



Building back better:

the intersection of climate solutions, healthy people and thriving communities.



A report developed in partnership with



Foreword

It would be easy to believe our economic recovery from COVID-19 is the full stop on the worldwide disaster that was 2020. It would be easy because there are more cranes in the sky, more crowds at the footy, and more diners in restaurants today than a year ago. It would be easy because whether you talk about health, social or economic impact, 2020 would arguably be the most difficult year Australians have shared. It would be easy, but it would be wrong.

If the best we can do is get back to 'normal', we will have wasted one of the greatest opportunities to reinvent the Australian economy that we've seen since Federation. This is our chance to increase our national competitive advantage, and build back better for our community, our economy, and for future generations.

Was 'normal' really utopia? Our economy was stagnant, our labour force casualised in the gig economy, wage growth evaporated, and inflation stalled below target. All while the cost of living swelled. Energy prices soared, the housing market was unattainable for most, and our global leadership on climate change tumbled from view. Drought was the norm rather than the exception, and by the end of 2019 we saw the most ferocious fires in our recorded history ravage our eastern seaboard.

That's why this report is so important. We invited Dr Huntley to look beyond the well-trodden ground of climate change and to explore the economic and social outcomes climate solutions can deliver. She uncovered many initiatives supporting employment security, stable income, social inclusion and wellbeing, while also helping to solve climate challenges. And there are many more.

Many Australians have solar panels on their roofs and businesses are leading the charge on change. The fossil fuel industry has called for a price on carbon; we are seeing investment in

renewable energy innovation, and workers are reskilling to enter greener industries. Australia understands the positive results action on climate could have for the economy, jobs, and our everyday lives.

So, why is it so hard to get united action?

As one of Australia's largest industry super funds, the themes in this report are central to Aware Super, and we're conscious of the difference we can make. Understanding climate change and its far-reaching impact on Australians, is part of our responsibility as custodians of our members' funds and as a major organisation. Through our investing power, we have the scale and expertise to do well for our members and good for all.

It is time to take action.

Australia is at a crossroads and there is a unique way forward. One that drives employment opportunities and jobs across the country. One that fosters business innovation and entrepreneurship, and powers strong and stable economic growth. A way forward that does right by Australians and sees them reaping the rewards of our country's investment in a healthier tomorrow.

Normal shouldn't be our benchmark. It's time to move on from the climate debate to start delivering impactful change to build a better Australia for all.

Deanne Stewart
CEO, Aware Super



About the author

Dr Rebecca Huntley is one of Australia's most experienced social researchers and former director of The Mind and Mood Report, Australia's longest running social trends report.

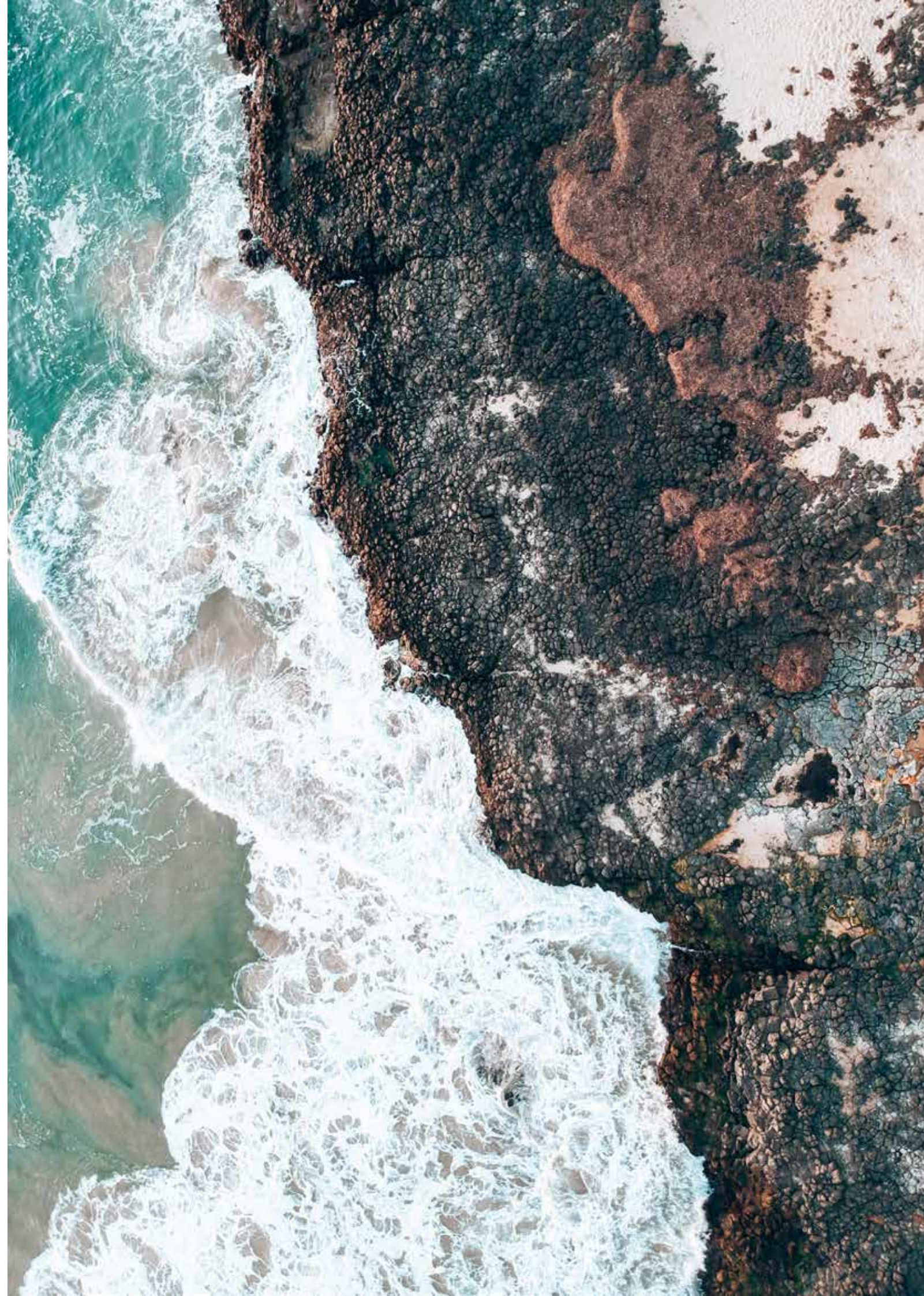
She holds degrees in law, film studies and has a PhD in gender studies.

She is the author of numerous books including *How to Talk About Climate Change in a Way that Makes a Difference* (Murdoch books, 2020), *Still Lucky: why you should feel optimistic about Australia and its people* (Penguin 2017) and *Australia Fair: Listen to the Nation*, the first Quarterly Essay for 2019.

Dr Huntley is dedicated to researching attitudes to climate change and works closely with business, local government, media agencies, NGOs, think tanks and industry groups to advocate for climate solutions that benefit Australia's economy, health and communities.

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The tipping point: how climate solutions can fuel our recovery

As the world continues to manage the COVID-19 pandemic and the related economic and social impacts, the community and leaders here at home are reflecting on what we need to do differently to restore the economy and emerge stronger and better prepared for the future.

The devastating 2019-20 Black Summer bushfires that swept the nation, and the more recent record-breaking floods in NSW, prompted similar discussions about how we not only restore communities affected, but accelerate action to address the causes of these extreme weather events, in particular climate change.

“The direction of [the recovery] investment will either set us back for decades...or catapult us forward.”

While the crises of 2020 have undoubtedly changed us, making us more aware of our strengths and fragilities, the preoccupations of Australians and those who call Australia home remain as they had been prior to the pandemic: secure jobs, secure housing, health

and personal wellbeing, a clean environment and a sense of connection to place and community. This report discusses the intersection between these elements as we set out to build Australia back better, and seeks to identify what individuals, businesses, investors and governments can do to make this happen.

So while we can, in Australia, be rightly proud of our efforts to help keep infection and death rates relatively low and for continuing to keep workers working and businesses operating, we must not lose momentum on the issue of climate change. Experts from across the spectrum of policy, business, academia and civil society argue that the pandemic creates the perfect opportunity and conditions for reform. The upside of disruption is that it forces people and organisations to think differently. It's an invitation to head in new directions, accelerate plans for the future and prepare for even greater, more predictable challenges ahead.

In its vision guide for climate and investment in Australia, think tank ClimateWorks describes this moment in time and the choices we face in the following terms:

“We are at a fork in the road. The scale of investment required to reboot and recover economies from the COVID-19 crisis is extraordinary. The direction of this investment will either set us back for decades in our efforts to solve climate change and achieve sustainable development or catapult us forward to a future where economies and people prosper, and where our climate and natural environment are safeguarded.”¹

At the time of writing this report, the impact of COVID-19 here and abroad is still uncertain; so much depends on the roll out of vaccines across the world. But what is certain is Australia is facing escalating challenges in areas that will remain urgent issues to tackle long after the pandemic is over.

Reflecting on these uncertainties and the changes we've seen in society in the past 12 months, this report identifies three important policy areas in our effort to build back better: climate change solutions, security and inclusion, and health and wellbeing. These are areas that require attention and action from everyone with a stake in Australian prosperity and success.

The foremost area is climate change, specifically the need to transition to a low-carbon economy and deal with the negative impacts of climate change in Australia and globally. This includes capitalising on the enormous potential of mature and emerging renewable energy technologies. The word 'need' here is used deliberately. Australia is not faced with a choice to address climate change and decarbonise the economy; the transition is inevitable and progressing at pace. We do, however, have a choice about how well we manage this shift and where we can take advantage of the specific opportunities available to Australian workers, businesses and communities.





The second area for attention is security and inclusion, with a focus on the life satisfaction and strength of community created when we enjoy secure work, affordable housing and a sense of connection to place and people.

And finally, wellbeing. This encompasses physical health, taking into account an ageing population who need to remain active in the labour market and broader community, but also mental health, which remains an under-resourced, complex and growing area of need. The pandemic has played an exacerbating role here, increasing the already-high levels of anxiety, stress and isolation in the community. And, for those regional and rural areas devastated by the Black Summer bushfires and 2021 NSW floods, the management of trauma and loss is ongoing.

This report identifies three important policy areas in our effort to build back better: climate change solutions, security and inclusion, and health and wellbeing.

This report will show how investment in climate solutions has the capacity to make energy cheaper and cleaner for households and businesses, unlocking the ability to save better, invest more and generate new jobs, but also how these investments can improve health and wellbeing and create more secure communities, particularly those impacted by climate change.

This is not just about putting more solar panels on Australian roofs. It's about building stronger, more independent and more inclusive communities who feel healthy, safe and secure – even in times of crises and uncertainty.

While the report addresses areas of wellbeing and security and inclusion, to the extent that they intersect and overlap with climate change, these areas are broad and multifaceted, encompassing many issues relatively unconnected to climate change. While consideration of the broad sweep of these policy areas is out of the scope of this report, progress in respect to these issues is no less important to our recovery from COVID-19 and the creation of a more prosperous and thriving society.

This report outlines the appetite for action on climate change from the general public and the organisations in which they have a direct stake, such as superannuation funds whose investments could move the needle on climate

solutions. It outlines broad support for the role that businesses generally – and superannuation funds specifically – can play in addressing the big economic, social and environmental challenges in the years ahead.

This should be seen as a call to arms for governments, industry, investors and the public to think differently about climate solutions.

It also seeks to illustrate the wide and increasing support among business and investment communities for an approach to the COVID-19 recovery that gives priority to investment in renewables and decarbonisation. Some of the most persuasive voices on climate action are emerging within the business community, putting forward a strong economic case for action which incorporates a concern for social and environmental goals.

Having canvassed the will for action on climate solutions from the public, superannuation fund members and business leaders, the report

explores current thinking and policy in each area. The section on climate solutions looks mainly at the economic benefits of investment to Australia, while other sections highlight the ways in which climate change can detrimentally affect wellbeing, security and inclusion and, conversely, the ways in which investment in climate solutions can improve outcomes in each area.

In addition to a review of attitudes and policy, we have invited respected experts and leaders across academia, business and the community to respond to and reflect on the findings. Throughout the report there are also case studies where successful investment and outstanding leadership in these areas combined is showcased. Some of the case studies featured are pilot programmes or small-scale ventures, indicating further investment and research is needed by government to work out what solutions are most effective and can be scaled up. This is particularly true in the area of mental health in communities impacted by climate change.

Finally, this report proposes solutions that individuals, households, companies (including superannuation funds) and institutions can put in place to assist the national effort to build back better.

