



THE 2019-2020 AUSTRALIAN BUSHFIRES: FROM TEMPORARY EVACUATION TO LONGER-TERM DISPLACEMENT

ACKNOWLEDGMENTS

This report would not have been possible without the contribution of IDMC's Vicente Anzellini, Christelle Cazabat, Bina Desai, Vincent Fung, Justin Ginnetti, Hamish Patten and Sylvain Ponserre.

We would like to extend our gratitude to our partners and contacts in-country who were able to provide data and valuable contextual information on displacement: Debra Shaddock and her colleagues from the National Coordination Centre of the Australian Red Cross, the Data for Good Team at Facebook, the NSW Aboriginal Land Council and Save the Children.

Authors: Elisabeth du Parc, Louisa Yasukawa

Editor: Jeremy Lennard

Design and lay-out: Maria Teresa Miranda Espinosa, Gregory van der Donk

Cover photo: The burnt landscape on Kangaroo Island, South Australia. Credit: Australian Red Cross, 2019

Published: September 2020

CONTENTS

KEY MESSAGES
INTRODUCTION
DISPLACEMENT PATTERNS
Chronology of the fires
Evacuation policies
Social and demographic patterns of displacement
Gender and age
Indigenous Australians
DISPLACEMENT IMPACTS
Housing
Livelihoods
Education
Security
Health
ROAD TO DURABLE SOLUTIONS AND RISK REDUCTION
Return or relocate?
Climate change mitigation measures
Disaster risk reduction strategies
Better data to inform better responses
CONCLUSION
Endnotes

KEY MESSAGES

Bushfires that raged across Australia triggered around **65,000 new displacements** between July 2019 and February 2020. They also destroyed more than 3,100 homes, potentially leading to longer-term displacement for around 8,100 people.¹

Displacement has had a negative impact not only on the housing conditions, but also the livelihoods, education, security and health of many of those forced to leave their homes. Covering just the housing needs of those unable to return to their homes for a year is estimated to **cost between \$44 million and \$52 million** (A\$60 million and A\$72 million).*

Evidence suggests displacement may have prevented people from working as much as they would normally have done. The loss of economic production as a result of people missing just one day of work because they were displaced by the bushfires is estimated to be around \$510 (A\$705) per person.

Government agencies, fire services and aid providers should be commended for their efforts in responding to the crisis, but better planning for the next bushfire season would help to reduce displacement risk and minimise the negative impacts for people who do become displaced.

Expanding the collection of data on displacement triggered by disasters, including the number of people affected and the patterns of their displacement, is vital to inform better policies on prevention, emergency planning and evacuation responses, and improve the support displaced people receive.

INTRODUCTION

Bushfires of an unprecedented scale and intensity raged across Australia between July 2019 and February 2020, burning over 17 million hectares of land.² Fuelled by prolonged drought, extreme heat and strong winds, the fires intensified rapidly in November and particularly affected people living in the Australian Capital Territory (ACT) and the states of New South Wales (NSW), Queensland, South Australia, Victoria and Western Australia. Thirty-three people lost their lives, three billion animals were killed or fled and more than half of Australia's adult population were affected by smoke.³

The fires triggered 64,579 new displacements, prompting people to leave their homes and register with the Australian Red Cross's Register. Find. Reunite (RFR) system, but the true number of people displaced is likely to have been much higher. Most of the displacements took the form of pre-emptive evacuations, which were effective in minimising loss of life. More than 3,100 homes were lost, potentially leading to longer-term displacement for around 8,100 people.

Government agencies, fire services and aid providers have been commended for their efforts in responding to the fires and supporting the needs of people uprooted, but displacement has still affected the housing conditions and disrupted the livelihoods, education, security and health of those forced to leave their homes, often with significant financial repercussions.

The World Risk Report classifies Australia's exposure to natural hazards as high, and the east of the country is one of the most fire-prone regions in the world.⁶ Given expert predictions that Australian bushfires will become more frequent and severe, this paper is intended to highlight the importance of robust data on displacement to inform better planning to reduce the risk and impacts of the displacement they trigger.⁷

Knowing how many people the fires displaced, the patterns of their displacement and how it has affected their lives is essential to ensure they are provided with the right resources to meet their needs and to help prepare for future disasters.

DISPLACEMENT PATTERNS

CHRONOLOGY OF THE FIRES

The severity of the fires and the displacement they triggered are linked to several factors, including record temperatures, low rainfall and strong winds. It is difficult to attribute a specific disaster to the impacts of climate change, but initial assessments suggest it increased the risk of hot and dry weather conditions by at least 30 per cent. 2019 was Australia's hottest and driest year on record, and parts of the country were experiencing their worst drought in more than a century. As the country's cities grow, suburbs have also been allowed to encroach on areas that are prone to bushfires, and this exposes residents to a higher risk of displacement.

64,579 new displacements were recorded during the 2019-2020 bushfire season, also referred to as the "Black Summer" bushfires, based on figures collected by the RFR services (see figure 1 and box 1). Authorities in Queensland, the first state to be affected, urged people to remain alert as early as August 2019, after the state recorded its hottest July on record.¹² Experts warned at the time that communities were not well prepared for what was likely to be a challenging bushfire season ahead.¹³

Around 1,550 new displacements were recorded across Queensland and NSW between August and October, and both states recruited large numbers of volunteer firefighters as new fires started and existing blazes continued to grow. Unprecedented fires took hold along the east coast at the beginning of November, and more than 80 fires displaced around 800 people in Queensland alone in November and December (see figure 2).

The worst fires, however, were in NSW and the ACT, where nearly 500 homes were destroyed in a few days and around 8,400 new displacements recorded over

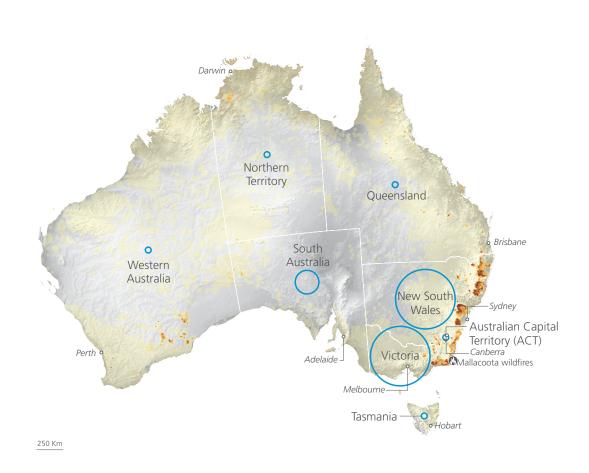
the two months. As the flames threatened the suburbs of Sydney, NSW set its maximum warning level of catastrophic for the first time in a decade. It declared a state of emergency on 11 November, two days after Oueensland.¹⁴

The wildlife haven of Kangaroo Island off the coast of South Australia was engulfed in flames toward the end of the year, as was the town of Cudlee Creek. At least 4,200 new displacements were recorded across the state in only a few days. Fires also spread exceptionally fast in Victoria, where 2,100 displacements were recorded. Flames closed in on the small coastal town of Mallacoota on New Year's Eve, trapping evacuated residents and tourists on the beach and shrouding them in thick smoke. Navy ships of the Australian Defence Force, which are normally used in humanitarian operations overseas, were deployed to help evacuate up to 5,000 people.¹⁵

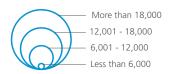
The Black Summer bushfires reached their peak at the beginning of January, when blazes were raging across all states. Some were of such magnitude that they influenced local weather patterns, developing pyrocumulonimbus clouds that have the potential to trigger violent thunder and lightning storms and fire tornadoes. ¹⁶ Thick smoke also posed a significant health hazard, and air quality deteriorated as the season progressed. ¹⁷ Canberra's air quality was ranked the worst in the world on 1 January, above Delhi in India and Dhaka in Bangladesh. ¹⁸

At least 47,000 new displacements were registered in January and to a lesser extent in February. RFR recorded 26,000 in Victoria, 17,000 in NSW and the ACT, 3,800 in South Australia and fewer than 470 across Queensland, Western Australia and Tasmania (see figure 2).

