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Submission Number: NND.001.01360

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What is your submission based on? I am making this submission based on my professional knowledge, qualifications or experience or on behalf of a group or organisation

What is your area of professional expertise? Insurance

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation? Insurance Australia Group (IAG)

Your Submission

In your experience, what areas of the bushfire emergency response worked well?

Detailed in our attached submission.

In your experience, what areas of the bushfire emergency response didn't work well?

Detailed in our attached submission.

In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

Detailed in our attached submission.

Is there anything else you would like to tell the Royal Commission?

Detailed in our attached submission.

Do you agree to your submission being published? Yes I agree to my submission being published in my name

Supporting material provided:

IAG submission PeterHarmer.pdf
Strengthening resilience FINAL 30APR.pdf

28 April 2020

Royal Commission into National Natural Disaster Arrangements
Locked Bag 2000
MANUKA ACT 2603
rcnda.enquiries@royalcommission.gov.au

Submitted online via https://naturaldisaster.royalcommission.gov.au/submissions

Dear Commissioners,

Insurance Australia Group (**IAG)** welcomes the opportunity to make a submission to the Royal Commission into National Natural Disaster Arrangements.

The 2019 – 2020 'Black Summer' bushfire season was devastating for all Australians. The loss of life, properties and impact on communities across the country is heartbreaking. At IAG our focus is on supporting our customers rebuild their homes, lives and communities under these incredibly difficult circumstances. It is also critical that after such events we take time to learn from the disaster and put in place key measures to help protect people and boost resilience of communities into the future.

IAG is the parent company of a general insurance group with controlled operations in Australia and New Zealand. Our businesses underwrite almost $12 billion of premium per annum, selling insurance under many leading brands, including: NRMA Insurance, CGU, SGIO, SGIC and WFI (in Australia); and NZI, State, AMI and Lumley Insurance (in New Zealand). With more than 8.5 million customers and information on the majority of domestic residences in our markets, we use our leadership position to understand and provide world-leading customer experiences, making communities safer and more resilient for the future.

Our purpose is to make your world a safer place and we recognise that our role extends beyond transferring risk and paying claims. Our purpose drives our business to work collaboratively with the community to understand, reduce and avoid risk, and to build resilience and preparedness. This results in better outcomes for the community and means fewer claims and lower costs for our business.

We work collaboratively with government, industry bodies and Australian and international organisations on a range of topics and issues that relate to our customers, our people and the community including safety on the road.

We commend the Government's National Natural Disaster Risk Reduction Framework released in 2018. It is an exemplary whole of society guide for proactive efforts to reduce disaster risk and minimise loss and suffering caused by disasters. IAG has supported the development and early implementation of this framework and will continue to work constructively with Government and other organisations to finalise and implement the National Action Plan.

Insurance and Natural Disasters

Insurance protects Australians from a range of financial risks and disasters. The price of insurance premiums also provides an important signal of the risk individuals or communities are exposed to.

In the absence of insurance, governments would have a fiscal responsibility to rebuild and restore communities should misfortune or disaster occur. The private insurance market remains the most effective and economically sustainable solution to ensuring the maximum number of Australians choose to cover themselves for risk. It is therefore in the best interest of the community to maintain an equitable and affordable private insurance market.

In order to ensure communities remain protected by affordable insurance, we need all levels of government to take the lead and shift their focus from disaster recovery to mitigation. This cannot be a simple transfer of funds, but a coordinated strategy incorporating mitigation, adaptation, data, infrastructure and community resilience.

We also need governments to work with business and the not-for-profit sector to improve community engagement; enhance resilience in the built and natural environment; ensure better disaster risk awareness and mitigation; and improve capabilities for disaster resilience. IAG's submission to the ACCC Northern Australia Insurance Inquiry[1] has further detail on what a nationally coordinated well resourced disaster resilience program might entail.

Climate Change

Climate change is already well underway and is considered by many to be the greatest risk currently facing humanity. Our communities in Australia are exposed to multiple hazards now and this will worsen with a warmer climate[2].

To reduce the impacts of climate change, governments need to ensure we have clear, considered and coordinated policies in place to reduce Australia's carbon emissions in line with our Paris Agreement targets. Additionally, governments need to ensure a changing climate is accounted for when creating a strategy to mitigate, adapt and improve community resilience to natural perils.

Royal Commission into Natural Disaster Arrangements

IAG has commissioned the attached Paper "*Strengthening Resilience: Managing natural disasters"* from the Menzies Research Centre to be part of our submission to this Royal Commission. We commissioned this expert Paper to synthesise the existing information on how Australia can prevent and respond to bushfires and other natural perils. This Paper summarises what has been learnt and what can be changed in the future. IAG supports the recommendations of this Paper. The five key recommendations are;

1. Government funding should further prioritise risk reduction which will reduce the need to spend on disaster recovery

[1] Available at https://www.iag.com.au/sites/default/files/Documents/News%20and%20events/IAG-submission-ACCC-Northern-Australia-Insurance-Inquiry-Second-Update-Report-Focus-Area-1.pdf
[2] Severe Weather in a Changing Climate, C. Bruyère, G. Holland, A. Prein, J. Done, B. Buckley, P. Chan, M. Leplastrier, A. Dyer, IAG, November 2019.

2. Introduction of a National Bushfire Risk Rating (NBRR) system for all bushfire-prone communities, properties and structures.
3. Introduction of a national approach to land use and building codes
4. Creation of an open access information platform comprising all data required for natural hazard management.
5. Tax reform to improve the affordability and increase uptake of insurance

IAG and Natural Disaster Management

IAG has a long history of working with communities to improve safety. In many ways we have been doing it since we began operation 185 years ago. We are involved across the spectrum of natural disaster management from mitigation to recovery.

Mitigation

Australian Business Roundtable for Disaster & Safer Communities (ABR) - IAG is the founding member of the ABR which was formed in December 2012. The Roundtable is helping to develop a more sustainable, coordinated national approach to making communities more resilient and Australian people safer through research and advocacy work.

The ABR members are IAG, Australian Red Cross, Munich Re, Optus and Westpac Group. Their research to date has provided economic analysis of natural disasters, the social costs of natural disasters, data needs and infrastructure decision making. Further detail and the five research reports can be found here http://australianbusinessroundtable.com.au/our-research

The first ABR research paper[3] demonstrated that for every $10 spent on post-disaster recovery, only $1 is spent on measures to improve the safety of our communities prior to disasters. Carefully targeted resilience investments of $250 million per annum have the potential to generate budget savings in the order of $12.2 billion for all levels of government (or $9.8 billion when looking at the Australian Government budget only). If successfully implemented, it could see Australian and state government expenditure on natural disaster response fall by more than 50% by 2050[4].

Resilience Investment Vehicle Pilot. – Supported by the Australian Government, this is a collaboration between IAG, NAB, CSIRO and member agencies of the ANZEMC Mitigation and Risk Sub-Committee (EMA, NSW OEM and QRA).

The pilot aims to explore how both public and private capital could be directed to finance new or adapt existing infrastructure that builds community resilience to natural hazards under a changing climate. Enhanced investment in disaster risk reduction is commonly seen as a public problem and responsibility, however as major players in the economy both IAG and NAB understand its shared interest in creating resilient communities. Together with CSIRO and the Mitigation and Risk Sub-Committee members, we believe we have a shared responsibility to apply our diverse capabilities from the financial services, science and government sectors to address this complex problem.

IAG commissioned research mapping the economic impact of natural perils in different communities – IAG commissioned SGS Economics & Planning in 2016 to prepare a report for

[3] Australian Business Roundtable (January 2014). Building our nations resilience to natural disasters. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/Natural%20Disaster%20Roundtable%20Paper%20Web%20version%20January%202014.pdf

[4] Australian Business Roundtable (January 2014). Building our nations resilience to natural disasters. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/Natural%20Disaster%20Roundtable%20Paper%20Web%20version%20January%202014.pdf

IAG entitled *'At what cost? Mapping where natural perils impact on economic growth and communities*[5]*'* which represented the first time that the population data and economic activity of all Local Government Areas (LGAs) across the nation have been overlaid with natural perils risk levels provided by the Insurance Council of Australia (ICA) and IAG. This report identifies the LGAs with the greatest risk and they are identified because of their high natural perils risk rating, their high level of gross domestic product (GDP), their capacity to deal with natural perils or, most importantly, due to an overlap of two or more of these factors.