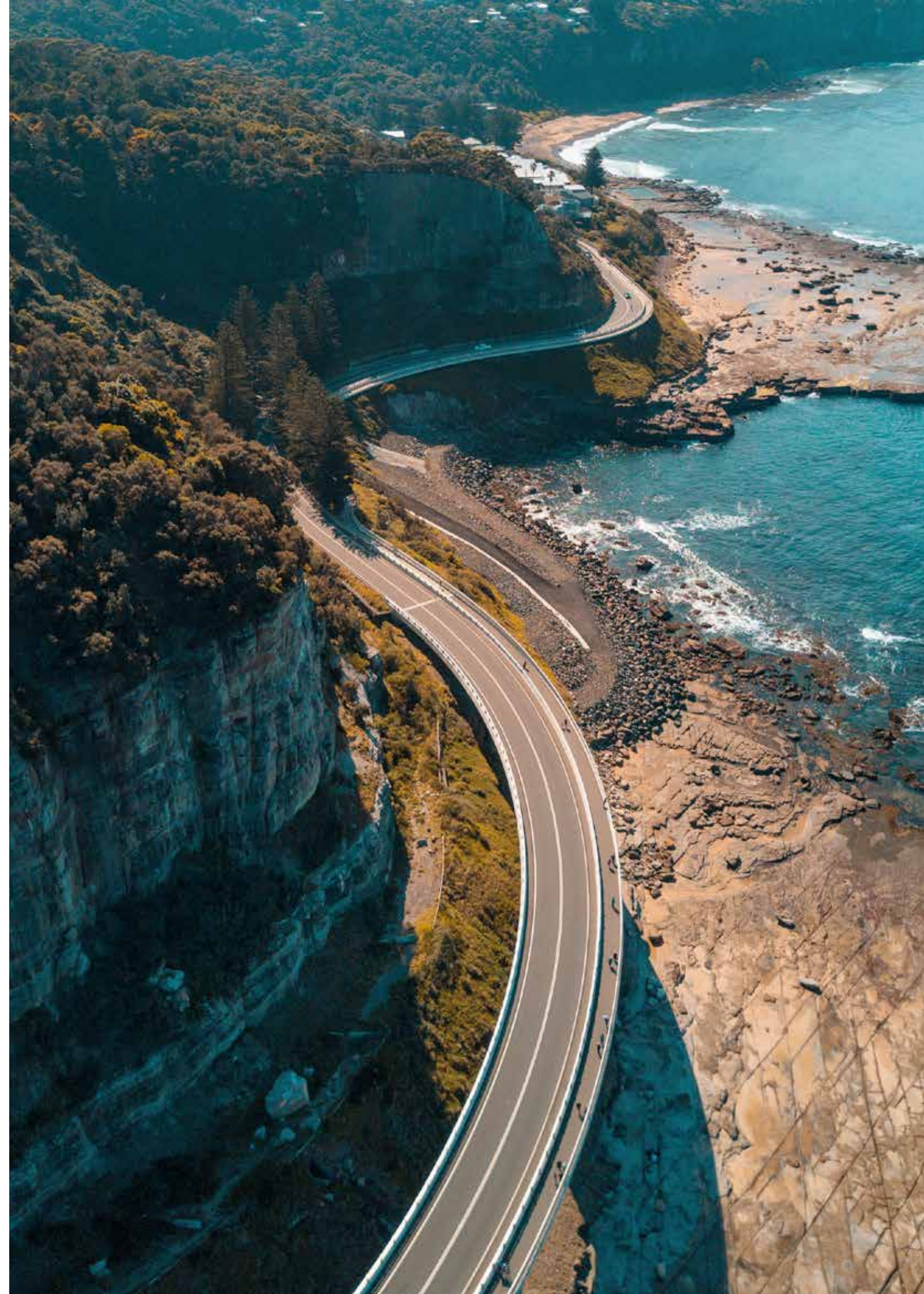
This report should be seen as a call to arms for governments, industry, investors and the public to think differently about climate solutions, such as renewable energy, and climate-aligned investments that can deliver social benefits to the communities that come together to support them.

Taking its lead from policy and public opinion research, case studies and expert opinions, this report argues that we should be prioritising business and government investment in ways that can:

- Consolidate workers' rights and livelihoods in an environment where the economy is already shifting to new energy sources and more sustainable production
- Relieve economic and social pressure on households, particularly in vulnerable communities, through providing cheaper renewable energy and more climate-resilient housing
- Create more community-scale grid systems that foster energy autonomy for suburbs and regions and, with the right financial arrangements, economic dividends for those communities, including First Nations communities
- Support the health systems, and mental and physical health-centred organisations and programs at the local and state level, that prepare the community for a climate-altered world.

What should be clear after reading this report is that visionary and courageous leadership on the issues canvassed is critical to the success of building back better. Government, businesses and organisations of all kinds should be thinking about innovative and inclusive ways to encourage and support leadership on these issues, particularly among younger people, First Nations communities and communities at the forefront of climate impacts.

The big shift is on, both in Australia and globally, towards renewable energy and decarbonisation. The question is not 'if' but 'how and when'. Australia is a nation with the institutions, natural endowments and human capital to manage whatever crisis appears on the horizon. With the right policy settings, investment from government and business, and community effort we can become a thriving society for Australians to work, live and retire into.



Supporting a post-pandemic recovery

Prior to the pandemic, Australian businesses were giving thought and dedicating resources to action on climate change. Reassuringly, despite having to be both quick and creative in their response to COVID-19, the pandemic has not put a complete stop to their efforts.

Rather, we've seen many business leaders and organisations publicly recognise that investments in solutions to climate change are critically important if we want the economy to recover and sustainably grow in the future. Like many of us in the broader community, business leaders understand that transitioning to renewable energy and being more responsible in our consumption is not only good for the environment but good for the economy.

Echoing calls from Australian scientists and scientific peak bodies, organisations such as the Australian Industry Group, the Business Council of Australia and the Property Council have over the past year all called for climate-aligned spending to aid our economic recovery. These local calls for action are matched at the global level, with bodies such as the International Energy Agency, the World Bank, the World Economic Forum and the International Monetary Fund highlighting the importance of climate-aligned stimulus spending.

Such international appeals have urged Australia to prioritise a 'nature-based recovery' from COVID-19 – namely solutions that protect and strengthen our natural environment as the fundamental source of our prosperity and wellbeing.²

“**...being more responsible in our consumption is not only good for the environment but good for the economy.**”

Despite some pessimism and anxiety driven by the pandemic, business sentiment studies show that leaders still see climate change as an important area for immediate action and investment. For example, the last Australian Institute of Company Directors' Director

Australian Institute of Company Directors' (AICD) Director Sentiment Index

Each year, members of the Australian Institute of Company Directors are invited to take part in the Director Sentiment Index, where they rank top policy priorities for the Australian Government in the short and long term. Visit the appendix to learn more about how climate change ranks on issues of importance to company directors.

Sentiment Index, released in October 2020, found that climate and energy policy remain the two most important short-term priorities for company directors. In fact, the study found 76% of directors want large-scale public investment in renewable energy to help drive a green recovery.³

And many experts would argue there's no better time than now. Dr Robert Glasser, former Head of the United Nations Office for Disaster Risk

Reduction and a visiting fellow at the Australian Strategic Policy Institute, states that the disruption caused by the pandemic could create "an unequalled, transformational opportunity for climate action". He writes:

"The longer the crisis lasts, the more likely it is that additional stimulus measures will be needed to reactivate the economy. In many countries, that will be an opportunity to overcome the politics that have led to economically inefficient subsidies for fossil fuels and underinvestment in renewable energy technologies that are already competitive and becoming more so each year... Even without multilateral action, market forces will accelerate action on climate change".⁴

He argues that, given the aftershocks of the pandemic will be with us for some time, Australia can – with good planning and policy – not only control the health impacts of the pandemic and accelerate the economic recovery, but prepare for "the much larger challenges that lie ahead in a rapidly changing climate".⁵

One of our most trusted public institutions, the CSIRO, released a report late in 2020

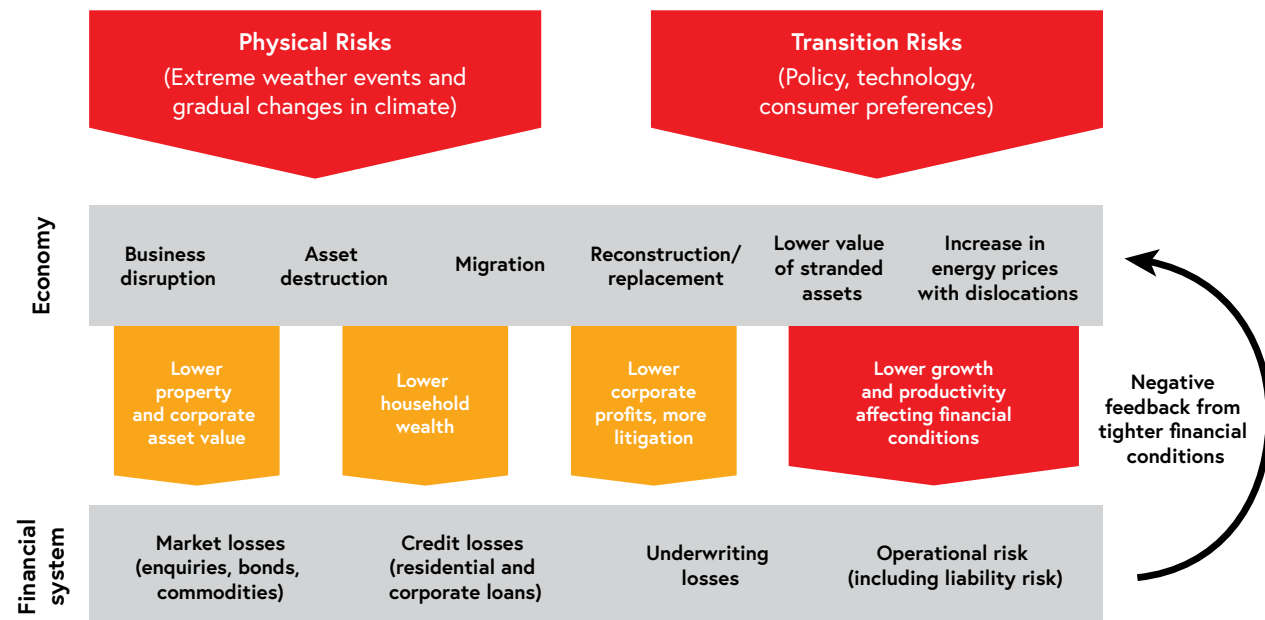


reinforcing the role investment in climate change solutions could play in our COVID recovery. In that report, the authors reaffirmed the idea that disruption can create an opportunity – even a responsibility – to make decisions that will create the foundations for future economic prosperity and resilience. "We have all the foundations to accelerate critical Australian industries by building on our world-class scientific expertise, high-value workforce, and national advantages if we make the right investments now," the report states.⁶ The authors identify both energy and health as the two most important and growing sectors for investment and, in their recommendations for government and policy makers, argue for "recognising and including social and environmental considerations in decision-making processes".⁷

Much of the Australian business community has been clear in its calls for a bipartisan, all-of-government approach to climate change and energy transition which creates consistent national policy settings and provides certainty to investors, companies and the broader community.

Physical and transition risks

The risks from climate change to the economy have two basic channels, but many potential impacts.



SOURCE: <https://www.gov.uk/government/consultations/taking-action-on-climate-risk-improving-governance-and-reporting-by-occupational-pension-schemes/chapter-1-background-and-summary-of-proposals#fn:3>

Specifically, for businesses looking at long-term investments, such as superannuation funds, climate change is one of the most significant financial risks, involving business disruption, asset destruction, lower growth and productivity to name a few [see chart on physical and transition risks of climate change to the economy.]

Take, for example, the multiple physical and transition risks from climate change as they impact our agricultural sector.

76%

of directors want large-scale public investment in renewable energy.

In its report on the economic impacts of climate change, the Climate Council outlines the ways in which climate impacts such as more frequent and severe heatwaves, intense rainfall and flooding, cyclones and storms, drought and rising average temperatures, will affect Australian food production and farming.



Tony Wood

Energy program director at Grattan Institute, and former energy program director, Clinton Foundation

"The COVID-19 pandemic clearly shows that governments can galvanise in response to an immediate big threat and can secure support for that response from the community, business and across the political spectrum. Common purpose means that what normally act as financial constraints can be removed with little resistance. It is true that providing an economic stimulus after a sharp recession can also secure support."⁸

"Governments must ruthlessly prioritise to tackle a huge agenda of urgent policies. In general, they should avoid industry assistance, and establish clear criteria if supporting projects; and they should ignore calls for infrastructure spending inconsistent with a low-emissions future. Translated to actions, this means enthusiasm for a green-led recovery should be turned to address barriers to the integration of renewable energy, and enthusiasm for a gas-led recovery tempered with a dose of economic reality."

Physical risks include decreased food yields and disruption to food distribution and transport. Financial risks include decreased farm incomes, job losses and increased food prices. Economic risks include reduced exports and increased imports, and decreased retail activity in rural areas. Not to mention increased psychological distress and disruption in farming communities leading to increased health costs for households and the health system.