FIGURE 1: Map of Australia showing bushfire affected areas and number of displacements







Frequency of bushfires during the 2019-2020 Australian bushfire season
July 2019 – February 2020 based on remote sensing
(Source, NRT VIRES 275m Active Fire





The 2019-2020 Australian bushfire season: new displacements by year, state and territory



(Sources: Australian Red Cross, fire and emergency services of states and territories and media monitoring)

Borders of States and Territories (Source: Natural Earth 2020)

• Capital cities (Source: Natural Earth 2020)

^{*}Due to rounding, some totals may not correspond with the sum of the separate figures. Data consolidated by IDMC. The boundaries and the names shown and the designations used on this map do not imply official endorsement or acceptance by IDMC.

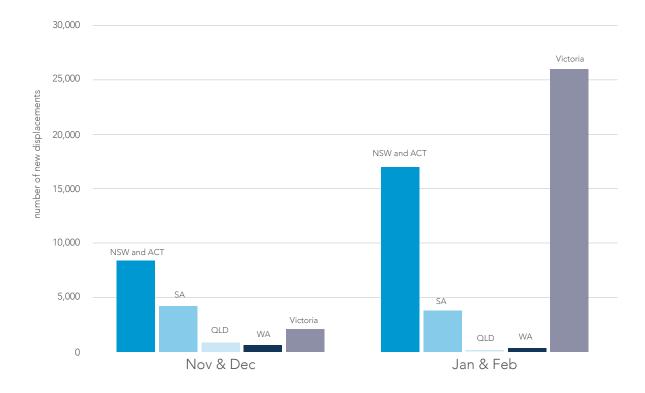
BOX 1: Behind the figures: the RFR system

The Australian Red Cross is responsible for assisting states and territories before, during and after emergencies. During the Black Summer bushfires, it activated its Register. Find. Reunite service to log the people affected, account for evacuees and help them reconnect with their family and friends. Registration takes place by phone, online or in person, but it is voluntary.

Evacuees were initially advised to find an alternative place to stay, whether with family or friends, in second homes or in rented accommodation. Many did so and they were encouraged to register with RFR, but it is likely that a high number of people did not register. Only those who sought shelter in dedicated evacuation centres were obliged to register. That led to the kind of discrepancy observed in the Gippsland and north-eastern region of Victoria, where around 70,000 evacuations were reported by the media after a state of emergency was declared in January, but the RFR only recorded 26,000 registrations across the state as a whole in the first two months of 2020.¹⁹

A further limitation lies in the fact that many people were only displaced for a night, making it more difficult to monitor their movements. Based on RFR data 64,579 new displacements were recorded, but all things considered the figure is almost certainly an underestimate.

FIGURE 2: New displacements recorded in November and December 2019 and January and February 2020





Red Cross personnel pictured with troops on board HMAS Choules during the evacuation of people from Mallacoota at the beginning of January 2020. Photograph: Australian Red Cross

EVACUATION POLICIES

"We kind of thought it was going to be a false alarm again."²⁰

Ms Safe, displaced from Bumbalong Valley, NSW

The majority of displacements were in the form of evacuations. Many people received early-warning alerts advising them to leave their homes via text message or a phone call.²¹ The authorities in NSW also declared a state of emergency various times during the season, giving the emergency services extraordinary powers to force people to evacuate if deemed necessary.²²

The emphasis on pre-emptive evacuations and the use of mandatory orders differed from earlier bushfire seasons, when residents were advised to choose whether to "stay and defend" their homes or "leave early".²³ Australia's states and territories have placed greater emphasis on early evacuation since the 2009 Black Saturday fires in Victoria, which killed 173 people.²⁴ One study revealed that those who sheltered in their properties were less likely to survive than those who evacuated.²⁵

States and territories are responsible for emergency arrangements and strategic planning, but they are also able to request federal government support for major events. The Australian Defence Force commenced Operation Bushfire Assist on 31 December 2019 to support state fire and emergency services across NSW, Queensland and Victoria, and later provided support to the ACT, South Australia and Tasmania. It marked the largest mobilisation of the Australian Defence Force for domestic disaster relief in Australia's history. More than 6,500 Australian Defence Force members assisted with emergency relief, response and recovery operations, including by clearing roads, repairing fences, and delivering water and food to evacuees.²⁶

Bushfires came dangerously close to Sydney, Canberra and Adelaide between November and January. Australia's fire-prone areas tend to be on the fringes of its major cities. Eighty per cent of the Greater Blue Mountains World Heritage Area, a popular tourist destination an hour's drive from Sydney, was burned.²⁷

Urban residents are often asked to lock down, while suburban and rural residents are advised to leave early before fallen trees and other fire debris or the flames themselves block their escape routes. People tend to flee by car and without government help, but timely evacuation warnings from local fire and emergency services undoubtedly save many lives.²⁸

SOCIAL AND DEMOGRAPHIC PATTERNS OF DISPLACEMENT

People face specific risks and were affected differently by the Black Summer fires depending on their age, location, gender and community. Forty-five per cent of the people who registered with RFR identified as male, 52 per cent as female and three per cent did not specify. Eighty per cent were adults and 20 per cent children.²⁹

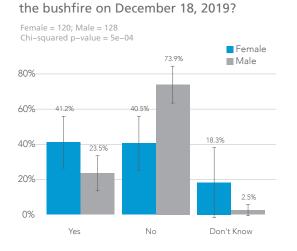
Around 16 per cent of the people evacuated in 2019 were tourists.³⁰ They are not included in this paper's figures, because the Guiding Principles on Internal Displacement stipulate that only people leaving their place of residence should be counted as internally displaced.³¹ It was not possible to exclude tourists in the gender and age breakdown of RFR registrations, but the figures are consistent with national demographic statistics.³²

Gender and age

In February and March 2020, Facebook's Data for Good program surveyed 96,000 users in the regions affected by the Green Wattle Creek Fire in Eastern NSW and the Cudlee Creek Fire in Adelaide Hills, South Australia, which both started on 18 December 2019.³³ NSW had then already declared a state of emergency, while the

FIGURE 3: Graph from Facebook survey showing preemptive evacuations

Did you leave more than 3 nights BEFORE



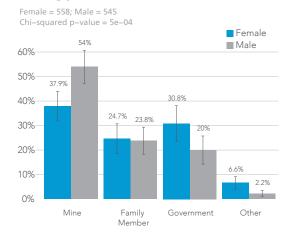


Soldiers from the 7th Battalion, the Royal Australian protect Red Cross Food parcels and supplies from the rotor wash of a Republic of Singapore Air Force Chinook helicopter as it takes off from Wallagaraugh in Gippsland, VIC. Photograph: Australian Red Cross

government of South Australia activated the State Emergency Relief Fund for the Cudlee Creek fires collecting donations aimed at people displaced.³⁴ Two weeks after the start of these fires, Facebook displacement maps showed that 8.86 per cent of the population had been displaced, and again they noticed a difference between men and women: a higher percentage of men (9.34 per cent) than women (8.36 per cent) were displaced.³⁵

FIGURE 4: Graph from Facebook survey showing decision leading to evacuation

Whose decision first led you to leaving your home?