Preparedness

IAG works proactively to educate the community on the risk of natural perils. Across the country, we have run joint campaigns with our community partners to encourage the public to prepare their homes to prevent the risk of property damage through weather events for example:

- **Natural Perils team –** IAG has an in-house Natural Perils team made up of meteorologists, atmospheric scientists, hydrologists, engineers and mathematicians. This team investigates the growing risk from natural perils, the interaction of natural peril risk with economic activity, and the communities' capacity to respond to disasters. Their work also contributes to the literature on climate change. Last year this team in collaboration with the US National Centre for Atmospheric Research (NCAR) released the Severe Weather in a Changing Climate report[6]. This report reviews and interprets the latest climate science to understand how climate change is impacting the severity and frequency of weather events like tropical cyclones, hailstorms and rainfall, and what is likely to happen in the future. The report also examines the changing physical risks from severe weather patterns, considering past, present and future climates.
- **Get Prepared app –** IAG in partnership with the Australian Red Cross, created the Get Prepared app in 2016. It is a simple, easy-to-use app that helps people prepare for any type of emergency by accessing information and tools to complete an emergency plan on their phone. By the end of February 2020, the app has been downloaded 32, 131 times.
- **Cyclone Testing Station, research and data sharing** – IAG shares its data, claims and expertise with the James Cook University Cyclone Testing Station. The cyclone testing station conducts research, testing and community education on the response of homes to severe weather events. We also share data with the Bureau of Meteorology to help improve the calibration of weather radar and associated severe weather warnings
- **Good Hoods-** Locally, connecting individuals and their communities through the **Good 'Hoods** initiative which aims to explore and improve community connection. As part of this initiative IAG worked with the Murrindindi Shire Council following the Black Saturday bushfires in 2009 to support the development and implementation of a community-led community planning framework. This has now been piloted in three communities.

Helping our customers understand risk.

When taking out a policy with one of our brands, we ask a number of questions to determine risk and ensure the right sum insured is selected. For example; with Bushfire we ask about proximity to bushland to ensure the sum insured takes new Bushfire Attack Level (BAL) zones into account.

Our websites also provide information to help customers prepare for the potential impacts of bushfires and other natural perils, including actions they can take to reduce risks to help protect their family and their home and property. These information resources include;

- **Storm Safe** – A proactive education campaign with NSW SES. Started in 2012, the

[5] SGS Economics and Planning. At what cost? Mapping where natural perils impact on economic growth and communities, IAG, November 2016. Accessed April 2020 at https://www.sgsep.com.au/assets/main/SGS-Economics-and-Planning-at-what-cost-IAG-mapping-where-natural-perils.pdf

[6] Severe Weather in a Changing Climate, C. Bruyère, G. Holland, A. Prein, J. Done, B. Buckley, P. Chan, M. Leplastrier, A. Dyer, IAG, November 2019.

campaign helps people minimise risks in their home when storms hit, reducing loss and claims.

- **Support for resilience retrofit programs –** Including support for the QLD government $20 million household resilience program[7] that assists homeowners improve their resilience to cyclones. By encouraging customers to apply to the program and providing some premium reductions for building improvements undertaken.
- **The Hub**- online and mobile information hub by NRMA Insurance which provides informative articles every week on protecting property, cars, bikes, boats, lifestyle, travel, business and the NRMA community.
- **ICA Data Globe** - The Insurance Council of Australia (ICA) developed 'DataGlobe' which provides visualisations of collected hazard data (Earthquake, Bushfire, Flood, Cyclone, Hail, Storm.) that can be used to provide a meaningful insight into natural perils, risk-based insurance premiums and the mitigation measures that may reduce the impacts of disaster in specific locations.

Underinsurance and Noninsurance

IAG is aware that underinsurance and noninsurance does occur in our communities. This issue is of great concern to us and the overall insurance industry. The Insurance Council of Australia's 2019 report, *The impact of government duties on household insurance*[8] and Dr Richard Tooths 2011 report *Flood insurance: economics and issues*[9] both have excellent suggestions on how government and industry can work together to reduce underinsurance and non-insurance in the community. One example we have long advocated for, is the removal of the emergency services levy in NSW where the layering of insurance duty and GST can result in taxes adding over 50% to the base premium for an insurance policy[10].

Greater investment in mitigation protects communities from the impacts of natural disasters and helps reduce the risks people face, and this ensures insurance is as accessible and affordable as possible.

Response and Recovery

As Australia's largest general insurer, responding to events is central to what we do. Our dedicated national Major Events Claims response team is resourced year-round. It ramps up during a catastrophe, with a focus on having our people on the ground early and then throughout the following months until we are satisfied customers are back up and running.

We brief our Assessment and Repair team before a catastrophe to ensure that our team is well prepared ahead of a major event to support customers. Our claims assessors will look at our customers' homes and properties to assess the damage as soon as possible and commence repairs shortly after. As always, we are committed to being there through to the end for our customers.

Following the 2019-2020 bushfires we have received more than 12,245 claims nationally since September 2019. We have a dedicated team managing these claims and have finalised 60% of these bushfire claims, our partner builders are on the ground helping our customers with repairs to rebuild their lives, homes and businesses. Our teams were on the ground to support customers with their claims and organise financial assistance and temporary accommodation at recovery centres in NSW, SA, VIC and QLD as well as at our Major Event Rapid Response Vehicle (MERRV) which was deployed to the NSW South Coast.

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[7] Further information accessed April 2020 at https://www.qld.gov.au/housing/buying-owning-home/financial-help-concessions/household-resilience-program

[8] Accessed April 2020 at https://www.insurancecouncil.com.au/assets/submission/2019/112219_ICA_Paper_Impact-Govt-Duties-Household-Insurance.pdf

[9] Reference report

[10] Accessed April 2020 at https://www.insurancecouncil.com.au/assets/submission/2019/112219_ICA_Paper_Impact-Govt-Duties-Household-Insurance.pdf

Our policy is to use qualified tradespeople from the impacted areas to help support communities recover, while also ensuring our customers' homes are assessed, repaired and rebuilt as soon as possible. Our Disaster Response Customer Support program was available where customers could receive free and confidential counselling by a team of psychologists experienced in providing post-incident support.

Recommendations:
In addition to the recommendations outlined in the attached report;

1. IAG urges governments at all levels to increase funding for mitigation works to make communities safer and more resilient for the long-term.

2. The primary role of governments in this area is to reduce community vulnerability to extreme weather events by creating a policy framework that promotes fit for purpose building codes, land use planning and preventative infrastructure investment, considers both life and financial impacts and future climate change.

3. A program of mitigation activity should be developed based on cost-benefit analysis that demonstrates a clear positive outcome from investing in pre-disaster resilience measures, including a program of community education activities. Prioritisation of these activities should be informed by analysis of research, information and data sets allowing key investment decisions to be taken at all levels, including government incentives and price signals from the private sector.

4. In order to ensure the benefits of mitigation investment are realised and not eroded over time, governments should work toward a long term, bipartisan and cross jurisdictional strategy for this mitigation investment.

5. All governments should work collaboratively with the private sector and community organisations when designing this strategy to allow each sector to capitalise on its unique expertise, data and skill set.

IAG welcomes the opportunity to discuss the issues raised in this submission in more detail. Please contact Naomi Graham, Principal Public Policy and Industry Affairs – [redacted] or [redacted].

Yours sincerely,

[redacted]

Peter Harmer
Managing Director &
Chief Executive Officer

MENZIES RESEARCH CENTRE POLICY PAPER

Strengthening resilience

Managing national disasters after the 2019-20 bushfire season

This policy paper was commissioned by IAG and prepared by the Menzies Research Centre
in conjunction with Green Square Economics.

Message from IAG Managing Director and Chief Executive Officer – Peter Harmer:

As Australia's largest insurer, we witness firsthand the devastation natural disasters bring to people and communities and have long been advocating for mitigation to better protect Australians.

The 2019–2020 'Black Summer' bushfire season, which devastated so many of our customers, once again highlighted the importance of increased investment to make our communities safer and more resilient.

It's important that we learn how to best do that by reflecting on recent experience, and so IAG, has commissioned the Menzies Research Centre, to develop Strengthening Resilience: *Managing natural disasters after the 2019-20 bushfire season*. This timely analysis demonstrates how Australia can prevent and respond to bushfires and other natural perils based on what has been learned so far. Importantly, we highlight what we need to change to better protect Australian lives, livelihoods and communities.

We commend the positive steps taken by governments to reduce Australia's risk to natural perils including the Natural Disaster Risk Reduction Framework released in 2018. IAG supported the development and early implementation of this framework and will continue to work constructively with Government and other organisations to finalise and implement the National Action Plan.

In addition to the recommendations outlined in the attached report; IAG urges governments at all levels to increase funding for mitigation works to make communities safer and more resilient for the long term. We look forward to working collaboratively with governments and community organisations to support our customers, our people and the community remain safe from natural perils.

[redacted]

Peter Harmer
Managing Director and Chief Executive Officer, IAG.

Introduction

After almost three decades of steady economic growth, Australia has been hit by a sudden series of exogenous shocks that tested our national resilience.