The Climate Council report shows that "on current trends, the accumulated loss of wealth due to reduced agricultural productivity and labour productivity as a result of climate change is projected to exceed \$19 billion by 2030". Furthermore, "previous severe droughts have reduced Australia's Gross Domestic Product by around 1%; estimates suggest that increasing drought frequency and impacts in the future may reduce GDP by 1% every year".

...loss of wealth...as a result of climate change is projected to exceed \$19 billion by 2030.



Stephen Koukoulas

Managing director, Market Economics

"Dr Huntley shows how Australia's experience during the pandemic and recent bushfires confirmed that government policy has a critical role in society and the economy. A government's policy agenda will determine climate outcomes and the extent to which societal wellbeing is protected and improved.

Governments can, if they choose, fast track the use of renewable energy and get to zero net emissions soon, if they want to. They can make the welfare safety net effective and fair to protect the segments of the population when they fall on hard times. Governments can provide accessible world-best health care, if they wish. Through the tax system and policy leadership, key objectives can be achieved. The only constraint is the willingness of governments to embrace the policy vision that delivers.

Working with business and the community, a progressive policy approach can yield huge returns to make Australian an even better place."

If you were to canvas threats to productivity and the health of workers across various sectors that climate change poses you would reach a similarly bleak conclusion. Indeed, Deloitte Access Economics' report A New Choice – Australia's Climate for Growth shows that the top six industries that are most at risk to the physical damages of climate change represent 46% of all jobs in this country and 41% of GDP. Those industries are manufacturing, trade agriculture, mining and services including tourism and construction.¹⁰

Even without a consistent national approach to addressing climate change and moving to a low carbon economy, investors, businesses, governments and community groups continue to set meaningful targets, actions and goals to respond to the risks of climate change despite challenging economic conditions. In 2020, it has been state and territory governments of all kinds that have led the way.

For example, in both New South Wales and Victoria, state governments have navigated the immediate challenges of drought, bushfires and COVID-19, while making some significant announcements about delivering more sustainable energy, and making it easier for investors to support renewables and new technologies.

“...the top six industries that are most at risk to the physical damages of climate change represent 46% of all jobs in this country.



Case Study

New South Wales and Victoria commit billions to renewables in a pandemic year

In 2020, the New South Wales and Victorian governments committed to spending an unprecedented \$1.7 billion and up to \$1.6 billion respectively to support the transition to renewable energy in their states. Common to the approach of both governments is an emphasis on transmission network planning and investment in renewables (including storage), direct support for superior projects and a focus on new technologies, including hydrogen.

In Victoria, \$540 million of the total package will be spent to create six Renewable Energy Zones (REZ). The REZs will allow the efficient upgrade of grid infrastructure to connect businesses, jobs and towns across regional Victoria to solar and wind resources. Gippsland and Mildura have been named as two potential zones. REZs are also planned in New South Wales in the Central West and Orana regions.

In New South Wales, the passing of the Electricity Infrastructure Investment Bill 2020 into law in late 2020 was a crucial step in moving New South Wales' energy infrastructure towards renewables and away from ageing coal-fired power station assets. New South Wales has a detailed and sophisticated plan that includes consultation and negotiation with Aboriginal communities, fostering local community support, jobs, economic development and manufacturing.

For several years, grid connection and the costs of pioneering new infrastructure builds have caused significant concerns for project developers, financiers and contractors. These significant state government commitments help address these challenges. The support at the state and territory level for renewables is creating competition that will continue to improve the quality and price of renewable solutions delivered to the market and consumers.

“ ...the support at the state and territory level for renewables is creating competition that will continue to improve the quality and price of renewable solutions.

New South Wales government has committed to spending up to

\$1.7b

to support the energy transition to renewable energy.

\$540m

will be spent in Victoria to create six Renewable Energy Zones.

Public opinion on the issue of climate action

As any politician, public servant or CEO worth their salt knows, community support is essential to the success of any strategy or plan for the future, forged in either crisis or calm.

And the broader Australian community is vocal in its concerns and attitudes on climate change and the urgent need for action. In 2020, The Australia Institute's annual Climate of The Nation report showed that 74% of Australians are concerned about climate change. One in two Australians (47%) is 'very concerned' about climate change, up 10 percentage points since July 2019. In the past five years, the number of Australians who think we are experiencing the impacts of climate change a lot (compared to a little, or not very much) has increased dramatically from 33% in 2016 to 48% in 2020. Furthermore, 57% of Australians say that we are experiencing 'a lot' of climate change impacts in Australia, up 14 percentage points since July 2019; a big jump driven in part by the Black Summer bushfires.¹¹

The 2020 Lowy Institute Poll found that, while concern about climate change had been somewhat overshadowed by the pandemic and economic downturn, 56% of Australians still agree with the statement 'global warming is a serious and pressing problem [and] we should

begin taking steps now even if this involves significant costs'.¹² The Lowy poll also found that eight in 10 Australians agree that the Australian Government should focus on renewables, even if that requires investing more in infrastructure to make the system more reliable.

 **8 in 10**

Australians agree that the Australian Government should focus on renewables.

Furthermore, the annual Ipsos Climate Change Report 2020 showed that the majority (71%) of Australians support the government's commitment to the Paris climate agreement targets and 69% support a commitment to net zero emissions by 2050. There continues to be a high level of support among Australians for renewable energy, which topped the list of environmental issues at 56%.

While health and jobs have superseded climate change as the issues that matter most to Australians, the Ipsos research also showed that support for general action on climate change has continued to trend upwards throughout the pandemic, with 47% saying they would take action on the issue. This is in contrast to the downward trend during and following the global financial crisis in 2008-09. Support for action on climate change reached its lowest point in 2011 at 28% and has been on the rise ever since.¹³

 **69%**

of Australians support a commitment to net zero emissions by 2050.

The Australian edition of the Edelman Trust Barometer in 2021 showed that 72% of us believe CEOs should take the lead on change rather than waiting for government to impose it and 66% believe CEOs should step in when the government does not fix societal problems.¹⁴ The 2020 edition of the barometer found that 70% of Australians believe a company can take actions that both increase profits and improve conditions in communities where it operates.¹⁵

Much of this research shows that the community expectation is for business to play a prominent leadership role, equal to governments, in

developing climate solutions and driving a swift transition to a low-emissions economy. The more emissions intensive or influential a business or sector is, the greater the responsibility.

This expectation follows through to the organisations individuals have a direct stake in, such as superannuation funds.

Aware Super is one of Australia's largest superannuation funds, investing more than \$140 billion on behalf of over one million members, many of whom are educators, health professionals, first responders and public servants. Research on the attitudes of Aware Super members shows strong support for the superannuation sector investing in a socially and environmentally sustainable way.

For example, Aware Super research conducted in September 2020 on attitudes to responsible investment found that, in relation to issues of importance to members personally, mental health, gender equality and climate change were ranked in the top three across most member groups. When ranking issues from most important to least important, climate change was one of the highest ranked. Almost three in five (57%) said that it was 'extremely' appropriate (9 or 10 rating) for Aware Super to actively influence climate change policy and action.¹⁶





Research conducted in early 2021 found that the cost of living, health and the economy were the top three general issues of concern to Aware Super members. However, climate change and the environment ranked fifth overall, after job security and creation, and ahead of education, housing and aged care. This was the case across all age cohorts. For climate and the environment to continue to rank in the top five issues for Aware Super members, despite the pandemic and economic downturn, it indicates an appetite for an economic recovery that doesn't sideline the issue of climate change.

“**...the cost of living, health and the economy were the top three general issues of concern to Aware Super members.**”

While support among the community and Aware Super members for responsible investment, renewable energy and action on climate is strong, it hasn't necessarily created the conditions for forward-thinking energy policy or best practice, world-class climate change policy. The disconnect between community attitudes and high level action on climate could be explained by the ongoing political polarisation around the climate debate. In both the Aware Super research and the broader community research that polarisation was evident, with respondents either putting climate change at the top or at the bottom of their list of concerns.

It might also be explained by the deficit of strong voices on climate action outside climate science and progressive and environmental activism. However, as mentioned previously, the past few years have seen a growing number of voices from within the business community speaking out on climate change, making the economic argument for action. The more these figures speak up and are heard, the greater the opportunity to depolarise the climate discussion, making it more relevant and meaningful for the broad spectrum of the population.



Sam Mostyn

Board member of the Climate Council and Centre for Policy Development

"As the world navigates the early stages of 2021, learns from the impact of COVID-19 on all our lives and adjusts to the shifts that will define our future, the phrase 'build back better' has become ubiquitous.

If we are honest about both the enormity of challenges before us, and the range of opportunities that could define our ambition, we must engage in rethinking what we really mean by 'better', and what it will take to secure shared prosperity while guarding against inequality.

So a report by Dr Huntley and Aware Super which seriously examines and interrogates the interconnecting areas of climate solutions, wellbeing, and security and

inclusion is vital and timely. Investment and engagement strategies which engage with this reality will have a remarkable opportunity of ensuring that Australia not only manages the impacts of the pandemic, but faces the future best placed to take advantage of the complex, accelerating changes across our society.

The Sustainable Development Goals (SDGs) remind us that we have less than a decade to address those issues which will define whether we are creating a sustainable, prosperous and fair world, and that this is the critical decade which determines the nature of our world for the rest of the century. If we are to aim to be better, we must engage with this work."



Linda Scott

Head of Australian Local Government Association

"Dr Rebecca Huntley's central question – how might Australia build back stronger, economically, socially and environmentally, from COVID-19 and its associated economic downturn – will define the coming century. Should we be able to achieve this, humanity will thrive for generations to come. The consequences of failure, on the other hand, don't bear consideration. Put simply, we must not fail this challenge.

For local governments, 2020 began staring down unprecedented climate disasters that combined prolonged drought, floods and bushfires. Lament for the innumerable missed global and domestic opportunities to prevent dangerous climate change did little, as we transformed town halls into emergency shelters and repurposed humble domestic waste vehicles into operations that carried out mass removal of entire, burnt-out towns. As COVID-19 hit, our city and town main streets snaked with Centrelink queues as more than one million Australians faced unemployment and millions more faced insecure economic futures.

 **77%**

reduction in electricity costs

Buried in the gloom, volatility and unpredictability of 2020, however, was the revelation that Dr Huntley's central thesis – that investment in climate solutions, health and wellbeing, and security and

inclusion can effectively ensure we develop into a place where all Australians can thrive – is fundamentally correct, based on evidence from local communities and local governments.

Councils, and the communities of the places they govern and care for, have shown the way, with examples all over Australia shining a light of evidence onto a model for rebuilding a nation.

The Light Years Ahead project, a collaborative approach between nine councils, is one of the largest ever energy reduction projects in Western Sydney, replacing 14,491 high emission 80 Watt mercury vapour street lights with energy efficient LED lighting. The project, independently evaluated, has achieved a 4.4 million kWh per year energy reduction, accompanied by a 77% reduction in electricity costs.

In New South Wales, the City of Newcastle is the first council in the state to use 100% renewable energy, leading efforts for a region traditionally reliant on mining and carbon-intensive industries.

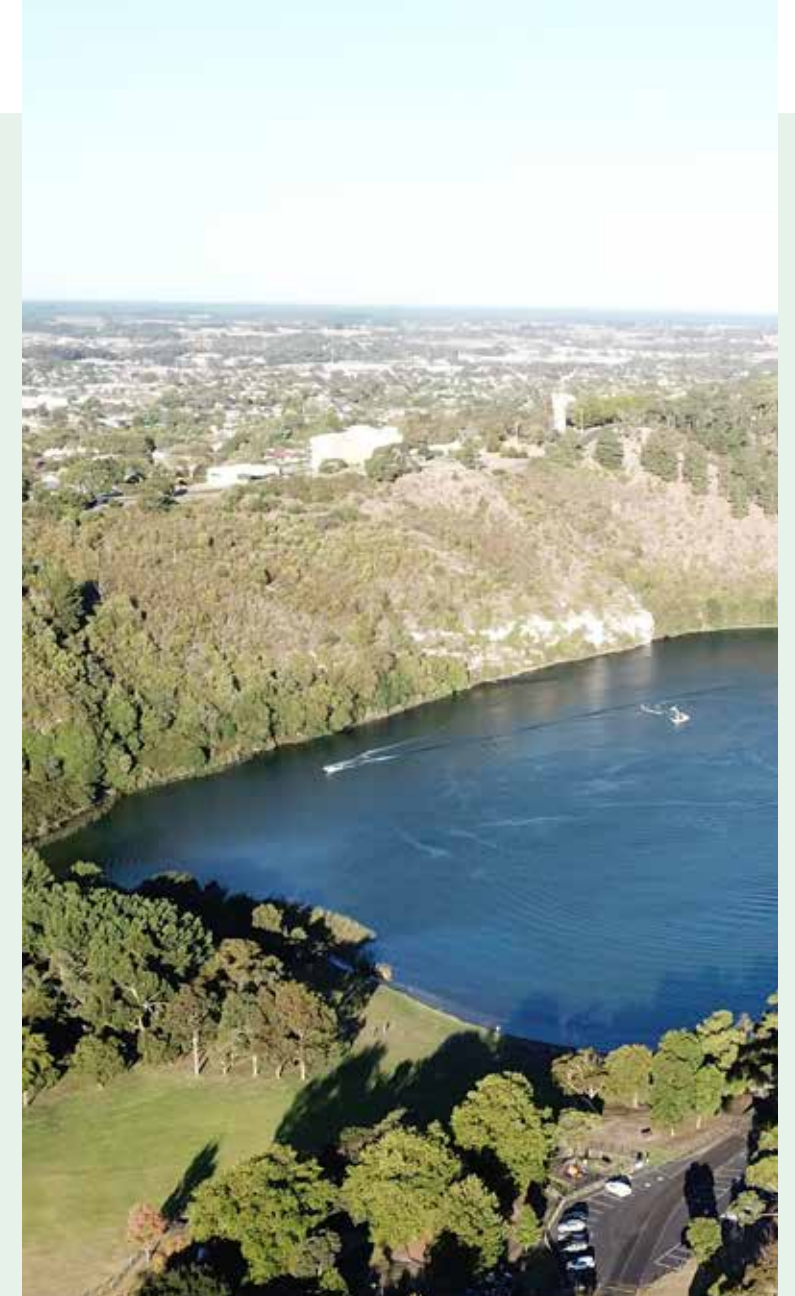
In Queensland, the Sunshine Coast Council has become Australia's first local government to offset electricity consumption across all of its facilities and operations from renewable energy generated at the 15MW Sunshine Coast Solar Farm. This includes administration buildings, aquatic centres, community and

performance venues, as well as holiday parks, libraries, art galleries and sporting facilities. The Solar Farm provides \$22 million in savings, after costs, over a 30-year period and the savings will increase substantially in the future.