There are many ways that women's displacement experiences may differ from men's. The main findings suggest women are more likely than men to evacuate earlier in time than their counterpart when evacuating ahead of a bushfire (see figure 3). With this data, emergency and relief services can not only plan where to focus their operations when targeting the needs of women, but also understand how men and women may be affected differently by disasters. The Facebook survey also finds women were more likely to attribute their evacuation decision to the government's advice to evacuate, while men are more likely to say it was their own decision (see figure 4). A regression model shows that when the displaced person is not the head of household, he or she is more likely to say it was a family member's decision and less likely to say it was the government's, even adjusted for age, gender, and level of education.³⁶

The survey studied a small sample of the total amount of people displaced and therefore by no means constitutes a comprehensive and exhaustive representation of the reality. The results best represent the self-reported experience of people who used Facebook at least once during the two-week window when the survey was administered, approximately two months after the fires. In general, Facebook users in Australia tend to be younger, with an overrepresentation of the age groups 20-40 as compared to the on-ground population, with less representation among older adults. People most affected by the fires might have been less able to respond to the survey if their access to connectivity or visitation patterns to Facebook were still disrupted at time of the survey.

Around 14,500 children were displaced by the Black Summer fires, accounting for 20 per cent of the displaced population.³⁷ This aligns fairly closely with national demographic figures, in which people aged 0 to 19 account for 25 per cent of the population.³⁸ Save the Children assisted 800 children in emergency centres and 750 through outreach services.³⁹ Children's recovery from the trauma associated with displacement can be a long process, and they have specific requirements in terms of play areas, adequate beds in shelters and physical and mental healthcare.

Indigenous Australians

NSW and Victoria are home to more than a third of the country's population of 865,000 Indigenous Australians. ⁴⁰ A quarter of those living in the two states have their homes in fire-affected areas, compared with a tenth of the non-indigenous population. Some of the towns affected by the fires were 100 per cent Indigenous Australian. ⁴¹ Such localities tend to be in remote areas that are less well protected, making them particularly vulnerable to hazards including storms and fires and the displacement they trigger. Around 18 per cent of Indigenous Australians live in remote and very remote areas, compared with 1.4 per cent of the non-indigenous population. ⁴²

Home ownership among Indigenous Australians is also much lower than for the non-indigenous population at 38 and 66 per cent respectively, which also increases their risk of long-term displacement. ⁴³ Landlords in NSW and Victoria are not legally obliged to provide alternative housing for tenants whose accommodation has been destroyed by a hazard. ⁴⁴

Members of at least 50 of NSW's 120 Local Aboriginal Land Councils (LALCs) were displaced by bushfires along the state's south and mid-north coast.⁴⁵ Of the 17 LALC families who fled the remote towns of Mogo, Eden and Cobargo, ten families were still seeking adequate medium- to longer-term alternate accommodation as of February 2020.

Indigenous Australian identity is strongly tied to the land, and the fires destroyed many hectares of cultural and sacred sites, particularly along the NSW and Victoria coast. Eighty per cent of the Greater Blue Mountains World Heritage Area in NSW - an area inhabited for millennia by the six Indigenous language groups, who are recognised as the traditional owners - was burned. Australian laws have partially returned land to Indigenous Australians in recent decades, but the evacuations still served as a reminder of the collective trauma of permanent displacement dating back to the time of colonisation. 46

DISPLACEMENT IMPACTS

The displacement triggered by the bushfires has destabilised the lives of many of those forced to leave their homes, not only affecting their housing conditions but also disrupting their livelihoods, access to education, security and health. Understanding how people's lives have been affected helps to inform better planning and preparation to ensure that their specific needs are addressed in future disaster responses.

HOUSING

As the Black Summer bushfires took hold, more than 100 evacuation and relief centres were established to provide displaced people with food, water, personal items and a safe place to stay. 47 State government agencies also set up services to provide emergency accommodation to those temporarily displaced. 48 More than 8,500 people offered spare beds, rooms and homes for free via the Find a Bed website, and Airbnb's Open Home programme and other accommodation-sharing platforms also helped to respond to the growing housing needs. 49

As large numbers of people tried to evacuate at the same time, however, heavy traffic and road closures prevented many from even reaching temporary shelter, whether in official centres or with friends or family. Most relied on their cars to get to safety and thousands ended up sleeping in their vehicles, or pitching tents and improvised bedding on the roadside.⁵⁰

Most evacuees have been able to return to their homes, but according to the National Bushfire Recovery Agency it is estimated the fires destroyed more than 3,100 homes.⁵¹ This figure is based on estimates provided by the Rapid Damage Assessment undertaken by State and Territory Fire Authorities and does not distinguish between primary residences and investment properties or holiday homes.⁵² Nor does it include caravans or mobile homes that were people's primary place of residence. The number of people at risk of longer-term displacement is calculated based on the average household size in Australia being 2.6.⁵³

Based on previous post-disaster efforts in Australia, it takes people who have lost their homes between one



Beds set up for evacuated people in a hall at Kangaroo Island, South Australia, during the bushfire emergency in January 2020. Photograph: Australian Red Cross.



Tents set up to shelter displaced people at an evacuation centre.

Photograph: Australian Red Cross.

and four years to rebuild.⁵⁴ The timeframe depends on a number of factors, including an individual's financial situation, psychological wellbeing and decision-making. Delays in meeting building requirements and processing insurance claims, and shortages of builders and materials in affected communities have also been known to slow down the rebuilding process.⁵⁵

The average rental cost for a house in Australia in March 2020 was around \$270 (A\$375) a week in regional areas and \$320 (A\$445) in the metro areas. ⁵⁶ This means that a displaced family could spend between \$14,100 (A\$19,500) and \$16,700 (A\$23,140) a year on rented accommodation. Assuming that each house destroyed in the fires represents one displaced household, the overall annual cost would be between \$44 million and \$52

million (A\$61 million and A\$72 million) (see figure 5).

This represents a potentially enormous financial burden for those displaced for long periods and could heighten their pre-existing vulnerabilities and deepen their socioeconomic hardship. State housing services have offered private rental bonds, advance payments and subsidised housing to help alleviate the burden.⁵⁷ The Australian Red Cross has distributed more than \$86 million (A\$119 million) in emergency assistance grants to 4,380 people whose homes were destroyed or rendered uninhabitable, and it also offers generous re-establishment grants.⁵⁸ Some people's insurance policies covered the cost of alternative accommodation, and several hotel chains have offered free accommodation to those who lost their homes.⁵⁹

FIGURE 5: Estimated cost of housing per year of displacement

	Regional areas	Metro areas
Cost of rent for one displaced household for a year	\$14,100 (A\$19,500)	\$16,700 (A\$23,140)
Cost of rent for all displaced households for a year	\$44 million (A\$60 million)	\$52 million (A\$72 million)

"You never want to have that conversation with your four-year-old about why it's not safe to go home, it's heartbreaking." 60

Maddy Barry, displaced from Bermagui, NSW

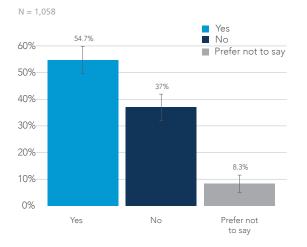
Despite these substantial efforts, many of those uprooted by the fires still have significant housing needs. Accommodation shortages in or near affected areas and difficulties in navigating bureaucratic procedures have left them unable to access stable accommodation, and some were still living in tents or trailers as of May 2020.⁶¹ Better coordination of transport arrangements could enable more evacuees to reach safe shelter in the short-term, but further resources are required to meet longer-term housing needs.

