context that gender and climate/environmental issues intersect. While Australia's internationally focused aid and development programs are based on the understanding that climate and environmental issues have gendered impacts, more needs to be done to highlight and centre the close connections between gender, climate and environment across Australian domestic policy-making and investment.

In assessing research data and expert stakeholder perspectives from across Australia, this report summarises what we know about the gendered impacts of climate and environmental issues explaining why gender diverse leadership and intersectional perspectives are critical to solving these challenges. A set of key recommendations focuses on leadership and decision-making; policy-making; finance and investment; the

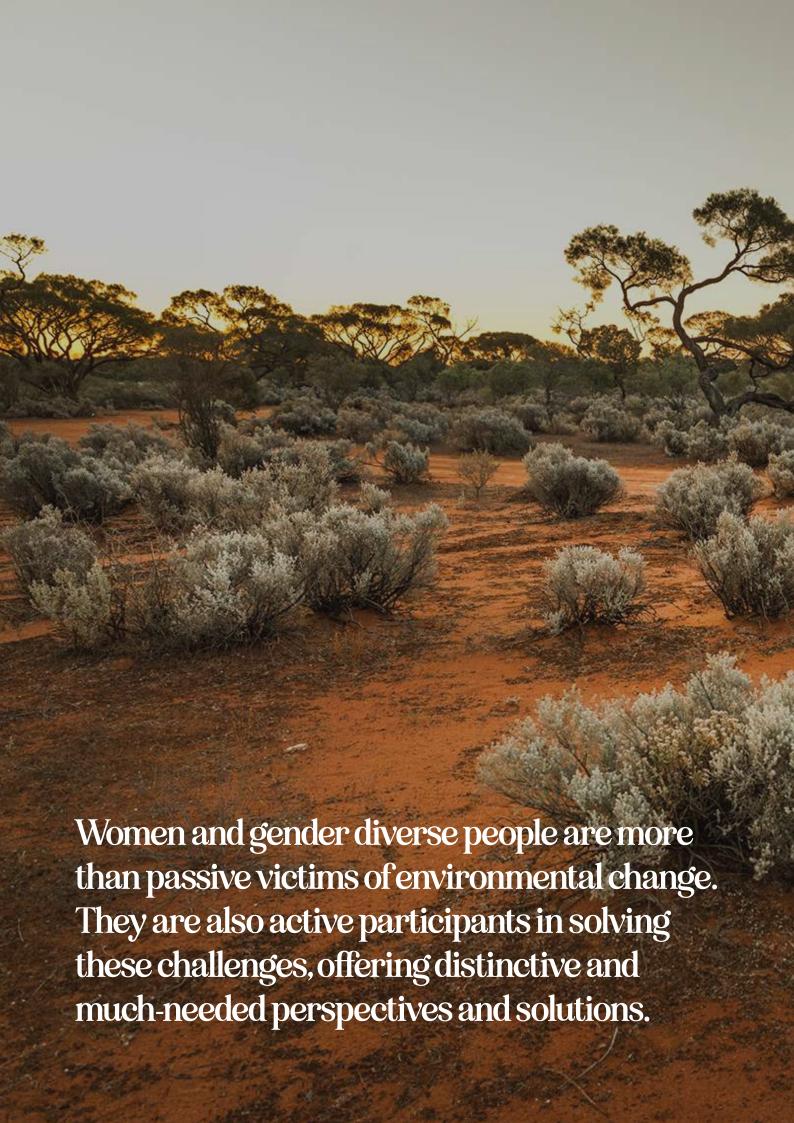
gendered nature of disasters; international commitments; diverse voices and sectors; and a just, equitable, clean, and caring economy.

Importantly, the report highlights an exciting opportunity for Australian domestic policy to recognise and understand the connection between gender, the environment, and climate issues. It lays the groundwork for how we can transform action in Australia for effective environment and climate outcomes through genuinely inclusive processes that prioritise the needs and solutions of women and gender diverse people across government, civil society, business, finance, and academia.

Environment and climate issues have gendered impacts

This report considers a range of spheres where gendered vulnerability to climate and environmental issues is most evident. Intersectional factors, including cultural and linguistic diversity, socio-economic status, and health and disability amplify the vulnerability of women and gender diverse people to environmental change.

Health and safety are significantly affected by environmental crises, and the impacts of environmental and climate disasters are gendered. In both personal spaces like private homes and collective spaces like evacuation centres, there is a well-documented increase in gender-based violence post-disaster. Women also experience different and exacerbated health impacts from events such as heat waves or bushfires. The mental and physical health of pregnant and breastfeeding women, women living with disabilities, gender diverse people, older women and Indigenous women are particularly at risk from extreme weather events.



Climate and environmental crises are placing additional burdens on households, with women consistently more responsible for household sustainability efforts, including reducing water, energy usage and waste, and growing fruits and vegetables. As climate change triggers rising costs of living, homelessness and under-insurance of houses, women and gender diverse people are vulnerable to losing shelter and food security.

Despite these disproportionate impacts, women and gender diverse people continue to demonstrate powerful leadership in community-led campaigns, advocacy, and environmental action. However, their vital role in building and maintaining community resilience and caring for the environment in an era of increasing disasters is often overlooked. When environments come under pressure or are damaged by climate change and biodiversity loss it is women and gender diverse people who bear a high burden of healing and repair.

Gendered disaster impacts also extend to the workplace with some of the sectors hardest hit by environmental change being care-based and feminised sectors. Childcare, aged care, disability care and social work carry a higher load during disasters because they serve vulnerable populations.

Gender shapes effective environment and climate solutions

Women and gender diverse people are more than passive victims of environmental change. They are also active participants in solving these challenges, offering distinctive and much-needed perspectives and solutions. This report highlights a critical opportunity for Australian domestic policy-making.

When women and gender diverse people lead or are involved with solutions, they often achieve more effective and equitable outcomes, favouring solutions that are nature-based, relational, locally-responsive and people-focused. With the increased frequency and intensity of climate-related disasters, the 'soft' infrastructure of community connection, mutual support and collaborative innovation will be just as important as 'hard' infrastructure.

Research shows that when more women are in politics, countries implement stronger environmental policies, vote for more environmental legislation, and ratify more environmental treaties. The evidence also shows that when more women are leading in industry, there are both financial and environmental benefits including significantly fewer environmental lawsuits and higher scores on Environmental, Social and Governance performance rankings.

Despite these documented advantages to gender diverse leadership, women and gender diverse people are currently under-represented in politics, policy-making and industry, including in sectors critical to a clean economy, such as the clean energy sector and science-related industries and technology. This discrepancy is even more acute for women and gender diverse people from First Nations and culturally diverse communities, and those from other marginalised backgrounds.

Gender inclusion and equity are essential across all sectors to achieve urgent climate change mitigation targets, effective adaptation, to protect and restore nature, and to support a clean and caring transition of our economy and society.

Summary of recommendations*

1. Leadership and decision-making influence

Support more women and gender diverse people into leadership and decision-making positions across government, industry, and not-for-profit sectors, including women from diverse cultural and community backgrounds. Gender equity in leadership needs to be urgently addressed to achieve effective action on climate and environmental issues.

2. Gender lens on Australian climate and environmental policy

Address the unequal impacts of climate and environmental issues upon women and gender diverse people in Australia through gender-aware climate and environmental policy-making.

3. Gender-wise investing in climate and environmental finance

A gender lens is needed across all funding from government, industry, investors, philanthropy, academia and the NFP sector so that climate and environmental finance is more effective, equitable and gender-responsive.

4. International commitment: Gender, Climate and Environment Strategy

Development of a Gender, Climate and Environment Strategy will ensure Australia meaningfully meets its international obligations to implement gender action plans. These would establish measures for evaluating progress and develop best practices in gender-responsive climate and environmental policy-making for state and local governments.

5. Gender and disasters

Further research into the gendered nature of disaster impacts and the role of gender in disaster preparedness and response is needed, as well as funding programs for emergency services and communities to understand and respond to these links in both preparation and recovery efforts.

6. Diverse voices and sectors

Research, knowledge translation and the design of solutions should seek out and amplify the voices of First Nations women, women of colour, women living with disabilities and LGBTQI+ Australians within climate and environmental policy and investment decisions, underpinned by genuine collaboration and engagement with more diverse perspectives.

7. Clean and caring economy

A clean and caring economy for people and the planet needs to be at the heart of policy-making. The intertwined climate and biodiversity crises represent a profound challenge to humanity, but by ensuring our responses are more gender-conscious we can also ensure they are more fair, just, and effective.

^{*}Our full recommendations can be found on page 60



Introduction

Feminist climate justice aims for a world where women, girls and gender-diverse people can flourish on a healthy and sustainable planet.²

Since the early twenty-first century, evidence has been emerging internationally that gender plays a significant role in vulnerability to environmental change.³ Globally, women are disproportionately impacted by climate change: they are fourteen times more likely to perish in a disaster and represent 80 percent of people displaced by extreme weather.4 Women are more impacted during and after climate-related disasters because they are consistently more constrained by socio-cultural norms and more disadvantaged by socio-economic circumstances.⁵ For example, women's unpaid workloads of caring for family members increase in the aftermath of disasters, due to mental and physical injuries, damage to the family home and increased resource insecurity.6

Uneven climate impacts upon women and gender diverse people are a direct result of structural and systemic factors including the unjust gendered power relations produced by the overlapping forces of patriarchy, colonialism, racism and neoliberalism. At the same time, recognition has grown internationally that gender diverse leadership on climate and environmental issues is urgently needed if we are to preserve a planet that is habitable, beautiful, equitable and inclusive.

International policy context

The three Rio Conventions – the United Nations Convention on Biological Diversity (UNCBD), the United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention for Climate Change (UNFCCC) – were adopted as international conventions following the Earth Summit held in Rio de Janeiro in 1992. The first two conventions incorporated gender perspectives from the outset. The preambles of the UNCCD and the UNCBD both acknowledge the significant role played by women and explicitly aim to increase women's participation in policy-making and programming.⁷

While the UNFCCC initially neglected gender dimensions, that shifted in 2007 with the release of the UNFCCC Bali Action Plan and the establishment of the Global Gender and Climate Alliance (GGCA). The UNFCCC Women and Gender Constituency was formed in 2009, and the Lima Work Programme was adopted in 2014. At the twenty-third Conference of the Parties (COP23) in 2017, a Gender Action Plan was adopted with the intention of ensuring gender equality was considered in climate change policy discussions. Parties to the UNFCCC have recognised that effective national climate policies need to be gender-responsive through creating a standing agenda item in the Convention and through reference in the text of the Paris Agreement.8

Strong articulations of feminist climate justice frameworks have been developed at the international level through the work of multiple agencies. The feminist climate justice framework laid out by UN Women is organised around four key domains of recognition, redistribution, representation and reparations, and two interlinked principles of interdependence and intersectionality:

Climate justice requires: the recognition and respect of diverse identities, experiences and forms of knowledge; the **redistribution** of resources; and the representation and meaningful participation of women and marginalized groups in climate related decision-making... In addition, the intergenerational dimensions of climate change call for reparative justice, including reparations for past and future harm... Based on decades of feminist economist, ecological and decolonial thinking, this transformation must be guided by an ethics of care that embraces interdependence as the basis of human interaction and intersectionality as a core principle.9

A range of organisations including the Asia Pacific Forum on Women, Law and Development (APWLD), Women's Environment and Development Organization (WEDO), and Women's Earth and Climate Action Network (WECAN) have developed their own articulations of the principles of feminist climate justice including a Global Feminist Decolonial Green New Deal, Ecofeminist Impact Assessment Framework, Feminist Fossil Fuel Free Future, People Power Now Manifesto, UK Feminist Green New Deal, and US Feminist Green New Deal. 10 Internationally, there is no shortage of organisations working at the intersection of gender and climate/ environment and there is a range of efforts to both understand gendered impacts and advocate for the importance of centring women and gender diverse people in designing responses.

Australian domestic policy context

But while the gendered nature of climate and environmental issues has been recognised for more than a decade internationally, as well as centred in international development work, such recognition has been slower to emerge in Australia. In our domestic context, there have recently been positive developments for climate and environmental policy, and significant progress on gender policy. However, more needs to be done to comprehensively embed an understanding of the links between gender and climate across domestic policy areas.

The National Health and Climate Strategy recognises that women and children are disproportionately affected by climate health impacts, with this vulnerability increasing for older people, people with disabilities, First Nations people, culturally and linguistically diverse communities, people experiencing socio-economic disadvantage, and people living in rural and remote areas. Such impacts include vulnerability to gender-based violence post-disasters, heat-related illness, and health impacts of poor air quality from bushfires or pollution.¹¹ By contrast, the *National Women's* Health Strategy 2020–2030 lists maternal health, mental health and gender-based violence as priority areas but makes no mention of how climate change impacts these health concerns.¹²

The National Plan to End Violence against Women and Children 2022-2032 and the associated Aboriginal and Torres Strait Islander Action Plan 2023–2025 both briefly recognise that crises such as pandemics and disasters lead to increased rates of gender-based violence (GBV), but do not position that evidence within the context of worsening disasters due to climate change, and the need for a commensurate policy response.¹³

Some of the risks but also opportunities at the intersection of gender and climate are acknowledged in relation to jobs, skills and economic development. Working Future: The Australian Government's White Paper on Jobs and Opportunities, recognises that climate change is sparking a massive transformation towards a net zero economy, and that for Australia to meet rising

demand for the new skills and jobs of the future, barriers to gender equality in key industries like clean energy must be addressed.14

The Women's Economic Equality Taskforce's final report A 10-year-plan to Unleash the Full Capacity and Contribution of Women to the Australian Economy 2023–2033 similarly recognises that we need to encourage women's equal participation in industries such as clean energy and climate-positive industries, as well as to increase women's access to seed funding and capital for new business and technology innovations. The plan acknowledges that women's equal representation in climate leadership and decision-making is also critical. 15

Two major policies devoted to women have been released recently. Working for Women, the national gender equality strategy released in 2024, outlines a range of data and recommendations that align with the contents of this report, across priority areas of gender-based violence; unpaid and paid care; economic equality and security; health; and leadership, representation, and decision-making. Working for Women also recognises that women are disproportionately impacted by ill health, death and gender-based violence due to climate change, and states that, 'diverse leadership and representation are important when communities and nations face events and crises that have disproportionate or specific impacts on women and other parts of the population'. 16 This recognition is important and welcome as a first step. However, recognition of the scale and breadth of our climate and environmental challenges and their gendered impacts are not embedded throughout the strategy, and next steps will need to consider policy and investment responses to address such challenges.¹⁷

The Wiyi Yani U Thangani Report recognises the significant role of Country in the lives of Aboriginal and Torres Strait Islander women and girls as a source of identity, strength, and healing. It documents the sadness and frustration felt by Aboriginal and Torres Strait Islander women at the limited political and economic power they have to address the impacts of climate change on their traditional lands and recommends that Australian governments recognise and respect the role of Aboriginal and Torres Strait Islander people in caring for Country and developing climate change policies.¹⁸

While climate and environmental issues are sporadically cited in gender-related Australian policies, gender issues are rarely mentioned in climate and environmental policies. The National Climate Resilience and Adaptation Strategy 2021–2025 only mentions gender in relation to supporting community resilience in partner countries, implying that gendered vulnerability to climate change is not an issue in the Australian context. It mentions that adaptation must recognise differentiated vulnerability without elaborating on how women and gender diverse people experience different climate impacts. 19 Australia's Strategy for Nature 2019–2030, which governs biodiversity conservation across Australia, does not mention gender and only briefly recognises that all Australians, including women, have an important role to play in caring for nature.²⁰

If recognition of the connection between gender and climate and environmental issues is only slowly emerging in the Australian domestic policy context, such recognition is relatively well-established in our international policy. All overseas aid and development programs funded by the Australian Department of Foreign Affairs and Trade (DFAT) are governed by a Gender Equality and Women's Empowerment Strategy, with a new International Gender Equality Strategy currently being developed.²¹ DFAT's new International Development Strategy establishes targets for at least half of all bilateral and regional investments worth more than \$3 million to have a climate change objective and for at least 80% of investments to have a gender equality objective.²² In addition, as a party to the UNFCCC and its Gender Action Plan, Australia is now expected to incorporate gender considerations into its climate policies, including 'strategies to advance women's full, equal, and meaningful participation in climate decision-making, promote gender responsive climate policy, and mainstream a gender perspective into all climate actions'.23



Case study: Gender Responsive Alternatives for Climate Change

The Gender Responsive Alternatives for Climate Change (GRACC) project is an example of the way that gender considerations are regularly foregrounded in international climate and environmental projects and policy-making. The project stemmed from a recognition that while climate change has gendered impacts, women and gender diverse groups have been excluded from climate action decision-making and solutions. It was carried out in partnership between ActionAid Australia, the Huairou Commission and Monash University, supported by the Australian Government.24 It continues to work with women in Vanuatu and Kenya with support from the Australian NGO Cooperation Program, and in Cambodia from UK Aid Match.

During 2017 to 2019, the GRACC project was undertaken in Cambodia, Kenya, and Vanuatu. The collaborative, cross-country project grew from an awareness that climate-fuelled disasters have uneven impacts, with forced displacement, food insecurity and human rights violations

disproportionately impacting women. Yet despite this, women were routinely not included in decisions concerning climate change and disaster planning. The GRACC project aimed to support women's engagement in policy, planning and decision-making across multiple levels of government, working in partnership with NGOs.

Melia David is a member of the 'Women I Tok Tok Tugeta' ('Woman talk, talk together') group in Vanuatu, which developed through the program. She stated that, 'Livelihood opportunities should focus on women to ensure that all people have the opportunity to support their families, especially in times of disaster'.

Recognising that women's experiences are affected by intersectional aspects of their identity, the GRACC project deliberately aimed to ensure diverse women were involved in the program. The project was carried out in ways that were responsive to the different contexts of the three countries, but with mechanisms for cross-country learning from each other.

In Vanuatu, the 'Women I Tok Tok Tugeta' forums provided space for women to talk about the ways that climate change disrupts their lives and identify ways to reduce its impacts. As one participant called Dorah explained:

Before Cyclone Pam, the water was okay, but after Cyclone Pam all our water source dried up. The Chief didn't do anything, so we women responded... We have planted trees that the cyclone wiped away, along our coastal areas and our nice beaches. We all understand it will take ages. But I asked them: what will your children's children benefit from, in 2030? Where shall he or she get the water from? Because by 2030, if we don't do anything all our water source will dry up.²⁵

In Kenya, the GRACC project supported women to respond to the challenges of food insecurity in ways that improve both gender equality and climate change planning. In Cambodia, women leaders in local Disaster Management Committees were supported to ensure their full participation in disaster preparation and response policies. Overall, projects like the GRACC demonstrate that combining gender equity with climate and environmental objectives is often undertaken in thoughtful and effective ways at the international level, presenting opportunities for Australia to learn from best practice principles developed globally in designing domestic alternatives.



While government policy-making within Australia has been slower to recognise the links between gender, climate and environmental challenges, this gap also extends beyond government, encompassing civil society, business, finance and academia. As such, there is a significant opportunity to better recognise and understand these issues within an Australian context.

Aims

One of the aims of this report is to analyse the current state of knowledge about the gendered impacts of climate and environmental issues in Australia, to summarise what we already know and where we need more research. While a considerable body of evidence has established that women and gender diverse people are more vulnerable to environmental change in both developed and developing countries, women are more than victims or passive beneficiaries.²⁶ Across the globe, women are acting as agents of change to help realise a more climate and biodiversity positive future for our planet. This report therefore aims to establish why gender matters when we attempt to find solutions to some of the most complex and urgent challenges we face. There is an exciting opportunity to transform action in Australia for environment and climate outcomes and to ensure genuinely inclusive processes if we prioritise the needs and solutions of women and gender diverse people.

Methods and approach

This project developed from conversations and connections between women, noting a lack of attention to gender in Australian discussions about climate and environmental issues. The concept of a foundational research report was explored and tested at a Feminist Climate Action Workshop hosted by Griffith University and WELA in December 2022. Funding was provided by Lord Mayor's Charitable Foundation to support the first phase of this work: a baseline report to survey and analyse relevant evidence and provide recommendations on policy and investment opportunities. Project methodology has combined desktop research with stakeholder consultation across NGOs, academia, unions, industry and government, including more detailed input from a cross-sectoral Reference Group. We present this report as a first step in opening up a conversation about the intersections between gender and environmental issues, hoping that more work will follow which permits deeper investigation of the matters raised here.

In speaking about 'gender' in this report, we focus primarily on women and gender diverse people. This is partly because their vulnerabilities and contributions have long been under-recognised in favour of an implicit focus on cis men. However, we note that a lack of research on the experiences and perspectives of gender diverse people in relation to environmental change limits what we can say about trans and non-binary people. This research is urgently needed if we are to continue to deepen our understanding of the intersections between all genders and the environment.

We take an intersectional feminist approach in this report, recognising that environmental impacts are complicated by a range of factors in addition to gender, including cultural background, socio-economic position, dis/ability status, caring responsibilities, place of residence, sexuality and more. Existing marginalisation and discrimination is compounded by climate change and environmental impacts. It is encouraging to see the National Strategy for Just Adaptation emphasise that '[Just climate adaptation requires] recognising and including the voices, experiences, and ambitions of the many people who make up Australia's society today, with special emphasis on Indigenous Peoples'. 27 It is important to acknowledge the lack of representation of people of colour in environmental organisations (and beyond),²⁸ and recognise that genuine climate justice is intersectional, as expressed by the Climate Justice Gathering held in Australia in 2022:

Climate justice for First Nations, Pasifika and people of colour would challenge the dominant market based, patriarchal and techno-scientific solutions that do not centre First Nations sovereignty, racial justice, economic justice, gender and human rights as core tenets of holding the government and corporations accountable... This is a critical time for grassroots and local communities to mobilise in shaping climate solutions that would address existing structural inequality and multiple and intersecting forms of discrimination.²⁹

Most importantly, we need to honour and privilege Aboriginal and Torres Strait Islander wisdoms about caring for Country if we are to positively transform our human relationships with the Australian environment. First Nations peoples have a deep, lasting and spiritual connection to Country as the original custodians of our lands, waters and skies, managing Country in harmony with people and culture for tens of thousands of years. Their profound knowledge and philosophy of working with nature should inform our broader national approach, particularly – for our purposes – the custodial practices of First Nations women in caring for Country.

While climate change has dominated national and global conversations recently due to the catastrophic nature of climate-related impacts, the scope of this report includes other environmental challenges including pollution, deforestation, mass extinction and biodiversity loss, recognising that these issues are interrelated. Our scope includes both climate adaptation and mitigation measures.