“...the City of Newcastle is the first council in the state to use 100% renewable energy.”

South Australia's City of Mount Gambier was the first council in Australia to install a biomass boiler to power three pools, including an Olympic-sized pool. The boiler, with a payback period of four years, saves approximately 58 tonnes of emissions per year and, due to its efficiency and the low moisture content of the locally-sourced woodchip, no smoke is produced.

One of the nation's smallest shires, the Wujal Wujal Aboriginal Community in Far North Queensland, has built a freely available, weather-resistant, independently solar-powered telecommunications backup 'hot-spot' system for locals to use during emergencies. This device, credited with ensuring communities can live safely in the remote Cape York community for generations to come, uses a solar-powered, microwave radio link technology, which



operates independently of the community's energy supplier and supports a range of devices including smartphones, voice-over IP hardware phones and personal computers to operate during natural disasters.

Many of these examples are small. They are designed by and provide secure employment opportunities for local people, creating solutions to suit the challenges and conditions of a place. They are typically completed on incredibly small budgets, using public money, with a business case to show a positive return for the public dollar. But together, they act to build back a stronger, better, place.

The economic case for action versus inaction

What is clear from the research is that there's an expectation among the general public and Aware Super members that businesses play a strong and upfront leadership role in addressing issues such as climate change, even during a crisis period.

This upward pressure is just one of the reasons why we've seen superannuation funds and businesses take greater interest. Tony Wood, energy program director at the Grattan Institute, writes in his 2021 essay for the Griffith Review that there's been a "steep increase in business demands [for climate action]" and that "businesses are responding to pressure from institutional and retail shareholders, regulatory authorities and the growing expectation that action on climate change is inevitable".¹⁷ Indeed, regulators like ASIC and APRA are now more attuned to the risks posed by climate change and environmental damage, and are increasing their oversight in these areas.

Seeing lack of action on climate change as a top-order risk to return and investment has fast become accepted practice in the financial sector at both the global and local level. For example, the World Economic Forum's 2020 Global Risk Report found that the top five most likely global risks all relate to the degradation of nature.

The World Economic Forum identified that failure to act on climate was not only the most severe risk, but also the second most likely risk to occur.

“ **Seeing lack of action on climate change as a top-order risk to return and investment has fast become accepted practice in the financial sector...** ”

¹⁸Among superannuation funds especially, there has been momentum in terms of action on climate change because of the financial risks it poses. In part, because superannuation funds – with their long-term investment horizons – recognise how vulnerable they are to the disruptions and transition costs associated with

climate change impacts. Because superannuation funds also have a responsibility to consider long-term dividends for members across generations, they have a unique role to play in advocating for investment and policy that takes long-term planning, risks and returns into account.

“ **...there's been a steep increase in business demands for climate action.** ”

As a September 2020 report by ClimateWorks Australia notes, "despite the economic repercussions of the COVID-19 pandemic, efforts by Australian superannuation funds to

address climate change risks are accelerating". It adds:

*"There are indications this sector is starting to transition. Conscious of the commercial implications of climate risks and of regulatory, legislative and policy requirements for action, institutional investors are acting to address the likely impacts of global warming. Under pressure from regulators and customers, many are emphasising engagement activities, such as asking the companies in which they invest to disclose – and, in some cases, address – their climate risks. Superannuation funds are themselves making commitments to reduce emissions funded through their investment portfolios, a further sign of gathering momentum for change."*¹⁹



Case Study

Aware Super investment in South Australian wind energy delivers returns and supports the local economy

Aware Super, Australia's second largest super fund, is seeking to transition its investment portfolio towards carbon neutrality, which means achieving net zero emissions by 2050.

The fund invests in assets and sectors that can deliver strong returns for members while addressing climate change, supporting the economy, and sustaining local communities.

“Our investment in Snowtown 2 shows how we're delivering strong long-term returns for our members while making a positive impact for all.

A key renewable investment for the fund is the Snowtown 2 wind farm. Located 170 kilometres north of Adelaide, Snowtown 2 is one of Australia's largest wind farms with 90 turbines and installed capacity of 270 megawatts.

It generates enough electricity to help South Australia reach its 100% renewable energy target by 2030.

Aware Super became a co-investor in Snowtown 2 in December 2019. The asset sits in the fund's infrastructure and real assets portfolio, which has returned 13% per annum over five years to January 2021.²⁰ Returns from the asset come from a stable and secure contract with Origin Energy.

Renewable energy assets are complex infrastructure investments. Their returns can vary significantly due to differences in generation, power price, and grid dynamic projections.

The Snowtown 2 investment was attractive to Aware Super for several reasons. One was its operating history – it had a five-year operational track record at acquisition.

Another was its long-term energy and Large-Scale Generation Certificate (LGC) offtake²¹ with Origin Energy. Another reason was its attractive location with a strong wind resource and location in the grid. Combined,

these factors position the Snowtown 2 wind farm at the low-risk end of renewable energy investment opportunities.

As well as helping to generate strong long-term investment returns for fund members, the wind farm avoids around 150,000 tonnes of CO₂-equivalent emissions each quarter, equivalent to powering about 180,000 homes.

Snowtown 2 has also delivered economic and community benefits. These include tertiary scholarships, as well as supporting the local community by funding various projects through Lend A Hand.

As Damian Graham, Aware Super's chief investment officer, says:

"Our investment in Snowtown 2 shows how we're delivering strong long-term returns for our members while making a positive impact for all.

"This was the fund's first direct investment in renewable energy in Australia and it builds on our past investments in renewables overseas."

150,000

tonnes of CO₂-equivalent emissions are avoided each quarter.

That's equivalent to powering

180,000

homes.

There are many examples of economic modelling from here and overseas outlining the risks involved and the costs to the economy of inaction on climate change. For example, the same Deloitte report, A New Choice – Australia's Climate for Growth, estimated that lack of action on climate change could reduce Australia's economic growth by 3.6% per year and cost 310,000 jobs annually by 2050. By 2070, the economic cost will have almost doubled to 6%, or \$3.4 trillion in present value terms.²² The CSIRO estimates that the value of buildings in Australia exposed to climate-related events will exceed \$5 trillion by 2070.²³ And a 2019 report by KPMG described the higher risks and real impacts from climate change in terms of bricks-and-mortar assets and operations – namely potentially significant increases in insurance premiums that could have devastating consequences on families and businesses who are no longer able to practically insure their properties and businesses. It could also include additional liability risk through claims against company directors for failing to recognise, disclose and adequately mitigate or adapt to climate risks.²⁴

 **\$63b**

in fresh investment opportunities is estimated to be available in Australia in the next 5 years.

Lack of action on climate change carries significant financial risks for companies, governments, small business and households, but climate action carries opportunity. In Australia, the opportunities are significant. The Investor Group on Climate Change (IGCC) and consultancy Energetics estimate that Australia would create \$63 billion in fresh investment opportunities over the next five years if it strengthened climate targets and policies in line with reaching net zero emissions by 2050.

The Deloitte report estimates that delivering net zero emissions by 2050 could grow the Australian economy by 2.6% in 2070. The CSIRO research on climate adaptation shows that protecting buildings from coastal flooding can yield up to \$40 in net benefit for each dollar invested.

“ ...lack of action on climate change could reduce Australia's economic growth by 3.6% per year and cost 310,000 jobs annually by 2050.

There is an expectation, an obligation and, increasingly, a necessity for companies and businesses to act on climate, given the enormous risks and significant opportunities involved in inaction and action respectively. Within the business community, superannuation funds have a critical role to play, given they are an influential part of our economy making substantial and growing investments in domestic assets. Indeed, as the ClimateWorks Australia report states: "Within the next 20 years, super funds could dominate domestic shareholdings, with collective ownership of up to 60% of shares in the Australian Securities Exchange (ASX)."²⁵ Superannuation funds can lead the charge in helping us strengthen the Australian economy post-COVID-19 in a way that accelerates rather than slows our transition to a low-carbon economy.

The broader objective of this report, however, is not just to show how investment in climate solutions can help the economic recovery, but how it can also maximise the social and environmental benefits to the broader



Tony Wood

Energy program director at Grattan Institute

"Investment in infrastructure often aligns with the interests of superannuation funds. There are investments that will be impacted by a changing climate and those that align with the opportunities that arise from global and domestic responses to address climate change. For example, existing investment in natural gas transmission pipelines and distribution systems will be impacted by a shift away from natural gas combustion, even if that unfolds over several decades.

If the recent momentum towards governments underwriting investment in electricity generation or storage is sustained, the preferred risk/reward characteristics of such investments could shift in favour of ownership by infrastructure funds. Australia's transition to a low-emissions energy sector is beginning to accelerate. Disciplined analysis will identify opportunities whether from this source or from whatever combination of policies emerges in the near-term to meet our long-term emissions reduction targets."

community in improved outcomes for health and wellbeing, security and inclusion. And to highlight the way investment from governments, communities and super funds can help make this happen.

The rest of the report will focus on these three interconnected and reinforcing areas, highlighting research and case studies that illustrate the benefits of combining climate solutions with broader community wellbeing, security and inclusion outcomes and showing how – step by step, project by project, investment on investment – we can build a thriving community now and into the future.

“ There is an expectation, an obligation and, increasingly, a necessity for companies and businesses to act on climate, given the enormous risks and significant opportunities involved in inaction and action respectively.

Climate solutions

The damage to Australia's natural environment caused by rapid climate change is well-researched and well-documented.

The local and international science on climate change, and the scale of the task involved to ensure global emissions remain below 2°C warmer than preindustrial times make for sober reading and highlight the flow-on effects to our economy, our health and our mental wellbeing at a personal and community level. Nevertheless, there is much reason for optimism and a thorough review of the climate solutions available to us here in Australia shows the




extraordinary potential they have to improve the wellbeing and prosperity of Australian communities.

The breadth and potential for growth across the climate solutions category is itself cause for excitement; a full consideration of these solutions is beyond the scope of this report. Much of the focus will be on mature renewable energy solutions such as solar and wind farms.

What are climate solutions?

The term 'climate solutions' refers to anything – a product or service – that helps communities, businesses and governments manage, adapt and mitigate climate change-related problems and generally contribute to solving the broader issue of climate change. Obvious examples are mature and emerging technologies, but a range of other climate solutions contribute to this effort.





Mature technologies:

-  Solar Energy
-  Wind Power
-  Low-carbon transportation (hybrid and electric vehicles)

Emerging technologies:

-  Green Hydrogen
-  Green Steel

Other climate solutions:

-  Nature-based carbon storage
-  Low carbon commercial and community building projects
-  Services that improve energy efficiency
-  Services that improve the circular economy (recycling and localised supply chains)

Damage to the natural world caused by rapid climate change

The environmental damage caused by rapid climate change has been proven time and again by scientific institutions from around the world. There are numerous and interconnected impacts of climate change on the Australian environment. In fact, Australia has been described as one of the countries that are most vulnerable to climate change in the developed world.²⁶ The impacts of climate change in Australia include:

Biodiversity loss: Climate change is emerging as a serious threat to native species and ecosystems and presents an ongoing challenge to their conservation. Rising temperatures and sea levels, fire, deteriorating water quality and ocean chemistry are already impacting biodiversity and will exacerbate existing threats such as habitat loss, weeds, pest animals and drought.