LIVELIHOODS

By disconnecting people from their workplaces and assets, the displacement triggered by the bushfires disrupted people's livelihoods and prevented them from working as much as usual. Evidence of the level of disruption caused by displacement was highlighted in Facebook's survey on displacement patterns in Green Wattle Creek and Cudlee Creek. Out of 1,058 people

FIGURE 6: Graph from Facebook survey showing percentage of people prevented from working as much as they normally do

Did leaving your home prevent you from working as much as you normally do?



who responded that they were away from their home for more than one night, 55 per cent said that leaving home prevented them from working as much as they normally do, compared with 37 per cent who said it did not (see figure 6).

Around 8 per cent preferred not to say. Perhaps unsurprisingly, the results indicated that the longer respondents were away from home, the more likely they were to respond that their work had been disrupted. For sole traders and people working in agriculture and tourism in particular, missing work could mean no pay or income.

The inability of large numbers of people to work as much as they would normally have done during their displacement also has wider implications for the economy as a result of lost production of goods and services. Each person contributes to the economy in different ways, but based on national GDP data and hours worked between June and September 2019, gross value added per person has been estimated at an average of \$68 (\$A94) per hour.⁶² If people displaced by the fires were prevented from working for one 7.5-hour day, lost production would be \$510 (A\$705) per person

Many people are likely to have been away from their homes for more than one working day. Indeed, according to the survey conducted by Facebook, among people who left home for more than one night, 63 per cent of respondents (out of a total of 1,485) said they were forced to flee their homes for more than three nights as a result of the bushfires.

This does not account for the economic impact of wide-spread displacement on the areas people leave behind. The absence of local residents and the mandatory evacuation of tourists left many businesses without customers at what is usually their busiest time of the year. ⁶³ This highlights the financial value of reducing the risk of displacement happening in the first place, and providing people who do become displaced with the support they need to able to resume their economic activity as quickly as possible.

Local, state and federal governments, aid providers and the private sector offered a range of grants and financial hardship measures to assist affected individuals, primary producers and small businesses.⁶⁴ People who lost their income as a direct result of the bushfires were eligible for up to 13 weeks of income support and a one-off disaster recovery payment of \$720 (A\$1,000).⁶⁵ The federal government had processed more than 75,000 claims and provided \$63.3 million (A\$88 million) in support by February 2020.⁶⁶ Such efforts should be commended, but strict eligibility requirements and severe delays in processing claims meant that many missed out.⁶⁷

"Homeless and unemployed. It's a full-time job to try and manoeuvre and navigate everything." 68

Melissa Churchman, displaced from Sarsfield, Victoria

There is also some evidence to suggest that financial pressures and lack of livelihood opportunities may be a factor in determining whether people decide to return home or permanently relocate. In the survey conducted by Facebook into displacement patterns in Green Wattle Creek and Cudlee Creek in Adelaide Hills, respondents were asked why they had not permanently returned

home. While 58 per cent of respondents said they had not returned home because it was "unsafe", 22 per cent cited "new opportunities" as the main reason (see figure 7).

Although it is unclear what respondents considered to be "new opportunities", one possible explanation is that residents chose not to return so they could find new sources of income elsewhere. This was the case for one NSW resident who had been back and forth from his family home for weeks because of the fires.⁶⁹ The flames did no damage to his home, but his employer's business remained closed, so he relocated to Canberra in search of income opportunities to support his family and pay his mounting bills.⁷⁰

Farming communities have also predicted that residents may not return because of a reduction in the amount of agricultural work available.⁷¹ These examples are consistent with research into the Black Saturday bushfires of 2009, which shows that some people chose to relocate because of reduced business and employment opportunities.⁷²



Berrara, NSW, during the bushfire emergency in January 2020. Photograph: Australian Red Cross

EDUCATION

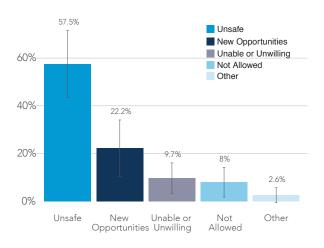
The bushfires reached their peak during school holidays, but many children were still evacuated from their homes various times in November and late January, causing significant disruption to their schooling.⁷³ The November fires destroyed at least two schools in NSW and led to the closure of more than 600 in the state of NSW alone.⁷⁴

How many of the children displaced by the fires were of school age, which is defined internationally as aged five to 14 for statistical purposes, is not known. Their number can be estimated, however, by applying the

FIGURE 7: Facebook survey graph showing reasons for not returning

Why have you not permanently returned to your home?

N = 125



percentage of school-age children among the national population, which is 12.4 per cent, to the total number of people registered as displaced. This yields a figure of around 8,000.⁷⁵ Some displaced students attended schools other than their own, but others simply missed out on learning.⁷⁶

Save the Children established ten Child Friendly Spaces in evacuations centres, providing around 800 children with emergency and psychosocial support.⁷⁷ In the absence of systematic government funding, however, specific services for children in centres were extremely limited and their needs were often overlooked.⁷⁸

The upheaval of displacement and loss of learning were nevertheless a source of anxiety and distress for children, some of whom reported a sense of time lost and concern that they were falling behind in their school work. Save the Children recommends better preparation to ensure continuity of schooling during future bushfire seasons, including the establishment of alternative modes of teaching and other mitigation and contingency plans.⁷⁹

SECURITY

Legal centres and domestic violence agencies have expressed concerns about the heightened protection risks that women uprooted by bushfires face.⁸⁰ Some women at risk of domestic violence encountered former partners in evacuation centres, where they suffered intimidation and even physical abuse.⁸¹ Others had to rely on violent former partners for a place to stay, food and other support, sometimes in breach of court orders forbidding contact.⁸² Displacement has also separated many women from family members and friends, who may be important sources of protection.⁸³ This highlights the specific needs of vulnerable displaced groups and the importance of tailoring support for them accordingly throughout their displacement.⁸⁴

HEALTH

The trauma of having to flee, being separated from loved ones, and the losses that displacement often entails have caused significant distress and in some cases given rise to complex mental health needs. ⁸⁵ The federal government deployed health specialists to support evacuees and committed \$54.7 million (A\$76 million) toward a mental health support package, including counselling sessions and online video consultations. ⁸⁶ The Australian Red Cross also provided free psychosocial support in evacuation centres. ⁸⁷

A number of private family doctors tried to set up impromptu practices next to evacuation centres to provide mental health support and emergency medication to their displaced patients, but they were prevented from doing so because they were not part of the official response team.⁸⁸ Road closures also impeded the supply of medical equipment, including oxygen cylinders.⁸⁹ This has prompted calls for a national framework that embeds doctors and community pharmacies in emergency evacuation plans and ensures that those forced to flee their homes are able to receive the mental and physical healthcare they need.⁹⁰

ROAD TO DURABLE SOLUTIONS AND RISK REDUCTION

The extent of the destruction and damage that the Black Summer bushfires wrought on affected communities means that finding lasting solutions for people facing prolonged displacement will be a complex, lengthy and expensive process.