The 2019-20 Black Summer bushfires, COVID-19 pandemic and forecast recession each present wicked policy challenges. They are riddled with complexity and conflicting aims and no clear stopping point.

The onset of each shock was so rapid that novel policy solutions are required, often on the run. Each follow a similar pattern. The first priority is emergency relief and the second is recovery. The third is the task of strengthening resilience, a challenge which will be addressed by this series of policy papers.

The resilience challenge applies in almost every domain of public policy. Economic and fiscal policy, defence, energy, the environment, health, agriculture, education, workplace relations and training, immigration, social policy and more each have a role in building national, community and individual resilience.

The political temptation to tame complex problems by dealing with the noisiest cog in isolation must be resisted. Silencing the growl does not solve the problem and can actually increase the risk if the wicked problem no longer shows its teeth before it bites.[1]

The risk of future exogenous shocks cannot be avoided. On the contrary; experience suggests there will be more, each one unexpected in form and timing. Yet the risk can be lowered though mitigation, adaptation and prudential measures to ensure we have the resources to deal with the next shock when it comes.

Natural Disaster Management

This paper was commissioned by Insurance Australia Group (IAG) in response to the 2019-20 bushfires that consumed more than 18 million hectares of land, destroyed over 5,900 buildings and killed at least 33 people.

Many of its findings and recommendations apply to natural disaster management more broadly. It should therefore be seen as a template for the improved management of floods, storms and other environmental disasters.

The role of climate change in bushfires has been the subject of considerable recent debate and discussion. Climatic variations are inextricably linked to the likelihood of bushfires and their intensity. Mitigating climate change by reducing emissions of greenhouse gases is a global challenge to which both sides of Australian politics have pledged to play a part.

Research and discussion about the quantum and pace of emissions reduction is to be encouraged. That debate, however, falls outside the scope of this paper. Instead we focus on a series of practical steps that will reduce the risk of catastrophic bushfires and increase our capacity to control the impacts of these disasters should they arrive.

We call for government funding and priorities to be recalibrated to address the imbalance between recovery and mitigation. The low death toll in 2019-20 relative to the extent of the destruction of land and property was a tribute to our improvements in containing fires and the application of safe practices for those in bushfire zones.

We call for the introduction of a National Bushfire Risk Rating (NBRR) for communities, individual properties and structures.

An NBRR will facilitate a nationally consistent approach to land use and building codes. It will offer coherent and consistent guidelines as to how existing properties and structures can be made safer. It will also inform the regulations that apply to new developments.

An NBRR will provide consistency when measuring risk which will be useful to insurers pricing risk and provide a benchmark for individuals, businesses and communities that take steps to reduce risk.

1 Churchman, C. West (December 1967). “Wicked Problems”. Management Science. 14 (4): B-141–B-146.

Technology will be a key to improving outcomes following a natural disaster. We call for an open platform for risk data to be collated that can be used to build resilience in decision-making and facilitate private use of the risk information.

Strengthening Resilience

The practice of building resilience has been underway on this continent for thousands of years. The first Australians demonstrated this by developing burn-off skills that remain highly effective today.

The continual progress made by science has given us a better understanding of bushfires and other natural disasters. We acknowledge the important role the CSIRO, James Cook Universities Cyclone Testing Station, Bushfire and Natural Hazard CRC, and many other researchers and universities across Australia have played in this regard over many years.

Technology and innovation will continue to play an important part in strengthening resilience.

So too will be our ability to learn from experience and to correct mistakes. We welcome the establishment of the Royal Commission into National Natural Disaster Arrangements, to which we are submitting this Paper.

Nick Cater
Executive Director, Menzies Research Centre
April 2020

Contents

Key Recommendations

1. Government funding should prioritise risk reduction which will reduce the need to spend on disaster recovery.
2. Introduction of a National Bushfire Risk Rating (NBRR) system for all bushfire-prone communities, properties and structures.
3. Introduction of a national approach to land use and building codes.
4. Creation of an open access information platform comprising all data required for natural hazard management.
5. Tax reform to improve affordability and increase uptake of insurance.

1. Policy context

The 2019-20 bushfires were neither the most deadly nor the most extensive in Australia's history. Those grim honours belong to the Black Saturday bushfires of 2009 in which 173 people perished, and the 1974-75 bushfires in which 117 million hectares burned, compared with 33 people and 17 million hectares which burned in the 2019-20 bushfire season, which has been called the Black Summer.

However, unlike other bushfires, the impact of the Black Summer Fires could be felt in Australia's largest capital cities, casting a pall of toxic smoke over Sydney, Melbourne and Canberra for many days over a number of weeks.

The 2019-2020 bushfires also came at the end of Australia's hottest and driest year raising fears that this would become the new normal. This provoked a polarising debate about the extent to which the ferocity of the fires was due to a failure to reduce fuel loads, whether it was possible to reduce fuel loads as fire seasons lengthened, the role of indigenous practices in mitigating bushfires, the impact that climate change was having on the severity of natural disasters and the extent to which Australia could reduce global warming through its national reduction of carbon emissions. The whole debate played out in the international arena with heart wrenching images of Australian wildlife and vulnerable people stranded on the beach in Mallacoota playing in news broadcasts around the world.

All of this culminated in the establishment, on 20 February 2020, of the Royal Commission in National Natural Disaster Arrangements and an expert advisory panel chaired by CSIRO'S Chief Scientist to bring forward recommendations to Australian Governments on practical resilience measures to strengthen buildings, public infrastructure, industries such as agriculture and to protect the nation's natural assets.

The Prime Minister also flagged the discussions of resilience measures with the States & Territories Premiers and Chief Ministers to ensure the Australian Government's investment through the National Bushfire Recovery Agency will be in assets that are built to survive longer, hotter, drier summers.

He explained the three elements of the government's response to climate change – emissions reduction, short to mid-term **resilience** and long-term **adaptation**.

> *"The first one, which is most talked about, is emissions reduction, and Australia is taking action on emissions reduction," Morrison said. "We are a signatory to the Paris agreement."*
>
> *"The second one, is our climate change action in relation to resilience. Our emissions reduction targets can be higher or lower, but the fact is the next ten years, and beyond, we are going to be living in a very different climate and we need to improve … in a range of measures."*
>
> *"The third is the climate change adaptation. These are the areas of climate change action that I think need greater attention because they're the things that are practically affecting people's daily lives here in Australia, where we can do practical things that will make us more resilient and ensure that we're safer."*

Australia's deadliest bushfires in recorded history were:[2]

- Black Saturday in Victoria in 2009 (173 people died);
- Black Friday in Victoria in 1939 (71 people died);
- Black Tuesday in Tasmania in 1967 (62 people died)
- Ash Wednesday in South Australia in 1983 (47 people died).

2 Blanchi R, Leonard J, Haynes K, Opie K, James M, Kilinc M, Dimer de Oliveira F, Van den Hornet R (2012). Life and house loss database description and analysis. CSIRO, Bushfire CRC report to the Attorney-General's Department. CSIRO EP-129645

The focus of the Royal Commission on improving resilience and mitigating risk is a welcome point of difference with previous inquiries, in particular the commitment to:

- examine the coordination, preparedness, response to, and recovery from disasters
- improve resilience and adaptation to changing climatic conditions
- mitigate the impacts of natural disasters.

Royal Commission into National Natural Disaster Arrangements

The Royal Commission provides the opportunity to develop **a national, long-term approach to managing natural disasters**, through a co-ordinated, collaborative response which focuses on prevention. A more **balanced approach to spending** is essential. Too much money is spent on disaster recovery because **not enough money is spent on disaster prevention** and preparedness.

A paper commissioned by the Australian Business Roundtable for Disaster Resilience & Safer Communities estimated that expenditure of $5.3 billion over the period to 2050 (in present value) would generate budget savings of $12.2 billion for all levels of government including $9.8 billion for the Commonwealth government for the Commonwealth Government. With targeted mitigation spending Commonwealth and State and Territory government expenditure on natural disaster could be reduced more than 50 per cent by 2050.[3]

Governments at all levels need to **increase funding for pre-disaster resilience** that reduces community vulnerability to extreme weather, taking into account future climate change, through:

- fit for purpose building codes,
- land use planning
- preventative infrastructure investment
- community education

Initiatives should be subjected to rigorous cost-benefit analysis and demonstrate clear positive outcomes.

Prioritisation should be informed by research and based on national data sets. This allows key investment decisions made at all levels to be guided by government incentives and price signals from the private sector such as the cost of insurance premiums.