Extreme weather events: Floods and extreme storms are already more prevalent and intense because of climate change, causing damage to property and infrastructure, and affecting the health and wellbeing of communities. For example, flooding in urban and rural NSW costs the state's economy about \$250 million each year, and causes loss of life and emotional distress.

Heatwaves: Heatwaves are becoming more intense and frequent because of climate change and are responsible for more deaths than any other natural hazard. There will

be more hot days and fewer cold nights in the future, which will impact agriculture, transport, emergency management, human health and the environment broadly.

Rising sea levels: Global average sea level rises are occurring because of the melting of land-based snow and ice reserves, and the thermal expansion of the ocean water mass. This increases the risk of inundation and erosion in coastal communities. In low-lying areas like the Torres Strait, rising sea levels are already causing damage to property and infrastructure, loss of land, and increasing social and emotional trauma. Researchers have estimated that more than 12,000 kilometres of Australia's sandy beaches will be threatened by coastal erosion by the end of the century, with greater losses predicted if greenhouse gas emissions remain high.

Soil deterioration: Climate change has the potential to have a severe but variable impact on soils, depending on the bioclimatic zone and the intrinsic vulnerability of the soil. Changes to land use and management as a result of climatic shifts will also potentially affect soils.

Water scarcity: Future temperature increases and rainfall changes are likely to place additional pressure on water resources in Australia. Some inland regions may live with permanent water shortages, requiring communities to truck in water, putting financial and social pressure on residents.



Tim Reed

Business Council of Australia (BCA)

"While the science of climate change has been clear for some time, until now the economics have been challenging – short-term versus long-term, global versus local, sunk costs versus new investments. Nowhere has this been truer than in Australia, where the size of our export earnings from coal and LNG has made the politics of climate change even more challenging.

In 2021, these trade-offs look very different. Global momentum to address climate change has crossed a tipping point – there is no going back – and now the greater risk for nations and for businesses is being left behind as new market opportunities emerge.

In Australia, we find ourselves in the very fortunate position where the opportunity from decarbonisation is immense. First because Australia has immense renewable resources – sun during the day and wind at night. In its recent work, Australian Energy

Market Operator (AEMO) has shown that renewable energy, firmed by pumped-hydro, is now cheaper than coal. Investment in transmission to get this energy to our cities along with roof-top solar means Australia is now adding renewable energy sources at five times the rate of any other nation. We can decarbonise and have cheap, reliable electricity.

Second, in the carbon-heavy world of the past, energy (coal, oil, LNG) was relatively expensive to extract but relatively cheap to store and transport. In the renewable world of the future, energy will be relatively cheap to extract but expensive to store and transport. This means energy intensive industries (aluminium, steel, silicon) will naturally move to places that have an abundant source of renewable energy – such as Australia. These industries have the potential to create many more jobs than the current energy extraction industries (coal and LNG) create today."

The energy opportunity

Investment in mature technologies such as renewable energy is critical to helping us meet growing global and local energy demands while keeping a lid on energy prices for businesses and households. The International Energy Agency estimates that, if the world continues on its present path, global demand will rise by 1.3% each year to 2040.²⁷ As the CSIRO reports, "meeting global energy demand in a clean and

cost-effective manner will be a major global challenge and Australia has an opportunity to leverage its abundant natural resources and extensive know-how to become a world-class clean energy and technology provider".²⁸

Renewable energy is also moving swiftly to become the cheapest form of energy; just taking into account raw costs, as opposed to the associated costs of environmental damage involved in fossil fuel extraction, manufacture

and use. This is evidenced in reports from the International Renewable Energy Agency which show that renewables will be a reliable and consistently cheaper source of electricity over fossil fuels within a few years. For example, onshore wind schemes cost an average of US\$0.06 per kilowatt hour, with some lower, and the cost of solar PV is US\$0.10 per kilowatt hour. The cost of fossil fuel-based electricity, by comparison, is US\$0.05-\$0.17. Modelling by the Energy Security Board has revealed that if the policy settings in Australia were aimed squarely at further and rapid growth in renewables this could reduce the annual average electricity bills for the community within a short period and continue ongoing, with the average household saving at least \$550 each year.²⁹

Comparing energy generation costs



US\$0.06 kWh

Onshore wind schemes



US\$0.10 kWh

Solar PV



**US\$0.05-
\$0.17**

Fossil fuel-based electricity

If policy settings in Australia were aimed squarely at renewables, the average household would save at least \$550 per year.

Globally, investment in renewable energy projects offers the chance for both job creation in a landscape where fossil fuel companies are reducing their workforce, as well as energy



...if the world continues on its present path, global demand [for energy] will rise by 1.3% each year to 2040.

affordability and security in an increasingly energy hungry world. The renewable energy opportunities for Australia in particular are significant and exciting, as Tony Wood, program director of energy at the Grattan Institute, describes:

*"Australia is unusually well placed to have a competitive advantage in renewable energy. This could facilitate Australia's emergence as a major exporter of low-emission energy. Even better would be the domestic manufacture of commodities based on that energy, such as green steel and green hydrogen."*³⁰

This is reinforced by Anna Skarbek and Amandine Denis-Ryan from ClimateWorks, who agree that decarbonising our economy is not an easy process, but one that comes with a unique set of opportunities. This is largely in part to Australia's positioning with "abundant mineral and energy resources, world-class renewable energy resources, project finance capability, engineering capability and existing trade relationships and proximity to Asian markets". They further add that:

*"Widespread, rapid deployment of mature technologies can achieve much of what is needed this decade and can accelerate immediately... Direct investment from business will accelerate deployment of both mature and emerging technologies... This is the transformational decade. Research shows that the years before 2030 offer a window for action that will not stay open."*³¹



Michele O'Neil

Australian Council of Trade Unions (ACTU)

"From New Year's Eve, when the town of Mallacoota took refuge from firestorms on the beach, to a global pandemic killing thousands and freezing economies, 2020 forced us to notice the fragility and fault lines of 21st century life.

These crises revealed the best of us. Australia's response so far to the pandemic has been remarkably successful; our public health response the envy of the world.

Now that vaccines have arrived, it's time to begin the economic recovery. It would be a huge mistake, however, to return to business as usual.

Rather, we need this to be the moment when we are honest with ourselves and admit that our society and economy is not working for all Australians and is built on increasingly shaky foundations.

Given this, the ACTU released our National Economic Reconstruction Plan, which, if adopted by the federal and state governments, would see us build back better from the crisis.

As the plan outlines, we need to invest in public and community services that are our first line of defence against shocks like COVID-19, bushfires and drought. We need public investment in public services, institutions and infrastructure – not cuts and austerity measures.

In the wake of the Great Depression, governments committed to building the Great Ocean Road. After World War 2, the nation embarked upon the Snowy Hydro Scheme. We need to take advantage of the historically low cost of borrowing money to invest in large national projects that create a lasting benefit to the nation, creating hundreds of thousands of new, secure low-carbon jobs.

As the surveys in this report show, Australians are ready and willing for our country to lead again on climate change. Key priorities for action could include investment in public transport projects, inter-city fast rail, electricity transmissions upgrades, and environmentally-friendly public and social housing. We share the enthusiasm of many others for the potential of zero emissions minerals and metals manufacturing in regional Australia to create thousands of sustainable jobs, but this won't happen without an investment plan and national leadership.

We also urgently need to ensure that workers in fossil fuel industries are supported through the energy transition. We will not leave the future of their jobs, families and regional communities to the whims of the market. Investors have a major role to play in this, which is why (in late 2020) the ACTU produced some guidance for investors on how to ensure they are supporting a just transition.

This report highlights the jobs potential of the clean energy sector. Over 27,000 Australians are already employed in our renewable energy industries and that number will grow over the next decade. However, the ACTU has recently also released research³² highlighting that many of these jobs have lacked the security, wages and conditions won by unions in the fossil fuel industries over generations. In this same report we've articulated a clear agenda for what good, clean energy jobs look like, that should be useful guidance for investors, the industry and policy makers to ensure that we are maximising the potential benefits of the energy transition.

Australia's energy transition and shift to net zero emissions is absolutely necessary to combat climate change, but we're optimistic that it can also deliver secure jobs with employment security.

That won't happen automatically, though, and needs well-planned and deliberate industry policy and investments. We look forward to working with investors, governments and emerging industries to build these new industries on sustainable and fair foundations."

There are projects already in train building on this competitive advantage, such as the Asian Renewable Energy Hub – 14,000 square kilometres in the East Pilbara region of Western Australia selected to accommodate 26,000 MW of wind turbines and solar photovoltaic panels. This will generate cheap, clean energy for the Pilbara; a potential catalyst for new economic activity, diversification and growth and – on top of the usual construction, operations and maintenance jobs for the 50-year lifespan of the project – it will also require supply chains for the manufacturing of the equipment, in turn creating skilled high-tech jobs. The project sits on the land of the Nyangumarta People, leading to opportunities in relation to new skills, jobs and revenue, and providing comprehensive and enduring community benefits for the First Nations owners. Finally, the capacity of the project means it is ideal for large-scale production of green hydrogen, which is of particular interest to our key export partners Japan and South Korea.

"We need to take advantage of the historically low cost of borrowing money to invest in large national projects that create a lasting benefit to the nation, creating hundreds of thousands of new, secure low-carbon jobs."

Case Study

Local council leads on renewables, saving ratepayers money and creating jobs in regional New South Wales

In July 2020, the City of Sydney signed an agreement with Flow Power to ensure all City of Sydney operations are powered by 100% renewable energy. That includes pools, sports fields, depots and buildings including the historic Sydney Town Hall. This represents the largest standalone renewables deal for an Australian council, with three-quarters of the power sourced coming from wind generation and the rest from solar.

The power for the deal is coming from projects in regional communities such as the Sapphire Wind Farm near Glen Innes in northern NSW, Bomen Solar Farm near Wagga Wagga in the south-west of the state, and a not-for-profit community-owned solar scheme near Nowra on the south-east NSW coast.

Many of these communities are already living with the impacts of climate change.

The City of Sydney has been certified carbon neutral since 2011 and declared a climate emergency in 2019. This new agreement with Flow Power means it is going to achieve its commitment to reduce emissions by 70% six years ahead of its original 2030 deadline.

While the commitment of \$60 million is substantial, each year City of Sydney ratepayers will be saving half a million dollars, showing that renewable energy can be more effective financially for the community while still addressing the issue of climate change.

The agreement will see the council cut emissions by around 20,000 tonnes per year – equivalent to the power consumption of 8,000 households. Projected savings amount to half a million dollars per year over the next decade.

“ The council will achieve its commitment to reduce emissions by 70% six years ahead of its original 2030 deadline. ”

20,000 tonnes

of emissions will be cut by the City of Sydney council.



\$500,000

Projected savings amount to half a million dollars per year over the next decade.



Securing the future

While the health, social and economic impacts of COVID-19 on Australians and the people who call Australia home were not as acute as in other countries, there is no doubt that many households and communities have been and are still being profoundly affected.

Research from the firm Newgate conducted in mid-2020 found that four in 10 Australians reported that the financial situation in their household had become worse as a result of COVID-19.³³ In terms of the social impact, ongoing research by the CT Group found that COVID-19 impacted our psychological and emotional lives significantly, with Australians reporting a negative impact on their sense of happiness, peace of mind, and feelings of safety and security.³⁴ Both reports explain why so many mental health organisations and studies found an increase in stress, anxiety and depression in the community over 2020.³⁵

Building back better after COVID-19 requires an approach that treats both the economic and the social aspects of recovery as equally important. By extension, investment in climate solutions needs to deliver both economic, and social and community benefits. As we've already addressed the economic benefits to investment in climate solutions, the final section of this report explores the social benefit of investment to communities whereby people enjoy secure work, affordable housing and a sense of connection to place and people.

Job creation and security

Separate from the important role climate solutions play in helping lower domestic emissions, the capacity for investment in renewables to create jobs is significant. The International Energy Agency and International Renewable Energy Agency estimate that global action in pursuit of the Paris Agreement target will create six million new jobs.

 **76,000**

jobs could be created in the next three years alone.