The Federal Government has established a National Bushfire Recovery Agency to coordinate efforts. It has initial funding of \$1.4 billion (A\$2 billion) and will work with dedicated state and territory agencies throughout the recovery process.⁹¹

Better planning for the next bushfire season would also help to reduce the risk of displacement, minimise its impacts and facilitate the achievement of durable solutions. This section explores options for doing so through return, recovery and risk reduction efforts.

RETURN OR RELOCATE?

Displaced people vary both in their willingness and ability to return and rebuild or relocate. Those who wish to rebuild may be prevented from doing so by a number of factors, including the lack of adequate home insurance, which may force them to relocate to other areas (see box 2). Research into the Black Saturday bushfires of 2009 also revealed that some people's decision to relocate was driven by an insurmountable feeling of being unsafe in their communities and traumatic reminders of loss. 92 Others cited more practical reasons, including reduced employment opportunities and access to basic services. 93



Berrara, NSW, during the bushfire emergency in January 2020. Photograph: Australian Red Cross.

BOX 2: Under-insurance as a barrier to return

Home insurance can play a important role in mitigating disaster losses and enabling people whose homes have been destroyed to rebuild and return more quickly. Many of those affected by the Black Summer fires, however, may not be adequately covered. The Insurance Council of Australia says that up to 80 per cent of insured homeowners may have been under-insured.⁹⁴ This happens when the value of a property for insurance purposes does not cover the actual cost of rebuilding. It may be the result of a number of factors, including greater demand for builders in affected communities increasing the price of their services, and changes to building regulations that may also push up rebuilding costs.⁹⁵

Australia introduced Bushfire Attack Level (BAL) ratings in 2000 as a means of measuring the extent of buildings' exposure. They were intended to reduce disaster risk and improve resilience, but by setting higher construction standards in areas prone to fires they have also inflated rebuilding costs by 20 per cent. ⁹⁶ This may prevent many people from rebuilding, which in turn may prolong their displacement. Experts have emphasised the importance of ensuring that homeowners in high-risk areas are aware of the implications of BAL ratings so they are able to plan accordingly. ⁹⁷

CLIMATE CHANGE MITIGATION MEASURES

Researchers have warned since 2007 about longer and more intense bushfire seasons, saying direct effects would be observable by 2020.98 There is compelling evidence to link this trend to climate change. The Black Summer fires were fuelled at least to some extent by prolonged drought, the hottest temperatures recorded and strong winds. One study suggests climate change increased the risk of the weather conditions that drove the fires by at least 30 per cent and possibly much more.99

As one of the world's biggest per capita emitters of greenhouse gases and one of the largest exporters of coal, Australia's climate policy is particularly relevant.¹⁰⁰ The Climate Change Performance Index gave Australia an overall rating of "very low" in 2020 and experts have observed a lack of national progress in reducing emissions in line with 2030 targets and developing a long-term mitigation strategy.¹⁰¹ The enormous human, environmental and financial cost of the Black Summer fires, including the displacement they triggered, highlights the value of investing in climate change mitigation strategies that reduce the intensity of such hazards and communities' vulnerability to them.

DISASTER RISK REDUCTION STRATEGIES

Those involved in rebuilding efforts face the challenge of striking a balance between communities' speedy recovery and taking the time needed to reduce future displacement by minimising disaster risk. The Sendai Framework for Disaster Risk Reduction (Sendai Framework), which Australia has adopted and incorporated into its national risk reduction framework and other policies, notes that the recovery and reconstruction phase after a disaster is a vital opportunity to "build back better" by integrating disaster risk reduction measures into the restoration of infrastructure and social systems.¹⁰²

"We're not fighting a battle against nature. These are socially constructed disasters, not just in terms of climate change, but in terms of the reactive response rather than long-term planning." 103

Dr Scott Hawken, urban designer from UNSW Built Environment

In the areas most at risk of bushfires, destroyed homes and infrastructure should arguably not be rebuilt at all.¹⁰⁴ This is particularly true of urban suburbs, which as a result of poor planning policy have encroached into areas prone to fires, where their unsuitable design further exposes their inhabitants to risk.¹⁰⁵ Improving infrastructure, revising building regulations and increasing vegetation management may help to strengthen resilience in the short-term, but larger-scale initiatives are needed to transform how settlements are designed and disaster risk is mitigated in the longer term.¹⁰⁶ This has prompted calls for state governments to buy back land from people in areas most at risk, as happened after the 2009 Black Saturday fires.¹⁰⁷

There have also been calls for more targeted risk reduction measures. State and territory authorities responsible for fire management have invested in coping capaci-

ties, such as early-warning evacuation text messages. They have also financed adaptation measures such as making buildings fire-resistant and improving forest management.¹⁰⁸

Hazard reduction burning, however, appears to have had little effect in slowing the 2019-2020 bushfires.¹⁰⁹ Rather than simply burning as much land as possible, as has often been the strategy, studies recommend a more targeted approach as part of a risk-based system intended to protect life, property and other assets. The controlled burning of leaves and branches in fires that are good for the land also prevents them from acting as fuel for an uncontrolled fire. Indigenous Australian have taught such techniques, which date back thousands of years, to the NSW Rural Fire Service already, opening a door for further collaboration.¹¹⁰



Standing in burnt landscape on Kangaroo Island, South Australia after the bushfire emergency during January 2020. Photograph: Australian Red Cross.

BETTER DATA TO INFORM BETTER RESPONSES

There are a number of significant gaps in the data on internal displacement in Australia. These need to be filled because accurate and timely data is vital not only to shed light on the scale of the displacement triggered by the Black Summer bushfires, but also to learn lessons and improve planning, preparedness and responses to future displacement crises. To ensure that policies and interventions to reduce displacement risk and support those who do become displaced are based on robust evidence, better data disaggregated by sex, age and indigenous status at a minimum is needed in several areas (see figure 8).

Options and guidance already exist to improve the collection of displacement data in Australia.¹¹¹ Integrating aid providers' and government agencies' existing monitoring tools with dedicated indicators would enhance coordination. Strengthening national reporting frameworks on displacement in line with the Sendai Framework would promote greater accountability and help to track progress in resolving people's displacement. Improving data and evidence sometimes requires innovative approaches, but in many cases it can be done by building on existing capacities and adapting tools and technologies that are already used in other disciplines.

FIGURE 8: Questions to be answered with better data and how this type of information could improve responses



Where are people displaced from and where do they take refuge? This would help to shape transport plans for evacuations and inform the positioning of support services.



Why do people decide to evacuate and who within households takes the decision to evacuate? This would improve the timing, framing and targeting of early warning messages.



What are the immediate and longer-term impacts of displacement, how are different groups affected and what is their motivation to return or relocate? This is key to tailoring support and formulating longer-term solutions.



What are the financial impacts of displacement and who bears the costs? This would help with fundraising and budgeting for future displacement events and advocating for investments to reduce displacement risk.

CONCLUSION

Australians do not tend to think of their country as being affected by internal displacement, or as being home to internally displaced people. The Black Summer bushfires, however, which triggered 64,579 new displacements, show that it is not immune to the phenomenon.