This report has three parts. It firstly analyses the gendered impacts of climate and environmental issues, demonstrating the ways that women and gender diverse people are particularly vulnerable to environmental risk. It then assesses evidence as to why gender-informed solutions and gender-diverse leadership yield more effective and fair outcomes. It ends with a series of overarching conclusions and targeted recommendations for policy and investment in order to begin embedding a gendered approach to climate and environmental issues in the Australian context.

Case study: Vanessa Cavanagh

Vanessa Cavanagh is an Aboriginal woman with Bundjalung and Wonnarua heritage from New South Wales who has worked in conservation and fire management, and is completing a PhD on Aboriginal women and cultural burning. Her research and writing demonstrate that First Nations women have a unique perspective on how to use fire to sustain healthy Country and that this intimate relationship to the land generates enormous grief when Country is damaged by disasters.

Vanessa grew up in Colo Heights, northwest of Sydney, on the edge of Darkinjung Country. She recalls,

My parents bought our twenty-five-acre heavily forested property in the late 1960s, thirty-five kilometres from the closest town. Buying this property in Colo Heights was important for mum and dad because they wanted their kids to grow up in the bush, to have that connection. They also wanted to have the security of owning a place of their own, away from departmental housing and government interference in Aboriginal cultural welfare. Thus, it became a place for extended family to come to, to avoid the controlling gaze of others.

Her father was a Wonnarua man who worked as a labourer and heavy machine operator on the NSW Department of Main Roads, as well as volunteering in the local Rural Fire Service (RFS) for more than forty years. Her mother is a Bungum Bundjalung woman, who has spent her life working towards social justice and feminist issues, including advocating for the 1967 Referendum and working in Aboriginal women's refuges.

Vanessa's family's involvement in the RFS during her childhood influenced her decision to pursue a career in conservation. She started her first job with the NSW National Parks and Wildlife Service at the age of twenty. Vanessa remembers,

As part of the firefighting responsibilities of this role, I trained as a tree-feller and Remote Area Fire Team member, getting winched in and out of fires by helicopter. I saw some amazing places while putting in fire containment lines, or mopping up and blacking out after bushfires. I've seen firsthand the devastation bushfires can wreak.

When Vanessa commenced her role there were only a handful of women in field officer roles and only three Aboriginal employees in the district. Later she moved into heritage management and research roles, advocating for greater and more deliberate inclusion of First Nations women. Her PhD research is demonstrating that Aboriginal women have played an enduring and significant role in cultural burning.

While there is a long history of Aboriginal people managing Country in Australia, after colonisation this relationship was disrupted as Aboriginal people were displaced from their lands and cultural practices. Vanessa's research charts the reinvigoration of cultural burning practices among Aboriginal women in New South Wales, finding that cultural burning results in both environmental and social outcomes, including reducing bushfire risk, strengthening cultural identifies and continuing the transmission of cultural practices among communities and generations. She considers the meanings, outcomes, and barriers to participation of Aboriginal women in cultural burning. Ultimately, she wants her research to 'positively influence cultural burning policy development and management, to support an increase in Aboriginal women's participation'.



Vanessa believes that pre-colonisation, there would have been very little separation in the caring for Country roles of First Nations women and men because there was 'no distinction between humans on the landscape and the landscape itself'. This integration would have included cultural burning but also harvesting food and sharing traditional knowledge with younger generations.

Her experience has been that 'Indigenous men working in cultural burning have supported the position of Aboriginal women's roles in cultural burning'. While Vanessa has felt supported in her work as a field officer, she still wants to ensure that cultural protocols dictating areas where women should not be involved are maintained.

Perhaps the greatest outcome of my research thus far has been the opportunity to promote and amplify that cultural burning can and should involve Aboriginal women where appropriate. Women's engagement must be encouraged for all Indigenous caring for Country activities. There must be opportunities made for Aboriginal voices, and Aboriginal women's voices to be heard and listened to.

Gendered impacts of climate and environmental issues

The climate crisis is not gender neutral... Climate change is a threat multiplier. 30

Australian gender context

The well-established vulnerability of women and gender diverse people to environmental change is amplified by other intersectional factors including cultural and linguistic diversity, socio-economic status, geography, and health and disability. There are multiple reasons for this vulnerability. Care responsibilities fall along gendered lines in Australia, with women doing more paid and unpaid care work looking after children, the elderly, people with disabilities and others. On average, women spend 30.2 hours per week on unpaid care and domestic work compared to 21.8 hours per week for men.³¹ Women are also over-represented in feminised care-based sectors where work is more likely to be insecure and low income.³² This means that when crisis strikes, such as environmental disasters or pandemics, women bear a greater burden of looking after vulnerable or dependent people.33

Current data shows that inequality is prevalent and persistent, and it impacts a woman's public and private experiences across her entire lifetime.34

Women's additional care loads also impact their financial position. Involvement in unpaid care work across the life cycle leaves women with less opportunities for career progression and interrupts wage-earning capacity. Women perform 32.5 hours of paid work per week compared to 39.3 hours for men, with women making up 70.4 percent of part-time workers.³⁵ This disparity, and the fact that female-dominated industries are under-valued and women are under-represented in better-paid leadership roles, creates an average gender pay gap of 21.7% in Australia.36 This leaves women with less financial resources across their lives – with Australian women earning \$1 million less than Australian men on average across their careers.³⁷ The cumulative impact of this is particularly noticeable at retirement. In the 2019–20 financial year, women aged over 65 had a median superannuation balance of \$168,000 compared to \$208,200 for men.³⁸ These figures are often starker for First Nations women, women of colour and women with a disability.

Achieving genuine gender equality is difficult when 30 per cent of Australian men believe that gender inequality does not exist (compared to 14 per cent of Australian women). In this sense, gender attitudes in Australian men lag behind global averages, where 21% of men (and 14% of women) internationally assert that gender inequality does not exist.³⁹ Gender Compass research commissioned by Plan International Australia found that 90% of Australians agree that gender equality is important and 41% believe it has not yet been achieved.

More than half (58%) of Australians agree that transgender and non-binary people should enjoy equal rights, opportunities, and outcomes with cisgender people. Yet despite seemingly progressive gender views, around half of Australians believe that men and women are 'naturally' well suited to certain jobs (58%), and that boys and girls are 'naturally' better suited to certain areas of study (44%).⁴⁰ While this data focuses on gender, further disaggregation is needed to understand the impacts on women of colour and First Nations women. We can assume discriminatory attitudes and views are likely to be compounded for these groups. Sexist and restrictive gender norms remain stubbornly entrenched among some segments of Australian society, restricting Australian women's potential, limiting their participation in new jobs emerging from the energy transition and leaving them less able to absorb environmental shocks when they occur.

Climate and environmental challenges impact Australian women in a multitude of ways, across the multiple spheres of their lives. This impacts section assesses evidence of the gendered impacts of the climate and biodiversity crises across the themes of health and safety, the home, the community and the workforce.

Health and safety

Health and safety are significantly affected by environmental change in distinctly gendered ways. In a meta-analysis of 130 studies, 68% found that women were more impacted by climate-linked health issues than men. ⁴¹ Disaster impacts are gendered partly because women are more likely to engage in caring roles such as looking after vulnerable people like children and older people, while men are more likely to engage in active, 'heroic' roles such as defending properties or rescuing people. ⁴²

Maternal and perinatal health is particularly impacted by climate hazards, as recognised by the World Health Organization. Extreme weather events can trigger adverse outcomes in pregnant women and babies including gestational diabetes, hypertensive disorders of pregnancy, preterm birth, low birth weight and stillbirth. Disasters affect both the provision of safe food and drink and the health and sanitation of living conditions. Living through disasters can also impact mental health during the vulnerable perinatal period.⁴³



Mothers and expectant mothers are particularly at risk during bushfires. Pregnant women exposed to bushfire smoke face a higher likelihood of complications such as gestational diabetes, high blood pressure and premature birth.⁴⁴ Breastfeeding mothers may struggle to maintain adequate hydration during an emergency and mothers of young children often find it difficult to tend to their children's needs during evacuation. 45

Disasters are not experienced equally by all members of the population. Research has demonstrated that intersectional aspects of a person's identity influence disaster vulnerability, including ethnicity, age, health, disability, gender and sexuality.⁴⁶ This means that women or gender diverse people who are also from socially marginalised cultures, sexualities or disabilities suffer compounding disaster impacts. For example, research into the 2019–20 Black Summer fires found that Aboriginal people were disproportionately affected, both in terms of the percentage of the population but also because of their deep connection to Country.⁴⁷ First Nations researcher Vanessa Cavanagh described the pain she felt realising that the grandmother tree on their family property in Darkinjung Country had been damaged:

For this grandmother tree, the combination of ongoing drought and persistent flames ended her reign at the far edge of the yard. The sight of this old tree with her crown removed brought warm, stinging tears to my eyes. It was a deep hurt of losing someone far older and wiser than me. Losing someone who was respected and adored. Someone with knowledge I cannot fathom or comprehend. When I told my mum that evening, she reacted similarly: it was a personal and family loss. To others, she might just be a big tree. Yet we know too that Country is powerful and will recover. These trees return to the earth, and their legacy will regenerate; we each have our cycles.48

Some Aboriginal people felt that the services and facilities provided by emergency response agencies during the Black Summer fires were culturally unsafe, forcing communities to support each other rather than rely on external support. While this demonstrated significant levels of community resilience in the face of disaster, these experiences have also engendered a distrust of external disaster agencies among some Aboriginal communities.49

Women and gender diverse people living with disabilities also experience distinctive challenges during and after environmental crises. One study of people with disabilities and their carers during a major 2017 flooding event in the Northern Rivers found that they had a higher risk of having their home flooded. Participants reported that flood warnings were 'inaccessible, conflicting and confusing' and that access to essential services such as healthcare and social services was interrupted. In the aftermath of the flood, access to safe and accessible housing was limited and people with disability had a higher likelihood of developing post-traumatic stress disorder. The research recommended longer-term and specifically tailored disaster preparation and recovery efforts for people with disability, recognising that they have distinctive needs and longer recovery periods.⁵⁰ For women and gender diverse people living with disability, these intersecting aspects of their identities compound their vulnerability to environmental crisis.

People from sexual and gender minorities experience a number of disaster-related vulnerabilities linked to their social marginalisation. These include an absence of personal or collective spaces that are free from harassment; experiences of verbal and physical abuse in evacuation centres; and unwitting heteronormative bias in emergency response agencies.⁵¹

Case study: Alice

Alice's experiences illustrate some of the ways that gender diverse people are particularly impacted by disaster. Her case study is adapted from the published findings of the Queering Disasters Project, a research project undertaken to overcome the lack of data on the experiences of gender and sexual minorities during environmental crises.52

Alice is a trans woman (26–35 years of age) who was living in Brisbane when severe floods struck in 2011. Alice was working for an NGO that promoted the health and wellbeing of LGBT people and lived in a share house with four other trans people. The house and their belongings were significantly damaged in the 2011 Brisbane floods. In trying to access relief payments through Centrelink, Alice experienced bureaucratic difficulties due to the changing gender identities of her house mates and their status as a non-family household.

Research suggests that trans people can often feel unsafe in their homes or neighbourhoods, and Alice and her household had worked hard to create a trans-inclusive domestic environment. Being forced to move out and live in other share houses for a period after the flood disrupted her sense of safety and wellbeing. Residential rebuilding post-disaster can focus on housing for traditional families, leaving trans people like Alice often not overtly considered in these recovery efforts.

Trans people may rely upon access to their clothes, cosmetics, or other personal items to maintain their 'gender legibility', which is important both to mental wellbeing and to personal safety from social discrimination. Displacement from one's home during disaster can make it difficult for trans people to control the way they present their gender to the world. Access to regular hormone replacement can also be an important part of maintaining the trans body, and this can be disrupted during disasters.

Alice was fortunate in that she had an additional supply of hormones to access, because of her concern at the possibility of missing hormone treatment. 'I was a bit lucky at the time. I'd built a stockpile of hormones. I kind of plan to stock hormones in case something happens, or they cut access'.

Trans people also develop specific forms of resilience that can help during disasters. In Alice's case, her conscious and deliberate development of community support networks in her neighbourhood and workplace before the floods meant that when crisis struck, she had people she could turn to.

We grabbed like essential stuff, and suitcases of files of documentation, and put them in people's cars. One of the other houses came for support. We stayed the night in one of the other share houses over the hill. That's the first kind of place you would think of getting to.

Alice's workplace also became a significant source of support for her.

It was the support from my co-workers that really made it possible for me to get through that time. It was my co-workers who were putting me up, who were queer-identified themselves, gay-identified, and they helped me out with clothing and bedding and accommodation and food and even coming to help clean the place up, you know, I couldn't have asked for a more supporting workplace at the time.



These experiences reiterate the critical role of community networks of care in helping groups of people to survive and recover from disaster.

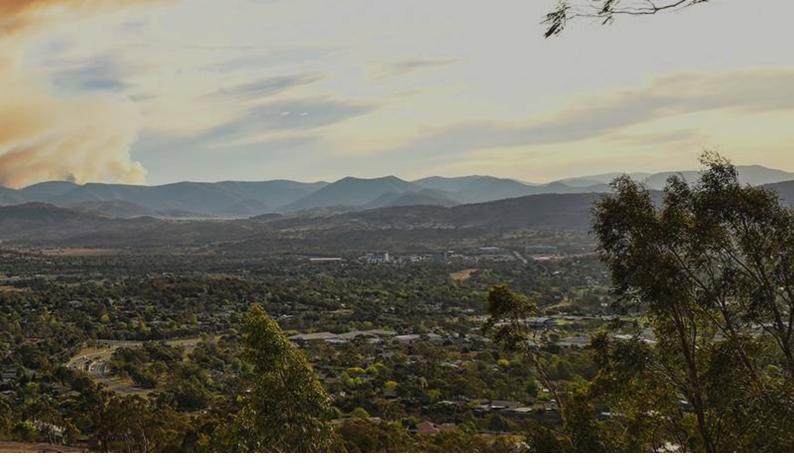
Extreme heat is often the deadliest type of disaster in Australia. As extreme heat events increase, pregnant women, children, older people and people with disabilities are particularly vulnerable.53 Older women are over-represented in heatwave mortality statistics because 'heatwave vulnerability is largely socially constructed through the intersection of deeply entrenched gender inequality with systemic socio-economic disadvantage'.54 This was recognised by the European Court of Human Rights, who found that governments have a duty to protect their citizens from climate change, after a group called Senior Women for Climate Protection (with an average age of 74), argued that they were particularly vulnerable to extreme heat as older women.⁵⁵

In the Australian context, the Australian Council of Social Service (ACOSS) Summer Heat Survey found that women (85%) surveyed were more likely than men (72%) to feel unwell in the heat. Many respondents reported that heat aggravated existing health conditions and/or disabilities, with perimenopausal women reporting that high temperatures made it more difficult to regulate their body temperature. ⁵⁶ People with disabilities can be

disproportionately affected by heatwaves, such as experiencing a worsening of symptoms for those living with multiple sclerosis. Such impacts are compounded by poverty, with socio-economically disadvantaged areas having less tree cover and green spaces on average, leading to a worsening of the urban heat effect.⁵⁷

While it has long been recognised that physical health is endangered by environmental disasters, it is increasingly recognised that mental health also suffers during and after crisis. One study after the 2009 Victorian bushfires found that the disaster had gendered mental health impacts, with women more likely to develop post-traumatic stress disorder and men more likely to experience heavy drinking. ⁵⁸ As disasters increase in frequency in the twenty-first century, experts are turning their attention to the mental health impacts of multiple and compounding disasters, where communities have barely recovered from one disaster before the next one hits. ⁵⁹

Multiple studies in Australia and overseas have consistently tracked a marked increase in gender-based violence during and after disasters. One study of several communities impacted by bushfires found that the higher the devastation wreaked by fire, the higher the incidence of violence against women.⁶⁰ Partly this is due



to a gendered response and understanding of crisis. After the 2009 Victorian fires, men were associated with heroic, active firefighting roles. Recovery workers and authorities such as police tended to empathise with men's difficulties in coming to terms with their bushfire experiences, and excuse or legitimise men's violent behaviour towards women and children. Studies found that violence against women increased after the fires, with women's responsibility for children and other dependents placing them at greater risk.⁶¹

In addition to these kinds of sudden and explosive environmental disasters, other types of crises trigger similar consequences. Environmental disasters can be swift and severe, and they can also be longer-term and cumulative in their impact. The Millenium Drought affected communities throughout the Murray-Darling Basin – particularly farming families – with distinctly gendered impacts. Women's health and wellbeing suffered as demands on their time and resources increased, such as needing to work longer hours to supplement reduced farm income; sacrificing their own needs for their children; taking responsibility for men's and children's health and wellbeing; family disruption; and increased gender-based violence.62

As wilderness areas are increasingly encroached upon by humans, more and more zoonotic viruses are predicted to cross between animal and human species in the twenty-first century. As with the COVID-19 pandemic, it is likely that women will carry a disproportionately high care burden during future pandemics. 63 Gender-based violence is also associated with pandemics. In the first year of the COVID-19 pandemic, 60,000 women in New South Wales experienced family and domestic violence for the first time and 46,000 experienced an escalation in violence.64

Gendered disaster experiences at a community level pervade emergency management services as well. The work of Gender and Disaster Australia (GADAus) has been critical firstly to document and understand the gendered nature of environmental crises and then to develop effective transformation of preparation, prevention, and recovery practices. GADAus is demonstrating that such transformation needs to start with cultural change within emergency response agencies, by increasing the number of women in leadership positions and 'changing a culture that rewards men for risky behaviour to one that supports both men and women'.65

Case study: Steve O'Malley

Steve O'Malley is the Manager of Emergency
Management Sector Engagement at Gender
and Disaster Australia and a Senior Emergency
Responder. Steve started fighting fires in 1988
and over the course of his career became more
aware of how gender operates both in the context
of community experiences of disaster and within
the emergency management sector. In his work
with GADAus, Steve leads training for emergency
services personnel that explains how disasters
increase gender-based violence, and how responders
can become more aware of gender in their work.

Women and children are always going to be disproportionately affected by disasters. Not only in terms of violence, but also in terms of the burden that they have to carry.

In our training we talk about the compounding effects of gender and disaster. What we're talking about here is domestic violence, basically. Because some men think they can get away with it if they're a part of the response to the disaster. They blame stress or they blame the contributing factors rather than the causes. There can be an expectation from them and their mates and relatives that they can get away with it. And they shouldn't. Disaster is no excuse for family violence... We've also got a high male suicide rate. So there's a definite issue with being a dude where you don't reach out for emotional support when you need it. There's an expectation that if I project physical or verbal violence then I should be able to get away with it because of what I went through fighting fires or floods. So in the act of protecting others, I should be forgiven if those most close to me feel more frightened and vulnerable.

GADAus responds to these challenges with three key strategies: strengthening the evidence base through research, trying to achieve cultural change through training, and advocating to decision makers and leaders. While the initial research conducted by the organisation was focused more on a gender binary of men and women, its focus has evolved over the years to include intersectional perspectives. More recent work of GADAus has explored how people experience disasters differently based upon their gender, sexuality, and age for example, conducting research with LGBTQIA+ communities and with the elderly.

Part of the training that GAD Australia does is analysing the cultures of the response-oriented organisations who have this hero narrative writ large.
But hyper masculine cultures don't do anyone any good because they encourage inequality. That's what we're talking about. I always talk about equity in the workplace. We have nowhere near equal numbers of men and women firefighters. But equity means different things for different people for different reasons.



In the home

Environmental challenges impact women across the multiple spheres of their lives, including in the home. As awareness of climate change and waste challenges grows, women consistently take more responsibility for household sustainability efforts, including reducing water and energy usage, minimising waste, and growing fruits and vegetables. This is partly because the home has traditionally been seen as a female domain and domestic sustainability practices can become part of home-making tasks managed by women.⁶⁶ It is also because a large body of research suggests that women are generally more concerned about the environment than men and more likely to act on such concerns.⁶⁷ For example, the Climate Action Survey run by Griffith University found that Australian women are more concerned and active than men in regards to climate change, and have a greater understanding of the issue.⁶⁸

Climate-fuelled extreme weather is placing additional burdens on households. Global and domestic crises are sparking increased costs of fuel, energy, food and more, exerting significant cost of living pressures on Australian households. Research by Australian Parents for Climate Action found that an overwhelming majority of families had found their living costs had gone up including food costs (94.1%), petrol costs (85.4%) and electricity costs (78.8%).69 A 2023 Women's Agenda survey of Australian women found that 24% were struggling to afford a home for their family and 27% anticipated difficulties paying their energy bills over the next three months.⁷⁰ In the 2024 Heat Survey, conducted by the ACOSS in partnership with the First Nations Clean Energy Network, women (59%) were more likely than men (50%) to say they struggle to cool their home and women (85%) were more likely than men (77%) to be struggling to pay for essentials like energy, food, and medicine. As a result, women were more likely to be reducing energy usage in order to pay bills and were three times as likely to currently have an energy debt or consider it to be imminent (18% of women; 6% of men). First Nations respondents were more likely to be struggling to afford essentials. People receiving income support (69.4%) and First Nations people (55%) were more likely to say they had or were soon to have an energy debt.⁷¹

Climate-linked disasters are also damaging or destroying more and more Australian homes, leaving homelessness in their wake. Women are particularly vulnerable to homelessness. Over the period 2016–2021, men's homelessness increased by 1.6% while women's increased by 10.1%. The number of homeless older women increased by 31 per cent during this time, up to almost 7,000 in 2016.⁷² While women aged over 55 were previously the segment of the population most affected by homelessness, they are now outpaced by women aged 35–44.73 Due to limitations in data collection, these figures underestimate the full extent of women's homelessness, particularly for women experiencing family violence, Aboriginal and Torres Strait Islander women, and women with disability.74 Women experiencing homelessness also experience intersecting risks such as violence and abuse, physical and mental health impacts, and difficulties accessing employment.⁷⁵ Climate change exacerbates these housing-related risks for older women. An increase in extreme weather events has led to rising insurance premiums and has expanded definitions of which homes and communities are vulnerable to disasters, leading to increased numbers of homes that are either uninsurable or unaffordable to insure. The Climate Council estimates that by 2030 520,940 Australian properties, or one in every 25, will be 'high risk' and uninsurable.76

As Australian households look to reduce emissions and homes transition into the twenty-first century, research is beginning to focus on the gendered aspects of emerging technologies such as energy feedback portals, smart home systems, home efficiency improvements, electric vehicles, solar photovoltaic panels, and home batteries. The energy sector has long been a male-dominated field and the renewable energy sector reflects this. As technologies for more energy efficient homes emerge these are also largely developed by masculinist fields such as computer science and artificial intelligence. At present, the masculinist bias of these developing technologies remains largely unexamined, with implications for whether these domestic technologies are equally accessible and usable for all genders. This leads to a danger that not all households or all household members



will be equally involved in the adoption and use of these new technologies, and therefore have less equitable access to the energy transition. If the gendered development of these new technologies remains unexamined, there is also a risk that existing gender inequities in household divisions of labour or access to paid employment may be perpetuated.⁷⁷ Such technologies are

also inaccessible for some households for socio-economic reasons, being unaffordable for people on lower incomes including single-parent households which are largely headed by women and women living in social housing, who are often in poorly constructed homes with limited or expensive heating and cooling options.