In Australia, numerous reports released in the year 2020 alone outline the job-generating capacity of large-scale renewable energy projects. For example, in July 2020, the Climate Council released a 'Clean Jobs Plan' with economic modelling by AlphaBeta Consulting that identified 76,000 jobs that, with the right policy measures, could be created in the next three years alone. These jobs would be needed for "the continued transition to grid-scale renewable energy as well as community-scale renewable energy systems, green hydrogen pilot projects, increased investment in future-proofed public and active transport networks, building

energy efficiency and rapid roll out of electric vehicle charging infrastructure".³⁶

Dr Robert Glasser, visiting fellow at the Australian Strategic Policy Institute, points out that investment in the renewable energy sector has an advantage over investment in the fossil fuel sector when it comes to job creation during an economic downturn. "Solar and wind farms can be constructed more rapidly than coal or natural gas facilities, freeing governments to meet the immediate need without having to lock in investments over the long term," he writes.³⁷

 **The cost to Australia of a global failure to deliver a new growth recovery [would mean] over 880,000 jobs are lost by 2070.**

Conversely, lack of action on climate change will cost jobs, according to the report from Deloitte, A New Choice – Australia's Climate for Growth: "The cost to Australia of a global failure to deliver a new growth recovery [would mean] over 880,000 jobs are lost by 2070." A new growth path would instead add over 250,000 jobs by 2070, according to Deloitte's modelling.³⁸

Jobs in the renewable sector are growing year upon year; COVID-19 hasn't arrested this growth. At the state level in Australia, given the policy settings and government commitment to building renewable infrastructure, jobs are being created as part of the approach to economic recovery.

For example, Victoria is reportedly on track to create more than 6,000 jobs through large-scale wind and solar under construction.³⁹

In Queensland, the state government's \$500 million Renewable Energy Fund is supporting

renewable projects and infrastructure; already 41 large-scale projects have commenced operations since 2015, representing around 6,500 jobs. In South Australia, we can see the capacity for renewable energy to create employment for people who have lost their jobs in declining industries, with the country's first storage system and manufacturing plant for lithium batteries employing workers made redundant by the car industry. Strong interest from business in investment in renewables and the right policy settings also opens up the opportunity for communities to co-invest in projects, securing them local affordable energy, jobs and financial benefits.

Where strategic investment will have the most impact



200K jobs

90GW Renewable energy and transmission



940K jobs

2.5m retrofits and new buildings



140K jobs

20,000 electric buses and new green transport



230K jobs

Clean manufacturing and mining



200K jobs

27mHA land regeneration



80K jobs

90% waste recycled

SOURCE: https://bze.org.au/research_release/million-jobs-plan/

Case Study

Renewables provide jobs for ex-car industry employees

In 2018, German energy giant Sonnen opened a home battery assembly site at the old Holden factory in Adelaide's north.

Within a year the site created 430 jobs, which included production roles for 14 former Holden employees. Sonnen moved its headquarters from Sydney to Adelaide to reflect its commitment to operating in the state.

Sonnen CEO Christoph Ostermann announced at the time of the site's opening that the company wants to deploy more than 50,000 battery systems over the next five years. "We'd like to create, in South Australia, one of the largest virtual power networks in the world to support grid infrastructure and supply customers in South Australia with clean and affordable grid power," he said. The cost of the core components of lithium ion batteries, used for battery storage, has fallen by nearly 90% in the past decade, from \$1,100/kWh in 2010 to a mere \$156/kWh in 2019.

Australia is well placed in terms of its lithium resources, but also its workforce for mining and manufacturing.

After the Black Summer bushfires in 2019-20, Sonnen and the state government offered a free home battery to each

household (around 188 families) that lost its home in the disaster. "Installing a battery as part of the rebuild will help make bushfire victims' new homes more sustainable, more resilient and allow them to access cheaper electricity," said South Australia Minister for Energy Dan van Holst Pellekaan, adding: "Kangaroo Island and parts of the Adelaide Hills can have outages due to storms, so rebuilding with batteries will make households more energy resilient by improving reliability and affordability."

“ We'd like to create, in South Australia, one of the largest virtual power networks in the world to support grid infrastructure and supply customers in South Australia with clean and affordable grid power. ”

430 jobs

were created in a year after Sonnen opened a home battery assembly site at the old Holden factory.

14

production roles at Sonnen went to former Holden employees.

Despite the opportunities climate solutions offer in terms of job creation, we cannot ignore that an increase in the pace of the transition to renewable energy and a low-carbon economy will entail more job losses in the fossil fuel sector. The impact of that in regional communities which have traditionally relied on those jobs should not be diminished. Economist John Quiggin makes the point that, given the global demise of coal-fired electricity generation and the jobs associated with it, policy should be directed at supporting fossil fuel workers into new employment and generating new employment through renewable energy.

"The renewable energy sector currently provides a little under 20,000 jobs, largely in small-scale solar installations. A policy shift to encourage rapid development of utility-scale solar in regional areas could promote a substantial increase in employment – more than enough to offset the phasing out of thermal coal-fired electricity generation in Australia – and to replace many of the jobs now provided by exports of thermal coal. This does not imply that all workers in thermal coal should be redirected to renewables. Rather, it shows that an economy based on renewables would generate at least as many jobs as one based on coal." ⁴⁰

Some unions are already taking on this issue in regions traditionally associated with fossil fuels. For example, the Hunter Jobs Alliance was launched at the end of 2020 and is an alliance between environmental advocacy groups and 13 local and state-wide unions including the Australian Manufacturing Workers' Union (AMWU) and the Electrical Trades Union (ETU). The alliance aims to campaign for a public process to give workers in the region a say in the planning for and adjustment to changes in the thermal coal market, and is calling for large-scale public investment in new industry. They point to opportunities already present in the region to create jobs and build confidence in the region's future, such as the transformation of the Tomago aluminium smelter to renewable energy.⁴¹

...policy should be directed at supporting fossil fuel workers into new employment...



Safe and secure housing

Climate change-related extreme weather events and heat are affecting, and will continue to affect, the houses and buildings where we live, earn, learn, shop and gather. If dwellings aren't equipped to keep people cool during heatwaves or if low-income workers or people on fixed incomes worry about covering energy bills to cool their homes, significant economic and emotional stress is the inevitable outcome.

The same applies if a community doesn't have publically accessible, safe, green, outdoor spaces to exercise and socialise in during heatwaves. Ongoing, affordable housing will need to be sustainable and climate-resilient.

 **1981-2015**

From June 1981 to June 2015 the percentage of our income going towards housing has almost doubled.

A report by the Melbourne Sustainable Society Institute argues that the building sector, which contributes almost a quarter of our emissions, could play a pivotal role in decarbonising and ensuring all future construction is both energy efficient and resilient to climate change effects. 'Net-zero buildings' should increasingly be the industry goal, namely:

"... green and healthy buildings which use energy ultra-efficiently and are supplied by renewables, where money isn't wasted on energy bills, where productive workplaces are insulated from extreme temperatures, and healthy schools are free from dirty air." ⁴²

Poor energy performance in our homes puts economic pressure on household budgets – particularly in low-income and public housing – and contributes to higher emissions. Conversely, improving energy performance in homes reduces energy bills, potentially freeing up income to

be spent in more productive ways. Government initiatives to improve the energy performance of homes and buildings could also create much-needed jobs in construction and economic stimulus as part of the COVID-19 recovery.⁴³

...improving energy performance in homes reduces energy bills...

A further important element of affordable and secure housing that also generates environmental benefits is improving housing affordability so people can live close to where they work and within easy distance from health care, schools and transport. This will not only improve quality of life, it will also drive productivity growth and overall wellbeing. Investment, for example, in essential worker affordable housing initiatives would greatly assist in this area and the increasing interest in investment in affordable housing by the superannuation sector is a welcome development in this regard.

The role of renewable energy in creating more efficient and healthier homes is even more welcome when we consider the escalating costs of health care, housing and energy in Australia. Over the decade between 2009 and 2019, electricity costs increased 100.9%, medical and hospital services at 78.8% and gas and other household fuels at 75.6%.⁴⁴ In terms of housing affordability, there has been a broad decline since the early 1980s. From June 1981 to June 2015 the percentage of our income going towards housing has almost doubled.⁴⁵ COVID-19 dramatically increased the number of people – particularly young people and those in insecure work – in housing stress, unable to cover their rent or mortgage payments.⁴⁶

Protecting how we live and spend our free time

In addition to impacting the places we live and work and the way we work and live, climate change threatens to alter the way we spend our precious free time with friends and family – and the industries that support our holiday and tourism activities.

The Deloitte report, A New Choice – Australia's Climate for Growth, describes the impact of climate change on our local tourism industry, already suffering due to the dramatic changes wrought by COVID-19. It states:

*"The weather, and the climate, is a key consideration and driver of tourism around the world. But no more so than Australia. Where and how people can holiday using natural assets and attractions will change – making attracting domestic and international tourists harder. Tourism is a pillar of many economies and without it many regional economies would struggle."*⁴⁷

Climate change also has the capacity to impact our extracurricular activities, family time and much needed down-time.



Tom Swann and Mark Ogge, in their report for The Australia Institute, write that:

*"Increasing extreme heat and heatwaves make many of the activities we take for granted less enjoyable and potentially dangerous. Last year heatwaves disrupted prominent sporting events... However, it is not only elite sport that will be disrupted, but the myriad of sporting events and outdoor activities that are an essential part of children's physical education and community life. Socialising outdoors and enjoying the natural environment are also important for the wellbeing of individuals and the community. Long, hotter summers and increasing extreme heat and heatwaves will diminish these activities and in some cases make them dangerous."*⁴⁸

Without housing and jobs that withstand the economic, environmental, physical, mental and social pressures wrought by climate change; without the opportunities and environment to spend time outdoors playing with friends and family, it becomes difficult to imagine how we create a community that is more connected, cohesive and caring than the one we have today. It is easy to imagine a society more fractured, unequal, tense and unhappy; one that is less secure and less inclusive.

As every section of this report has sought to demonstrate, while there are substantial risks and threats posed by unaddressed climate change, there are even greater opportunities and benefits flowing from well-considered and targeted climate solutions.



Emma Bacon

CEO Sweltering Cities

"The thesis of this report – that there is a clear nexus between climate change, health and wellbeing, and security and inclusion – is powerful.

The idea that superannuation companies could be using their investments in infrastructure development to drive sustainable projects in cities – from solar gardens to housing, to transport – is equally important. In the same way that building renewable energy projects can create a significant amount of jobs, large-scale energy efficiency retrofitting projects, public transport, and sustainable housing projects create urban jobs that contribute to reducing fossil fuel emissions and increasing the wellbeing of people.

Community awareness of rising temperatures in cities will see demand for sustainable and resilient developments increase, along with the value of investment in building the sustainable cities of the future."

🌐 Case Study

Cobargo builds back stronger and more resilient after the fires

The Bega Valley town of Cobargo in New South Wales was devastated by the Black Summer bushfires.

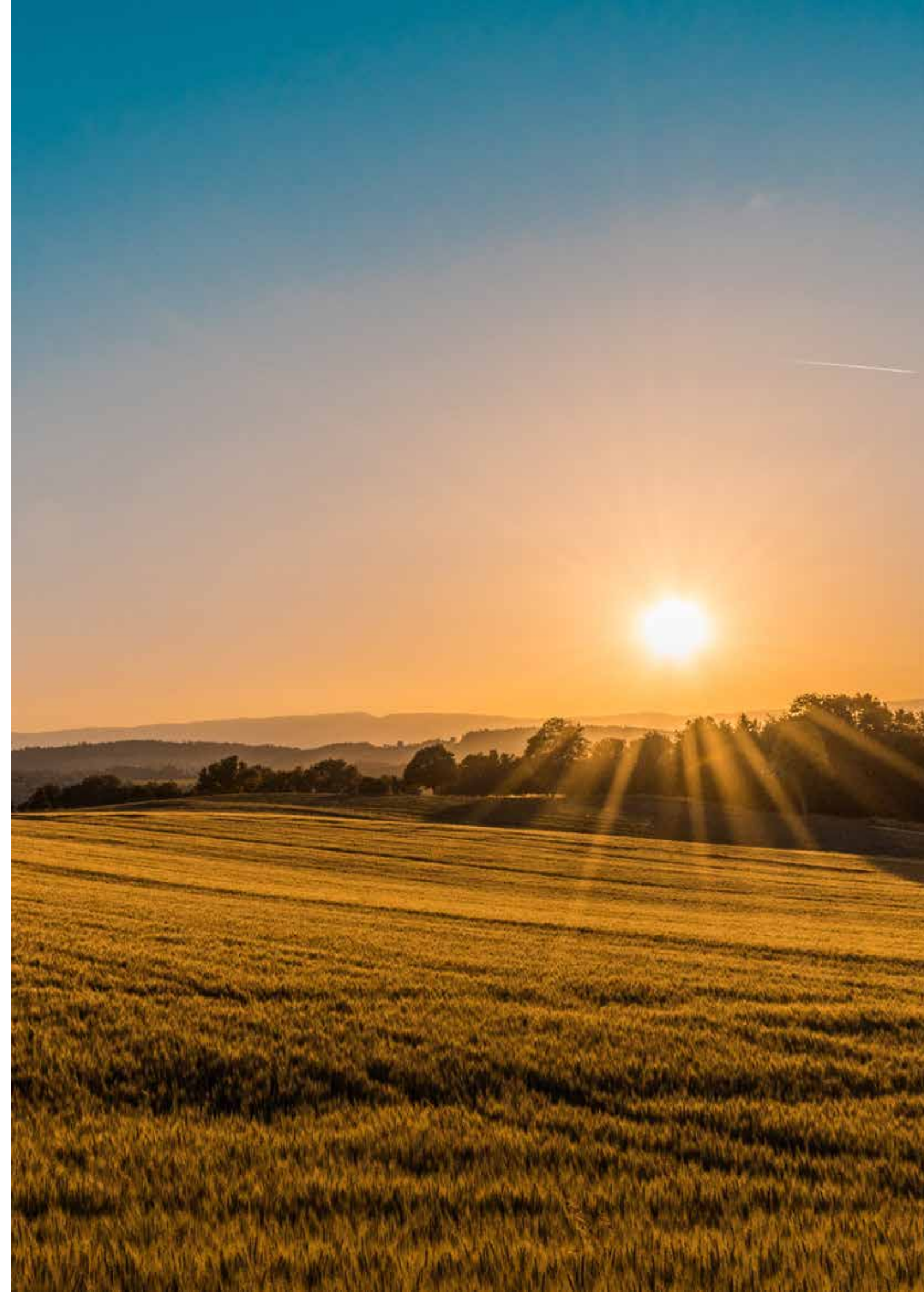
In the aftermath, the Cobargo Community Bushfire Recovery Fund was established as an independent, not-for-profit incorporated association run entirely by volunteers from Cobargo and the surrounding district. It raises and distributes funds for projects that help build a vision for recovery that ensures Cobargo and the surrounding district not only survives this disaster but emerges as a stronger, more connected community.