Government agencies' and aid providers' impressive response to the fires and the support displaced people have received reveal signs of good practice, which can be harnessed when responding to future disasters. Responders have established dedicated services to assist displaced people. Members of the community and the private sector have shown that they have a vital role to play in filling the gap between needs and resources via home-sharing platforms and financial hardship programmes. Several government-led inquiries have also been set up to examine responses to the Black Summer fires, providing an opportunity to share experiences and explore what worked well and what could be improved in future bushfire seasons.¹¹²

Recovery and rebuilding efforts, however, have been slow, and challenges remain for many of those still unable to return to their homes.¹¹³ Left unaddressed, the negative consequences of displacement can accumulate, with implications not only for the people concerned, but also their communities and the wider economy.

This paper's findings have a number of implications for government agencies and aid providers when planning for future disasters. They highlight the need for more robust data on disaster displacement to inform planning, preparedness and responses. By examining some of the direct impacts of displacement on the lives of those forced to leave their homes, this paper has also sought to illustrate the importance of addressing the specific needs of vulnerable groups such as women, children and Indigenous Australians, and adopting measures to reduce displacement risk.

Government agencies across Australia have already demonstrated their commitment to taking important steps to do so. The government of NSW announced in August 2020 that it would adopt all 76 recommendations made in the final report of the NSW bushfire inquiry.¹¹⁴ This includes shifting to a strategic approach to bushfire planning to accommodate changing climate conditions, strengthening early warning systems, and engaging in short- and longer-term resilience and mitigation measures.¹¹⁵ Other recommendations that have been adopted include improving the management of evacuation centres to specifically address the needs of vulnerable people and ensuring Indigenous Australians are included in emergency planning and preparation.¹¹⁶ The report also recommended NSW government agencies design an inclusive opt-in scheme to collect personal information at evacuation centres, which can be shared between government agencies, local councils and NGOs administering support services for disaster-affected people.117

As experts warn that bushfires will become more frequent and intense in the years to come, adopting such measures and enhancing the collection of displacement data disaggregated by sex, age and indigenous status could play a vital role in reducing risk, strengthening resilience and minimising the negative impacts of displacement.

ENDNOTES

- 1 Australian Red Cross, "<u>Australian Bushfire Report: January June 2020</u>", June 2020; National Bushfire Recovery Agency, "<u>Local area profiles</u>", last updated: 10 September 2020.
- Parliament of Australia, "2019–20 Australian bushfires—frequently asked questions: a quick guide", 12 March 2020.
- Parliament of Australia, "Australian bushfires: Condolences Mr Morrison", 4 February 2020; Biddle et al., "Exposure and the impact on attitudes of the 2019-20 Australian Bushfires", ANU Poll, Centre for Social Research and Methods, February 2020; WWF, "Australia's 2019-2020 Bushfires: The Wildlife Toll: Interim Report", July 2020.
- 4 Australian Red Cross, RFR system, "Australian bushfires 2019-20", received by IDMC via email, 13 August 2020.
- 5 The number of homes lost is based on estimates provided by the Rapid Damage Assessment undertaken by State and Territory Fire Authorities and does not distinguish between primary residences and investment properties or holiday homes. It also does not include caravans or mobile homes that were people's primary place of residence, see: Australian Red Cross, "Australian Bushfire Report: January June 2020", June 2020; National Bushfire Recovery Agency, "Local area profiles", last updated: 10 September 2020. The estimated number of people facing longer-term displacement is based on the average household size in Australia being 2.6 from IDMC, "Methodological Annex", GRID 2020, April 2020, pp.15-16.
- 6 Bündnis Entwicklung Hilft & Institute for International Law of Peace and Armed Conflict, "World Risk Report 2019 – Focus: Water Supply", 17 September 2019.
- 7 Dowdy et al., "Future changes in extreme weather and pyroconvection risk factors for Australian wildfires", Scientific Reports vol.9, 11 July 2019; Climate Council, "This is Not Normal": Climate change and escalating bushfire risk: Briefing Paper", 12 November 2019.
- 8 Climate Council, "This is Not Normal': Climate change and escalating bushfire risk: Briefing Paper", 12 November 2019
- 9 Oldenborgh et al., "<u>Attribution of the Australian bushfire risk</u> to anthropogenic climate change", Natural Hazards and Earth System Sciences (in review), 11 March 2020.
- 10 Australian Government Bureau of Meteorology, "Annual climate statement 2019", 9 January 2020.
- Australian Institute for Disaster Resilience, "Living with bushfires on the urban-bush interface", Australian Journal of Emergency Management, vol. 35(1), January 2020; UNSW Sydney News Room, "We must rethink before we rebuild",21 February 2020.
- 12 Australian Government Bureau of Meteorology, "Queensland in July 2019: Rainfall below average in the southeast", 1 August 2019.
- 13 ABC News, "Queensland bushfire season expected to last longer, authorities warn", 28 August 2019.
- 14 NSW Government, "State of Emergency declared for NSW", 12 November 2019; Brisbane Times, "Authorities declare 'state of emergency', in parts of Queensland", 9 November 2019.
- 15 International Federation of Red Cross (IFRC), "Information Bulletin Australia: Bushfires", 8 January 2020.
- 16 NASA, "NASA Animates World Path of Smoke and Aerosols from Australian Fires", 9 January 2020.
- 17 Arriagada et al., "<u>Unprecedented smoke related health</u> burden associated with the 2019–20 bushfires in eastern Australia", The Medical Journal of Australia, 12 March 2020.
- 18 IQAir, "Air quality in Canberra", accessed: 26 August 2020.
- 19 The Age, "Victorian bushfires LIVE: Third confirmed death, about 300 homes destroyed", 8 January 2020.