Case study: Kaye Graves

Kaye Graves' professional work seeks to understand the impacts of environmental change on migrant women in the home, as well as their experiences interacting with disaster response agencies. Kaye works for Bendigo Community Health Services (BCHS), the key agency responsible for humanitarian and refugee resettlement in the region.

BCHS takes a broad public health approach to quality of life and sees adapting to environmental impacts as part of their work developing health literacy for refugees to achieve safe, sustainable living. Community consultation in refugee languages is central to their approach, as is co-design with bilingual staff from refugee communities. Taking gender into account means different things to different communities. With Afghan refugees, who are predominantly Muslim, a gender-segregated approach to community education is often preferred. Burmese Karen refugees may be Buddhist, Christian or other denominations and a gendered approach to community education is often less important.

Kaye explains that female refugees have a gendered experience of adjusting to life in Australia, leading to different environmental impacts.

If you've been born in a refugee camp in Thailand, you get married, you have your babies there, and you arrive when you're 45. You might even have grandchildren by that age. You've only ever lived enclosed by a barbed wire fence. You've all slept together in your bamboo hut, and you have quite distinct roles.

But when you get to Bendigo, you both get Centrelink payments. You're both expected to go to English classes. And that's really hard for the women then to separate from their children, because they've only ever slept with their extended families... After 12 months,

if you don't continue to learn English, you have to start looking for a job.

There's a disadvantage if you're a woman in this settlement model, because it's really hard to put your kid into childcare when you've never had childcare before. Some of the women are left behind because of those reasons. They're staying home in hothouses. They don't go out to work in the air-conditioned factory. They walk their kids to school, come rain, hail, or shine. There's also an intergenerational component around care for the elderly. So [climate] impacts are different.

BCHS have also identified differences in energy and water usage among refugee communities. Managing appliances in the home is challenging for someone who has lived in different kinds of accommodation before their arrival in Australia.

The first time you live in a rental is the day you get off the plane from your refugee camp. You have no idea how to flush the toilet, how to use the washroom. How to cope on a hot day. We've had situations where our newly arrived families have been cold because the gas pilot light went out and they didn't know what to do. Or they're sweltering in heat because they've forgotten how to switch the air conditioner on. So, if you think of the environmental impacts on lifestyle, it's exacerbated because refugees come from a very different environment.

These kinds of environmental factors in the home especially impact women, because sometimes they are more likely to be doing the domestic work of caring, cooking and cleaning. The fact that water, electricity, and gas bills are all in English makes it challenging for people from



non-English-speaking and largely illiterate backgrounds to develop energy literacy. BCHS employs a Karen woman to help explain to other Karen women in their own language how they can use energy more efficiently.

In addition, BCHS is working to ensure that disaster preparation and recovery is more culturally inclusive. Five years ago, there were no resources available in languages spoken by Hazara or Karen refugees. This led to the initiation of the Emergency Preparedness Program, a collaboration between BCHS, the State Emergency Services (SES), Country Fire Authority (CFA), and City of Bendigo. The team developed videos and fact sheets in three languages, and community education sessions within faith-based groups to build their disaster preparedness. Each year, champions are recruited and conduct recorded community conversations.

The project is also 'reorienting service providers to understand new and emerging communities'. Kaye runs a session with SES, CFA, and council emergency staff to help them understand the refugee journey, explain that disasters would have been experienced differently in countries of origin, and encourage the establishment of recovery centres that are culturally inclusive.

In the community

As the climate and environment shift in the twenty-first century, the volunteer efforts of community members in land and habitat management, supporting community transition, and managing disasters is both essential and growing, with women taking on a disproportionate amount of this load. Women have consistently led community volunteer initiatives in Australia, from op shops to kindergarten committees and from the Country Women's Association to church fetes. Australian Bureau of Statistics data found that in 2020 26% of women volunteered compared to 23% of men.⁷⁸ Similarly, Volunteering Australia found that in 2022, 28.6% of women volunteered and 24.7% of men volunteered.79

Women have played a variety of community leadership roles in relation to climate and environment, including as women Elders, convening climate justice and environmental groups, contributing to government advisory groups, and influencing climate-related programs and policies in schools, local government, and community organisations. Such volunteering efforts can be understood as part of women's caring roles in their communities: caring for local places and local people.

Women and gender diverse people have demonstrated extensive leadership in the creation of community led campaigns, advocacy and environmental action, but their roles have often been overlooked.80 Women have been foundational in the establishment and sustenance of the modern Australian environmental movement, from the Franklin campaign to the School Strikes for Climate, though their contributions have been less often recognised through formal or paid leadership roles, in the media, or through funding of their initiatives.81

In addition to advocacy and campaigning, women have played a significant role in caring for local environments. Land and habitat management has been carried out by First Nations people for tens of thousands of years and continues into the present, with First Nations women acting as highly knowledgeable land managers, often responsible for particular places and/or species. Indigenous women play a vital caring for Country role as rangers, particularly in Northern Australia.82 While colonisation has caused severe damage to ecosystems across Australia, settler Australians have belatedly realised the need for more sustainable land management practices often through observing environmental degradation at the local level.

Non-Indigenous women have also been heavily involved in caretaking of local areas and gardens. Landcare Australia originated in 1983 with an initiative of Joan Kirner (then Minister for Conservation, Forests and Lands) and Heather Mitchell, (then President of the Victorian Farmers Federation). Although women's roles in local Landcare groups have sometimes been under-recognised, women have played significant roles as knowledgeable land managers with a strong ethic of stewardship.83 Community gardens also play important social and environmental roles in local regions and are often led by women – in one research study they constituted 70 percent of community gardeners.84

Case study: Yuki

Yuki's experiences volunteering in her local area are representative of the kinds of under-acknowledged community building and environmental custodianship that women undertake in their local communities all around Australia. Yuki is a 39-year-old woman who migrated from China 16 years ago. She works in information and communications technology in private industry. Yuki lives with her father, her partner and two children in the City of Whittlesea in Melbourne. Yuki is involved in several volunteering initiatives for the environment in her local community. With her father and her son, she is regularly involved in her local community garden. She also volunteers for Clean Up Australia initiatives and for Bicycle Network.

Yuki's local community garden functions with some support from local council staff, who help them write grants to provide tools and other supplies. Most members of the garden come to tend the plots or harvest fruit and vegetables whenever they have spare time. There are also monthly catch ups for all members where they can socialise and work on group projects.

It's a great socialisation opportunity. Particularly because my dad doesn't speak English much, but there's someone else at the garden who speaks the same language so often they communicate together, sharing experiences and tips. I also like having a sense that we eat what we grow and that's something I can show my children. It does help them to foster an appreciation for nature. Especially when they observe the process from planting seeds and then it grows into something we can eat.



Gardening is recognised as an activity with measurable positive benefits, particularly for physical and mental health. Such benefits can be particularly pronounced for migrant communities, where gardening is linked to intergenerational cultural traditions, and maintaining a sense of identity and connectedness.85 A substantial number of community gardens have developed in response to the needs of newly arrived migrants in socio-economically disadvantaged areas, and women have been at the forefront of establishing and maintaining such gardens.

Yuki also volunteers for the organisation Bicycle Network which offers different volunteering opportunities. She participates in a 'super count' where she sits at a designated recreational path and records data such as the people walking or cycling by. She also notes the cycling conditions, design and visibility of the track, and cyclist behaviour such as compliance with helmet wearing. Data is collated and sent to local council for better planning, traffic control and track maintenance.

Despite her busy life as a professional woman and mother of two children, Yuki finds time to volunteer for these environmental initiatives because she sees it as family time. Her involvement in the community garden fosters

intergenerational connection between three generations of her family and the Clean Up Australia events are often next to a park or playground so it is relatively easy to bring her children. Having her father's help with caring for her children also gives Yuki more time for community-based activities. Yuki said, 1 think this is a very important issue, so I want my children to get involved from when they are young. That way they can start to get used to such activities and get an awareness that there is work to be done.'

Yuki has observed that the majority of participants in these community-based environmental activities are women. Reflecting on why that might be, she mused:

I think women do seem to care more and are more willing to take action. It might be different from the stereotypes we usually think of. Usually, we think women are thinkers and men are doers. but sometimes it's not the case. I think women are more willing to take action. Also, we are often more comfortable to socialise and work with other people. Some men prefer to do something just on their own rather than participate in groups like this.

Stories like Yuki's exemplify the way that women often play a vital role within communities as the glue that binds people to each other and to their local places. But when environments come under pressure or are damaged by climate change and biodiversity loss, this means that women also bear a high burden of healing and repair.

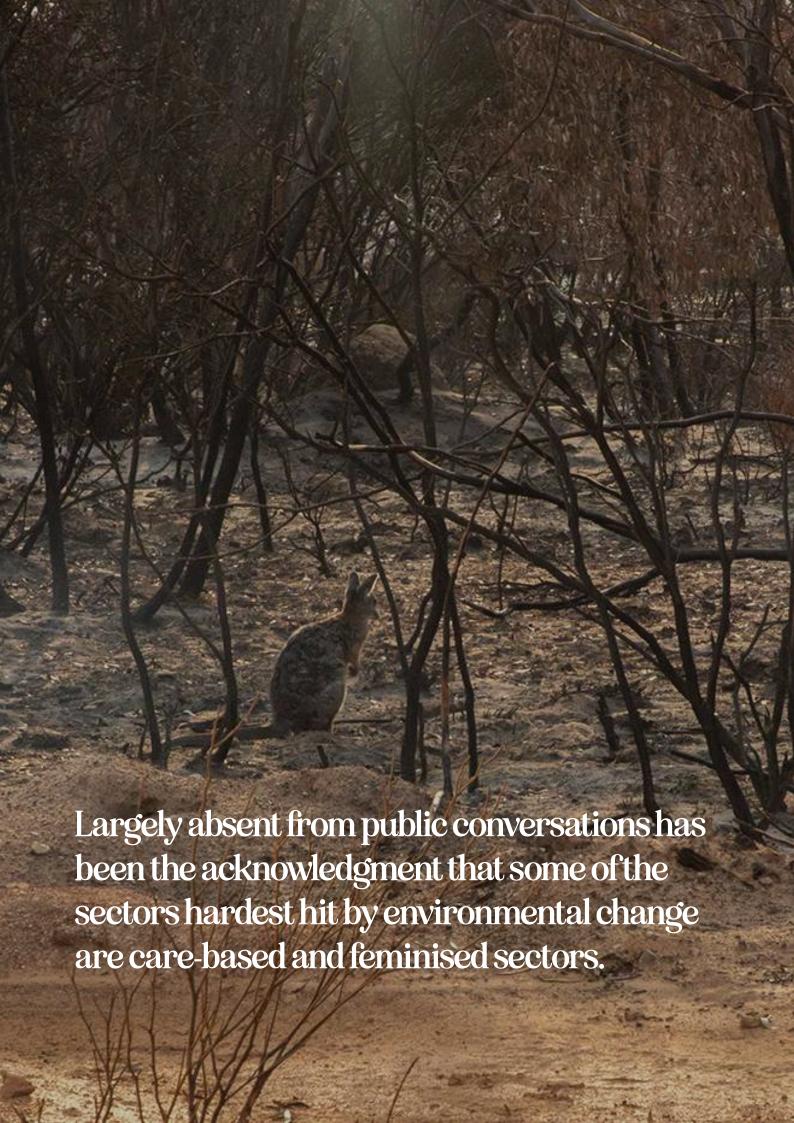
In an era of escalating disasters, there is a need to acknowledge that formal emergency services will not be able to handle all the demands on their resources when crisis strikes, meaning that informal community support is critical. Given that this increase in the frequency and ferocity of disasters is inevitable, relationships and networks need to be strengthened before disasters strike, so they are not solely emerging in a reactive mode in response to sudden crisis.86 Research highlights the significant role of women in preparing for, surviving and recovering from disasters, and urges policy and investment decisions which better support the 'soft infrastructure' of community based resilience that is so often led by women.87

In the workplace

Gender also influences the impacts of climate and environmental change on employment experiences. It is broadly recognised that Australia needs to transition to a greener economy in order to rapidly reduce our carbon emissions. But conversations about how to achieve a just transition to a new economy have centred upon male-dominated industries like fossil fuel.

Largely absent from public conversations has been the acknowledgment that some of the sectors hardest hit by environmental change are care-based and feminised sectors. Internationally, two-thirds of paid care workers are women.88 Care workers working in childcare, aged care, disability care and social work carry a higher load during disasters because they serve vulnerable populations.89 Health care workers also manage a higher patient load due to illness and death linked to extreme weather. Many of these sectors already struggle with low pay, insecure work, and limited workplace protections, and tend to have higher numbers of Australians from culturally diverse backgrounds.

Care workers are on the front lines of climate change... When extreme weather events happen, physical infrastructure is more likely to break down and the social infrastructure will be the only thing left. This will mean that care workers will often be first responders, with the skills and understanding of what people need and where they are located.90



Case study: Daele O'Connor

Daele O'Connor is a Māori woman who has witnessed firsthand the impacts of climate change on women in the workforce. Daele is part of the climate action team in the United Workers Union.

Growing up in New Zealand, Daele was fortunate to be brought up on a marae.

A marae is like a community. And what connects us to our marae is through our whakapapa, our genealogy. How our whakapapa goes is family, whānau, hapū, which is like extended whānau, and then iwi. which is our tribes.

Daele remembers that everyone was treated as an equal on their marae and that the community took collective responsibility to raise children. There were many elders, or aunties and uncles, who would take children to the ocean to collect seafood.

They'd be teaching us the respect of tangaroa, of the ocean. And our food source. Always take enough just for a kai, just for a meal. Because there will always be plentiful kai for the next person. And when they would put a rahui, which means close the seabeds, and no one was allowed on that seabed, no one questioned it. It was all around conserving our food sources, looking after and being sustainable.

Daele reflects sadly that much of that wisdom that she was raised with has been lost through little more than a generation.

Born with a cleft palate, Daele experienced bullying and discrimination as a child. Her family were assisted to pay for the high costs of the health care she needed by the New Zealand Crippled Children Society. This eventually inspired Daele's decision to enter disability care as an adult. 'I always kind of had an inkling that

I would always end up in the disability sector, giving back what the Children's Society were able to do for me.'

Daele's mother was also a disability support worker. The first week of Daele's new job, her mother encouraged her to attend the union meeting where they were negotiating their agreement. The union delegate at the time pointed at Daele and said, 'You're the next delegate'. As Daele explains, 'when you're picking a delegate, it's normally the mouthy one!'

Over the years, Daele progressed through the union to branch delegate and then roles in the national office. Across these roles, Daele was always supporting the care sector, including disability, mental health, aged care, and social work. She became the national president of her union and was 'proud to lead our union through a constitutional change and brought Te Tiriti o Waitangi in partnership with our union. I'm very proud of that. Being Māori and being a woman to have led our members through that change.'

Daele explains what motivates her as a leader in the union movement:

Every morning, I wake up and I think what am I going to do today that's going to make a difference in someone's life? Whether it be small or whether it be life changing. I've been proud to have been involved in campaigns that have been life-changing to women. One campaign that our union back in New Zealand ran was an equal pay campaign, for our members who were predominantly women and predominantly Māori and Pasifika, and it was worth \$2 billion.

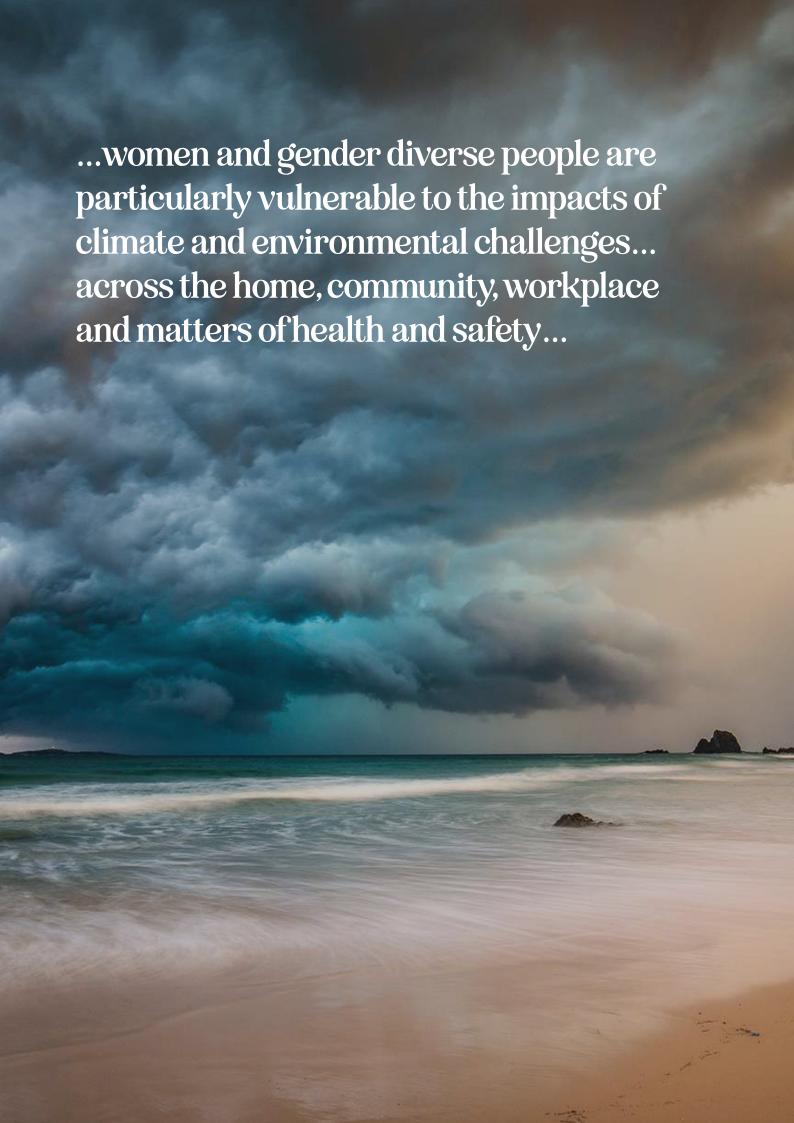


In 2017 Daele moved to Australia with her son, taking up a job with the Australian Workers Union who later merged to become the United Workers Union. Her recent work has focused upon how climate change is affecting care workers in Australia. She believes that the care sector is the industry most profoundly affected by environmental change.

When you look at jobs of the future, that's in the care sector. It's not in renewable energies, it's not going to be in mining. It's not going to be in manufacturing or logistics, because that's all going to be automated. How do you transition workers from mining to renewables, mining to care sector, logistics to care sector? It's about lifting women, the value of women's work. When women, as carers, when there's a flood, when there's earthquakes, when there's fires, do we just stop? Do we just stop doing what we're doing? I guarantee that a care worker will go through hell on earth to get to their client.

Daele believes that to bring people along in their understanding of climate issues, we need to communicate through stories rather than research or science.

Climate work, environmental work, it's slow. It's little steps, so you could just bring people with you. It's about educating people along the way, but you've got to communicate in a non-threatening way, but in a way where they can relate to it. When you share those stories about workers that you've supported or the work that you've done yourself, that's when they relate to it. That's when they're walking with you and not feeling threatened.



Australian unions are primarily approaching climate change as an issue of health and safety at work, gathering data and delivering training concerning the impacts of environmental change on workplaces. A report on High Heat and Climate Change at Work found that heat is impacting safety and productivity in Australian workplaces. On hot days, more than half of the workers surveyed are significantly impacted by heat but have limited ability to mitigate its impacts. However, gender is still largely missing from these conversations. Although the High Heat report recognised that certain industries are more affected, as well as older workers and workers with pre-existing health conditions, the issue of gender was not considered.91

Emerging research argues that just transition policies and programs need to think expansively about what Australia's climate-changed future could look like in order to genuinely address the diverse needs of communities experiencing social and economic change. Research into a just transition for the coal mining town of Collie in Western Australia found that there had been too great an emphasis on supporting affected workers in the coal industry, and too little attention to addressing social and gender issues including housing affordability, mental health support and childcare accessibility.92 When community consultations were held in the fossil-fuel-dependent town of Gladstone, Queensland, about what kind of new economy and society the community wanted to transition towards, healthcare, housing and liveability were three key pillars. Recognising women's rights and central roles in these three areas will be fundamental to just adaptation and needs to be centred in transition decision-making.93 There is currently only limited recognition in the Australian context that women and gender diverse workers are impacted by climate change in specific, gendered ways that demand targeted policy responses.

The first section of this report has demonstrated the multiple ways in which women and gender diverse people are particularly vulnerable to the impacts of climate and environmental challenges. Across the home, community, workplace and matters of health and safety, extreme weather, biodiversity loss, and other environmental issues are experienced in gendered ways in the Australian context. But women and gender diverse peoples are more than just passive victims of environmental change – they are also active participants in solving these challenges, offering distinctive and much-needed perspectives.

Gendered responses and solutions to climate and environmental issues

Women are more vulnerable than men to the devastating impact of climate change. Women are also missing out on the chance to be part of the climate solution. Our data shows that women are lagging behind men in almost every aspect of the transition to a green economy, and in many cases these gaps are widening.94

What difference does gender diversity make to climate and biodiversity solutions?

While we know that women and gender diverse people remain vulnerable to environmental change, their voices are not always centred in designing solutions. Greater engagement with all genders will lead to climate and environmental outcomes that are both more equitable and more successful. for a range of reasons.

At the most pragmatic level, solutions are only effective when the experiences and perspectives of those most impacted are listened to and included. That means we need to involve everyone affected by environmental challenges in order to find solutions that work.95 This is a basic participatory and co-design principle that informs much policy-making in contemporary Australia – yet a lack of attention to gendered perspectives pervades policy discussions of climate and environmental issues.

There are also compelling citizenship-based arguments. As a group constituting more than half of the Australian population, women and gender diverse people are a significant proportion of Australian citizens, and a rights-based approach to environmental issues implies that all citizens are included in considering responses to environmental challenges. Solution design needs to prioritise the participation of women in all their diversities and lived experiences.