Individuals can take steps to protect their assets, but there is also a need for a coordinated approach by all levels of government. Options available to address the risk of damage posed by extreme weather events include land-use planning, development controls and infrastructure resilience. Robust cost-benefit analysis of these options which takes into account the impact on insurance premiums is vital to allow decision-makers and communities to make an informed choice and to understand the trade-offs involved in living in disaster-prone areas.

Insurance benefits individuals, the community, government and the economy because it:

- manages risk efficiently by allowing it to be shared or transferred
- encourages those who are insured to reduce the threat of loss through risk-weighted premiums;
- enhances peace of mind
- reduces the demand on governments to meet the cost of rebuilding after disaster strikes;
- promotes financial stability by pooling the cost of risk and spreading it over time
- mobilises domestic savings;
- facilitates trade and commerce through risk mitigation
- supports economic growth through the efficient allocation of capital and the development of financial services

3 Australian Business Roundtable (January 2014). Building our nations resilience to natural disasters. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/Natural%20Disaster%20Roundtable%20Paper%20Web%20version%20January%202014.pdf

Insurance plays a key role in identifying, assessing and communicating risk. Insurance premiums provide a vital signal to individuals, businesses and communities by quantifying their exposure to risk and provides an incentive to implement preventative and protective measures to reduce vulnerability.

Insurance allows **individuals** to maintain financial stability while decreasing the need for precautionary savings. These savings alone may not be sufficient to cover losses following an insurable event. This frees up savings for consumption or investment. Insurance also facilitates trade and commerce, through risk mitigation which supports **business** and fuels economic growth. On the contrary, non-insurance and underinsurance can put political pressure on **governments** to rebuild communities following natural disasters.

Private insurance market is the most effective and economically sustainable way of ensuring the maximum number of Australians cover themselves for risk. The Australian insurance sector is well regulated, capitalised and highly competitive despite an unprecedented number of natural disasters in recent years.

The insurance industry has a responsibility to play a role in building national resilience beyond its primary role of financial risk management. The sector has already co-created the Australian Business Roundtable for Disaster Resilience & Safer Communities, which is a cross sector collaboration of business and community organisations. The Australian Business Roundtable is committed to supporting actions that make Australian communities safer by improving disaster resilience and climate change preparedness. Investment in disaster resilience and preventative activities is the most effective way to protect communities and reduce the impact of disasters.

Significant improvements in data availability and interpretation capability now allow insurers to assess an individual customer's circumstances to ensure their premium reflects the risk. This takes into consideration a property's exposure to events like cyclones, flood and bushfire. Household pricing recognises customers as individuals, each with their own risk profile, instead of treating them as a postcode, demographic group or risk factor. This means pricing is increasingly more granular and accurate. Insurance premiums therefore send a price signal (at times the only sign) to property holders regarding the level of risk they are exposed to.

Understanding weather events and a changing climate is core business for the insurance industry. General insurers underwrite weather-related catastrophes by calculating, pricing and spreading the risk and meeting claims when they arise. Extreme weather events and climate volatility have a significant impact on the sector. Research shows that the impacts of a changing climate are already being felt and that bushfire risk, as measured by the trends in fire danger indices, is likely to increase in almost all locations in Australia, leading to more frequent and extreme events and fire seasons.[4] This is a key concern for insurers and threatens the viability of the industry.

4 Severe Weather in a Changing Climate, C. Bruyere, G. Holland, A. Prein, J. Done, B. Buckley, P. Chan, M. Leplastrier, A. Dyer, November 2019.

2. The cost of catastrophes

Economic cost of bushfires

In Australia, there has been an upward trend in natural disaster costs, particularly since 2000. In 2013, the total economic costs of natural disasters in Australia was estimated to average around $6.3 billion per year.[5] By 2015, that the cost had risen to $9.6 billion with the inclusion of social impacts of disasters.[5] By 2017, the cost of natural disasters had risen to $18.2 billion per year, equivalent to 1.2% of GDP, and was forecast to grow by 3.4 per cent per rising to $39 billion by 2050 per year in real terms, even without considering the future impact of climate change.[6] These rising costs reflect increased population growth, the increasing density of infrastructure and continuing migration to more vulnerable parts of the country. Local government areas (LGAs) with high and extreme risk of bushfire generated $175 billion (10.8 per cent) of GDP and are home to 2.2 million people (9.2 per cent of the population). For example, in Victoria, 17.5 per cent of the population live in LGAs which contain communities at high to extreme risk of bushfire.[7] The increasing value of building households and contents and sub-par building standards also contribute to a rise in the cost of natural disasters.[8]

The impacts of severe fire (and other extreme weather events) on the economy in urban, regional, rural and remote areas can be related to the economic output of each area. Increasingly, Australia's economic activity is taking place in locations with high risk of natural perils.

Major capital cities, such as Brisbane and Melbourne, are at high risk of flooding and climate change will likely exacerbate this risk. Brisbane and its fast-growing LGAs on the Gold Coast and Moreton Bay are also at high risk of cyclones. There are also LGAs with high economic value and high exposure to bushfires located in Western Australia — East Pilbara, Ashburton and Roebourne.[7] While the September 2016 storm in regional South Australia caused an extensive blackout that affected high-value activity not just in Adelaide but at the Port Pirie smelter, the Whyalla steelworks and at BHP Billiton's Olympic Dam mines, this one event reducing the GDP of South Australia by as much as $200 million.[7]

This means that economic activity and taxation on revenue are at greater risk of disruption or delay. Further, some rural and remote at-risk communities do not have the economic resources to independently prepare for and recover from a natural disaster, this increases reliance on government funds to recover. In 2016, LGAs with high and extreme risk of bushfire generated more than 10 per cent of GDP and were home to 2.2 million people — 9.2 per cent of the population.[7]

Ensuring areas with the highest level of economic activity are protected from natural perils by wise infrastructure investments and mitigation measures will help to maintain economic growth. This requires government to understand the distribution of economic activity and the risk of natural perils.

5 Australian Business Roundtable. (March 2016).The economic cost of the social impact of natural disasters. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/documents/Report%20-%20Social%20costs/Report%20-%20The%20economic%20cost%20of%20the%20social%20impact%20of%20natural%20disasters.pdf

6 Australian Business Roundtable. (November 2017) Building resilience to natural disasters in our states and territories. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/documents/ABR_building-resilience-in-our-states-and-territories.pdf

7 SGS Economics and Planning. At what cost? Mapping where natural perils impact on economic growth and communities, IAG, November 2016. Accessed April 2020 at https://www.sgsep.com.au/assets/main/SGS-Economics-and-Planning-at-what-cost-IAG-mapping-where-natural-perils.pdf

Understanding the capacity of communities to deal with risk is also an important consideration for government. For example, Hepburn, Central Goldfields and Hindmarsh in Victoria are at high risk of bushfire yet low on economic resources which may undermine their ability to prepare for and recover after a disaster. As a result, the economic burden will primarily fall on government and these communities will probably take longer to recover and rebuild.[7] Local and state governments can use planning laws to prevent individuals and communities from being exposed to unacceptable risk.

Small businesses that suffer major loss due to a natural disaster are at a greater risk of failure because it can take weeks or months to return a business to full operation after an event such as a fire or flood while expenses such as rent and wages need to keep being paid. In order to understand their exposure to risk, businesses need to conduct a business impact analysis and develop a disaster recovery plan.

Social cost of bushfires

The social costs of natural disasters repeatedly exceed the tangible economic costs.[5] They include deaths, injuries, impacts on health and wellbeing, community connectedness, as well lost wages and from not working or lost leisure time.[5] More than nine million Australians have been impacted by a natural disaster or extreme weather event in the past 30 years.[6] While it is difficult to put a dollar value on these tragic and devastating events, it is estimated that the total economic cost of natural disasters in Australia over the 10 years to 2016 had averaged $18.2 billion. This is forecast to rise to $39 billion per year on average by 2050 (in present value terms) without including additional costs to due to the increased frequency of extreme weather events due to climate change.[5]

As Australian Red Cross CEO Judy Slatyer said, 'Natural disasters have a deep social impact on individuals and communities that can last for years.' For example, the 2009 Black Saturday bushfires in Victoria was one of the worst natural disasters in Australian history. The intangible costs associated with these bushfires were estimated to be significantly higher than the tangible costs, at $3.9 billion compared to $3.1 billion respectively. This means the ratio of intangible costs to tangible costs was around 1.3.[8]

To reduce the costs of social impacts of natural disasters, the Australian Business Roundtable made four key recommendations:

1. Pre- and post-disaster funding should better reflect the long-term nature of social impacts.
2. A collaborative approach involving government, business, not-for-profits and community is needed to address the medium- and long-term economic costs of the social impacts of natural disasters.
3. Governments, businesses and communities need to further invest in community resilience programs that drive learning and sustained behaviour change.
4. Further research must be done into ways of quantifying the medium- and long-term costs of the social impacts of natural disasters.