- 20 The Canberra Times, "My brain went completely numb': Couple returns to destroyed home in Bumbalong Valley", 2 February 2020.
- 21 ABC News, <u>Bushfire SMS alerts urge Corryong, north-east Victoria residents to evacuate</u>, 2 January 2020.
- 22 NSW Government, "Premier declares third State of Emergency", 2 January 2020.
- 23 The Guardian, "Australian fires: Victorians urged to leave amid fears 'heat spike' will cause bushfires to merge", 9 January 2020; Paveglio, et al., "Wildfire Evacuation and its alternatives in a post-Black Saturday landscape: Catchy slogans and cautionary tales, Environmental Hazards", vol. 11, 12 January 2012.
- 24 Johnson, et al., "Stay or Go? Human Behaviour and Decision Making in Bushfires and Other Emergencies", Fire Technology vol. 48, 2012; Paveglio et al., Wildfire Evacuation and its alternatives in a post-Black Saturday landscape: Catchy slogans and cautionary tales, Environmental Hazards vol. 11, 2012.
- 25 Handmer et al., <u>The risk of dying in bushfires: A comparative analysis of fatalities and survivors</u>, Progress in Disaster Science, vol. 1, May 2019.
- 26 Australian Government Department of Defence, "Operation Bushfire Assistance Concludes", 26 March 2020.
- 27 The Guardian, "It's heart-wrenching': 80% of Blue Mountains and 50% of Gondwana rainforests burn in bushfires", 16 January 2020; NSW Government Department of Planning, Industry and Environment, "NSW Fire and the Environment 2019–20 Summary", March 2020, p.5.
- 28 Maas et al., "Using social media to measure demographic responses to natural disaster: Insights from a large-scale Facebook survey following the 2019 Australia Bushfires", arXiv: 2008.03665, 9 August 2020.
- 29 Australian Red Cross, RFR system, "Australian bushfires 2019-20", received by IDMC via email, 27 February 2020.
- 30 Australian Red Cross, RFR system, "Australian bushfires 2019-20: Disaggregation residents vs. tourists", received by IDMC via email, 17 March 2020.
- 31 OCHA, "<u>Guiding Principles on Internal Displacement"</u>, 1998, paragraph 2.
- 32 Australian Bureau of Statistics, "2016 Census QuickStats", last updated: 12 July 2019.
- 33 Facebook, "<u>Data For Good</u>", accessed 26 August 2020; Maas et al., "<u>Using social media to measure demographic responses to natural disaster: Insights from a large-scale Facebook survey following the 2019 Australia Bushfires</u>", arXiv: 2008.03665, 9 August 2020.
- 34 Government of South Australia, "<u>State Emergency Relief</u> <u>Fund activated for Cudlee Creek</u>", 24 December 2019.
- Maas et al., "<u>Using social media to measure demographic responses to natural disaster: Insights from a large-scale Face-book survey following the 2019 Australia Bushfires</u>", arXiv: 2008.03665, 9 August 2020.
- Maas et al., "<u>Using social media to measure demographic responses to natural disaster: Insights from a large-scale Face-book survey following the 2019 Australia Bushfires</u>", arXiv: 2008.03665, 9 August 2020.
- 37 Australian Red Cross, RFR system, "Australian bushfires 2019-20", received by IDMC via email, 27 February 2020.
- 38 Australian Red Cross, RFR system, "Australian bushfires 2019-20: Disaggregation residents vs. tourists", received by IDMC via email, 17 March 2020; Australian Bureau of Statistics, "2016 Census QuickStats", last updated: 12 July 2019.
- 39 Save the Children, "Children's experiences and needs in the 2019-20 bushfires: Consolidated submission to inquiries into the 2019-20 bushfires", April 2020.
- 40 Australian Bureau of Statistics, "Projected population, Aboriginal and Torres Strait Islander Australians, Australia, state and territories, 2016 to 2031", accessed 26 August 2020.
- 41 Williamson et al., "Aboriginal Peoples and the response to the 2019-2020 Australian bushfires", Centre for Aboriginal

- Economic Policy Research Working Paper 134, Australian National University, Canberra, 2020.
- 42 Australian Bureau of Statistics, "2076.0 Census of Population and Housing: Characteristics of Aboriginal and Torres Strait Islander Australians 2016 (Indigenous Status by Remoteness 2016(a))"; last updated 13 March 2019.
- 43 Australian Institute of Health and Welfare, "Indigenous housing", 11 September 2019.
- 44 NSW Government Fair Trading, <u>Repairs, maintenance and damage when renting</u>, accessed 26 August 2020; Consumer Affairs Victoria, "<u>Renting disaster advice</u>", last updated 6 August 2020.
- 45 NSW Aboriginal Land Council, "Summary of Dislocation of Aboriginal Peoples in NSW – 'Black Summer' Bush Fires 2019-20", 25 May 2020; NSW Aboriginal Land Council, "LALC/ Aboriginal Community Bushfires Impact Map", last updated 21 February 2020, available at:
- 46 The Conversation, "Strength from perpetual grief: how Aboriginal people experience the bushfire crisis", 10 January 2020; SBS News, "All hell broke loose': Mogo Aboriginal community devastated by bushfire", 3 January 2020.
- 47 Australian Red Cross, "Australian Bushfires Report: 1 January 15 April 2020", April 2020.
- 48 NSW Government Communities & Justice, "Bushfire Housing Assistance Service", 10 January 2020.
- 49 Future Focus Project, "Find a Bed finds accommodation for bushfire evacuees", 22 January 2020.
- 50 SBS News, "Thousands Flock to NSW highway, sleeping on road to escape bushfires", 3 January 2020; The Canberra Times, "South Coast fires: Batemans Bay evacuees in limbo over their next move", 2 January 2020.
- 51 Australian Red Cross, "Australian Bushfire Report: January June 2020", June 2020; National Bushfire Recovery Agency, "Local area profiles", last updated: 10 September 2020.
- 52 Australian Red Cross, "Australian Bushfire Report: January June 2020", June 2020; National Bushfire Recovery Agency, "Local area profiles", last updated: 10 September 2020.
- 53 IDMC, "<u>Methodological Annex</u>", GRID 2020, April 2020, pp.15-16.
- 54 Australian Red Cross, "<u>Australian Bushfires Report: 1 January</u> <u>– 15 April 2020</u>", April 2020.
- 55 ABC News, "Australian bushfire rebuild could take five years, builders warn, citing Tathra example", 4 February 2020.
- 56 Rent.com.au, "Rent.com.au rental market snapshot": March 2020, 1 April 2020.
- 57 NSW Government Communities & Justice, "Bushfire Housing Assistance Service", 10 January 2020.
- 58 Australian Red Cross, "<u>Australian Bushfires Report: January June 2020</u>", June 2020.
- 59 Finder, "Emergency accommodation after bushfires: what are your options?", 6 January 2020.
- 60 ABC News, "As Government pursues cheap bushfire loans, this woman's patisserie won't bake for weeks", 7 January 2020
- 61 The New York Times, "A Nightmare': Losing a Home to Australia's Fires, Then Locked Down by a Virus", 10 May 2020.
- 62 The Australia Institute, "Polling Bushfire crisis and concernabout climate change", January 2020; Australian Bureau of Statistics, "5206.0 Australian National Accounts: National Income, Expenditure and Product, Mar 2020 (Table 3)", last updated 3 June 2020; Australian Bureau of Statistics, "6202.0 Labour Force, Australia, Nov 2019 (Table 19)", last updated 22 January 2020.
- 63 Commercial Real Estate, "South Coast businesses suffering after the devastating bushfires begin the slow task of getting back on their feet", 7 February 2020. Roy Morgan, "Today 26% of Australian businesses have been affected by bushfires Australian needs to support businesses in the Accommodation and Food services industries with Visitors and Tourists", 24 January 2020.

- 64 Funding Centre, "Grants for bushfire relief", accessed 26 August 2020.
- 65 Australian Government Services Australia, "NSW Bushfires September 2019 - Disaster Recovery Allowance", 20 March 2020
- 66 Australian Government Services Australia, "Media release:

 Update on Australian Government support for bushfire affected regions", 3 February 2020,