In a comparative international sense, Australia has an opportunity to enhance our reputation on the world stage by considering gender in relation to climate and environmental issues. As a developed economy in a developing region, Australia arguably has a moral obligation to provide policy leadership on this matter, and such leadership will only enhance our relationships with our Pacific neighbours and our ambitions to host COP31. As a clear global consensus has emerged regarding the need to gender our understandings of environmental impacts and responses, there is an opportunity for us to take a leading role in translating international evidence into the Australian context, providing lessons for other countries to follow.



Heads of delegations at the 2015 United Nations Climate Change Conference (COP21), which led to the signing of the Paris Agreement (CC BY 2.0 Wikimedia Commons). Women continue to be significantly under-represented within the COP processes and other decision making fora

Feminist approaches

But the most compelling argument for gendering our understandings of climate and environmental issues is offered by a feminist analysis. Feminist perspectives on policy-making insist that all genders, including women, in all their diversities and lived experiences, are incorporated into the design, implementation and evaluation of any policy. Increasingly, feminist policy analysis also demands an intersectional perspective, questioning how decisions will impact citizens differently depending on their cultural and linguistic background, gender and sexuality, health and disability, and socio-economic background.

Feminist analysis also invites a step back from climate and environmental challenges, encouraging us to understand that piecemeal or band aid solutions will not adequately respond to problems of this magnitude. The unsustainable ways of perceiving and interacting with the natural world that caused our contemporary environmental problems are linked with patriarchal, colonialist and extractivist mindsets that originated with elite white men. In the context of catastrophic climate and ecosystem breakdown, a wholly new approach to human-nature interaction is required, not merely

technocratic solutions. A feminist ethics of care proposes a different mode of interaction, one which prioritises care for people and care for the planet.

This section of the report details evidence that climate and environmental solutions led by or involving women and gender diverse people achieve more effective or equitable outcomes. Such evidence spans a range of sectors including politics, conservation, and energy. But the reasons why diverse gender representation makes a difference across these fields goes beyond equity. Research additionally confirms that women and gender diverse people bring different beliefs, opinions, and approaches to their work. We will consider sector-specific evidence before outlining a series of general conclusions for increasing the gender diversity of climate and environmental leadership.

Case study: Sarah Eccles

Sarah Eccles is a Wadawurrung woman centring First Nations women's voices and Caring for Country practices within the places and projects she has worked in with Aboriginal organisations, conservation organisations and government agencies. Sarah grew up, 'knowing that caring for Country is essential to our wellbeing and our Country's wellbeing'.

Sarah undertook studies in arts, humanities, social sciences, conservation, and land management. Her studies provided knowledge in conservation practices to complement the cultural knowledge learnt from her Elders. Alongside her studies she took on voluntary roles in local community projects healing Country, such as Green Corps – an Australian Government program training young people in conservation through volunteering in large re-vegetation programs – and at CERES – an environmental

education centre, community garden, urban farm, and social enterprise in Naarm (Melbourne). Her next role was with Greening Australia, an organisation carrying out landscape restoration. Sarah coordinated a project working alongside First Nations communities with native foods and caring for Country businesses.

Sarah then worked for many years with Bush Heritage Australia, a nation-wide conservation organisation, supporting the development of the Indigenous partnership program. This role fostered collaborations with Indigenous groups across the nation to bring resources and support to their caring for Country programs, ranger teams and Indigenous Protected Areas work. This has been part of a journey towards Traditional Owners having a greater say in and care of Country, towards joint or full management.



When Sarah began there was only one relationship with Traditional Owners, but when she left.

working in partnership with First Nations was at the heart of the organisation's values and how Bush Heritage works. There were around 26 partnerships across the nation. Realised through slow building of relationships, of understanding and respect for the role we have as First Nations people in continuing to care for our country and community, but also of the disadvantages experienced in our daily lives that make this challenging.

Sarah spends more of her time working with her own Wadawurrung community now, sharing her skills and experiences learnt in forming Caring for Country collaborations. Sarah has supported the creation of Wadawurrung's Paleert Tjaara Dja Let's make Country Good Together – plan. She has subsequently supported putting it into action and the development of the Gobata Dja – Caring for Country program and team. This has become an important cross-cultural communication tool expressing the collective voice and perspective of Wadawurrung people in self-determining their future.

In wanting to see positive change and support for her community's needs, Sarah has served multiple periods of being a director and co-chair on the Board of Directors of the Wadawurrung Traditional Owners Aboriginal Corporation. She has found decision-making to be very gendered in this context, with few women leaders represented.

As a mother raising girls who will continue this work, I feel the importance of nourishing these leadership qualities and that includes my own abilities to be their strong example. I know I have a role to create space for women's leadership and voices in caring for Country, in conservation and in designing local solutions and policy that impacts our lives and our families. We need our women to step up and voice up and yarn up because we're ultimately the ones that carry a strong caring role.

Sarah also works part time in a social enterprise for conservation management, does consultancy work with Melbourne Water, and sits on the Great Ocean Road Coast and Parks Authority Board as a Wadawurrung representative. Reflecting on her career to date, Sarah sees the need for a greater valuing of First Nations women's leadership.

There's men's and women's business - knowledge that men and women hold separately, as much as we need each other to care for Country and community. What I see a lot in a community context and through the broader caring for Country movement is men are often at the front with all the yarns and perceived decision-making but it's the women in the background who do everything. When you really hear ideas and ways of doing things that are centred on caring and looking after generations and healing – its women coming through.

Gender in conservation and environmental work

Gender differences have often been noted in international conservation work. Market-based responses to environmental challenges – such as offsetting carbon and biodiversity – have come to dominate global responses to climate change and biodiversity loss. Yet market-based solutions are rooted in patriarchal and colonialist systems and primarily benefit white men in the Global North. Including more women with diverse lived experiences, particularly from low-income countries, offers the opportunity to craft responses to climate and biodiversity crises that are more complex and effective, based on a lived understanding of social inequities.⁹⁶ Environmental solutions are stronger and more enduring when they have ongoing support from communities directly impacted by environmental change.

One feminist analysis of the water industry argued that men tend to try to 'control' natural resources like water and prefer technology or engineering centred responses to water management.97 This can be characterised as 'a masculinistpaternalist ambition to control the unpredictable and undisciplined – in this case, the natural environment'.98 When women are involved, decisions and approaches to water usage become more relational. People become the solution rather than technology.99 Some evidence suggests that women tend to prefer nature-based solutions (NbS) to climate and environmental challenges while men favour technological approaches.

Perhaps this is why research suggests that when women are involved in or lead conversation projects, natural resource management and climate change adaptation activities, there is a greater likelihood of success. 100 Women often use natural resources in their local areas differently to men, yet tend to exercise less formal control and influence. For example, research in India and Nepal has demonstrated that the inclusion of women in forest management groups leads to better conservation outcomes and resource governance.¹⁰¹

Empowering more women in local resource decision-making may lead to better resource governance and conservation. 102

Nature-based solutions and women's climate leadership represent the kinds of systems-level, transformational actions needed to respond to climate change. Yet both remain under-funded at the international level. Currently less than 1% of global charitable funding goes to women-led environmental action.¹⁰³ Women are often stewards of natural resources like firewood and water, with specialised knowledge of how to sustainably maintain and use these resources. Investing in women-led initiatives is likely to benefit more than just environments, as women typically re-invest 90% of their earnings back into family and community.¹⁰⁴ Increasing funding for NbS and women-led climate action represents an opportunity to harness and multiply the benefits of both. 105

In particular, there is evidence about the benefits of supporting nature-based solutions led by Indigenous women. Support for such efforts remains inconsistent, however. Although nature-based solutions are a priority area for the European Commission, women and Indigenous peoples have been inadequately centred in funded NbS projects to date, despite being particularly impacted by climate and environmental challenges. Inclusion of both groups is critical to increase the likelihood of meaningful, effective and long-lasting nature-based solutions. 106

In the Australian context, where Indigenous rangers are responsible for managing land and seas representing around 44% of the national protected area estate, over one-third of the 2,000 ranger positions funded in the Australian Government Indigenous rangers program are women.¹⁰⁷ In remote areas where a lack of local jobs is a major barrier to women's employment, Indigenous ranger programs have been important sources of employment opportunities for women. The Wiyi Yani u Thangani Report notes that Indigenous ranger programs nurture pride in women and girls, and permit appropriate management of women's sites and women's business.

Our women rangers hold a vital place in actively using our knowledge, and learning innovative practices, to keep our Country, our people and all human and non-human relatives healthy and strong. Our men play an equally important role, but our women rangers have been undervalued and under-resourced. It is essential we invest in women working on Country to ensure our sacred women's sites, law, knowledge and songs are maintained and protected. 108

The Strong Women for Healthy Country Network has been operating since 2019, bringing together Indigenous women rangers from across the Northern Territory to an annual gathering. 109 Through this collaboration the network has produced a set of best practice principles for caring for Country. One of the aims of the guide is to improve gender equality in land management workplaces. 110 The Strong Women for Healthy Country Forum 2021 noted the importance of this work being underpinned by strong communication and governance, as well as opportunities for networks of women rangers to work together.¹¹¹

However, meaningful efforts to engage women in all their diversity are still lacking internationally. Peer-reviewed literature relating to the climate and biodiversity crises remains dominated by men from the Global North. In one analysis of authorship, only 36% were women, 31% of first authors were women, and less than 2% were women from the Global South. 112 Another study of 100 influential climate science papers found that less than 1% of authors were African-based and nearly three-quarters were employed by European or North American institutions. Women comprised less than a quarter of authors, with only 12 papers produced by a female lead author. 113 This is despite the fact that one large study demonstrated that the greater the diversity of scientists involved in research projects, the greater the impact of the research they produced. 114

Women in conservation organisations report that their gender restricts their career development, with men more likely to influence conservation and science decisions, and women more likely to experience harassment and discrimination. Even when diverse gender representation is achieved, women can still experience systemic inequity, particularly due to intersectional issues such as race and caring responsibilities. 115

Genuine reform would mean recognising that women are not a homogenous group, rather their experiences are layered with race, ethnicity, age, religion, income level and disability. It would also require that conservation and natural resource management institutions implement measures to address gender equity and inclusion in their internal operations, not just in projects they fund. 116 There are efforts afoot to change this.

Case study: Robyn James

Robyn James is an environmentalist whose conservation and climate projects and doctoral research are designed to address barriers and opportunities for women in conservation.

Robyn is Director of Gender and Equity at the Nature Conservancy Asia Pacific. For over 25 years she has been driving conservation and climate efforts in the Asia Pacific region, collaborating with communities in more than 17 countries including Australia, Papua New Guinea and the Solomon Islands. She is also undertaking a PhD in gender and conservation at the University of Queensland.

All of Robyn's work is underpinned by a commitment to gender equity in natural resource management, so that conservation work respects women's expertise, benefits women in communities and avoids adversely affecting women. Through her work with The Nature Conservancy and her doctoral research, Robyn has demonstrated that women are often underrepresented, and sometimes even completely absent, in conservation work – but when women are intentionally included, projects are more likely to succeed. 117 She has also shown that women are systematically discriminated against in scientific research, conservation projects and even in conservation organisations – that can

be highly conscious of environmental impacts but less of gendered impacts. Women face further barriers due to other aspects of their identity, including race, class, location, and religion.

While her research has provided quantitative proof of these trends in countries from low to high income, Robyn has also directly experienced these issues.

It is important to recognise that these gender imbalances are present in environmental organisations themselves. For example, women often occupy communicative and administrative roles (with a focus on so-called soft skills), and men are over-represented in positions that involve strategy, risk-taking, fieldwork, or are leadership oriented.

I have been discouraged from applying for leadership positions because management felt that it would be unsafe for a woman to travel to remote locations, or that my parenting responsibilities would make it difficult for me to meet travel requirements. In stark contrast, my male counterparts were alternatively encouraged into leadership positions, even though they had children of similar age and often less experience than me.¹¹⁸

Multiple studies have shown that women in conservation and climate science are paid, cited, and promoted less often than men, and are less likely to receive invitations to editorial boards, research panels, and grant proposals. Pobyn's research includes practical strategies for organisations wishing to make meaningful progress towards not just gender parity, but gender equity.

Gender in science and technology

Some of the challenges in achieving gender equity and inclusion in a range of fields including conservation, scientific research and science-related industries like clean energy are linked to deep-seated cultural attitudes. The barriers to attracting women and girls into Science, Technology, Engineering and Mathematics (STEM) subjects at secondary and tertiary education are linked to the difficulties with retention of women in research and industry. This problem is not new, and a range of programs and organisations have attempted to tackle it, but have not yet resulted in the changes needed. Women are only 16% of Australia's STEM-skilled workforce and on average women in the professional, technical and scientific services industry earn 23.7% less than men. Within STEM research, women are 52% of the lowest rung of researchers and 23% of the highest rung. Similarly in STEM organisations, women are only 28% of managers and 8% of CEOs or Heads of Business. 120

These figures are concerning for a number of reasons, but particularly because science and technology will be shaping climate and environmental responses into the future, and women are missing out on some of the major decision-making spaces. For example, the proportion of female authors on the Intergovernmental Panel on Climate Change has increased from less than 5% in 1990 but is still only just over 20% in recent assessment reports. Women from the Global South and/or non-English speaking backgrounds particularly felt that it was difficult for them to influence IPCC reports. 121 In addition to scientific research and authorship, ensuring that emerging technology is designed, tested, and rolled out by people of all genders and diversities is critical to ensuring that it meets the needs of all Australians.

One systematic literature review of 1,275 journal articles on the role of gender in developing technologies to combat climate change concluded that encouraging more women into science and technology related fields could yield more innovative climate technologies. 122 This is because women tend to have different motivations for innovation. 123 Further, the review found that women's tendency to care for others results in an inclusive approach to managing teams, which helps create an environment conducive to developing innovative climate and environment technologies. 124 Overall, the systematic review found women are more likely to lead research and development teams in caring and inclusive ways and to focus on technological innovations that serve broader social purposes, such as climate action. 125

Yet climate technology remains dominated by men. A pervasive stereotype of the 'tech bro' – a young, white, able-bodied cis male – operates to inhibit financial support for new ideas from other types of innovators, especially women. Companies founded by men receive more than double the level of investment of those founded by women. 126 In 2018 only 22% of Australian startups were founded by women. In the last financial year, only 0.7% of private sector funding went to startups founded by women. 127 This is despite the fact that women-owned startups achieve greater financial success over time. 128 Indeed, women-founded startups generate 78 cents of revenue for every dollar of start-up funding compared to a return of 31 cents per dollar from men-founded start-ups. 129 To address this gendered investment gap, Scale Investors was founded in 2013 with a mission dedicated to investing in Australian women-led startups. In addition to connecting angel investors with startups boasting women-led or gender diverse teams, Scale Investors also hosts an online education platform for women founders.

Case study: Kirstin Hunter

Kirstin Hunter is the Managing Director at Techstars, the largest pre-seed technology investor in the world. She helps to identify startups in innovative technologies and connect them with pre-seed investment, training, networks, and mentoring.

While the Techstars program is not climatespecific, Kirstin expects all founders in their program to understand that business cannot ignore climate and environmental issues in the twenty-first century.

Climate is both the biggest threat and the biggest opportunity economically. Even if founders and their businesses are not climate businesses, in 2023 every business is a climate business one way or another. The impact on the climate can be positive, neutral, or negative.

Kirstin believes that businesses cannot afford to separate consideration of climate and sustainability issues from their core business strategy. She hopes that with some leadership from 'the small end of town' they will create new business models that the broader economy can adopt.

Kirstin's experience in technology financing is that when investment spending is low, unconscious bias plays a larger role, with investors supporting all-male teams. The 2023 State of Australian Funding Report from Cut Through Venture reported that 26% of funding went to companies with at least one woman founder but only 4% went to all female founder teams. 130 But Kirstin's experience leading the accelerator program at Techstars has convinced her that teams benefit from diversity of all types, including gender, age, cultural background and neurotype.

She has found that,

Because women founders are the minority, because the system is not built to serve them, they're a little bit less in service at the system. They're a little bit more questioning, a little bit more creative, about the type of funding sources that they're looking for, and the business models that they're looking to solve, and much more heart driven problems, rather than economic or idea driven problems that look great on a whiteboard but often don't survive their first contact with the market.

Kirstin believes that there are several strategies that could help to shift investor preference away from male-led teams, involving both the carrot and the stick. One is to increase awareness that diverse teams deliver outsized returns. Another strategy is for limited partners to put more pressure on venture capital (VC) funds to explain why their investments lack gender diversity. Finally, Kirstin would like to see more transparency around gender in VC investment. Currently there is pressure for Australian VC funds to voluntarily disclose their gender data. By contrast, California has passed legislation requiring investors to share diversity metrics of the companies they invest into. In the last Techstars accelerator program, 58% of companies were led by female CEOs.

Governments can play a powerful role in shifting gender balances. Kirstin points to the Victorian Government's Alice Anderson Fund which offers women founders matched funding if they can raise a certain amount of capital from private investors. Government can also help to build 'thriving ecosystems that are particularly friendly to female founders, thriving tech ecosystems that don't have that hustle, tech bro culture'. Government can additionally fund the experimentation phase of new innovations,



recognising that there is a considerable upfront cost in testing whether new technology is viable.

Prior to working at Techstars, Kirstin was the Director and Chief Executive Officer of Future Super, a superannuation fund specialising in ethical and fossil fuel free investing. Kirstin's contributions at Future Super were recognised through being named the Superannuation Executive of the Year at the 2019 Women in Financial Services Awards. Kirstin's role at Future Super was characterised by working collaboratively with the industry.

We were the first to release an impact methodology to understand the carbon intensity of an investment portfolio within the super space. We just went and did it and shared our assumptions and talked to the regulator when they got interested and basically were very transparent about how we calculated the carbon impact of investing with Future Super vs investing in a similar product that lacked ethical screens. We tried to lead the industry to say this is an important thing that your members need to know.

Kirstin foresees significant changes to business in the near future. Fifty years ago, successful businesses were,

extractive in terms of planetary resources, but also human resources in terms of their staff and their customers. The state of the planet is echoed in the amount of social inequality that we have, which means that extractive businesses don't have much left to extract either from the planet or its people. The generation of businesses of the future are more likely to be ones that are built in harmony with people and the planet, that genuinely solve real problems, rather than providing a surface level fix that allows the underlying problems to continue.

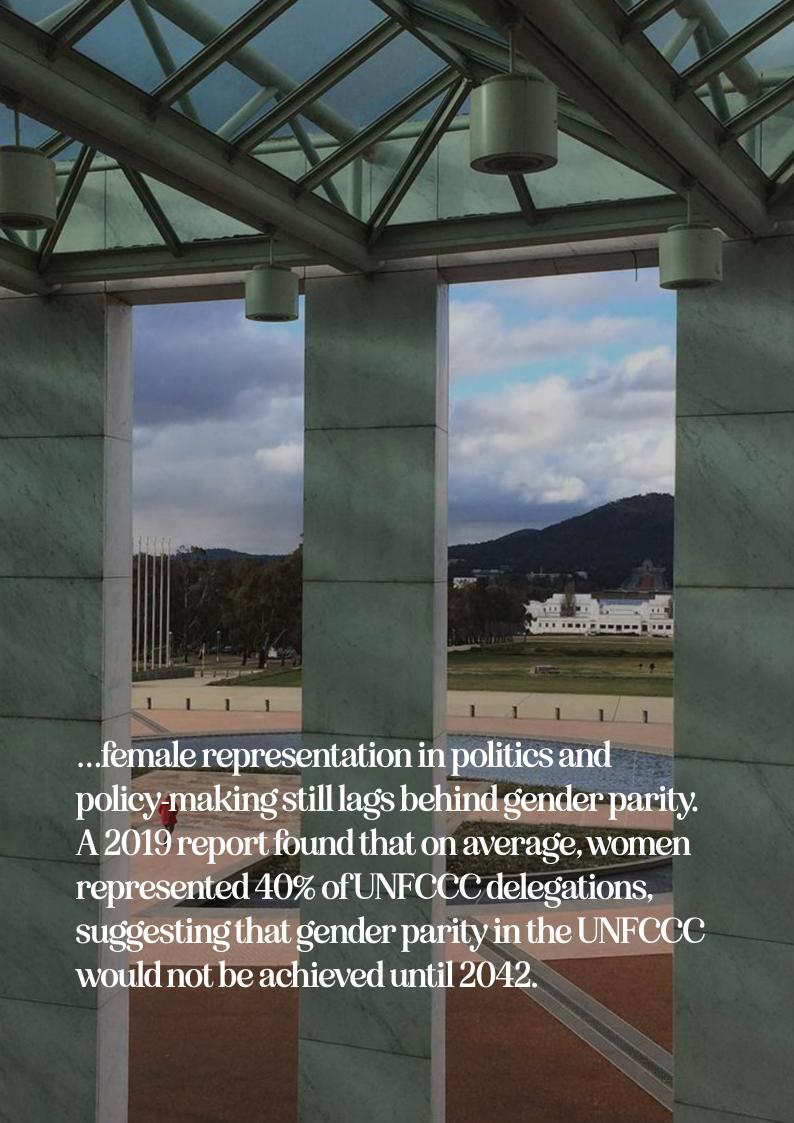
Gender in politics and policy-making

Women's leadership achieves different environmental outcomes in the political arena also.

A range of studies across different geopolitical contexts demonstrate a correlation between having more women involved in politics and policy-making and care for the environment. The UN Development Programme asserts that 'women often show more concern for the environment by supporting pro-environmental policies and leaders', 131 which means that increasing the numbers and influence of women in politics and decision-making is likely to further environmental goals.¹³² A study of 91 countries found that higher female parliamentary representation correlated with stronger climate action policies, 133 with another study similarly finding evidence that a larger number of women in political decision-making was associated with more ambitious climate strategies. 134 Within the European Parliament, men and women were found to be equally likely to express pro-environmental opinions, but in terms of concrete action, women were more likely to vote for environmental legislation. 135 These trends also extend to countries' support for international action: nations with higher numbers of female politicians more consistently ratify environmental treaties. 136

However, female representation in politics and policy-making still lags behind gender parity. A 2019 report found that on average, women represented 40% of UNFCCC delegations, suggesting that gender parity in the UNFCCC would not be achieved until 2042. 137 At the COP28 climate talks in 2023, only 15 out of 140 speakers were women, and only 38% of party delegation members were women.¹³⁸ Speaking at an event on the importance of women's leadership to tackling the climate crisis, former US Secretary of State Hillary Clinton criticised the under-representation of women at COP28. 'We have seen repeatedly that women's lives, women's work, is often an afterthought if it's a thought at all'. 139

In the Australian context, 39% of federal parliamentarians and 39% of state and territory parliamentarians were women in January 2022. 140 This rose to 44.5 % of federal parliament and 43.5% of federal cabinet by November 2022. The current Australian Government has promised \$5 million over the next five years to help encourage more women to run for public office at all levels of government.¹⁴¹ But we need more than just gender diversity - cultural diversity is also lacking in Australian politics with First Nations women and women of colour under-represented in the corridors of political decision-making. Women for Election are running leadership incubation workshops in collaboration with Politics in Colour to help Indigenous women and women from other culturally and linguistically diverse backgrounds to learn how to run political campaigns. 142



Case study: Bianca McNeair

Bianca McNeair is a Malgana woman from Gutharagudu (Shark Bay) whose work caring for Country has spanned several different cultural, conservation and political roles, including running for political office in 2022 and working with a Greens Senator.