5 Australian Business Roundtable. (March 2016).The economic cost of the social impact of natural disasters. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/documents/Report%20-%20Social%20costs/Report%20-%20The%20economic%20cost%20of%20the%20social%20impact%20of%20natural%20disasters.pdf

6 Australian Business Roundtable. (November 2017) Building resilience to natural disasters in our states and territories. Accessed April 2020 at http://australianbusinessroundtable.com.au/assets/documents/ABR_building-resilience-in-our-states-and-territories.pdf

7 SGS Economics and Planning. At what cost? Mapping where natural perils impact on economic growth and communities, IAG, November 2016. Accessed April 2020 at https://www.sgsep.com.au/assets/main/SGS-Economics-and-Planning-at-what-cost-IAG-mapping-where-natural-perils.pdf

8 The economic cost of the social impact of natural disasters, Australian Business Roundtable for Disaster Resilience & Safer Communities, March 2016, p. 38

3. Prevention is better than cure

There have been 57 formal public inquiries, reviews and Royal Commissions related to bushfires and fire management since 1939.[9] These inquiries tend to focus on how to respond to an active bushfire and post-disaster relief. Insufficient attention has been paid to the use of data and planning to mitigate the threat posed by bushfires and most mitigation is focused on fuel loads, the key theme common to all the inquiries.

Despite this relentless commitment to inquiries, in 2014, a report released by the Productivity Commission into Natural Disaster Funding Arrangements found that government natural disaster funding arrangements had been inefficient, inequitable and unsustainable. 'They are prone to cost shifting, ad hoc responses and short term political opportunism.'

The Productivity Commission lamented that the funding mix was disproportionately recovery-based and did not promote mitigation. It observed that the political incentives for mitigation were weak, 'since mitigation provides public benefits that accrue over a long-time horizon,' and that over time this would create entitlement dependency and undermines individual responsibility for natural disaster risk management.'

At that time, it said, mitigation funding amounted to only three per cent of what is spent on post-disaster recovery and recommended that the Australian Government should gradually increase the amount of annual mitigation funding it provides to state and territory governments to $200 million.

It was therefore very welcome when the Senate voted in October 2019 to increase mitigation funding by $50 million. The Insurance Council of Australia called it a 'leap in the right direction.' It was a timely decision as it came at the start of the bush-fire season. It is to be hoped that the Government continues in this direction and increases its funding to the State and Territory Governments for mitigation to $200 million per year. Generally, one dollar spent on mitigation can save at least two dollars in recovery costs.[10]

Committing additional mitigation funding makes economic sense. A report by the Australian Business Roundtable for Disaster Resilience & Safer Communities suggests that a mitigation expenditure in the order of $5.3 billion over the period from 2020 to 2050 (in present value terms) could generate budget savings in the order of $12.2 billion for all levels of government, or $9.8 billion when looking at the Commonwealth government budget only. If successfully implemented, it could see Australian and State Government expenditure on natural disaster response fall by more than 50 per cent by 2050.

In order to lock in this focus on risk reduction rather than recovery, the Australian Government should treat natural disaster contingent liabilities more transparently by quantifying the size of these liabilities and disclosing the estimates and their confidence ranges in the budget's Statement of Risks. Funds should also be allocated for future natural disaster recovery costs in the forward estimates. This would promote incentive neutrality and reduce the systemic bias against mitigation.

The Australian Government should also develop a formula for allocating mitigation based on where such funding is likely to achieve the greatest net benefits, rather than on an ad hoc basis. Many government-sponsored and community programs place heavy emphasis on emergency response and civilian response-preparedness, and these should include concrete risk reduction strategies that can be adopted. But to be fully effective and efficient, these efforts should take place at, and be targeted to, every level of society—individual, business, community, and government.

Building an open access platform with all the relevant data required to assess and analyse the risk posed by natural disasters and the best strategies to reduce that risk is a key plank in developing more resilient societies.[11]

9 Kevin Tolhurst, The Conversation, 16 January 2020.

10 McClelland, R. (2011) Address on climate change to the James Cook University School of Law, available at: www.austlii. edu.au/au/journals/JCULawRw/2011/1.pdf

11 Australian Business Roundtable. (July 2014). Building an Open Platform for Natural Disaster Resilience Decisions. Access April 2020 at http://australianbusinessroundtable.com.au/assets/Building%20an%20Open%20Platform%20for%20Natural%20Disaster%20Resilience%20Decisions%20CLEAN.pdfABR recommendation

4. Adapting to a changing climate

Every year we are confronted with extreme weather events that too often become natural disasters. Climate change is altering and exacerbating these events, increasing the threats that they pose. Fortunately, Australia, as a prosperous flourishing democracy, is better placed than most societies to reduce weather-related risks. To do that it is important to understand how Australia's climate is changing and how that is augmenting the risk of natural disasters. This information then needs to be made available to all stakeholders and decision-makers via an open access national platform to inform risk reduction strategies and disaster preparedness planning at all levels of governments, in businesses, community organisations and individuals to reduce the impact of extreme events and the physical, economic and social costs of disaster recovery.[11]

The level of scientific knowledge has reached the stage where it is possible to make assessments, with some confidence about the impacts of climate change at larger scales and longer time frames but many decisions require information at more local scales, such as states, cities and towns.

The key point for this paper is that: 'Bushfire risk, as measured by the trends in fire danger indices, is likely to increase in almost all locations nationally, leading to more frequent and extreme events, and longer fire seasons. The rate of increase varies by location and will depend on weather system changes and site-specific factors at regional scales.'[12]

Bushfires are the result of complex interactions between weather, climate, vegetation and people and are challenging to simulate because most global fire activity is directly attributable to people.[17] Nonetheless, an observational study from 1979 to 2013 showed that fire weather seasons have lengthened by almost 20 per cent globally, resulting in a doubling of the global burnable area affected by long fire weather seasons.[12]

The McArthur Forest Fire Danger Index is a measure of the atmospheric conditions that drive bushfires, but other factors are critical including biomass, fuel moisture, land use and demographics, bushfire prevention and combat activities. The FFDI monitors fire weather in Australia, based on daily temperature, wind speed, humidity and a drought factor. It shows increases at almost all sites and significant increases at 42 per cent of sites in the period from 1974-2015. The increase is particularly strong in south-east Australia and is primarily related to temperature increases. Severe fire conditions can lead to extreme bushfires with a very high risk of house destruction. Historical records suggest an increasing occurrence of extreme bushfires in recent decades.[13]

There is high confidence that climate change will lead to a higher frequency of days with severe fire danger in southern and eastern Australia. This will result in reduced intervals between fire events, a higher fire intensity, lower fire extinguishments and an increase in fire spread with an estimate that by 2050, the frequency of extreme fire danger will increase by 15-70 per cent in south-east Australia. Very little work has been done on changes in extreme bushfires, but it is highly likely that they will significantly increase in frequency in the future too. The length of the fire season is also expected to increase which would reduce opportunity for fuel-reduction burning to winter. This has happened due to increasing temperatures and drying in these regions. Little change in fire hazard is expected in the tropical and monsoonal north Australian regions.

11 Australian Business Roundtable. (July 2014). Building an Open Platform for Natural Disaster Resilience Decisions. Access April 2020 at http://australianbusinessroundtable.com.au/assets/Building%20an%20Open%20Platform%20for%20Natural%20Disaster%20Resilience%20Decisions%20CLEAN.pdfABR recommendation

12 Severe Weather in a Changing Climate, C. Bruyère, G. Holland, A. Prein, J. Done, B. Buckley, P. Chan, M. Leplastrier, A. Dyer, IAG, November 2019, P.3

13 Severe Weather in a Changing Climate, C. Bruyère, G. Holland, A. Prein, J. Done, B. Buckley, P. Chan, M. Leplastrier, A. Dyer, IAG, November 2019, P. 45

5. The danger of underinsurance – rebuilding self-reliance

The impacts of natural disasters are becoming more devastating due to the increasing concentration of populations and their insured assets in locations with exposures to natural disasters. Insurance plays a significant role in mitigating adverse outcomes and helping to restore normal economic activities following disasters regardless of their size. Insurance payouts help to stabilise the local economy and offset the initial impact to the economy following the disaster. Over time, the economic stimulus from claims payouts and recovery activity encourages a faster return to normal economic activity.

This is particularly the case in regional areas which have a high reliance on capital intensive sectors like resources, agriculture, and tourism. The value of insurance is clear for areas that have limited employment opportunities, or a narrower economic base compared to urban areas that can absorb the economic losses of a disaster more easily.

With large parts of Australia at growing risk from tropical cyclones, bushfires, storms and floods, the importance of insurance is increasing. Unfortunately, the increasing costs of claims reduces the affordability and accessibility of insurance.