To date, the fund has facilitated community consultations about the recovery, engaged the CSIRO to assist in developing a Cobargo Recovery and Resilience Strategy, and initiated concept designs for a proposed

Cobargo Resilience Centre. It has also engaged an expert team to refine proposals and assist in preparing an application to the state government for development of a community micro-grid. It has also provided free physical and other therapies to community members to address stress and emerging trauma responses around the first anniversary of the bushfires.

Other major infrastructure projects are the redevelopment of the Cobargo CBD precinct that was destroyed in the fires; the Cobargo Bushfire Resilience Centre; the Cobargo Showground community hall and disaster refuge; and a community-driven holistic landscape plan to transform Cobargo into a vibrant place with inspiring green spaces. Linking all these projects is the proposed community micro-grid.

The Cobargo Community Bushfire Recovery Fund raises and distributes funds for projects that support Cobargo recovery.



Offsetting risks in physical health and mental wellbeing

Climate change may be the greatest threat to the economics of health care, given the significant costs of extreme weather to our health care systems, the implications of the growing cost of health insurance, as well as ramifications around workforce productivity for employers across sectors.

Given these numerous and serious impacts of climate change on health and wellbeing, it's no wonder health care professionals here and overseas have argued for the need to see climate change as a health crisis. In their 2020 report for think tank the Grattan Institute, authors Stephen Duckett, Will Mackey and Anika Stobart argue that "for the health sector, responding to climate change is not an optional extra, it is core business".⁴⁹

Indeed, the World Health Organisation has declared climate change a health emergency, and the 'greatest threat to global health in the 21st century'. And, in 2019, the Australian Medical Association (AMA) joined other health organisations around the world – including the American Medical Association, the British Medical Association and Doctors for the Environment Australia – in recognising climate change as a health emergency.

The federal motion stated that:

- The scientific reality is that climate change affects health and wellbeing by increasing the situations in which infectious diseases can be transmitted and through more extreme weather events, particularly heatwaves
- Climate change will cause higher mortality and morbidity from heat stress
- Climate change will cause injury & mortality from increasingly severe weather events
- Climate change will cause increases in the transmission of vector-borne diseases
- Climate change will cause food insecurity resulting from declines in agricultural outputs
- Climate change will cause a higher incidence of mental ill-health
- These effects are already being observed internationally and in Australia. There is no doubt that climate change is a health emergency

In making this declaration, the AMA joined unions representing health care workers such as the Australian Nursing and Midwifery Federation in their concern about climate change and their calls to have it recognised as part of the National Preventive Health Strategy.⁵⁰

This idea that economic prosperity can be undermined by a health crisis was exacerbated by the global pandemic. It became abundantly clear that, in our highly interconnected world of global trade and human movement, a virus outbreak in one country can become an international economic and humanitarian disaster within a few weeks or months.

“...[climate change is the] greatest threat to global health in the 21st century.

This recognition of the fundamental importance of human health is reflected in public opinion surveys since the pandemic hit, whereby 'health' toppled 'cost of living' from the top of the priority list of Australians and those who call Australia home. The monthly Ipsos Issues Monitor, particularly during the first half of 2020, showed that health care remained either the number one or number two issue for Australians, often outranking the economy, jobs and cost of living.⁵¹ An Essential poll in early January 2021 also found that 'providing the necessary health care resources to protect the country from COVID-19' was seen as the number one priority for the federal government for the coming year.⁵² A poll in August 2020 found managing COVID-19 was the most important factor driving people's voting decisions. And, in the Aware Super member research conducted in early 2021, 'health' significantly outranked 'cost of living' and 'the economy' across all member groups, with the focus on health increasing with age.

This is because we live in a society, not just an economy. Financial security and health and wellbeing are interconnected, but the former doesn't guarantee the latter. Indeed, prosperous societies like Australia still face significant challenges with certain physical diseases and conditions associated with poor lifestyle, and complex and increasingly urgent issues around mental health.



Health care remained either the number one or number two issue for Australians.

In its 2020 Global Risks Report, the World Economic Forum described these new pressures on health systems:

*"Health systems around the world are at risk of becoming unfit for purpose. New vulnerabilities resulting from changing societal, environmental, demographic and technological patterns threaten to undo the dramatic gains in wellness and prosperity that health systems have supported over the last century. Non-communicable diseases – such as cardiovascular diseases and mental illness – have replaced infectious diseases as the leading cause of death, while increases in longevity and the economic and societal costs of managing chronic diseases have put health care systems in many countries under stress...As existing health risks resurge and new ones emerge, humanity's past successes in overcoming health challenges are no guarantee of future results."*⁵³



Dr. Kathryn Bowen

The Fenner School of Environment and Society

"This report rightly points out that the pandemic offers us an opportunity to reflect on where we want to go as a society and highlights the inherent problems with measuring success and prosperity in purely economic terms.

One of the fundamental fault lines in our society is the way we measure growth and development – the belief that a country's Gross Domestic Product (GDP) can in any way be read as an ultimate measure of individual wellbeing. Holding this measure up as the gold standard of 'progress' is fundamentally flawed, as it doesn't take into account our natural environment or social factors, such as how our societies actually function and whether we are inclusive and supportive of everyone.

Thankfully we're now seeing some resistance to that GDP dogma; even the OECD is pushing for a broader inclusion of different ways to measure growth, and wealth, and how we understand the different ways that communities and regions can thrive.

Specifically, when working in climate change, the vast majority of health impacts

will arise via pathways from sectors outside of health. From agriculture and water arise issues of food and water security – the two biggest factors that will drive the impacts on health from climate change, particularly in resource-poor settings. And climate change is just one element in terms of global environmental changes. We also need to look at this in an integrated way, which is known as planetary health – the health of human civilisation and the state of natural systems we rely on – which includes understanding issues of biodiversity, of land system change, and how these interact with human health.

We are now faced with these massive systemic challenges to the way we live, and we will have to be able to work across disciplines and silos to understand the trade-offs and synergies across different sectors.

For me, the big take away of 2020 is that human health is dependent on the natural environment that gives us the air, water and land we need to survive – a fundamental acknowledgement of our place in the world."

Delving into the large and growing area of research on the impact of climate change on public health, the economic and social costs of inaction become all too clear. For example, there is mounting medical research to show the

impact of air pollution from the burning of fossil fuels alone is responsible for millions of deaths globally; medical researchers have found that one in five of all the deaths recorded in 2018 can be linked to air pollution.⁵⁴

The focus of this report, however, is on the challenges and opportunities here in Australia. The public health effects of climate change in Australia were recently detailed in a special report of the Medical Journal of Australia (MJA) and The Lancet, compiled and published in response to the Black Summer bushfires of 2019-20.⁵⁵ The report describes the Australian public as "uniquely at risk". It also details the health impacts from extreme fires, given the extent of the devastation and the thick smoke that invaded Australia's major cities, resulting in levels of air pollution almost 10 times the hazardous rating. These impacts included:

- 1305 asthma emergency department presentations
- 3151 hospital admissions for cardiovascular and respiratory conditions
- 450 deaths due to direct injury and air pollution exposure
- Acute and lingering mental health impacts of experiencing trauma of evacuation and dislocation; loss of family and friends, property, livelihoods, sense of security and safety
- Physical and mental exhaustion, emotional trauma and chronic exposure to smoke for frontline workers
- Increased heat stress and stroke, particularly in vulnerable populations, creating excess ambulance demand and hospital admissions
- Psychological stress
- Interrupted sleep patterns
- Reduction in capacity and willingness to exercise, associated with increased accident risk, sedentary lifestyle-induced diabetes and cardiovascular disease

There is also an emerging area of medical research focusing on the long-term health effects of extreme fire smoke, recovery following smoke exposure and health consequences of exposure in children – all of which may equate to a major ongoing threat to the mental and physical health of communities in bushfire vulnerable areas.⁵⁶

The MJA-Lancet report and other research have outlined other ways in which climate change impacts public health and health care systems, namely in relation to high temperatures and heatwaves causing:

Heatwaves are also responsible for more deaths than all other natural disasters combined.⁵⁷ There is also extensive research on the health and productivity impacts on workers in extreme heat. Extreme heat increases the risks of injury to workers across industries like construction and agriculture, and slows the pace of work in others to comply with health and safety regulations. As Dr Sudhvir Singh, a medical doctor and researcher working for the WHO and specialising in the area of public health and climate change, writes: "Without intervention, climate change in [countries like] Australia can be expected to further exacerbate heat-related burden of disease and loss of productivity in many jobs."⁵⁸ In addition to heat and smoke, climate change impacts food security and the spread of infectious and non-infectious diseases.⁵⁹

“ The report describes the Australian public as "uniquely at risk". It also details the health impacts from extreme fires, given the extent of the devastation... ”

 **Case Study**

Greater Western Sydney takes action on rising urban heat

In 2018, the Western Sydney Regional Organisation of Councils (WSROC) developed the Turn Down the Heat Strategy and Action Plan to deal with the issue of rising urban heat in the Greater Western Sydney area, with a series of actions planned up to 2023.

Down the Heat Strategy and Action Plan, if no action is taken, the "death rate from heat related causes is likely to increase with population growth, ageing, and climate change [and] the social and economic costs resulting from heatwaves on families, communities and industries will continue to increase".⁶⁰ While the exact economic cost of heatwaves is unknown and difficult to quantify, there is an observable reduction in labour and economic productivity during periods of extreme heat.

The Turn Down the Heat Strategy and Action plan has developed a number of actions that focus on mitigation and adaptation to the issue of urban heat. These actions include increasing the urban tree canopy, designing with water, utilising cooler building materials, adapting infrastructure, better preparing services and health providers, adjusting messaging in the community, and ensuring that research is accessible to key decision makers.

Since the plan was developed, the Cool Suburbs Initiative – which builds on the Turn Down the Heat Strategy – acquired funding in 2019. This initiative aims to develop a toolkit of resources for governments, developers and community to "identify and implement best practice in urban cooling," WSROC notes, and will also develop a 'cool score' for new and existing suburbs in the Greater Western Sydney area.⁶¹

Extreme heat has adverse effects on the health of the community, especially among the elderly. Heatwaves contribute to the deaths of over 1,000 deaths per year among those aged over 65, with the very old at even greater risk. Along with the elderly, there are significant risks for those with existing medical conditions, the very young, those who work outdoors and those whose physical and mental wellbeing is compromised.

In addition, extreme heat exacerbates pollution and air quality issues such as vehicle emissions, and allergens such as dust and pollen. As argued in the Turn

“...the death rate from heat related causes is likely to increase with population growth, ageing, and climate change.”

1,000
deaths per year are caused by heatwaves among those aged over 65.



There are also significant risks for those with existing medical conditions, the very young, those who work outdoors and those whose physical and mental wellbeing is compromised.

Researchers and professional networks within the mental health sector have long argued, too, that mental illness, anxiety and stress in the community will be exacerbated by climate change due to more frequent and severe weather events, combined with the social and economic impacts of climate change.⁶² And, while climate-related mental health issues can manifest in all kinds of communities, research shows that regional, rural and remote communities are often hardest hit (by the trauma and loss caused by extreme weather events and drought, for example) but often under-resourced for specialist medical care, resources and support.⁶³

As recovery efforts after the 2015 fires in regional South Australia and the Black Summer bushfires that affected the NSW regional area around Cobargo show, recovery efforts require sustained support and funding for mental health and community resilience, especially in communities where services are already difficult to access.