Bianca's parents emphasised hard work, accountability, and honesty. Bianca remembers her mother 'taught me my responsibility as a woman, as a mother, as a community person. She was very strong... We have a very strong matriarchal culture in Malgana Country.'

Bianca is a painter, storyteller, and photographer. She explains that 'Painting is a good way to document our stories. I've done work with museums documenting Malgana history and culture.' For Bianca, being an Aboriginal artist means painting from knowledge of Country, so 'that sent me on a whole journey of learning about Shark Bay... to know intricately about Malgana Country'.

Losing her mother and father within two years of each other was a 'huge turning point' in Bianca's life. She began working as an Aboriginal education worker and then as a cultural project officer for an Aboriginal organisation, bringing Country and art together through youth programs. She became involved in the native title process that resulted in recognition of Malgana traditional ownership of Shark Bay. These experiences strengthened her understanding of land and sea management and conservation. Bianca completed a Bachelor of Visual Arts which 'helped me to see that my storytelling, artistic, creative side is the way I can bring blackfellas and whitefellas together for Country'.

After becoming involved in Aboriginal ranger program coordination, Bianca encountered resistance to women joining the program.

In a lot of Aboriginal ranger programs men actually dominate those programs and they say it's for cultural reasons... I had to really fight hard to say no, you need to separate Aboriginal culture from the culture that you created in your workplace.

Bianca explains that Aboriginal men and women have different relationships to species and Country, but men's traditional practices are more likely to be recognised by government and industry.

We've always had responsibility for the nurture of our own babies, of our families, of our communities... But having that disconnect through colonisation has made it really hard for women to be involved in any of those practices, whereas the men in my community have still had an active traditional fishing industry, where they have traditional fishing licences for commercial fishing. That allowed them to stay connected to those practices of hunting turtle and dugong. Whereas us women, we've lost a lot of access to those places, which are really important not only for looking after the turtle, but also for our fertility, our cultural practices and passing on information between generations of our women.

Bianca created and coordinated a program where Malgana women monitor loggerhead turtles at Shark Bay to collect information about movement and breeding patterns to design programs to protect turtles from climate change. The loggerhead turtle program is also passing on cultural knowledge through generations of Malgana women.



Bianca adapted her program of loggerhead turtle monitoring to help Nhanda women monitor mallee fowl nests, despite the fact that Malgana and Nhanda people were in conflict over native title.

Grandmothers and granddaughters go out on their Country and do mallee fowl mound monitoring once a year. I was really proud of that because if that went through a native title process it would never have worked. But it was just women to women, knowing that we needed to do this for our next generations.

Bianca was invited to join the National First People's Gathering on Climate Change, an initiative of the Climate Systems Hub funded by the federal government's National Environmental Science Program. She says:

This Gathering work that I do is really close to my heart. The people in it are like my family. We have done a lot of work bringing forward the skills of First Nations peoples in climate issues. Elevating the issues we are facing and teaching climate scientists how to work with us.

Bianca ran in the 2022 federal election in the seat of Durack. In 2023-24 she worked in the office of a Greens senator, and reflected on how powerful it was to be working for an inspiring Aboriginal woman in politics.

Underpinning all of Bianca's work caring for Country is an understanding that Aboriginal women bring a much-needed perspective to cultural and environmental issues.

Us women we're dealing with the issues on a day-to-day basis for our communities... There's lots of disputes over native title borders and whatever but the one thing all us women have in common is that our babies are committing suicide... As women we'll go and say what can we do, what can we contribute.

Gender in business and industry

There is also evidence that increasing the numbers of women in industry has financial as well as environmental benefits, though we need more research demonstrating the difference that women's leadership makes to environmental outcomes in the private sector, where corporate success has traditionally been the major measure of success.

Women enable teams to perform more effectively both in general and in business specifically. 143 Gender diversity in corporate leadership yields clear environmental benefits. Research demonstrates that a 1% increase in women managers in a firm results in a 0.5% decrease in carbon emissions. 144 Boards with greater gender diversity experience significantly fewer environmental lawsuits¹⁴⁵ and receive higher scores on Environmental, Social and Governance (ESG) performance rankings. 146 An analysis of more than 11,700 listed companies worldwide found a correlation between women on boards and climate governance and innovation. Across the electric utilities, oil and gas, and mining sectors, companies that have more than 30% of women on their boards displayed better climate governance. Gender diversity was also associated with climate innovation, through technology innovation and new business development, and with more innovative and inclusive corporate cultures. 147

One piece of research tried to understand why gender diverse boards fare better, through interviews with men and women directors from 200 publicly traded companies in the US and Europe. The research concluded that:

First, it turns out that women directors come to board meetings well-prepared and concerned with accountability. Second, women are not shy about acknowledging when they don't know something, are more willing to ask in-depth questions, and seek to get things on the table. As a result, the presence of women improves the quality of discussion. 148

Another research project analysed data from 19 European countries and identified a positive correlation between the number of women on boards and corporate sustainability performance. In this research, a board composition of at least 30% women was required to positively enhance corporate sustainability, with the author arguing that this.

may be due to women's style of managing, operating, and setting strategies. Women board members are more stakeholder-oriented and more likely to establish policies that further higher sustainability performance. 149

Research also shows that companies with genderdiverse leadership teams and boards are more successful than those without. 150 An international study of 366 public companies from diverse industries found that when women represent at least 30% of leadership composition, companies report business gains irrespective of their size. 151 Further, companies with leadership in the top quartile for gender diversity were 15% more likely to have financial returns above their industry's median, while companies with leadership in the top quartile for racial and ethnic diversity were 35% more likely to report above-average financial returns.152

Yet women hold just one in four executive leadership positions in ASX300 companies, with progress on gender equity in Australian corporate leadership seemingly stalled or going backwards. At the current rate of progress, it will take a century for women to constitute 40% of CEO positions among ASX200 companies.¹⁵³ In their most recent gender equality scorecard, the Workplace Gender Equality Agency noted that 'as the level of seniority in management increases, women's representation decreases'. In 2022–23, the proportion of women CEOs decreased slightly to 22% (from 22.3%) and the proportion of women on boards remained steady at 34%, with only 13% of organisations setting a target to increase this. Only 25% of boards have achieved gender equality and 1 in 4 boards have no women at all.154

Gender in energy

The clean energy sector cannot grow at the scale required without the participation of half of Australia's population... The clean energy workforce is predominantly male, especially amongst the critical occupations for clean energy supply and demand... The majority of occupations in shortage have a substantially gendered workforce, most of which are male dominated... The clean energy sector, like the traditional energy sector before it, will not attract, support or retain women in the workforce without transformational change and targeted policy reform. 155

Women are also under-represented and underrecognised in the energy sector, both in Australia and internationally. 156 The UN Secretary General's 2022 report on 'Achieving Gender Equality' recognised that 'only a third of 192 national energy frameworks from 137 countries include some gender considerations; women are characterized therein as potential stakeholders or beneficiaries, but rarely as agents of change'. 157 Yet gender inclusion and equity in the sector will be essential both to achieve urgent climate change mitigation targets and to ensure that the associated economic benefits are genuinely inclusive. 158

More than 80 percent of the new jobs created by the decarbonization agenda will be in today's male-dominated sectors. Women will not benefit from job creation unless the current gender segregation by occupation is addressed. 159

As we shift towards new economies, it will be critical to ensure that the extractivist mindsets that led to catastrophic environmental degradation are not perpetuated, and that women are part of designing these new industries such as clean energy and can benefit from them. 160

Women currently represent 23% of the Australian oil and gas industry and 16% of the coal industry. 161 Overall, around 35% of the clean energy workforce is female with women predominantly in jobs such as office administration, accounting and cleaning rather than trade-qualified or engineering roles. 162 Data on gender in the clean energy sector is imprecise because renewable energy is not its own recognised economic sector, so information is captured in larger aggregated data sets. Accurate data will be critical to establishing targets to improvising the numbers of women in the industry.

Research by the Clean Energy Council discovered that women in the sector experience bullying, harassment, and discrimination, and that women are under-represented in senior management and board positions. 163 Industry-wide strategies are needed to realise a more inclusive and equitable sector, including addressing the gender pay gap; workforce safety, particularly high rates of harassment; and basic workplace amenities. 164

Women-led efforts from the clean energy sector are proving highly successful. The First Nations Clean Energy Network in Australia is co-chaired by Yorta Yorta woman Karrina Nolan (also Executive Director of Original Power) and its gender-balanced Steering Group includes Jaru woman and electrical engineer Ruby Heard, of Alinga Energy Consulting. The Network has an overarching mission 'to protect Country and make sure the transition to renewable energy in Australia occurs fairly for First Nations people and communities', within a broader commitment to land rights, sovereignty, and gender justice. A partnership of First Nations people, Traditional Owners, community organisations, land councils, unions, academics, industry groups, technical advisors, legal experts, renewables companies and more, the Network has recently launched a new Community Energy Planning Toolkit.165

Case study: Nicky Ison

Nicky Ison believes that women bring distinctive and necessary perspectives to clean energy, characterised by connectedness, collaboration and multidimensionality. Nicky is Head of Direct Advocacy at Boundless. She trained as an engineer and has worked on renewable energy policy at the World Wide Fund for Nature and Climate Action Network Australia. Nicky has also worked as a social entrepreneur in community-owned renewable energy and as a researcher at the Sustainable Futures Institute, University of Technology Sydney. In her view,

Climate solutions can be accelerated in two ways. One is a very technocratic, siloed approach like we need this number of megawatts and that's all we focus on. There's another way which is to try to look at the social, political, cultural and environmental dimensions as well as the technical and economic dimension... How do you create solutions that are good for people and nature as well as accelerating things technically and economically? That is, how do you think about the interconnectedness of things, and not think in such siloed ways - creating win-win-wins?

If you look at some of the best strategists and campaigners doing the work on this, they're women... I think the people who help shape the strategy behind the scenes are increasingly women, but the people who help shape the public discourse are still predominantly men, particularly in the solutions space, the energy space. That needs to change.

Women also bring a collaborative approach to climate and environmental challenges that are critically needed in this space.

There are campaigns that you can run where an organisation doesn't need to collaborate, but in the climate space that doesn't really exist. The scale of the challenge and the multidimensional nature of it means that there are very few wins that a single organisation can have by itself. So movement-level thinking, fostering collaboration, building power together, is critical. That work is not universally being done by women, but done more by women or by men who you could call pro-feminist men.

Nicky also believes that women are particularly skilled at multidimensional thinking, and climate change is a perfect example of a multidimensional problem that requires solutions that encompass public, community, and environmental aspects.

In my experience it is more likely that women will bring interconnectedness, collaboration and multidisciplinarity to climate and environmental challenges... The consequence is that you get less unintended consequences, because you are operating from multiple perspectives.

We need more women engineers, because engineers are problem solvers. Increasingly the two biggest pieces of action on climate change are engineering challenges and sociopolitical challenges. Those two things can come into tension unless you have people with both skill sets. There's a tension between process and outcome. We need a process that can build trust but also move quickly. We need process and capability building to be able to build things quickly.

Increasingly others share Nicky's view that more women are needed in the clean energy sector, particularly women with engineering skills. The Australian Government has signalled its commitment to gender equality in the clean energy industry by supporting the global *Equal by 30* campaign, a joint initiative of the Clean Energy Ministerial (CEM) and the International Energy Agency (IEA). Work is underway to deliver on five commitments:

- 1. Initiating an Australian Women in Energy Roundtable to share industry strategies
- 2. Achieving gender parity in leadership roles within the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- 3. Sharing Australian Public Service strategies to achieve gender balance and reduce the gender pay gap
- 4. Building a Women in Energy Resources Hub
- 5. Championing gender diversity in domestic and international energy forums. 166

However, we will need sustained efforts across government, industry and the NFP sector if we are to ensure that women can benefit from the transition to clean energy, and that the renewables sector can in turn benefit from ensuring that clean energy sector leadership is inclusive of women and gender diverse peoples in all their diversities and lived experiences.



Case study: Anita Talberg

Anita Talberg is Director of Workforce Development at the Clean Energy Council (CEC). She has worked across industry, government, and academia, with academic qualifications in engineering and climate change, and a PhD on the governance of climate engineering. Anita's role at the CEC focuses upon ensuring the availability of a workforce to power the growth of clean energy in Australia, with three main components.

The first component is attracting sufficient numbers of workers and maintaining accurate workforce data. The second is ensuring that education and training systems are producing skilled individuals who meet the needs of the renewable energy industry. The third component is equity, inclusion, and diversity. Anita highlights this aspect because:

if you're not employing people from all cohorts, then you're missing out on a lot of skills and talent. Research shows that a more diverse and inclusive workforce has better workforce retention, has better productivity, has better customer service outcomes, is more innovative. Beyond the business case, there is a moral case, which is that the energy transition affects everybody, so everybody should be involved in shaping that transition.

Global data captured by the International Renewable Energy Agency (IRENA) suggests that female representation in clean energy is generally higher in Australia than elsewhere. Women's representation is also higher in Australian clean energy than comparable Australian industries such as oil and gas.

Despite this, the industry is below gender parity and for several reasons.

It's a very technical industry. And historically in Australia, we don't put a lot of women in through STEM courses and we don't have a system that supports women through that stream...The other element is the trades. We have a huge trade component to our workforce. And, for example, the number of women working as electricians hasn't gone above 3% in 30 years.

The CEC has three strategies to tackle these challenges. The first is supporting women into leadership roles in renewable energy.

We're working on supporting women into those leadership positions. And increasingly, we're going to be working with our members to work out why they don't have gender parity on their boards.

The second strategy focuses upon STEM, because the renewable energy industry is highly reliant on skills like engineering.

The problem there is economy-wide... We need to be working on the pipeline. For us, that means working to get more women into maths, science, and engineering at that year nine level, and then see if we can support them all the way through.

The third strategy concerns supporting women into trades. The CEC provides policy advice to government and considers support strategies like scholarships. But the problem is more far-reaching.

Girls aren't going into those trades. So we need to work out how we change the culture, how we support more of them to be able to make lifestyle choices that are in line with the trade career. So being able to go off and have babies and not lose their apprenticeships.

There is relatively high cultural diversity in the sector because much of the workforce comes from Europe, the USA and Asia. But despite the fact that many workers have come to Australia through skilled migration programs, Anita reflects that.

What I have heard from a lot of both job seekers and our employers is that if your experience isn't an Australian experience, you tend to have your experience disregarded.

Nevertheless, Anita's experience is that there are significant numbers of talented women of colour in the sector, particularly in technical roles.

Anita believes we need to make space for the different kinds of leadership offered by women and gender diverse people.

We need to change the way that we think about leadership, around change management. Women are a big part of that story. It's not trying to shape women into the problem solvers that we've had in the past. It's about re-prosecuting how we solve problems and by reframing it women come to the fore naturally. To do that, we need a lot of male champions who recognise that.



Gender and disasters

Research confirms the vital role that women play in building and maintaining community resilience in an era of increasing disasters.

Women contribute to disaster resilience and community strength by combining care skills acquired through personal and professional development, working with families, neighbourhoods and communities.167

The organisation Gender and Disaster Australia has extensively researched the multiple ways that disaster impacts and responses are gendered. Its research confirms that disaster preparedness and recovery within communities often fall along gendered lines. Gender stereotypes which are pervasive across Australian society – for example, that men are seen as protectors and women as nurturers – also influence the roles that different genders play in preparing for and recovering from disasters.168

Men are more likely to be involved in physical preparation work such as trimming trees and setting up sprinkler systems, while women are more likely to pack evacuation bags and practice evacuation drills with community and family members and animals. During disasters, men tend to defend properties and attempt rescues, whereas women are more commonly performing physical and emotional care of vulnerable people such as children and older people. In the aftermath of a crisis, it is often women who perform cooking, caring, and talking to take care of families and communities, while men typically attempt more physical and tangible tasks such as clearing debris or rebuilding structures. Restrictive cultural expectations of normative masculinity may trap men into 'heroic' and stoic behaviour which increases risks to their physical safety, prevents healthy emotional responses to trauma and contributes to well-documented increases in gender-based violence during and after disasters. LGBTQI+ community members have sometimes

felt marginalised within these normative gender expectations and may avoid places of collective gathering such as community evacuation centres because of experiences that are not inclusive or welcoming.

The kinds of relational and emotional disaster response roles that women often perform are often less acknowledged than physical rebuilding. Yet caring through disasters is critical and likely to increase in an era of multiplying extreme weather events. Research by Australia ReMade in collaboration with Women's Health Goulburn North East investigated the role of care in communities recovering from disasters, discovering that women were central in leading care-centric community rebuilding efforts. 169

Other research into disaster experiences is likewise demonstrating that the kind of care that women commonly provide is vital to how communities survive and recover from disasters. 170 One implication for policy is that as the frequency and intensity of disasters increases in the twenty-first century, we need to invest in more than the 'hard' infrastructure of bushfire building codes or flood-resistant urban planning. 'Soft' infrastructure of community connection and mutual support will be just as important for ensuring that local people and places can cope in a world of erratic and extreme weather. 171

Community-led collective action and planning which strengthens social and relational capital, engenders feelings of belonging, and increases informal social connectedness can help address the mental health and wellbeing impacts of climate change, while simultaneously supporting communities to prepare for those impacts.¹⁷²

Case study: Maddy Braddon

Maddy Braddon's work helping her community of Lismore on Widjabul Wia-bal Country recover after devastating floods epitomises the kinds of vital community resilience efforts carried out by women and gender diverse people.

Maddy moved to Lismore in 2006. As a teenager, Maddy was starting to 'go down the wrong track' when her mum took her aside and said:

You have a choice. What do you actually love? What do you want to do? You could have a good hard think right now about where you want your life to go.

This was a life changing moment for Maddy. She threw herself into climate and environmental activism, connecting with Australian Youth Climate Coalition and Young Greens locally. Maddy was blessed with a series of mentors who gave her opportunities to grow into her leadership potential.

At every step of my journey, I had someone, usually a woman, asking do you want to come along to this event?

Do you want to speak at this event?

I wouldn't be where I am without these older, strong women.



In 2017 Maddy was 22 and had just finished an internship with Australian Farmers for Climate Action when devastating floods hit Lismore. She spent two days observing the suffering caused by the disaster and feeling hopeless and impotent. But then Maddy started a Facebook group to connect people who needed help with people who were willing to offer it. She sought advice from her friend and mentor, Kristin DeNexter, and connected with two older women, Mandy Kay and Katie Cooper Wares.

They didn't question my capabilities as a young person, we just worked together seamlessly and played to our strengths and there was no competition. It was just this supportive, we're going to do this together.

Called Lismore Helping Hands, the group grew to over 5000 people in days. Maddy met with the local SES group about how to mobilise 'spontaneous volunteers'. She then met with local councillor and campaigner Elly Bird, who helped mobilise on-ground organising efforts, and access to the South Lismore train station. The online mutual support group gained a physical presence, where people could volunteer their time or request support. In just three weeks, Lismore Helping Hands supported nearly 1500 volunteers to carry out around 1000 volunteer jobs. Though the centre eventually closed, the community networks established became Resilient Lismore. Maddy recalls that, 'the flood changed my life in a big way. Climate action became an even bigger part of my life, and it is more personal.'

Afterwards Maddy conducted local research about how the floods affected people's mental health. She sees community-based responses as critical to ongoing community resilience in an era of escalating disasters. For Maddy, community-based resilience groups are best placed to do that and to be branded as our own place-based resilience groups. There's room for a diversity of groups that need to exist to create spaces and opportunities for community-led preparedness recovery response.'

When severe floods hit Lismore again in 2022, Maddy felt 'disbelief and shock, layered with climate grief and frustration, wishing more could be done about it'. Amidst a sense of pressure to take a leadership role again, Maddy tried to model a form of 'vulnerable and authentic leadership', posting videos that honestly shared her difficult emotional response to disaster.

Maddy muses that the kinds of emergency responses that are valued tend to be patriarchal in nature. For example, when the flood anniversary occurred in 2023 the local council gave silver medals to the 'tinny army', a group of predominantly male locals who rescued people in their boats. There were heaps of other community-led efforts that were mostly led by women that did not get recognition. Like Koori Mail, their First Nations-led flood recovery effort was hugely led by women and matriarchs.'

Reflecting on her years of working in communityled disaster recovery and climate resilience initiatives, Maddy reflects that she has observed a gendered kind of leadership based on collaboration, coaching, support, nurturance, and capacity-building.

Looking back over the last six years of community-based response recovery adaptation resilience, most of it has been working with women and queers. We're already the ones caring in our communities. We're more relational generally by nature. I'm careful about binary thinking now, and I'm generalising, but the evidence is there that women and gender diverse people are the ones who are disproportionately represented in impacts, but we're also disproportionately the ones that step up in recovery, particularly community-based, care-based, but also launching an effort, we just know what needs to be done, and support each other to do it.

Conclusions

While the evidence analysed in this report covers multiple geopolitical contexts, including international and Australian data, and crosses a diverse range of sectors, issues, gendered identities and lived experiences, overarching themes have emerged. In this section broad conclusions are drawn before ending with a series of targeted policy and investment recommendations.

Leadership and decisionmaking influence

We believe that it is time for women's leadership to help turn the tide of political culture from polarised discord to collaboration and cooperation. We propose that nurture of life in the natural world and care for the Earth must be at the centre of every policy and government decision.173

There is a clear need to support more women and gender diverse people into positions of leadership and decision-making across government, industry, and not-for-profit sectors. Encouraging gender inclusive and equitable workforces is not only beneficial to all genders, but also benefits the environment. To date, gender equity in the workforce has been treated as an appealing principle but progress has been remarkably slow. Available evidence is clear that more women in decision-making results in better environmental outcomes. Gender equity in leadership across a range of sectors needs to be addressed with urgency in order to achieve the level of action required to address our climate and environmental challenges.