Studies show that Australia is significantly uninsured and underinsured[20]. At the same time as an ever-greater percentage of the population rely on taxpayer-funded largesse rather than their own savings or insurance policies[21] to provide for themselves in adversity, governments are failing to collect sufficient revenue to pay for their promises. In these circumstances, fiscal deficit and debt is inevitable.

In the event of a natural disaster, the Commonwealth contributes from 50 to 75 per cent of the cost of replacing essential public assets such as roads. Regrettably, this has tended to encourage States and Territories not to spend their own revenue on mitigation efforts, including by insuring or reinsuring assets.

Separating those responsible for mitigating the risk of natural disasters from those who pay for the damage creates a dangerous moral hazard, putting lives in danger and increasing costs for the community. Yet, spending as little as $250 million per annum on mitigation could reduce the cost of natural disasters by up to 50 per cent and generate budget savings of as much as $12.2 billion for all levels of government.[14]

Whether such savings could be realized would depend on how wisely the mitigation funds were spent. Relevant local knowledge should inform those decisions if state and local governments, which are primarily responsible for responding to disasters, also managed disaster mitigation and covered the cost of disasters.

Government intervention should not reduce the incentive for individuals to insure themselves or increase the incentive to be a free rider. For example; in the devastating floods in Grantham, Queensland January 2011, individuals who had insured their houses saw that others who had not received government funding to assist in a return to normal life. The funding for this government largesse came out of the Queensland Flood Levy. Hence a costly government intervention delivered a double whammy, discouraging responsible behaviour and encouraging irresponsible behaviour at the same time.

The failure of governments to intervene can also have disastrous consequences. Australians living in flood or bush-fire zones who do not take out insurance maybe dangerously ignorant of the perils they face. Indeed, non-insurance may have the perverse effect of encouraging more people to live in these areas than would do so if they paid risk-rated insurance premiums commensurate with living in a dangerous area. Not only does this increase the burden on the taxpayer it puts lives at risk.

14 Building our Nation's Resilience to Natural Disasters, Australian Business Roundtable for Disaster Resilience and Safer Communities, 20 June 2013.

Unfortunately, at present governments actively discourage people from insuring themselves by imposing levies on insurance premiums. For example, in NSW and Tasmania insurance companies have to partially fund fire brigades, a cost which is passed on through increased premiums.

Insurance taxes in Australia are considerably higher. Out of ten comparable OECD countries, Australia was the only one with double digit insurance tax rates and one of only three that impose a consumption tax (GST) on insurance.

A study by the Insurance Council of Australia in 2008 found that Victoria and NSW had the highest rate of insurance taxes of some 30 countries or states surpassing Germany, Finland, Denmark, Switzerland, the UK, California and Japan. Although Victoria has rescinded its fire levy, NSW continues to punish self-reliance. Taxing insurance is particularly short-sighted. In 2008 IPART concluded that these levies and the fire services charges were the most inefficient of all State taxes. More importantly, they increase the incentive not to insure and by decreasing the size of the insurance pool, they push up premiums even further.

As if all this were not enough, insurance taxes are inequitable. As premiums rise fewer people from lower socio-economic groups take out insurance and thus are exposed to greater risk and hardship when adversity strikes. But by increasing the incentive not to insure, governments create a greater fiscal burden for themselves.

The Henry Tax Review found that Australia had high taxes on insurance not just in comparison to other countries but compared with taxes on other products and industries in Australia.

In view of the fact that this deterred people, especially low-income earners, from insuring themselves, it recommended that all taxes on insurance products, including the fire services levy, should be abolished and that insurance products be subject, like most other services, only to the GST.

But even this does not go far enough. The government should not impose a GST on disaster insurance since such insurance will directly reduce the quantum the government may be pressured to spend on recovery. Moreover, the government should provide a direct incentive to property holders to take out insurance for disasters by making it fully tax deductible.

That would be fairer to all when misfortune strikes and would rebuild the spirit of self-reliance on which Australia was built.

6. Building blocks

In February 2011 the Council of Australian Governments endorsed the National Strategy for Disaster Resilience and agreed to actions to implement priority outcomes. In 2018 the National Disaster Risk Reduction Framework was released by the Department of Home Affairs. Although these commendable documents guide proactive efforts to reduce disaster risk and minimise loss and suffering caused by disasters, we continue to see the Government's relationship with these issues oscillating between a lack of ownership and possessiveness.

We require strategic leadership and co-operation at all levels of government as we need to prioritise and plan in a coordinated way. The following building blocks are a good place for this work to start.

Open data platform for disaster resilience decisions

Accurate Hazard Information is critical to understanding natural disaster risk and informing state and local land use planning.

Information is fundamental to natural hazards management to ensure that communities, planners, emergency services, individuals, property owners and insurers understand the risks they face, and devise and implement effective risk reduction.

Without access to critical data inputs and research findings, communities, business and government cannot make informed decisions on how to target these investments to achieve the greatest impact.

Yet too often councils and other authorities are reluctant to provide detailed information about risks such as flood or fire to owners or prospective purchasers because they fear litigation if the information that they provide has adverse consequences such as reducing the market value of a property.

A new national platform with mandatory reporting requirements would provide a circuit breaker to the collation, co-ordination and analysis of natural disaster information. The key inputs required by end-users are:

- Foundational data — locational information including the characteristics of assets at risk, community demographics, topography and weather details
- Hazard data — hazard-specific information on the risks of different disaster types, including history of events and the risk profile of the location
- Impact data — potential and actual impacts associated with natural disasters, including historical costs and damage, and current and future value at risk
- Research data — seeks to answer specific questions across a range of areas building on the existing stock of data[11]

The value of a standardised data portal is that public and private organizations can access information to create value.

The Insurance Council of Australia has developed 'DataGlobe' 22[15] which provides visualisations of natural hazard data that provides insights into natural perils, risk-based insurance premiums and mitigation measures that may reduce the impacts of disaster in specific locations. Unfortunately, the credibility of natural hazard data is often questioned because of the variations between individual insurers and local councils.

Natural hazard data produced by governments and agencies remains the most relevant source of data for the insurance industry and the Government should provide accurate hazard information via a national centralised platform to ensure consistency, reliability and public trust in the information.

11 Australian Business Roundtable. (July 2014). Building an Open Platform for Natural Disaster Resilience Decisions. Access April 2020 at http://australianbusinessroundtable.com.au/assets/Building%20an%20Open%20Platform%20for%20Natural%20Disaster%20Resilience%20Decisions%20CLEAN.pdfABR recommendation

15 https://www.icadataglobe.com/

Access to such information will

- better enable local governments to undertake effective public mitigation works such as fire breaks and enhanced monitoring, emergency warning and evacuation procedures in geographical areas that are subject to bushfire risk, reducing the risk exposure of properties situated in those areas
- reduce public expenditure on rebuilding communities after fires
- allow insurers to underwrite the risks with maximum certainty putting downward pressure on premiums in those areas that have benefited from public mitigation works
- ensure communities are less exposed to the social and economic disruption caused by fire

Accurate Hazard Information can also be used to amend/strengthen regulatory building standards. Once accurate data can show 'at risk' areas, the building code could be amended to require new builds (or alterations to existing buildings) in these areas to withstand the relevant hazards.

One insurer IAG also believes Accurate Hazard Information should be readily accessible by householders and businesses, helping them understand the flood risk in their location. It also has significant economic value, as it reduces risk, will benefit planning authorities, banks, financiers and developers, and allow insurers to underwrite the risks with maximum certainty.

Land use planning

Learnings from the 2019/2020 bushfires should evolve our understanding on the appropriate development and risk reduction opportunities in bushfire prone land. Bushfire datasets should nationally coordinated and consistent best-practice methodologies should be made available to government, banks, insurers, engineers to make decisions about risk, land use and planning.

The *At what cost*[7] report highlights that as our population increases, governments will face more pressure to release low-cost land in higher risk areas, putting more lives in danger. Development of this land should be informed by accurate data on natural perils risks and accompanied by appropriate mitigation measures to minimise the risks.

Current requirements do not reflect the level of risk communities will face in the future. A thorough review needs to be undertaken to ensure they are changed to reflect the range of scenarios and forecasts in risk exposure that will occur with climate change. Current land planning and zoning requirements are misaligned with insurance risk, this dynamic in particular creates an affordability challenge for insurance and will only worsen as the risk increases with climate change. Additionally, there are no requirements in infrastructure, planning or zoning for the consideration of building with resilience. This most recent research completed by the Australian Business Roundtable (ABR) in 2016 found that:

- A major share of the costs associated with natural disasters arises from damage to critical infrastructure including roads, bridges, railways and hospitals.
- More than $450 million per financial year was spent by Australian governments on restoring essential public infrastructure assets following extreme weather events between 2002-03 and 2010-11 which equates to about 1.6 per cent of total public infrastructure spending. With no requirement to build back better or to consider the future risks of an areas when planning or zoning; individuals, communities, businesses and governments are left more vulnerable to widespread disruption and higher costs post disaster

With a changing climate resulting in increased extreme weather events, the case for prevention and planning with a range of forecasts is even stronger and more cost effective than trying to retrofit solutions in the future.