Increasingly, experts in the area of climate and health have outlined the ways in which health care professionals and organisations can contribute to climate solutions as well as ways in which the health care system can

be decarbonised given it is "an important contributor to emissions, comprising nearly half of governments' direct emissions on account of public hospital energy use".⁶⁴ Reducing waste, building sustainable and energy-efficient health care infrastructure and employing procurement practices that have environmental and sustainable goals at their core are some of the ways in which the health care sector can contribute to the transition to a low-carbon economy. Investment in a workforce well-trained and supported to help manage the impacts of climate change ongoing would also be a significant contribution to the health and wellbeing of our community as a whole.

Frontline health care workers have and will continue to bear witness to the current and concrete impacts of climate change on their fellow Australians. This has compelled some health care unions to consider how they can contribute to the decarbonisation of their own industry. For example, in 2020, Ambulance Victoria made a commitment to be 100% powered by renewable energy by 2025, making it one of the first health services in the country to have an Action Plan genuinely aimed at limiting their emissions. Its commitment would mean a 27% reduction in overall emissions – a significant achievement for a service that covers the entire state 24 hours a day, every day of the year. Associate Professor Tony Walker, chief executive officer of Ambulance Victoria, commented at the time of the announcement that "delivering the best care to the communities we serve means [acting] on the issues that impact them, including climate change".



Dr. Grant Blashki MD
Beyond Blue

"As the business, insurance and superannuation industries become increasingly aware of the economic impacts of climate change and climate policy responses, as the report highlights, an often overlooked area is the impact of climate change on the mental health of communities.

The direct impacts of populations being in harm's way from the extreme weather events outlined in the report – such as floods, fires and droughts – can affect stress levels and ultimately lead to depression, anxiety and post-traumatic stress. In the longer term, the indirect impacts of loss of employment, loss of livelihoods can also affect the mental health of communities, such as increasing rates of domestic violence, substance abuse and diminished social capital.

Generally, as the broader community's awareness of climate change grows and the dire predictions become understood as emphasised in this review, significant existential worries and anxiety can occur even among those who are not directly affected by climate change in the short term.

Anxiety about climate change is increasingly recognised as a phenomenon, especially among young people, and is often amplified by social media, and sometimes catalysed by high-profile activism such as was led by Greta Thunberg and the climate strikes."

 **100%**

Ambulance Victoria's commitment to be powered by renewable energy by 2025.



Case Study

Skills in mindfulness and resilience help communities devastated by bushfires

In 2015, the Pinery bushfire caused catastrophic damages to a cluster of rural communities living in South Australia's lower mid-north. The fire burned 86,000 hectares of land, destroyed 97 homes, livestock and crops, and killed two people. The Insurance Council of Australia declared the event catastrophic, with insurance claims of over \$172 million. Experts say the fire was caused by a perfect storm of changed farming practices and various climate change drivers, including higher than normal temperatures and winds.

As part of the Pinery fire recovery effort, a pilot project was conducted by the South Australia Health and Medical Research Institute Wellbeing and Resilience Centre and the South Australia Department of Human Services to increase personal resilience among those communities impacted by the event.

The pilot program offered members of the community a suite of practical skills to build their personal resilience incorporating

techniques associated with mindfulness and cognitive behavioural therapy. Skills included adaptability, positive coping, self-regulation and social support to improve wellbeing and resilience. The training was delivered using a train-the-trainer model where a selected group of community members deliver the training to residents living in the fire-affected communities. The aim was to try to embed aspects of wellbeing and resilience into the community's broader ethos and remove reliance on external supports – an important aspect given the remote nature of these communities.

An evaluation of the pilot program showed encouraging responses, with participants in the pilot program showing significantly higher levels of resilience and increases in wellbeing compared to before the intervention. All participants either strongly agreed or agreed that people, as well as the broader community, would benefit from the resilience skills taught in the programme.

Insurance claims in the wake of the Pinery bushfire totalled over \$172 million.

size, the positive reception and outcomes show both the unaddressed and high level of need for these programs in communities impacted by extreme weather events. Experts in the growing area of mental health and climate change argue that future work should focus on "future-proofing communities that are prone to natural disasters by upskilling local trainers and involving communities and local partner organisations to consider the wellbeing and resilience of individuals and communities before critical events occur".⁶⁵

The goal here is to build psychological health at both the personal and the community level in areas where climate-related extreme weather will continue to create challenges and cause damage; a need that will continue regardless of our trajectory with climate action.

"...future work should focus on "future-proofing communities that are prone to natural disasters..."

Conclusion

It's been heartening to see that, in the midst of a pandemic and global financial downturn, governments, businesses, organisations and communities of all kinds have continued to act and invest in solutions to the greatest risk to our future health and prosperity – climate change.

If the myriad of reports, studies and economic modelling is to be believed, recovery from COVID-19 and action on climate change are, in fact, compatible rather than antagonistic. While both the broader community and Aware Super members want a return on investment and economic safety and security, they increasingly see action on climate and broader social and environmental goals as important and compatible with those financial goals. As the Deloitte report, *A New Choice – Australia's Climate for Growth*, puts it:

"There is no need for green, just good. As Australia cushions the economy to the effects of the pandemic and recovers, there is a need to think of resilient investments for recovery: this is what most risk managers would simply call 'good' investments. It is not about 'green' investments or policy, it is about what is good – good policy, good economics and good investments that mitigate risk and create returns to both business, industry, society and the economy." ⁶⁶

This report has sought to show that, through academic and social research, case studies and opinions from experts across sectors, investment in climate solutions – particularly those that address the health, wellbeing and social impacts of climate and build a sense of security and inclusion in the broader community – will not

only help Australia recover from the impact of COVID but help us prepare for even greater challenges ahead. Australians deserve to live, work and retire with a sense of safety and security, and hope for the future. With the right investments and determination from government, business and the community, we can make it happen.

What can you do?

By choosing Aware Super, Aware Super members are already supporting positive action on climate change.

As consumers we can:

- Explore green energy options in our homes
- Explore green finance and superannuation products
- Offset flights and vehicle usage with Australian-based organisations that are investing in carbon-offsetting
- Reduce waste and overconsumption

As members of the community we can:

- Contact our local council, state and federal member and ask them what they are doing to support and invest in climate solutions
- Support organisations in their advocacy around climate change

As employees we can:

- Ask our employer to conduct an environmental audit of operations with a view to making a commitment to becoming carbon neutral or to move to 100% renewable energy by 2025, like so many other companies around the world
- Work through peer networks and peak bodies to reflect on how our profession can contribute to climate solutions and climate action
- Talk to colleagues at work about our concerns about climate change and the importance of action

As communities we can:

- Explore opportunities for community solar and wind power through our local government
- Ask our local health care organisations what they are doing to decarbonise and focus more on community-centred care

As leaders we can:

- Speak out on the importance and benefits of acting on climate change and the risks of inaction, in both our personal and professional networks
- Educate ourselves more on how climate solutions can deliver broader benefits to the community than cheaper energy and lower emissions
- Educate and persuade those around us about the benefits of climate action and the risks of inaction through the organisations we belong to
- Commit to clear carbon emission reduction targets for 2030 and 2050 with clear transition plans and incentives in place.



The AICD Director Sentiment Index

Members of the Australian Institute of Company Directors (AICD) are invited to take part in the annual Director Sentiment Index (DSI).

The last survey was conducted between 15-29 September 2020. A total of 1,777 members responded. Results were weighted by gender to reflect the profile of the AICD member base.

Respondents to the DSI have been consistent in ranking climate change as a top policy priority for the Australian Government in both the short term and the long term. Moreover, climate change's relative importance as a policy priority has been trending higher over the lifetime of the survey.

Australia: Climate change as a DSI policy priority

Percent of respondents selecting climate change as a top five policy priority



Source: AICD Director Sentiment Index (DSI), past issues. Q. Please nominate the top five issues of importance, in your opinion, that the federal government should address in the short term (ie in the next three years) / in the long term (ie in the next 10 – 20 years) where 1 is the most important and five is the least important.

The DSI also tells us that around one in five members sees climate change as one of the top three economic challenges facing Australian business (likely nudged down a little by COVID-19 this year).

Australia: Climate change as a main economic challenge currently facing business

Percent of respondents selecting climate change as top three challenge currently facing Australian business

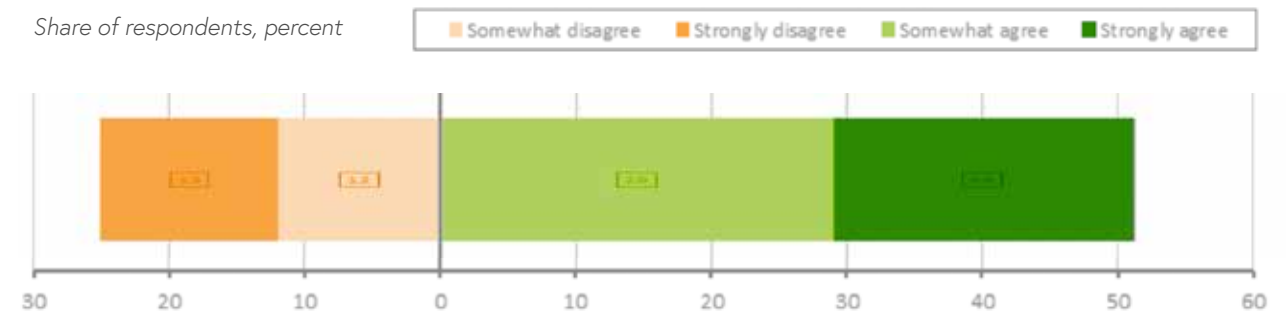


Source: AICD Director Sentiment Index (DSI), past issues. Q. In your opinion, what are the three economic challenges currently facing Australian business? (Select three).

In the most recent DSI, a majority of respondents (51%) agreed with the proposition that climate change was a material risk to their organisation.

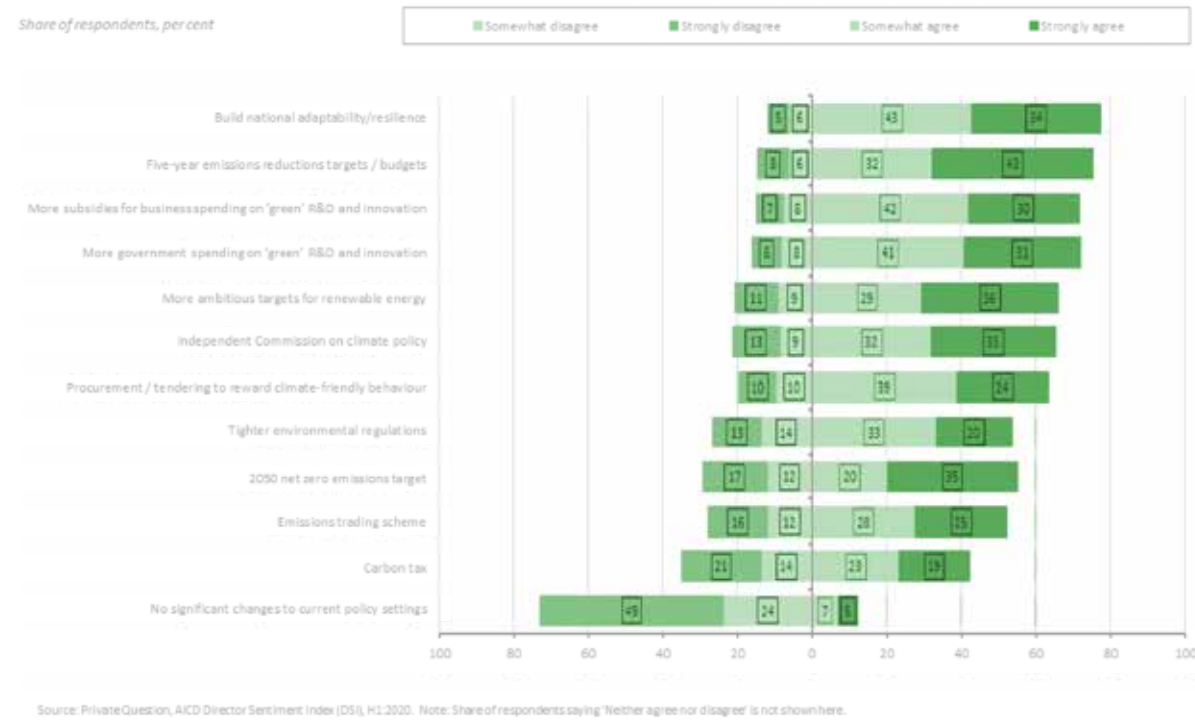
Australia: DSI – Climate change is a material risk for my organisation

Share of respondents, percent



Source: AICD Director Sentiment Index (DSI), H2:2020. Note: Share of respondents saying 'Neither agree nor disagree' is not shown here. Q. To what extent do you agree or disagree that 'Climate change is a material risk for my organisation'?

Australia: DSI support for selected policies



In summary, the Index shows that members think climate change should be a government policy priority, that a majority of members view it as posing a material risk for their organisation, and that there is a clear appetite for a change in policy direction.

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