Opportunities for significant impact are particularly apparent in business, within government and at local levels, where efforts to improve gender parity among decision makers should be prioritised. Industries and sectors where decisions directly impact climate and environmental outcomes are most urgently in need of greater numbers of women and gender diverse people in leadership, including industry sectors like energy, transport, and agriculture; conservation and natural resource management; and emerging sectors such as climate technology.

Gender lens on Australian climate and environmental policy

Climate and environmental policy-making in Australia currently often ignores gender. Yet there has been widespread recognition at the international level for almost two decades that gender and environmental issues need to be considered in parallel. The United Nations recommends that all climate and environmental projects should be required to consider gender in order to be funded. 174 There is an opportunity to learn from what the Australian Government funds overseas and bring an active gender lens to our domestic climate and environmental policy-making.

Given the large body of evidence that women and gender diverse people are disproportionately vulnerable to the effects of climate and environmental issues, policies should explicitly aim to reduce these unequal impacts. Gendered impacts stretch across multiple areas of government responsibility, including health, housing, and energy, and across all levels of government, including local, state, and federal. As a multilayered governance issue, responses will be required at all levels of government in order to meaningfully address the gendered disparities in climate and environmental impacts.

If inclusion of people of all genders is not explicit, a policy or programme runs a significant risk of ignoring vitally relevant social dynamics because the activities will be based on the implicit assumption that all stakeholders involved are homogenous, which is almost never the case. Neglecting different needs, experiences and knowledge based on gender and gender roles significantly affects the policy's or programme's potential effectiveness. 175

Secondly, this gender-responsiveness needs to be extended throughout the pipeline of decision-making including into climate and environmental budgeting. This will be critical to ensure that the transition to a renewable economy is just and equitable for everyone. Gender-responsive budgeting (GRB) has been implemented in the Australian context.

GRB involves conducting a gender-based assessment of the impact of a policy shock or a policy setting and using this analysis to inform policy design. 176

The Victorian Government was the first Australian state to introduce GRB in the 2021-22 state budget. Australian Government departments are also required to undertake a gender analysis for all new policy proposals and Cabinet submissions. 177 In so doing, these governments are following in the footsteps of an increasing number of countries worldwide, with GRB tools trialled or adopted in nearly half of all Organisation for Economic Co-operation and Development (OECD) countries including Canada, France, Germany, Japan and the United Kingdom – five of the seven largest economies in the world. 178 The Australian Government seeks to take an intersectional approach to GRB,¹⁷⁹ and it is likely that Australian governments will increasingly follow jurisdictions overseas in considering a greater range of diversity factors beyond gender. 180 Following the widespread implementation of GRB at Victorian and Commonwealth levels, other governments are trialling this approach. Ultimately, GRB should be extended through all government decision-making at local, state, and federal levels.

Gendering climate and environmental finance

Financing of climate and environmental initiatives by industry, government, investors, philanthropy, and the not-for-profit sector should also adopt a gender lens, both for equity reasons and because evidence demonstrates that considering gender improves performance.¹⁸¹ Research by the Global Gender and Climate Alliance in 2016 found that only 0.01% of all funding worldwide supports projects tackling both climate change and women's rights.182

The Global Impact Investing Network (GIIN) defines gender lens investing as 'a strategy or approach to investing that takes into consideration gender-based factors across the investment process to advance gender equality and better inform investment decisions'. According to GIIN this can encompass investing with the aim of addressing gender issues or improving gender equity, as well as investing in enterprises or organisations that focus on improving gender imbalances through their processes or strategies.¹⁸³

The stringency of a gender lens varies depending on awareness and objectives. At the highest level, organisations have an explicit gender mandate (i.e. investments are screened for a specific gender impact). The next level would include gender as a factor of analysis (i.e. once an investment is deemed suitable, gender would be one consideration among others). Other organisations have an unintended gender lens because they operate in a sector where gender is pervasive or unavoidable. At the lowest level, no consideration is given to gender.

As argued by influential Italian economist Mariana Mazzucato, all government investment for the new economy and just transitions should have a range of conditionality to ensure good public policy outcomes, including for gender. 184 For example, priority investments into regions for economic diversification and energy transition should require a percentage of investment to women-led businesses, and conditionality around gender in workforce participation. Government financing of policies and programs responding to

climate and environmental impacts also needs to foreground gender considerations. For example, in responding to devastating floods in 2022, the Victorian Government earmarked \$1.2 million to fund recovery programs for women. Recognising that women take on more of the emotional burden of disaster recovery, and take longer to recover economically, the Victorian Government split the funding between four women's health services to aid women's flood recovery. 185

Private finance should also seek to use funding of private sector initiatives to promote both gender equity and better climate and environmental outcomes. Under the European Bank for Reconstruction and Development's (EBRD) Green Cities program, the EBRD is seeking to both support the transition to low-carbon cities while increasing gender balance in the infrastructure sector. For example, the EBRD is supporting the Green City Action Plan of Tbilisi, Georgia, which highlights the need for urgent action to improve the city's air quality. The EBRD has partnered with the Tbilisi Transport Company (TTC) to purchase low-emissions buses and modernise the city's metro system. At the same time, the EBRD has supported TTC to become more gender inclusive in its employment and training policies, as well as its infrastructure planning. As 2XGlobal website concludes:

The collaboration between EBRD and Tbilisi is an example of how a gender lens can be brought to green investments, and in particular how women's employment and skills development can be integrated into green infrastructure investment approaches and processes. 186

In the philanthropic space, the United States Agency for International Development (USAID) launched the Climate Gender Equity Fund (CGEF) in partnership with Amazon. The CGEF aims to increase access to finance for gender-responsive, women-led, and women-benefiting organisations, seeking to raise an initial \$60 million from corporations, philanthropy and multilateral institutions to support climate action led by women.¹⁸⁷

As more and more organisations in the public, private and not-for-profit sectors realise the benefits of combining gender with climate and environmental objectives, a range of toolkits, guides and best practice case studies have emerged. Internationally, 2xGlobal provides guidance in 'gender-smart climate investments', bringing an intersectional lens to investment and finance. 188 Closer to home, Australians Investing In Women has developed resources to support 'gender-wise grantmaking'. 189

Applying a gender-responsive approach to climate and environmental finance will ensure that all new projects being financed have considered how their actions impact upon or are impacted by gender. Taking up the opportunity to mainstream a gender lens into the programming and funding of all climate and environmental initiatives in Australia will ensure that they are more informed, effective, and equitable.

International commitments - Gender, Climate and **Environment Strategy**

Climate, environmental and gender justice in Australia cannot be developed in isolation from global efforts. Australian domestic policy needs to both fulfil international obligations and learn from best practice examples worldwide. Progress has been made on mainstreaming gender considerations under each of the Rio conventions, and on increasing gender parity in representation. Gender action plans to be developed under these conventions include the 2015–2020 Gender Plan of Action under the United Nations Convention on Biological Diversity, the Gender Action Plan under the United Nations Convention to Combat Desertification (2017), and the enhanced Lima Work Programme on Gender (LWPG) and Gender Action Plan (GAP) (2019–2024) under the United Nations Framework Convention on Climate Change.

The enhanced LWPG is a decision made by Parties to the UNFCCC which expresses a commitment to gender equality in various dimensions. It 'recognizes that the full, meaningful and equal participation and leadership of women in all aspects of the UNFCCC process and in national and local level climate policy and action is vital for achieving long-term climate goals'. It also states that 'gender-responsive implementation and means of implementation of climate policy and action can enable Parties to raise ambition'.

These documents are interpreted as confirming that environmental and climate action needs to promote gender equality to be effective and equitable. 190 Parties to the UNFCCC are expected to ensure gender equality is enhanced through their climate policies, but there is not a specific requirement that every Party have its own national GAP. Rather, the GAP provided as an annex to the enhanced LWPG provides examples of activities where gender equality can be promoted through climate action. As of 2020, only around two dozen countries had developed national climate change gender action plans. 191 Similarly, the 2015–2020 Gender Plan of Action under the Convention on Biological Diversity recommends but does not mandate that Parties 'mainstream gender in national biodiversity strategies and action plans'.

In order for Australia to meaningfully meet its international obligations, we recommend the development of a Gender, Climate and Environment Strategy. This would enable Australia to detail how it is responding to and implementing gender action under these UN conventions, establish measures for evaluating progress, and develop best practice in gender-responsive climate and environmental policy-making that could be followed by state and local governments.

Gender and disasters

Groundbreaking Australian research has established that gender plays a role in disasters, including slow-moving crises like drought, dramatic weather events like fires and floods, and health-related crises like pandemics. Evidence overwhelmingly attests to the greater vulnerability of women and gender diverse people during disasters, particularly related to gender-based violence but also physical and mental health more broadly.

Women are also at the forefront of unpaid community resilience work at the local level, supporting and strengthening their communities through volunteer efforts. However, these kinds of social and emotional disaster recovery roles are often less recognised (and resourced) than the more physical work of clearing debris or rebuilding structures, which are often undertaken by men. Response and recovery roles in formal emergency services also tend to be gendered, which influences how they interact with affected communities.

There is a need for greater awareness of the role of gender in disaster preparedness and response. Building on the commendable work of Gender and Disaster Australia, this should include research into the gendered nature of impacts and responses to disasters as well as funding programs for emergency services and communities to understand and respond to these links.

Diverse voices and sectors

Currently, discussion of climate and environmental challenges in the Australian context often takes an unacknowledged position that is white, cis male, heterosexual and able-bodied. There is limited public discussion of the fact that environmental challenges such as extreme weather events impact people differently depending on their cultural background, socio-economic background, gender, sexuality, health, and disability. Similarly, discussion of the workforce implications and economic challenges of the transition to a renewable economy focuses on the need to protect (primarily male) workers in the fossil fuel industry or the opportunities presented by (primarily male) jobs in clean energy. Less attention is paid to the impacts of climate change on highly feminised, care-based employment or on the fact that women are currently missing out on the opportunities presented by clean energy jobs.

There are multiple opportunities to increase awareness of the links between gender, climate, and environmental justice. Research and knowledge translation can seek out and amplify voices currently absent from such discussions. including First Nations women, women of colour, women living with disabilities and LGBTQI+ Australians. This will contribute to building a stronger understanding of the lived experience of climate and environmental impacts, and of the opportunities and hardships presented by the economic transition. Such research needs to be intersectional, feminist, and participatory if it is to genuinely advance climate justice.

Climate and environmental policy and investment decisions also need to be underpinned by genuine collaboration and engagement with more diverse perspectives, including the women's sector, social sector, First Nations women's organisations and women's industry groups. Engaging more varied stakeholders in offering active input into the design of policy and solutions will result in climate and environmental outcomes that benefit all genders.

Genuinely just transitions require embracing a more expansive understanding of our climate and environmental challenges, recognising that the whole community and economy is affected, not just physical infrastructure and certain industries. There is an opportunity in the present moment to rethink these issues more holistically, appreciating that our environment, society, and economy are interconnected.

Clean and caring economy

Mainstream economics does not address the critical issues of our times, including gendered and racial violence, climate change, species extinction and ecosystem destruction. The 'fathers of economic theory' excluded unpaid homemaking, childrearing, caring for others, caring for the environment, and community building activities from having economic value. Services that involve these skills are undervalued, underpaid and under-resourced. Similarly, the natural environment is excluded from economic consideration and value. A new school of economics, with greater input from women, embraces new approaches designed to balance social, political, technological, generational and ecological interests to create a healthy, inclusive, socially just and gender-balanced society. 192

Underpinning all these recommendations is a conviction that we need to centre a clean and caring economy if we are to adequately respond to the profound challenges of the twenty-first century. This would involve placing care at the heart of policy-making – both care for people and for the planet.

Feminist scholars... have consistently drawn parallels between the devaluation and depletion of women's unpaid labour and the natural environment, with both considered infinitely elastic and costless even as together they create the very foundation on which the economy rests. Neither women's unpaid care work nor ecosystem services are taken into account in conventional economic metrics, meaning they are both invisible in measures of economic progress and prosperity.... More generally, quantitative data on gender and the environment is scarce, hampering evidence based policymaking. 193

Centring care would entail a cultural shift towards understanding that the gendered distribution of unpaid care work is at the heart of the unequal impacts of environmental change. The care work that is disproportionately performed by women and gender diverse people is foundational to the continued functioning of our economy, society, and environment, yet is rarely valued as such. Countries continue to measure progress as Gross Domestic Product (GDP) rather than incorporating measures of environmental health or quantifying unpaid work like care. 194 One consequence is that both care and the environment are assumed to be limitless and are taken for granted, without being properly valued or measured in traditional economic theory. Yet one of the overarching themes across the evidence presented in this report is that care-based solutions will be essential to helping us manage climate and environmental disruptions, such as the caring work that women often do in disaster-affected communities.

There are examples to guide us in identifying and implementing care-based solutions for people and nature. In the Australian context, First Nations approaches to caring for Country and community have long understood the indivisibility of people and place. Feminist approaches in Australia and overseas have often highlighted the importance of care, such as the Women's Budget Group in the United Kingdom.

Feminist ecological economics recognises connections between the exploitation of feminised care work and the exploitation of the Earth's resources. It sees ecological/ climate emergency and the crisis of social reproduction (often referred to simply as care) as interlinked and mutually sustaining, arising from the overburdening of those who carry responsibility for social reproduction, the vast majority of whom are women. Women who bear the responsibility for care are also increasingly shouldering the costs ensuing from the ecological crisis as well as measures to redress it... Central to feminist ecological economics is the normative claim that gender equality should not be achieved at the expense of ecological degradation or the exploitation of nature and other species and that environmental sustainability must not be achieved by exploiting feminised labour. 195

A wholly new approach is needed, not just technocratic, band aid solutions. Transitional system change is required, recognising both the value and centrality of care to the continued flourishing of the Australian economy, society and environment.

Recommendations

The diverse range of evidence throughout this report allows us to appreciate that there is a consistent thread running throughout the data: not only are women and gender diverse people disproportionately vulnerable to environmental and climate challenges – they also have distinctive perspectives and approaches to solving these challenges.

Climate and environmental issues require gendered responses if we are to transition to a fair, just and sustainable future. The recommendations below outline initial steps required for climate and environmental policy and investment in Australia to be genuinely inclusive of and responsive to gendered perspectives, and to maximise the innovative approaches to climate and environmental solutions offered by women and gender diverse people.

Support more women and gender diverse people into positions of leadership and decision-making across government, industry, and the community

1a) Organisations working on climate and environmental challenges and solutions should consider introducing gender-based quotas for senior levels of leadership, including at the board and c-suite.

1b) Priority should be given to ongoing investment in leadership development for women and gender diverse people working in climate and environment related issues and fields. This includes programs, mentoring and other relevant support networks and mechanisms.

Over the past 5 years, the Women's Leadership and Development Program led by the federal Office for Women has supported numerous women's leadership projects across a range of sectors and communities.

This program should be expanded with funding for the next 10 years, and include a specific funding stream tied to leadership for climate and environmental outcomes. Program assessment should include an intersectional lens to ensure leadership development funding is inclusive for First Nations women, women of colour and any other marginalised groups.

1c) Further data gathering and analysis, and cross-sectoral dialogue is required into the barriers to increased women's leadership in different industries, with a view to informing targeted sector-appropriate solutions. Such data gathering and analysis should include an intersectional lens to ensure understanding of the different and compounding barriers faced by women from First Nations communities, from different cultural backgrounds, or from other marginalised communities.

Bring an active gender lens 2. Bring an active 5... to Australian climate and environmental policy-making

2a) All climate and environment related policy development processes at all levels of government should include a gender lens.

Current federal policy development processes that should immediately look to include a gender lens include:

- The National Climate Adaptation and Risk **Program**, including Australia's first National Climate Risk Assessment, and the National Adaptation Plan.
- The **Net Zero 2050 Plan**, including the six sectoral decarbonisation plans included in this policy development process. Notably, the **Electricity and Energy sector plan** is currently in development.
- The establishment of a new National Net Zero Authority, to support the transition to a clean energy economy for workers, communities, and industry. It is positive to note that a majority of the Advisory Committee supporting the establishment of the Authority are women.
- Commitments outlined in the Nature Positive **Plan**, including the overhaul of the *Environment* Protection and Biodiversity Conservation Act 1999, the introduction of a new and independent environmental regulator, Environment Protection Australia (EPA), and the establishment of Environmental Information Australia to provide reliable environmental data.

2b) Similarly, climate and environmental considerations should be included in all gender-based policy development.

It is essential to understand how the federal and state governments' gender equality strategies will be affected by increasing climate and environmental impacts. Any funding or further policy development stemming from these strategies should include consideration of how climate and environmental impacts will intersect with the interests of women, girls, and gender diverse people.

Any further strategy and policy development at all levels of government should include climate and environmental impacts and solutions as a core lens.

- 2c) Gender responsive budgeting should be extended across all levels of government, including state and local government.
- 2d) Further research is required to increase understanding of the gendered nature of climate and environmental issues in Australia, including through an intersectional lens.

This should be a matter of priority for universities, research-oriented philanthropy, government, and impacted industry sectors.

Apply a gender lens to climate and environmental financing for impacts and solutions by industry, government, philanthropy, and the community sector

3a) Clear conditions should be attached to all government funding and investment that addresses climate and environmental issues and solutions, to ensure positive gender-based outcomes.

This could include:

Quotas requiring 50% of government investment and funding programs to be awarded to projects owned and / or led by women or gender diverse people

- Clear requirements regarding diverse workforce development and community outcomes
- Requirements regarding gender impact assessments for project and program proposals
- 3b) Business investment into climate and environmental issues should similarly adopt a gender lens, to ensure that impacts and benefits have gender equitable outcomes.
- 3c) Grantmakers should be encouraged to use a gender-wise tool such as that developed by Australians Investing In Women.

Develop a Gender, Climate and Environment Strategy

Australia has international obligations under each of the three Rio conventions (United Nations Framework Convention on Climate Change, the United Nations Convention on Biological Diversity and the United Nations Convention to Combat Desertification) but to date, discussion of the gendered nature of these issues has focused upon the UNFCCC.

4a) In order for Australia to meaningfully meet its obligations under these conventions, we recommend the development of a Gender, Climate and Environment Strategy. This would enable Australia to detail how it is responding to and implementing gender action plans under these conventions, establish measures for evaluating progress, and develop best practice in gender-responsive climate and environmental policy-making that could be followed by state and local governments.

Funding and resources to address increasing climate and environmental disasters should include a clear gender lens

5a) Disaster response funding, including immediate recovery funding, should include a gender lens, recognising and responding to the different and often compounding impacts faced by women and gender diverse people during disasters.

5b) Further training for emergency service providers is required for the sector to better understand and respond to the links between gender and disasters.

5c) Funding and support for community-led preparation, resilience, and recovery work should be increased.

Given the prevalence of women-led activity of this nature, such funding will support communities to be better prepared and respond to increased disasters and will address gender-based inequality within communities.

Include diverse voices and sectors in 6. shaping environmental and climate solutions and responses

6a) Policy and investment decisions need to be underpinned by genuine collaboration and engagement with more diverse perspectives. However, there are significant barriers for some organisations and communities engaging in the numerous policy processes that will be required to inform a sustainable and equitable future.

Government and industry should proactively seek out, and where necessary fund, the inclusion of diverse and marginalised voices such as those from the women's sector, the social sector, multicultural organisations and communities. First Nations communities, and women's industry and workforce groups.

Centre a clean and 7. caring economy

Underpinning all of these recommendations is the need to transform the way we think about our economy in the twenty-first century. Social and environmental factors influence and are influenced by economic factors, and feminist economic policy-making recognises these interconnections. Economic policies need to actively measure gendered and environmental impacts, as well as count the positive economic contributions made by care work and environmental values.

7a) As an initial step towards this goal, we recommend the adoption of a Climate Budget Statement at the federal, state and local government levels. Just as the Australian Government now issues a Women's Budget Statement to measure the gendered impacts of each federal budget upon women, a climate budget statement would estimate the budget impact on climate and environmental issues, including their gendered dimensions.

Ultimately, it will be a long-term and whole of government endeavour to genuinely re-image how we measure economic goals and progress, and their relationships to people and places.

References

- We use the term 'women' to include cisgender women, transgender women, femme/feminine-identifying, genderqueer and non-binary individuals. We also acknowledge that non-binary individuals face even greater challenges than cisgender women in societies and systems structured around binary gender identities.
- Laura Turquet, Constanza Tabbush, Silke Staab, Loui Williams and Brianna Howell, Feminist Climate Justice: A Framework for Action (New York: UN Women, 2023).
- Yianna Lambrou and Grazia Piana, Gender: The Missing Component of the Response to Climate Change (Rome: Food and Agricultural Organisation of the United Nations, 2006); Ruth Lane and Rebecca McNaught, 'Building Gendered Approaches to Adaptation in the Pacific', Gender and Development 17, no. 1 (2009): 67-80; Eric Neumayer and Thomas Plümper, '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 97, no.3 (2007): 551-566.
- Anne Gaspers, Thea Lurås Oftebro and Emily Cowan, 'Including the Oft-Forgotten: The Necessity of Including Women and Indigenous Peoples in Nature-Based Solution Research', Frontiers in Climate 4 (2022).
- Margaret Alston, 'Gender and Climate Change in Australia and the Pacific', in Research, Action and Policy: Addressing the Gendered Impacts of Climate Change, ed. Margaret Alston and Kerri Whittenbury (Dordrecht: Springer Netherlands, 2013) 175-88.
- Alston, 'Gender and Climate Change'; Lambrou and Piana,
- Michelle Bachelet, 'Integrating Gender into the Rio Conventions', panel discussion on the Rio Conventions, Rio de Janeiro, Brazil, 20 June 2012, https://www. unwomen.org/en/news/stories/2012/6/integratinggender-into-the-rio-conventions.
- 'Introduction to Gender and Climate Change', United Nations Climate Change, accessed 22 February 2024, https://unfccc.int/gender.
- Turquet et al, Feminist Climate Justice.
- 10 Asia Pacific Forum on Women, Law and Development. Feminist Fossil Fuel Free Future (APWLD Briefer, 2016), https://apwld.org/apwld-briefer-feminist-fossil-fuel-freefuture-5fs-2/; Friends of the Earth International, People Power Now Manifesto (2018), https://www.foei.org/ publication/people-power-now-manifesto/; Maeve Cohen and Sherilyn MacGregor, Towards a Feminist Green New Deal for the UK: A Paper for the WBG Commission on a Gender-equal Economy (Women's Environmental Network and UK Women's Budget Group, 2020), https://wbg. org.uk/wp-content/uploads/2020/05/Feminist-Green-New-Deal.pdf; US Feminist Green New Deal, Principles, https://feministgreennewdeal.com/principles/; Women's Environment and Development Organisation (WEDO), Global Feminist Frameworks for Climate Justice Town Hall Reader (2020), https://wedo.org/global-feministframeworks-for-climate-justice-town-hall-reader/.
- 11 Commonwealth Department of Health and Aged Care, National Health and Climate Strategy (2023), https://www. health.gov.au/resources/publications/national-healthand-climate-strategy.
- 12 Commonwealth Department of Health, National Women's Health Strategy 2020–2030 (2019), https://www.health. gov.au/resources/publications/national-womens-healthstrategy-2020-2030.