Government has a crucial role to play in risk-appropriate land use planning and zoning. Land that is, or becomes, an unacceptable risk from hazards such as tropical cyclones, severe storms, hailstorms, bushfires and flood should not be zoned for residential or commercial use. Without sound and consistent government controls, there is little to prevent ongoing building in locations of extreme vulnerability. Improved land-use planning will involve a commitment by Government to develop national land use planning criteria that prohibits inappropriate land-use in Australia.

7 SGS Economics and Planning. At what cost? Mapping where natural perils impact on economic growth and communities, IAG, November 2016. Accessed April 2020 at https://www.sgsep.com.au/assets/main/SGS-Economics-and-Planning-at-what-cost-IAG-mapping-where-natural-perils.pdf

Some of the strategies focusing on protecting life and built property are achieved through land use planning and zoning instruments. Strategies include deep setback of buildings from rivers/shorelines; relocation of buildings or infrastructure (including capacity for emergency relocation of demountable buildings); and enhanced monitoring, emergency warning and evacuation procedures. Additional measures available include investment in permanent engineering structures such as flood barriers, canals, dykes, pumps, levees, and importation of fill; plantings (such as dune grasses, mangroves) to absorb water and/or stabilise erosion-prone surfaces; sacrifice of land and land buyback schemes.

Building codes

Current buildings codes may not be adequate to meet the risks of future extreme weather events. While the objectives of the building code are centered on life safety, which is unquestionably vital, they do not focus on reducing the associated costs of damage from major disasters. This is an important aspect in ensuring that communities are more resilient in the future. It is important that research is conducted into both the drivers of damage to buildings as well as improved understanding of the potential changes to extreme weather events so that building codes are more effective in managing future community risk. Providing upfront protection of assets, buildings and infrastructure minimizes the impact to community post disaster. This is an issue now and will only increase in its impact to communities as we see an increase in more extreme weather events.

There is a crucial role for government to support community resilience by ensuring that new buildings in "at-risk" areas are constructed to withstand hazards such as tropical cyclones, storm surge, severe storms, hailstorms, bushfires, earthquake and flood. While land use planning is critical to managing natural disaster risk, building codes are an essential component of an effective multi-faceted, integrated approach to reducing the risk of natural hazards in the Australian community.

Given changing weather conditions and exposure as well as technological developments in construction, design and materials it is important to keep these codes under regular review to ensure they remain effective.

Cross-sector collaboration is essential for a resilient nation. Insurers should be routinely included in planning, mitigation and other flood management related decisions which will directly impact the pricing of risk. The potential insurance premiums generated by various levels of exposure should be part of the calculation of what is tolerable before new development takes place. This will help the community make an informed choice, understanding the trade-offs for living in particular areas.

The Government should collaborate with insurers to provide greater guidance to households of the risks they face. Informing households about the probable hazards that they may face remains a core government responsibility that should continue to be pursued through national or, at a minimum, consistent State-based initiatives.

The role of insurers should be to support and complement government activities by disseminating relevant information to their customers, not to be the sole or central source of that information.

Insurers need to be empowered to do this with access to accurate and up to date data to provide a nationally consistent view of risk. Where insurers have access to the same data as those who are responsible for mapping and managing the impact of natural hazards they can help educate the community on the risk they have. When insurers are not able to use the most up to date and accurate information available there is greater potential for confusion and scepticism in the community about the impact of natural disasters. The Insurance Council of Australia is working closely with several states and local governments to address these matters.

Building codes need to be extended beyond the normal principal place of residence and commercial buildings to include all forms of outbuildings and structures above an agreed size, such as garages, pergolas, sheds and anything else that could turn into a projectile in a tropical cyclone or other severe storm. Externally fitted structures such as air conditioners and solar panels should also have a building code to ensure at least a basic level of structural integrity in the event of a major storm – including hailstorm.

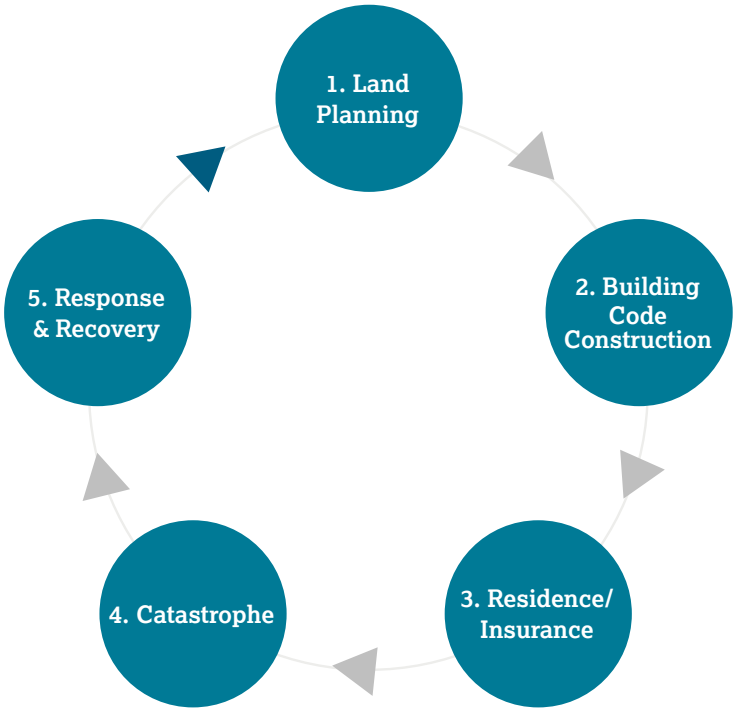
Further, future uncertainty over the changing climate has the potential to increase the frequency and severity of weather-related losses in Australia. Without appropriate risk assessment, mitigation and adaptation measures to offset these uncertainties the cost of insurance is very likely to rise, with some locations becoming too expensive for consumers to bear the cost of insurance or leading to some insurers withdrawing in part or totally from providing home and strata title insurance in certain geographic markets. As the affordability of insurance decreases and some

insurers withdraw from the market it is governments who will be called upon to fill the economic void and cover the cost of repair and reconstruction currently met by insurers.

It is also important that policy and funding decisions around extreme weather resilience measures are based upon the most likely changes in climate and severe weather. From an infrastructure perspective, the designs utilised should reflect the climate change projections relevant to the lifecycle of the structures/infrastructure being planned.

Resilience ratings

A resilience rating needs to be developed and awarded to buildings which is similar to the star ratings systems used for energy efficiency and water use. Once resilience ratings are widely in use there would be scope for the insurance industry to offer lower premiums to those people in more resilient buildings compared to those in unrated buildings, thereby providing a financial incentive for individuals to try to self-protect and for the construction industry to offer more resilient buildings to clients.



Bushfire Attack Level – BAL

Following the 2009 Victorian bushfires, the Australian Building Council Board adopted a national bushfire standard for residential buildings. The new Standard A53959-2009 Construction in bushfire-prone areas aims to improve the ability of a building to withstand bushfire attack. The standard sets out the building requirements for house design and construction according to the bush fire attack level (BAL) that a development falls into.

The BAL is a way of measuring the severity of bushfire attack a house may experience during a bushfire.

BAL takes into consideration: type of vegetation, proximity to vegetation, slope of land, Fire Danger Index in region

- BAL Low: There is insufficient risk to warrant specific construction requirements
- BAL 12.5: Ember attack. (BAL 12.5 Construction Requirements)
- BAL 19: Increasing levels of ember attack and burning debris ignited by windborne embers, together with increasing heat flux. (BAL 19 Construction Requirements)
- BAL 29: Increasing levels of ember attack and burning debris ignited by windborne embers, together with increasing heat flux. (BAL 29 Construction Requirements)

- BAL 40: Increasing levels of ember attack and burning debris ignited by windborne embers, together with increasing heat flux and with the increased likelihood of exposure to flames. (BAL 40 Construction Requirements)
- BAL FZ: Direct exposure to flames from fire, in addition to heat flux and ember attack. (BAL FZ Construction Requirements)

The building requirements for house design and construction vary according to the BAL. Importantly the majority of buildings in bush fire prone areas pre-date the current bush fire regulations. If you live in a bushfire prone area it may now cost significantly more to rebuild your home under the new standards.

A typical four-bedroom home in a high-risk bushfire area can cost more than $100,000 extra to rebuild due to new standards to fire-proof homes.