- 13 Commonwealth Department of Social Services, National Plan to End Violence against Women and Children 2022-2032 (2022), https://www.dss.gov.au/the-nationalplan-to-end-violence-against-women-and-children/ the-national-plan-to-end-violence-against-womenand-children-2022-2032; Commonwealth Department of Social Services, Aboriginal and Torres Strait Islander Action Plan 2023-2025 (2022), https://www.dss.gov.au/ the-national-plan-to-end-violence-against-women-andchildren/aboriginal-and-torres-strait-islander-actionplan-2023-2025.
- 14 Commonwealth Department of Employment and Workplace Relations, Working Future: The Australian Government's White Paper on Jobs and Opportunities (2023), https://www.dewr.gov.au/employment/ announcements/working-future-australian-governmentswhite-paper-jobs-and-opportunities-now-available.
- 15 Women's Economic Equality Taskforce, Women's Economic Equality: A 10-year Plan to Unleash the Full Capacity and Contribution of Women to the Australian Economy 2023-2033 (Department of the Prime Minister and Cabinet, 2023), https://www.pmc.gov.au/resources/10-year-plan.
- 16 Commonwealth Department of the Prime Minister and Cabinet, Working for Women: A Strategy for Gender Equality (2024), https://www.pmc.gov.au/office-women/ working-women-strategy-gender-equality.
- 17 Toni Hassan, 'Gender Strategy Fails Climate Test', The Saturday Paper, 30 March 2024, https://www. thesaturdaypaper.com.au/life/environment/2024/03/30/ gender-strategy-fails-climate-test.
- 18 Australian Human Rights Commission, Wiyi Yani U Thangani (Women's Voices): Securing Our Rights. Securing Our Future Report (2020), https://humanrights.gov.au/ourwork/aboriginal-and-torres-strait-islander-social-justice/ publications/wiyi-yani-u-thangani.
- 19 Commonwealth Department of Agriculture, Water and the Environment, National Climate Resilience and Adaptation Strategy 2021 – 2025: Positioning Australia to Better Anticipate, Manage and Adapt to our Changing Climate (2021), https://www.dcceew.gov.au/climate-change/ policy/adaptation/strategy.
- 20 Biodiversity Working Group for the Meeting of Environment Ministers, Australia's Strategy for Nature 2019-2030 (2019), https://www.dcceew.gov.au/environment/ biodiversity/conservation/strategy
- 21 'Gender Equality', Commonwealth Department of Foreign Affairs and Trade, accessed 9 April 2024, https://www.dfat. gov.au/international-relations/themes/gender-equality.
- 22 Commonwealth Department of Foreign Affairs and Trade, Australia's International Development Policy (2023), https://www.dfat.gov.au/sites/default/files/internationaldevelopment-policy.pdf.
- 23 'First-ever Gender Action Plan to Support Gender-Responsive Climate Action Adopted', UN Women, 14 November 2017, https://www.unwomen.org/en/news/ stories/2017/11/announcement-first-ever-gender-actionplan-on-climate-action-adopted.
- 24 'Gender Responsive Alternatives for Climate Change'. Australian Department of Foreign Affairs and Trade, accessed 19 February 2024, https://www.dfat.gov. au/aid/who-we-work-with/ngos/gender-responsivealternatives-for-climate-change.
- 'Gender Responsive Alternatives for Climate Change', ActionAid Australia, accessed 19 February 2024, https://actionaid.org.au/programs/gender-responsivealternatives-for-climate-change-2/.

- 26 Joane Nagel and Trevor Scott Lies, 'Re-gendering Climate Change: Men and Masculinity in Climate Research, Policy, and Practice', Frontiers in Climate 4 (2022).
- 27 Future Earth Australia, A National Strategy for Just Adaptation (Australian Academy of Science, 2022).
- 28 This lack of cultural diversity has been recognised within the climate and environment sectors in most industrialised countries. See, for example: Damien Gayle, 'Environment Charities Lag Behind Other UK Sectors in Racial Diversity, Study Finds', The Guardian, 7 February 2024, https://www. theguardian.com/environment/2024/feb/07/environmentcharities-lag-behind-other-uk-sectors-in-racial-diversitystudy-finds.
- 29 Kavita Naidu with Katelyn Jones and Melanie Montalban, Climate Justice Gathering Report (2023).
- 30 'Explainer: How Gender Inequality and Climate Change are Interconnected', UN Women Australia, 2 March 2022, https://unwomen.org.au/explainer-how-genderinequality-and-climate-change-are-interconnected/.
- 31 Australian Bureau of Statistics, How Australians Use Their Time: Key Findings on How People Use their Time in Australia, released 7 October 2022, https://www.abs. gov.au/statistics/people/people-and-communities/howaustralians-use-their-time/latest-release.
- 32 Fair Work Commission, Annual Wage Review 2022–23 (FWCFB 3500), https://www.fwc.gov.au/hearingsdecisions/decisions-and-orders/national-wage-andsafety-net-review-decisions.
- 33 Sherilyn MacGregor, Seema Arora-Jonsson and Maeve Cohen, 'Caring in a Changing Climate: Centering Care Work in Climate Action', Oxfam Research Backgrounder series (2022): https://www.oxfamamerica.org/explore/ researchpublications/caring-in-a-changing-climate/.
- 34 Women's Economic Equality Taskforce, Women's Economic Equality.
- 35 Australian Bureau of Statistics, Labour Force, Australia, Detailed, February 2023, https://www.abs.gov.au/ statistics/labour/employment-and-unemployment/ labour-force-australia-detailed/feb-2023.
- 36 Workplace Gender Equality Agency, Australia's Gender Equality Scorecard: Key Results from the Workplace Gender Equality Agency's Employer Census 2022-23, https://www.wgea.gov.au/publications/australias-genderequality-scorecard.
- 37 Eliza Littleton and Greg Jericho, The Times They Aren't A-Changin (Enough): It is Past Time to Value Women's Work Equally (Centre for Future Work at the Australia Institute, 2023), https://futurework.org.au/wp-content/ uploads/sites/2/2023/03/Centre-for-Future-Work-Gender-Pay-Gap-WEB.pdf.
- 38 Australian Bureau of Statistics, Household Income and Wealth, Australia, 2019-20 (2022), https://www.abs.gov. au/statistics/economy/finance/household-income-andwealth-australia/2019-20.
- 39 Ipsos and Global Institute for Women's Leadership, 'One in Five Australians Thinks Women Who Say They Were Abused Often Make Up or Exaggerate Claims of Abuse or Rape', Ipsos, March 2022, https://www.ipsos.com/en-au/ one-five-australians-thinks-women-who-say-they-wereabused-often-make-or-exaggerate-claims-abuse-or.
- 40 Plan International Australia, Gender Compass: A Segmentation of Australia's Views on Gender Equality (2023), https://www.plan.org.au/our-work/gendercompass/.

- 41 Daisy Dunne, Mapped: How Climate Change Disproportionately Affects Women's Health, Carbon Brief, 29 October 2020, https://www.carbonbrief.org/mapped $how-c \underline{limate-change-disproportion at ely-affects-}$ womens-health/.
- 42 Elaine Enarson, Gender and Natural Disasters (International Labour Organization, 2000); Carla Pascoe Leahy and Catherine Gay, 'Care and Crisis: Disaster Experiences of Australian Parents Since 1974', The History of the Family 29, no. 1 (2024), 131-156.
- 43 World Health Organization, Protecting Maternal, Newborn and Child Health from the Impacts of Climate Change: Call for Action (2023), https://www.who.int/publications/i/ item/9789240085350.
- Sarah Robertson and Louise Hull, 'Pregnant Women Should Take Extra Care to Minimise their Exposure to Bushfire Smoke', The Conversation, 9 January 2020, https://theconversation.com/pregnant-women-shouldtake-extra-care-to-minimise-their-exposure-to-bushfiresmoke-129349.
- 45 Karleen Gribble, Michelle Hamrosi and Susan Tawia, 'Want to Help the Children? Help the Parents': Challenges and Solutions from the Babies and Young Children in the Black Summer (BiBS) Study (Australian Breastfeeding Association and Western Sydney University, 2023), https://www.breastfeeding.asn.au/sites/default/ files/2023-06/BiBS%20Study%20Report%20Final.pdf.
- 46 Dale Dominey-Howes, Andrew Gorman-Murray and Scott McKinnon, 'Queering Disasters: On the Need to Account for LGBTI Experiences in Natural Disaster Contexts', Gender, Place and Culture 21, no. 7 (2014), 905-918; Christina Finch, Christopher T. Emrich and Susan L. Cutter, 'Disaster Disparities and Differential Recovery in New Orleans', Population and Environment 31, no. 4 (2010), 179-202; Ben Wisner, 'Marginality and Vulnerability: Why the Homeless of Tokyo Don't "Count" in Disaster Preparations', Applied Geography 18, no. 1 (1998), 25-33.
- 47 Bhiamie Williamson, Aboriginal Community Governance on the Frontlines and Faultlines in the Black Summer Bushfires (Centre for Aboriginal Economic Policy Research, Australian National University, 2022).
- 48 Vanessa I. Cavanagh, 'This Grandmother Tree Connects Me to Country. I Cried When I Saw Her Burnt', curated by Charlotte Day with Brian Martin, Tree Story (Monash University Museum of Art, Melbourne, 6 February-10 April 2021).
- 49 Williamson, Aboriginal Community Governance.
- 50 Jodie Bailie, Veronica Matthews, Ross Bailie, et al, 'Exposure to Risk and Experiences of River Flooding for People with Disability and Carers in Rural Australia: A Cross-sectional Survey', BMJ Open 12, no. 8 (2022).
- 51 Andrew Gorman-Murray, Scott McKinnon, Dale Dominey-Howes, Catherine J. Nash, and Rillark Bolton, 'Listening and Learning: Giving Voice to Trans Experiences of Disasters', Gender, Place & Culture 25, no. 2 (2018): 166-87.
- 52 Gorman-Murray et al, 'Listening and Learning'.
- 53 Sophie McNeill, Feeling the Heat (Human Rights Watch, 2022), https://www.hrw.org/video-photos/ interactive/2022/03/22/feeling-heat-australiancommunitys-struggle-rising-heat-warning
- 54 Margareta Windisch, 'Denaturalising Heatwaves: Gendered Vulnerability in Urban Heatwaves, a Review', Australian Journal of Emergency Management Monograph 4 (2019): 146–53, https://www.aidr.org.au/media/7378/ monograph_afac19-peer-reviewed_v2_051219.pdf.

- 55 Molly Quell and Raf Casert, 'Verdict saying Switzerland Violated Rights by Failing on Climate Action Could Ripple Across Europe', AP News, 10 April 2024, https://apnews. com/article/europe-eu-climate-court-human-rights-3b540a965aff7e2b49f1451c7a328e77.
- 56 De-identified, unpublished data from Australian Council of Social Services, ACOSS Summer Heat Survey (ACOSS and First Nations Clean Energy Network, 2024), https:// www.acoss.org.au/wp-content/uploads/2024/03/ ACOSSHeatSurveyReport2024.pdf.
- 57 Wildaliz De Jesús, 'People with Disability 'Bear the Brunt' of Extreme Heat', ABC News, 31 January 2024, https:// www.abc.net.au/everyday/extreme-heat-people-livingwith-disability/103382810.
- 58 Richard A. Bryant, Elizabeth Waters, Lisa Gibbs, H. Colin Gallagher, Philippa Pattison, Dean Lusher, Colin MacDougall, et al, 'Psychological Outcomes Following the Victorian Black Saturday Bushfires', Australian & New Zealand Journal of Psychiatry 48, no. 7 (2014): 634-43.
- 59 Claire Leppold, Lisa Gibbs, Karen Block, Lennart Reifels, Phoebe Quinn, 'Public Health Implications of Multiple Disaster Exposures', Lancet Public Health 7, no.3 (2022), E274-E286.
- 60 Robyn Molyneaux, Lisa Gibbs, Richard A. Bryant, Cathy Humphreys, Kelsey Hegarty, Connie Kellett, H. Colin Gallagher, et al, 'Interpersonal Violence and Mental Health Outcomes Following Disaster', BJPsych Open 6, no. 1 (2020).
- 61 Debra Parkinson and Claire Zara, The Way He Tells It: Relationships after Black Saturday (Women's Health Goulburn North East, 2011); Debra Parkinson and Claire Zara, 'The Hidden Disaster: Domestic Violence in the Aftermath of Natural Disaster', Australian Journal of Emergency Management 28, no. 2 (2013): 28-35.
- 62 Kerri Whittenbury, 'Climate Change, Women's Health, Wellbeing and Experiences of Gender Based Violence in Australia', in Research, Action and Policy: Addressing the Gendered Impacts of Climate Change, edited by Margaret Alston and Kerri Whittenbury (Dordrecht: Springer Netherlands, 2013) 207-21.
- 63 Lyn Craig and Brendan Churchill, 'Dual-earner Parent Couples' Work and Care during COVID-19', Gender, Work and Organization 28 (2021), 66-79; Emilee Gilbert and Carla Pascoe Leahy, 'Viewpoint: Visibilising Care in the Academy: (Re)Performing Academic Mothering in the Transformative Moment of COVID-19', Gender & History 35, no.1 (2023), 340-361.
- 64 Impact Economics & Policy, Aftershock: Addressing the Economic and Social Costs of the Pandemic and Natural Disasters. Report 2 - Domestic and Family Violence (NSW Council of Social Service, 2022), https://www.ncoss.org.au/ wp-content/uploads/2022/09/IE_Aftershock_Domestic-Violence-Family_V4_SINGLES-1.pdf.
- 65 Debra Parkinson, Claire Zara and Susan Davie, 'Victoria's Gender and Disaster Taskforce', Australian Journal of Emergency Management 30, no. 4 (2015): 26-29.
- 66 Lis Dzialo, 'The Feminization of Environmental Responsibility: A Quantitative, Cross-National Analysis', Environmental Sociology 3, no. 4 (2017): 427–437; Carol Farbotko, Domestic Environmental Labour: An Ecofeminist Perspective on Making Homes Greener (Routledge, 2018); Emily Huddart Kennedy and Julie Kmec, 'Reinterpreting the Gender Gap in Household Pro-Environmental Behaviour,' Environmental Sociology 4, no. 3 (2018), 299-310; Vanessa Organo, Lesley Head and Gordon Waitt, 'Who Does the Work in Sustainable Households? A Time and Gender Analysis in New South Wales, Australia', Gender, Place

- & Culture 20, no. 5 (2013): 559-577; Sarah Parry and Joseph Murphy, 'Gender and Sustainability in our Home: A Collaborative Autoethnography Linking Experience, Scholarship and Progressive Politics', Families, Relationships and Societies 12, 3 (2023): 341-356.
- Lena Ramstetter and Fabian Habersack, 'Do Women Make a Difference? Analysing Environmental Attitudes and Actions of Members of the European Parliament', Environmental Politics 29, no. 6 (2019): 1063-84.
- 68 Sameer Deshpande, Graham Bradley, Karlien Paas, Natasha Hennessey, Kerrie Foxwell-Norton, and Brendan Mackey, Griffith Climate Action Survey, 2022: Summary for Policy and Decision Making (Griffith University, 2023).
- Australian Parents for Climate Action, The Real Cost of Living: How the Energy Crisis is Hurting Australian Families (2022), https://www.parentsforclimate.org/cost_of_living_report.
- 70 Women's Agenda, The Climate Load: How Climate Change Impacts Women in Australia and the Risks and Opportunities Ahead (2023), https://womensagenda.com. au/wp-content/uploads/2023/03/The_Climate_Load_ Womens_Agenda_March_2023-1.pdf.
- 71 De-identified unpublished data from the ACOSS Summer Heat Survey 2024.
- 72 Darlene Rowlands, 'Labor Social Housing Bill Not Enough to Address Older Women Homelessness Spike, Advocates Say', ABC News, 22 February 2023, https://www.abc. net.au/news/2023-02-22/older-women-growinghomelessness-labor-housing-policy/102002118.
- 73 Australian Bureau of Statistics, Estimating Homelessness: Census (ABS, 2021), https://www.abs.gov.au/statistics/ people/housing/estimating-homelessness-census/latest-
- 74 Kay Patterson, Kathryn Proft and Joanna Maxwell, Older Women's Risk of Homelessness: Background Paper (Sydney: Australian Human Rights Commission, 2019).
- 75 Patterson et al, Older Women's Risk of Homelessness.
- 76 Nicky Hutley, Annika Dean, Nathan Hart and Jordie Daley, Uninsurable Nation: Australia's Most Climate Vulnerable Places (Climate Council of Australia, 2022), https://www. climatecouncil.org.au/resources/uninsurable-nationaustralias-most-climate-vulnerable-places/.
- 77 Yolande Strengers, Kirsten Gram-Hanssen, Kari Dahlgren, and Line Kryger Aagaard, 'Energy, Emerging Technologies and Gender in Homes', Buildings and Cities 3, no.1 (2022), 842-853.
- 78 Australian Bureau of Statistics, General Social Survey: Summary Results, Australia (ABS, 2020), https://www. abs.gov.au/statistics/people/people-and-communities/ general-social-survey-summary-results-australia/latestrelease.
- Nicholas Biddle, Charlotte Boyer, Matthew Gray and Maria Jahromi, Volunteering in Australia: The Volunteer Perspective (Volunteering Australia, 2022), https://www.volunteeringaustralia.org/volunteering-inaustralia-2022/#/.
- 80 Jane Elix, 'Women Leaders Social Change', Jane Elix's blog, 19 April 2011, https://janeelix.wordpress. com/2011/04/19/women-leaders-social-change/; Jaqueline Peel, Kathryn Bowen, Belle Workman, Rebekkah Markey-Towler, Carla Pascoe Leahy, 'Women Leading the Fight Against Climate Change', Pursuit, 7 March 2022, https://pursuit.unimelb.edu.au/articles/women-leadingthe-fight-against-climate-change.

- 81 Jane Elix and Judy Lambert, 'Passionate Defenders, Accidental Leaders: Women in the Australian Environment Movement', in Diversity in Leadership: Australian Women, Past and Present, edited by Joy Damousi, Kim Rubenstein, and Mary Tomsic (Canberra: ANU Press, 2014), 301-12.
- 82 'Women Rangers', WWF-Australia, accessed 25 April 2024, https://wwf.org.au/what-we-do/caring-on-country/ women-rangers/.
- 83 Allan Curtis, Penny Davidson and Terry De Lacy, 'Women's Participation and Experience of Landcare in Australia', Journal of Sustainable Agriculture 10, no. 2-3 (1997): 37-56.
- 84 Susan Thompson, Linda Corkery and Bruce Judd, 'The Role of Community Gardens in Sustaining Healthy Communities', 3rd State of Australian Cities National Conference, 28–30 November 2007, Adelaide, Australia, https://soac.fbe.unsw. edu.au/2007/SOAC/theroleofcommunitygardens.pdf.
- 85 Peter Theodosiou, 'Sowing Seeds of Love: Why Gardening Goes Beyond Health and Wellness for Australian Migrants', SBS News Online, 21 October 2022, https://www.sbs. com.au/language/english/en/article/sowing-seeds-oflove-why-gardening-goes-beyond-health-and-wellnessfor-australian-migrants/e7ioc63yn.
- 86 Rebecca McNaught, Johanna Nalau, Rob Hales, Emma Pittaway, John Handmer and Jean Renouf, 'Innovation and Deadlock in Governing Disasters and Climate Change Collaboratively – Lessons from the Northern Rivers Region of New South Wales, Australia', International Journal of Disaster Risk Reduction 105 (2024), 104366.
- 87 Mary Farrow, 'Strengthening Women as an Investment in Community Resilience', Australian Journal of Emergency Management 31, no. 4 (2017) 36-37; Australia ReMADE, Care Through Disaster (Australia ReMADE and Women's Health Goulburn North East, 2023), https://www. australiaremade.org/care-disaster.
- 88 International Labour Organization, 'Mainstreaming Care Work to Combat the Effects of Climate Change', Chapter VI.2, Green Jobs, an Opportunity for Women in Latin America: Climate Change, Gender and Just Transition (International Labour Organization and European Commission, 2023), https://www.ilo.org/wcmsp5/groups/ public/---americas/---ro-lima/documents/publication/ wcms_888607.pdf.
- 89 Marjon Meijer, in collaboration with Yelter Bollen, Bert De Wel and Maria Tsirantonaki, Coping with Climate Change in the Care Sector: Workers' Guide (Reset Vlaanderen for the International Trade Union Confederation, 2021), https://www. ituc-csi.org/IMG/pdf/reset_klimaatadaptatie_a5_en.pdf.
- 90 Josie, 'The Fight for Climate Justice is also the Fight for Improving the Low-Carbon Care Jobs we Already Have', United Workers Union blog, accessed 25 April 2024, https://unitedworkers.org.au/blog/care-work-is-climatework/.
- 91 Elizabeth Humphreys and Freya Newman, High Heat and Climate Change at Work: Report for the United Workers Union (United Workers Union, 2021), https://unitedworkers.org.au/high-heat-at-work-report/.
- 92 Wilman Boodja, N. J. Godden, G. Beardman, M. Nejati, E. Scott, J. Yallup Farrant, L. Scoffern, J. Northover, J. Khan. L. Winmar, P. Ugle, K. Mulholland, J. Parkin, S. Anderson and A. Morrison Saunders, A Just Transition for Collie that Leaves No One Behind (Climate Justice Union WA and Edith Cowan University Centre for People, Place and Planet, 2023), https://climatejusticeunion.org/resources/ Documents/Policy%20Submissions%20and%20 Reports/A%20Just%20Transition%20for%20Collie%20 that%20leaves%20no-one%20behind%20FINAL.pdf.