A BAL not only helps identify bushfire risk, but also identifies specific construction standards required to improve the performance of buildings subjected to bushfire attack (construction standards listed in AS3959-2018).

Certain Local Governments may not approve a development or subdivision if your BAL is deemed 'too high' (e.g. BAL-40 or BAL-FZ), so understanding your building or sites BAL is very important.

In some states new building work is required to comply with the requirements of the Building Code of Australia (BCA). The BCA, amongst other things, provides specific construction requirements for building in designated bushfire prone areas.

The Australian Standard AS3959-2018 Construction of Buildings in Bushfire Prone Areas specifies the construction requirements for buildings in bushfire prone areas. It aims to improve a buildings resistance to bushfire attack from burning embers, radiant heat, flame contact and combinations of all three attack forms.

Construction requirements are determined by a building determined BAL. BAL methodology and BAL specific requirements are all listed within the AS3959-2018

Retrofitting risk reduction

Information is fundamental to natural hazards management. Ultimately, the goal is to ensure that communities, planners, emergency services, individuals, property owners and insurers understand the natural peril risks that they face, and that effective risk mitigation measures can be undertaken. Without access to critical data inputs and research findings, communities, business and government cannot make informed decisions on how to target these investments to achieve the greatest impact. Yet often councils and other authorities suggest that they are reluctant to provide specific information about risks such as flood or fire risk, to property owners or prospective purchasers. This reluctance arises from a fear of litigation that may arise if that information has adverse consequences, for example by reducing the market value of the affected property.

In recent years, State and Federal agencies and stakeholder industries have begun investing in state and national information sharing systems for natural hazards to provide wider public access and consistent data sets. The Victorian Draft Floodplain Management Strategy includes a commitment to streamline and improve their existing flood hazard databases and share all information with insurers. However, more needs to be done.

As above, we need a national platform for foundational data covering demographic, weather, topography and geological, and assets data. The responsibility for the provision of such risk information in an accessible and usable way lies primarily with government. Much of the information needed to address natural hazards understanding is common across many sectors. It is efficient to coordinate the production and dissemination of this information centrally to ensure consistency and avoid duplicated effort across jurisdictions and industry sectors as natural disasters do not respect artificial jurisdictional boundaries. The credibility of hazard information is often questioned because of the variations between individual insurers and local councils. A centralised, independent single point of access is required to ensured consistency, reliability and public trust in the risk information provided.

Currently insufficient funding is allocated to collecting and sharing risk information to increase the capability of communities to respond to risks appropriately. Inaccurate or incomplete data on natural perils risks can limit the ability of a community to manage its risk in a number of ways. To improve personal responsibility and accountability for risk management, the public needs to be able to be able to access and understand risk information.

Many property owners are reluctant to invest in private mitigation in circumstances where the cost is ultimately borne by them. For this reason, governments, insurers and business should work together to incentivise property owners to undertake mitigation works. Government could directly subsidise mitigation works; insurers then provide premium discounts according to the level of mitigation works and the building industry provides an expand range of cost-effective and acceptable retrofit options. The Queensland government's $20 million Household resilience program[16] is an example of this in action. The program has seen premiums for those in the program reduce. Any program would need to include a database of the resilience measures undertaken, this database would need to be openly available so future residents, builders and insurers would have a record of the works completed on the property.

16 https://www.qld.gov.au/housing/buying-owning-home/financial-help-concessions/household-resilience-program

7. Solutions

The 2019/2020 bushfires demonstrated the urgent need for a nationally coordinated approach to bushfires and natural disasters. Political, business and community leaders all have a shared responsibility to improve emergency management and ensure integrated disaster resilience. This calls for an integrated, whole-of-nation effort encompassing enhanced partnerships, shared responsibility, a better understanding of the risk environment and disaster impacts, and an adaptive and empowered community that acts on this understanding.

Governments at all levels must increase funding for mitigation works that make communities safer and more resilient for the long-term and focus on effective risk reduction to reduce the need for recovery funding.

Government funding should be structured to support—not undermine—the contribution of the private and non-for-profit sector in risk management.

Governments must harness the expertise of the insurance industry to inform decision-making on avoiding, mitigating or transferring risk.

What is required is a common framework for land use planning and risk assessment to enable the private insurance market to accurately price risk and for consumers to understand that risk.

Governments, planners, developers, architects and home purchasers all make decisions that contribute to the cost of insurance and disaster recovery that is passed on to the consumer. To avoid this, all sectors of the community need to work together to provide information, advice and cues to communities, households and individuals so that they can ensure their safety before, during and after a disaster.

Prioritising risk reduction rather than recovery funding

- Current government funding is disproportionately focused on recovery and does not promote mitigation.
- Increase funding for mitigation including and distribute it based on an economic value and risk assessment.
- Government policy should not undermine or create barriers to individual and business risk management.
- Expectations of government intervention post-disaster have a detrimental impact on private insurance penetration.
- Government funding should be structured to support the contribution of the private and not-for-profit sector in risk management.

National Bushfire risk rating system

- A nationally consistent bushfire risk assessment standard for both communities and for individual properties and structures.
- The risk rating system will be similar to the star-rating system for energy-consumption of electrical goods.
- This should be developed jointly by government and the private sector, in consultation with community leaders and informed by the expertise of the insurance industry in assessing risk.
- To develop this risk rating we need to develop a common national agreement on climate-related risk in relation to bushfires and their impact on property. It should be science-based and integrate the best scientific data available to determine current and future assessments of bushfire risk over a 50-year timeframe—the relevant timeframe for land use and building codes.
- It will ensure that risk measurement approaches used by government do not lag behind risk measurement approaches used by insurers, leading to misalignment of risk signals.
- It will signal risk to property owners through higher premiums in higher risk areas. Premiums can be reduced if scientifically backed mitigation strategies are put in place.

- To develop this risk rating system, we need common national standards, reporting requirements and open access to all information collected and relevant to assessing bushfire risk.

National approach to land use and building codes

- The national bushfire risk assessment standard should inform regulations that govern land use and building codes.
- Unlike current practices, it should require explicit consideration of the compounding risk of multiple disasters.
- Building code risk reduction measures should be science-based and demonstrably reduce risk in order to qualify for insurance discounts. At present, BAL-based bushfire building codes may be ineffective in catastrophic fire weather conditions which contribute the majority of insurance losses and therefore to premiums.
- Any retrofit or risk reduction measures must demonstrably reduce risk in order to qualify for insurance discounts.
- Risk reduction measures should be tracked in a national register.
- Governments and business need to pool land use planning data, hazard datasets and information sources on a national open data platform.
- Land use planning must be science-based, up to date, align with measured risk, consider future risk the compounding of multiple perils.
- Building code risk reduction measures must be science-based and measurably reduce risk in order to qualify for insurance discounts. All risk reduction measures should be tracked in a national register.

Risk reduction strategies

- Fuel reduction policies must be guided by a rigorous approach to risk reduction and need to be considered alongside land use policies and building codes.
- Annual fuel reduction requirements for all land that interfaces with human habitat should be included in an open national register.
- Indigenous land management techniques that are scientifically validated should be integrated into risk management wherever possible.
- Given the lengthening fire season and the poor health outcomes associated with bushfire smoke, mechanical fuel reduction should be undertaken by forest industries in areas where smoke would affect communities. This should be done on a commercial basis so that sale of the timber can cover the costs.
- The introduction of a bio-fuel industry should also be used to reduce fuel loads.
- State and territory and local governments should be required to regularly undertake risk assessments to the land within their jurisdictions to ensure that bushfire prone areas are accurately identified and appropriately managed including the prohibition where necessary of development in these areas with just compensation for affected landholders.

Tax Reform to improve affordability and increase uptake of insurance

- The free-rider incentive that flows from post-disaster government assistance should be countered with the introduction incentives to promote self-reliance. To this end, all taxes (including GST) and levies should be removed from disaster insurance, and premiums should be fully tax-deductible.
- At present the Federal Government discourages people from insuring themselves by imposing the GST on insurance premiums. Some state governments also penalise self-reliance by imposing levies on insurance companies to fund fire brigades, a cost which is passed on through increased premiums.
- Insurance taxes in Australia are considerably higher. Out of ten comparable OECD countries, Australia was the only one with double digit insurance tax rates and one of only three that impose a consumption tax (GST) on insurance.
- Emergency services levies should be decoupled from insurance premiums in NSW. Ideally, they should be abolished. If not, they should be attached to Local Government rates as in Victoria.
- Disaster insurance premiums should be weighted according to risk according to the National Bushfire risk rating system, with regards to location, building type and construction materials and mitigation measures within the radius of the property. This mechanism would offer property owners and communities an incentive to reduce risk.

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