- 93 E. Ganley, J. McCosker, et al. A Real Deal for Gladstone: Community Listening Report to Shape Economic and Social Transition (Sydney Policy Lab, The University of Sydney, 2023), https://www.sydney.edu.au/sydney-policy-lab/newsand-analysis/latest-news/2023/07/28/new-communitylistening-report-a-real-deal-for-gladstone.html.
- 94 Linkedln, The Green Gender Gap: A Special Edition of LinkedIn's Global Green Skills Report 2023 (LinkedIn, 2023), https://economicgraph.linkedin.com/content/dam/ me/economicgraph/en-us/Green-Gender-Gap-Report.pdf.
- 95 Heather Boetto and Jennifer McKinnon, 'Gender and Climate Change in Rural Australia: A Review of Differences', Critical Social Work 14, no. 1 (2013) 15-31.
- Robyn James, Jonathan R. B. Fisher, Chelsea Carlos-Grotjahn, Marissa S. Boylan, Baigalmaa Dembereldash, Meaza Z. Demissie, Crystal Diaz De Villegas, et al, 'Gender Bias and Inequity Holds Women Back in Their Conservation Careers'. Frontiers in Environmental Science 10 (2023), 1–16.
- Anna Kosovac, 'Masculinity and Smart Water Management: Why We Need a Critical Perspective', Water International 46, no. 3 (2021): 342-44.
- 98 Kris Hartley and Glen Kuecker, 'Deconstructing Masculinity in Water Governance', Water International 46, no. 5 (2021): 671 - 76.
- 99 Kosovac, 'Masculinity and Smart Water Management'.
- 100 Sophia Huyer, Jennifer Twyman, Manon Koningstein, Jacqueline Ashby and Sonja Vermeulen, Supporting Women Farmers in a Changing Climate: Five Policy Lessons (CGIAR Research Program on Climate Change, Agriculture and Food Security, 2015), https://hdl.handle. net/10568/68533; Robyn James, Bridget Gibbs, Laura Whitford, Craig Leisher, Ruth Konia, and Nathalie Butt, 'Conservation and Natural Resource Management: Where Are All the Women?', Oryx 55, no. 6 (2021): 860-67.
- 101 Craig Leisher, Gheda Temsah, Francesca Booker, Michael Day, Leah Samberg, Debra Prosnitz, Bina Agarwal, et al, 'Does the Gender Composition of Forest and Fishery Management Groups Affect Resource Governance and Conservation Outcomes? A Systematic Map', Environmental Evidence 5, no. 1 (2016).
- 102 Leisher et al, 'Gender Composition of Forest and Fishery Management Groups'.
- 103 Christen Dobson and Steven Lawrence, Our Voices, Our Environment: The State of Funding for Women's Environmental Action (Global Greengrants Fund, 2018).
- 104 UN Environment Programme, Empowering Rural Women and Girls as a Solution to Environmental Sustainability and Food Security (UN Environment Programme World Conservation Monitoring Centre, 2020), https://www. unep-wcmc.org/en/news/empowering-rural-women-andgirls-as-a-solution-to-environmental-sustainability-and-
- 105 Isabel Schmidt and Mayesha Alam, 'Accelerating Nature-Based Solutions to Climate Change Through Women's Leadership: Opportunities to Galvanize Action at COP28 to Maximize Environmental and Socioeconomic Impacts' (FP Analytics, 2023), https://fpanalytics.foreignpolicy. com/2023/11/17/accelerating-nature-based-solutionsto-climate-change-through-womens-leadership/.
- 106 Gaspers et al, 'Including the Oft-Forgotten'.

- 107 Margaret Ayre, Djalinda Yunupingu, Jonathan Wearne, Cheryl O'Dwyer, Tanya Vernes and Mandaka Marika, 'Accounting for Yolnu Ranger Work in the Dhimurru Indigenous Protected Area, Australia', Ecology and Society 26, no. 1 (2021), 24; T. Janke, Z. Cumpston, R. Hill, E. Woodward, P. Harkness, S. von Gavel and J. Morrison J, 'Indigenous: Enablers of Caring for Country', in Australia State of the Environment 2021 (Commonwealth Department of Agriculture, Water and the Environment, 2021), https://soe.dcceew.gov.au/indigenous/ management/enablers-caring-country.
- 108 Australian Human Rights Commission, Wiyi Yani U Thangani.
- 109 Kate Ashton, 'NT Strong Women for Healthy Country Network Gathers in Remote Banatjari', ABC News, 31 May 2021, https://www.abc.net.au/news/2021-05-31/ nt-strong-women-for-healthy-country-network-gathersin-banatjari/100177552.
- 110 Victoria Ellis, 'Strong Women for Healthy Country Network shares Principles for Women Caring for Country', ABC News, 22 December 2023, https://www.abc.net.au/news/ rural/2023-12-22/strong-women-for-healthy-countryprincipals-supporting-women/103178602.
- 111 Strong Women for Healthy Country Forum, Strong Women for Healthy Country Forum 2021 Report (Mimal Land Management, 2021).
- 112 Robyn James, Javkhlan Ariunbaatar, Meaghan Bresnahan, Chelsea Carlos-Grotjahn, Jonathan R. B. Fisher, Bridget Gibbs, Justine E. Hausheer, et al, 'Gender and Conservation Science: Men Continue to Out-Publish Women at the World's Largest Environmental Conservation Non-Profit Organization', Conservation Science and Practice 4, no. 8 (2022): e12748.
- 113 Ayesha Tandon, 'Analysis: The Lack of Diversity in Climate-Science Research', Carbon Brief, 6 October 2021, https:// www.carbonbrief.org/analysis-the-lack-of-diversity-inclimate-science-research/
- 114 Bedoor K. AlShebli, Talal Rahwan and Wei Lee Woon, 'The Preeminence of Ethnic Diversity in Scientific Collaboration', Nature Communications 9, no. 1 (2018), 5163.
- 115 James et al, 'Gender Bias and Inequity'.
- 116 James et al, 'Conservation and Natural Resource Management'.
- 117 Robyn James, 'Breaking the Bias: How to Deliver Gender Equity in Conservation', Nature Careers Community, 14 March 2023, https://www.nature.com/articles/d41586-023-00779-7.
- 118 Robyn James, 'Challenging Conservation Not to Leave Women Behind', Cool Green Science Newsletter, 7 March 2021, https://blog.nature.org/2021/03/07/challengingconservation-not-to-leave-women-behind/
- 119 Justine E. Hausheer, 'Gender Bias Holds Women Back in Conservation Careers', Cool Green Science Newsletter, 27 February 2023, https://blog.nature.org/science-brief/ gender-bias-holds-women-back-in-conservation-careers/.
- 120 Australian Academy of Science, Women in STEM Decadal Plan (Australian Academy of Science, 2019), https:// www.science.org.au/files/userfiles/support/reports-andplans/2019/gender-diversity-stem/women-in-STEMdecadal-plan-final.pdf.
- 121 Miriam Gay-Antaki and Diana Liverman, 'Climate for Women in Climate Science: Women Scientists and the Intergovernmental Panel on Climate Change', Proceedings of the National Academy of Sciences 115, no. 9 (2018), 2060-2065.

- 122 Séverine Le Loarne-Lemaire, Gaël Bertrand, Meriam Razgallah, Adnane Maalaoui, and Andreas Kallmuenzer, 'Women in Innovation Processes as a Solution to Climate Change: A Systematic Literature Review and an Agenda for Future Research', Technological Forecasting and Social Change 164 (2021): 120440.
- 123 Johanna Nählinder, 'Where are All the Female Innovators? Nurses as Innovators in a Public Sector Innovation Project', Journal of Technology Management & Innovation 5, no.1 (2010), 13-29.
- 124 Hema A. Krishnan and Daewoo Park, 'A Few Good Women—On Top Management Teams', Journal of Business Research 58 no. 12 (2005),1712-1720.
- 125 Loarne-Lemaire et al, 'Women in Innovation Processes'.
- 126 Cristian L. Dezsö and David Gaddis Ross, 'Does Female Representation in Top Management Improve Firm Performance? A Panel Data Investigation', Strategic Management Journal 33 (2012), 1072-1089.
- 127 Deloitte Access Economics, Accelerating Women Founders: The Untapped Investment Opportunity (Deloitte Access Economics, 2022), https://www.deloitte.com/au/en/ services/economics/analysis/accelerating-womenfounders.html.
- 128 Katie Abouzahr, Matt Krentz, John Harthorne, and Frances Brooks Taplett, 'Why Women-Owned Startups are a Better Bet', Boston Consulting Group, 6 June 2018, https://www. bcg.com/en-au/publications/2018/why-women-ownedstartups-are-better-bet.aspx.
- 129 Dezsö and Ross, 'Female Representation in Top Management'.
- 130 Cut Through Venture and Folklore Ventures, State of Australian Funding Report 2023 (Something Ventured, 2024), https://www.australianstartupfunding.com/.
- 131 United Nations Development Programme, Sustainability and Equity: A Better Future for All, Human Development Report 2011 (UNDP, 2011), https://www.undp.org/ india/publications/human-development-report-2011sustainability-and-equity-better-future-all.
- 132 Anuradha K. Rajivan, Power, Voice and Rights: A Turning Point for Gender Equality in Asia and the Pacific (United Nations Development Programme, 2010), http://www. asia-pacific.undp.org/content/rbap/en/home/library/ human_development/asia-pacific-hdr-2010.
- 133 Astghik Mavisakalyan and Yashar Tarverdi, 'Gender and Climate Change: Do Female Parliamentarians Make a Difference?' European Journal of Political Economy 56 (2019): 151-164.
- 134 Sigita Strumskyte, Sara Ramos Magaña and Helene Bendig, Women's Leadership in Environmental Action (Organisation for Economic Co-operation and Development, 2022), https://doi.org/10.1787/f0038d22-en.
- 135 Ramstetter and Habersack, 'Do Women Make a Difference?'.
- 136 Kari Norgaard and Richard York, 'Gender Equality and State Environmentalism', Gender and Society 19, no. 4 (2005):
- 137 Women's Environment & Development Organization, By the Numbers: UNFCCC Progress on Achieving Gender Balance (WEDO, 2019), https://wedo.org/wp-content/ uploads/2020/01/Factsheet-UNFCCC-Progress-Achieving-Gender-Balance-2019.pdf
- 138 Brianna Fruean, Hilda Flavia Nakabuye and Txai Suruí, Breaking the Green Glass Ceiling: Where Were the Women at COP28's World Climate Action Summit?', Context, 3 December 2023, https://www.context.news/ climate-justice/opinion/where-were-the-women-atcop28s-world-climate-action-summit.

- 139 Louise Boyle, 'Hilary Clinton Says Absence of Women in COP28 Climate Talks a Major Worry', Independent, 5 December 2023, https://www.independent.co.uk/climatechange/news/hillary-clinton-cop28-dubai-b2457876.html.
- 140 Anna Hough, 'Trends in the Gender Composition of State and Territory Parliaments', Flagpost, 27 May 2022, https:// www.aph.gov.au/About_Parliament/Parliamentary_ departments/Parliamentary_Library/FlagPost/2022/May/ Gender_composition_of_state_and_territory_parliaments.
- 141 Commonwealth Department of the Prime Minister and Cabinet, Gender Balance on Australian Government Boards Report 2021–22 (Commonwealth of Australia Department of the Prime Minister and Cabinet, 2022), https://www. pmc.gov.au/sites/default/files/resource/download/genderbalance-on-australian-government-boards.pdf.
- 142 Nick Newling, 'Women in Power: The Push to Get More Diverse Female Candidates in Australian Elections', The Guardian, 17 November 2023, https://www.theguardian. com/australia-news/2023/nov/17/women-in-powerelections-leadership-incubator-workshops-australia.
- 143 Anita Williams Woolley et al, 'Evidence for a Collective Intelligence Factor in the Performance of Human Groups', Science 330 (2010), 686–688; Dezsö and Ross, 'Female Representation in Top Management'.
- 144 Yener Altunbaş, Leonardo Gambacorta, Alessio Reghezza and Giulio Velliscig, 'Organizations with Women Managers are Likely to Have Lower Carbon Emissions', World Economic Forum, 22 June 2022, https://www.weforum. org/agenda/2022/06/women-organizations-reducegreenhouse-gas-emissions/.
- 145 Chelsea Liu, 'Are Women Greener? Corporate Gender Diversity and Environmental Violations', Journal of Corporate Finance 52 (2018): 118-42.
- 146 Christina Banahan and Gabriel Hasson, 'Across the Board Improvements: Gender Diversity and ESG Performance', Harvard Law School Forum on Corporate Governance, 8 October 2023, https://corpgov.law.harvard. edu/2018/09/06/across-the-board-improvementsgender-diversity-and-esg-performance/.
- 147 Bloomberg NEF and Sasakawa Peace Foundation, Gender Diversity and Climate Innovation (2020), https://www.spf. org/en/gender/publications/20201201.html.
- 148 Margarethe Wiersema and Marie Louise Mors, 'Research: How Women Improve Decision-Making on Boards', Harvard Business Review, 17 November 2023, https://hbr. org/2023/11/research-how-women-improve-decisionmaking-on-boards.
- 149 ABM Fazle Rahi, 'Unpacking Women's Power on Corporate Boards: Gender Reward in Board Composition', International Journal of Disclosure and Governance (2024).
- 150 Sharon E. Jones, 'The Value of Diversity in Leadership Roles', Ladders, 12 November 2018, https://www. theladders.com/career-advice/the-value-of-diversity-inleadership-roles.
- 151 Julia Dawson, Richard Kersley and Stefano Natella, The CS Gender 3000: The Reward for Change (Credit Suisse Research Institute, 2016), https://www.creditsuisse.com/media/assets/corporate/docs/about-us/ research/publications/csri-gender-3000.pdf.
- 152 Dame Vivian Hunt, Dennis Layton and Sara Prince, 'Why Diversity Matters', McKinsey & Company, 1 January 2015, https://www.mckinsey.com/capabilities/peopleand-organizational-performance/our-insights/whydiversity-matters.

- 153 Chief Executive Women, CEW Senior Executive Census (CEW, 2022), https://cew.org.au/advocacy-and-research/ cew-senior-executive-census/.
- 154 Workplace Gender Equality Agency, Australia's Gender Equality Scorecard.
- 155 Jobs and Skills Australia, The Clean Energy Generation: Workforce Needs for a Net Zero Economy (Jobs and Skills Australia, 2023), https://www.jobsandskills.gov.au/ publications/the-clean-energy-generation.
- 156 International Renewable Energy Agency, Renewable Energy: A Gender Perspective (IRENA, 2019), https:// www.irena.org/Publications/2019/Jan/Renewable-Energy-A-Gender-Perspective; Jobs and Skills Australia, The Clean Energy Generation.
- 157 UN Secretary-General, Achieving Gender Equality and the Empowerment of All Women and Girls in the Context of Climate Change, Environmental and Disaster Risk Reduction Policies and Programmes (UN Secretary-General, 2022), https://digitallibrary.un.org/ record/3956348.
- 158 Rebecca Pearl-Martinez and Jennie C. Stephens, 'Toward a Gender Diverse Workforce in the Renewable Energy Transition', Sustainability: Science, Practice, & Policy 12, no. 1 (2016).
- 159 Catherine Saget, Adrien Vogt-Schilb and Trang Luu, *Jobs* in a Net-Zero Emissions Future in Latin America and the Caribbean (Inter-American Development Bank and International Labour Organization, 2020), https://www. ilo.org/wcmsp5/groups/public/---americas/---ro-lima/ documents/publication/wcms_752069.pdf.
- 160 Turquet et al, Feminist Climate Justice.
- 161 Workplace Gender Equality Agency, 'Comparing Oil and Gas Extraction and Coal Mining', WGEA Data Explorer, https://www.wgea.gov.au/data-statistics/data-explorer.
- 162 Jobs and Skills Australia, The Clean Energy Generation.
- 163 Clean Energy Council, Empowering Everyone: Diversity in the Australian Clean Energy Sector (CEC, 2021), https:// www.cleanenergycouncil.org.au/resources/resources-hub/ empowering-everyone-diversity-in-the-australian-cleanenergy-sector.
- 164 Clean Energy Council, Empowering Everyone; Jobs and Skills Australia, The Clean Energy Generation.
- 165 First Nations Clean Energy Network, Community Energy Planning Toolkit (2024), https://www. firstnationscleanenergy.org.au/we_ve_launched_a_new_ community_energy_planning_toolkit.
- 166 Commonwealth Department of Climate Change, Energy, the Environment and Water, 'Equal by 30: Equal Pay, Equal Leadership, Equal Opportunities', DCCEEW website, updated 22 February 2024, https://www.dcceew.gov.au/ energy/women-in-energy/equal-30.
- 167 Farrow, 'Strengthening Women'.
- 168 Debra Parkinson, Alyssa Duncan and Jaspreet Kaur, 'Longterm Disaster Resilience', Gender & Disaster Pod (Women's Health Goulburn North East, Women's Health In the North and Monash University Disaster Resilience Initiative, 2018), https://genderanddisaster.com.au/wp-content/ uploads/2023/06/Vol-1-Executive-Summary-29-Octwith-references.pdf.
- 169 Australia ReMADE, Care Through Disaster.
- 170 Australia ReMADE, Care Through Disaster.

- 171 Melissa Parsons, Ian Reeve, James McGregor, Peter Hastings, Graham R. Marshall, Judith McNeill, Richard Stayner and Sonya Glavac, 'Disaster Resilience in Australia: A Geographic Assessment Using an Index of Coping and Adaptive Capacity', International Journal of Disaster Risk Reduction 62 (2021), 102422.
- 172 Jo Longman, Maddy Braddon, Blanche Verlie, David Schlosberg, Lisa Hampshire, Catherine Hawke, Anna Noonan and Emily Saurman, 'Building Resilience to the Mental Health Impacts of Climate Change in Rural Australia', The Journal of Climate Change and Health 12 (2023): 100240.
- 173 'Women Leading United Action on Climate Change', Women's Climate Congress, accessed 25 April 2024, https://womensclimatecongress.com/.
- 174 UN Secretary-General, Achieving Gender Equality.
- 175 Women's Environment & Development Organization, Pocket Guide to Gender Equality under the UNFCCC (WEDO, 2020), https://wedo.org/wp-content/ uploads/2020/11/2020-Guide-to-Gender-Equalityunder-the-UNFCCC.pdf.
- 176 Leonora Risse and Angela Jackson, 'A Gender Lens on the Workforce Impacts of the COVID-19 Pandemic in Australia, Australian Journal of Labour Economics 24, no. 2 (2021): 111-44.
- 177 Commonwealth Department of the Prime Minister and Cabinet, Including Gender: An APS Guide to Gender Analysis and Gender Impact Assessments (DPMC, 2023), https://www.pmc.gov.au/resources/including-gender-apsguide-gender-analysis-and-gender-impact-assessment.
- 178 Organization for Economic Co-operation and Development, OECD Gender Budgeting Framework (OECD), https:// www.oecd.org/gov/budgeting/Gender-Budgeting-Highlights.pdf.
- 179 Commonwealth Department of the Prime Minister and Cabinet, Including Gender: An APS Guide to Gender Analysis and Gender Impact Assessments (DPMC, 2023) https://www.pmc.gov.au/resources/including-gender-apsguide-gender-analysis-and-gender-impact-assessment.
- 180 Anna Macdonald, "Light Touch" to Gender Responsive Budgeting Anticipated in October', The Mandarin, 10 October 2022, https://www.themandarin.com. au/202169-light-touch-of-gender-responsivebudgeting-anticipated-in-october/.
- 181 Rahi, 'Unpacking Women's Power on Corporate Boards'; Bloomberg NEF & Sasakawa Peace Foundation, Gender Diversity and Climate Innovation.
- 182 Senay Habtezion, 'Gender and Climate Finance', Gender and Climate Change Policy Brief 5 (Global Gender and Climate Alliance and United Nations Development Programme, 2016), https://www.undp.org/sites/g/files/ zskgke326/files/publications/UNDP%20Gender%20 and%20Climate%20Finance%20Policy%20Brief%20 5-WEB.pdf.
- 183 Global Impact Investing Network, 'Gender Lens Investing Initiative', GIIN website, accessed 25 April 2024, https:// thegiin.org/gender-lens-investing-initiative/.
- 184 Mariana Mazzucato and Dani Rodrik, 'Industrial Policy with Conditionalities: A Taxonomy and Sample Cases', UCL Institute for Innovation and Public Purpose, Working Paper Series, 3 October 2023, https://www.ucl.ac.uk/bartlett/ public-purpose/wp2023-07.
- 185 Victorian Government, 'Supporting Women In Flood-Affected Communities', Victorian Government website, 21 January 2023, https://www.premier.vic.gov.au/ supporting-women-flood-affected-communities.

- 186 'Tbilisi Transport Company and EBRD', 2XGlobal, accessed 25 April 2024, https://www.2xglobal.org/case-studies/ tbilisi-transport-company-ebrd.
- 187 United States Agency International Development, 'Catalyzing Gender Equity in Climate Finance', US AID Climate Gender Equity Fund, accessed 25 April 2024, https://www.usaid.gov/gender-equality-and-womensempowerment/climate-gender-equity-fund-cgef.
- 188 2XGlobal, Gender and Climate Finance Toolkit (2XGlobal, 2021), https://www.2xglobal.org/climate-toolkit-home; Women in Finance Climate Action Group, Applying a Gender Lens to Climate Investing: An Action Framework (WIFCAG, Oliver Wyman Forum and 2X Global, 2023), https://www.2xglobal.org/knowledge-hub-blog/ applying-a-gender-lens-to-climate-investing-an-actionframework
- 189 Australians Investing In Women, The Gender-wise Toolkit for Grantmakers (AllW, 2023, 3rd edition), https://www. aiiw.org.au/gender-wise/.
- 190 Women and Gender Constituency, Background Paper: The GAP – What Should We Know about the UNFCCC Gender Action Plan? (Women & Gender Constituency, 2022), https://womengenderclimate.org/wp-content/ uploads/2022/05/Background-Paper-The-GAP_v3.pdf.
- 191 International Union for Conservation of Nature, Advancing Gender in the Environment: Accelerating Impact for Equality and Sustainability (IUCN, 2020), https:// genderandenvironment.org/advancing-gender-in-theenvironment-accelerating-impact-for-equality-andsustainability-2/.
- 192 Women's Climate Congress, A Charter for Change: A Call to Climate Action (Version 1, 2022), https:// womensclimatecongress.com/charter.
- 193 Turquet et al, Feminist Climate Justice.
- 194 UN Secretary-General, Achieving Gender Equality.
- 195 Maeve Cohen and Sherilyn MacGregor, Towards a Feminist Green New Deal for the UK: A Paper for the WBG Commission on a Gender-Equal Economy, (UK Women's Budget Group and Women's Environmental Network, 2020), https://wbg.org.uk/wp-content/uploads/2020/05/ Feminist-Green-New-Deal.pdf.