 67 ABC News, "Fire recovery payments barely trickling through
- 67 ABC News, "Fire recovery payments barely trickling through as Victoria's fire-affected communities try to rebuild their lives", 17 February 2020. ABC News, "Bushfire-affected farmers falling through the cracks unable to qualify for government grants", 29 January 2020.
- 68 ABC News, "Fire recovery payments barely trickling through as Victoria's fire-affected communities try to rebuild their lives", 17 February 2020.
- 69 ABC News, "Bushfire recovery costs start at \$2 billion but Government assistance can't pay the bills", 7 January 2020.
- 70 ABC News, "Bushfire recovery costs start at \$2 billion but Government assistance can't pay the bills", 7 January 2020.
- 71 ABC News, "Victorian cattle farmer fears ongoing bushfire threat will see residents leave rural areas", 23 February 2020:
- 72 ABC News, "<u>Victorian cattle farmer fears ongoing bushfire</u> threat will see residents leave rural areas", 23 February 2020.
- 73 Save the Children, "Children's experiences and needs in the 2019-20 bushfires: Consolidated submission to inquiries into the 2019-20 bushfires", April 2020.
- 74 The Guardian, NSW fires: almost 600 schools closed today amid catastrophic bushfire conditions, November 2019; The Australia, Bushfires: NSW faces \$20m bill to rebuild damaged schools, January 2020.
- 75 Australian Bureau of Statistics, <u>"2016 Census QuickStats"</u>, last updated 12 July 2019.
- 76 Port Macquarie News, "St Joseph's Regional College HSC students sit exams at MacKillop College on November 8 due to bushfires", 8 November 2019.
- 77 Save the Children, "Children's experiences and needs in the 2019-20 bushfires: Consolidated submission to inquiries into the 2019-20 bushfires", April 2020.
- 78 Save the Children, "Children's experiences and needs in the 2019-20 bushfires: Consolidated submission to inquiries into the 2019-20 bushfires", April 2020.
- 79 Save the Children, "Children's experiences and needs in the 2019-20 bushfires: Consolidated submission to inquiries into the 2019-20 bushfires", April 2020.
- The Conversation, "<u>Domestic violence will spike in the bushfire aftermath, and governments can no longer ignore it</u>", 17 November 2019.
- 81 ABC News, "A new bushfire crisis is emerging as experts brace for an imminent surge in domestic violence", 23 February 2020; The Australian, "Bushfires: Agencies report post-natural disaster spike in domestic violence", 16 January 2020.
- 82 ABC News, "A new bushfire crisis is emerging as experts brace for an imminent surge in domestic violence", 23 February 2020.
- 83 The Conversation, "<u>Domestic violence will spike in the bushfire aftermath, and governments can no longer ignore it</u>", 17 November 2019.
- 84 ABC News, "A new bushfire crisis is emerging as experts brace for an imminent surge in domestic violence", 23 February 2020
- 85 ABC News, "<u>Dealing with Australian bushfire trauma and caring for your mental health</u>", 15 January 2020.
- 86 Australian Government Department of Health, <u>Medical support from AUSMAT for bushfire evacuees</u>, 6 January 2020.
- 87 Australian Red Cross, "<u>Australian Bushfires Report: 1 January</u> 15 April 2020", April 2020.
- 88 Royal Australian College of General Practitioners, "Submission to the Royal Commission into National Natural Disaster

- Arrangements", April 2020; ABC News, "Local GPs who were sidelined at evacuation centres want to be added to bushfire plans", 7 January 2020.
- 89 Surf Life Saving NSW, "Thousands seek shelter from bushfires at surf club evacuation centres", 31 December 2019.
- 90 Royal Australian College of General Practitioners, "<u>Submission to the Royal Commission into National Natural Disaster Arrangements</u>", April 2020.
- 91 Prime Minister of Australia, "Media Release: National Bushfire Recovery Agency", 6 January 2020.
- 92 Gibbs et al., Post-bushfire relocation decision-making and personal wellbeing. in Awotona (ed), Planning for Community-Based Disaster Resilience Worldwide Learning from Case Studies in Six Continents, Routledge (2016): pp. 333-356: https://mspgh.unimelb.edu.au/ data/assets/pdffile/0003/2980218/Gibbs-et-al-Post-bushfire-relocation.pdf
- 93 ABC News, "Victorian cattle farmer fears ongoing bushfire threat will see residents leave rural areas", 23 February 2020.
- 94 Sydney Morning Herald, "<u>Under-insurance leaves household-ers exposed this bushfire season</u>", 2 November 2019.
- 95 National Road Transport Association, "<u>Underinsurance in Australian bushfires</u>", 5 February 2020.
- 96 Vet and Eriksen, "When insurance and goodwill are not enough: Bushfire Attack Level (BAL) ratings, risk calculations and disaster resilience in Australia, Australian Geographer", vol. 51(1): 35-51: 2020
- 97 Vet and Eriksen, "When insurance and goodwill are not enough: Bushfire Attack Level (BAL) ratings, risk calculations and disaster resilience in Australia, Australian Geographer", vol. 51(1): 35-51: 2020
- 98 Garnaut, "<u>The Garnaut Climate Change Review: Final Report</u>", 2008.
- 99 Oldenborgh et al., "<u>Attribution of the Australian bushfire risk to anthropogenic climate change</u>", Natural Hazards and Earth System Sciences (in review), 11 March 2020.
- 100 OECD, "Statistics: 2017 Greenhouse gas emissions, Total GHG excl. LULUCF per capita", accessed 26 August 2020; Reserve Bank of Australia, "The Changing Global Market for Australian Coal", 19 September 2019.
- 101 Climate Change Performance Index, "CCPI 2020 Scorecard Australia", December 2019.
- 102 UNDRR, "Sendai Framework for Disaster Risk Reduction, 2015"; UN General Assembly, "Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction: A/71/644", 2018; Australian Government Department of Home Affairs, "Australian Disaster Preparedness Framework", October 2018; Commonwealth of Australia National Resilience Taskforce, "Profiling Australia's Vulnerability", 2018.
- 103 UNSW Sydney News Room, "We must rethink before we rebuild".
- 104 Australian Institute for Disaster Resilience, "<u>Living with bushfires on the urban-bush interface</u>", Australian Journal of Emergency Management, vol. 35(1), January 2020; UNSW Sydney News Room, "<u>We must rethink before we rebuild</u>", 21 February 2020.
- 105 UNSW Sydney News Room, "We must rethink before we rebuild", 21 February 2020.
- 106 Australian Institute for Disaster Resilience, "Living with bushfires on the urban-bush interface", Australian Journal of Emergency Management, vol. 35(1), January 2020.
- 107 The Guardian, "Bushfire-destroyed homes should not be rebuilt in riskiest areas, experts say", 18 January 2020.
- 108 Anderson-Berry et al., "Sending a message: How significant events have influenced the warnings landscape in Australia, International Journal of Disaster Risk Reduction", vol. 30,

- September 2018; CNN, "<u>The Australian architects designing</u> homes to withstand bushfires", 8 April 2020.
- 109 The Guardian, "Hazard reduction burning had little to no effect in slowing extreme bushfires", 5 February 2020.
- 110 Time, "How Australia's Indigenous Experts Could Help Deal With Devastating Wildfires", 14 January 2020.
- 111 IDMC, "<u>Disaster Displacement: A global review 2008-2018</u>", October 2016; Expert Group on Refugee and IDP Statistics, "<u>International Recommendations on IDP Statistics</u>," March 2020
- 112 Government of Australia, " <u>The Royal Commission into National Natural Disaster Arrangements</u>", accessed 30 July 2020; Parliament of Australia, "<u>Lessons to be learned in relation to the Australian bushfire season 2019-20</u>", accessed: 30 July 2020; NSW Government, "<u>NSW Bushfire Enquiry</u>", accessed 30 July 2020.
- 113 ABC News, "<u>Four-corners-portrait-of-cobargo-bushfire-recovery"</u>, 7 July 2020.
- 114 ABC News, "NSW Government accepts all 76 bushfire inquiry recommendations", 25 August 2020;
 115 Owens & O'Kane, "Final Report of the NSW Bushfire In-
- 115 Owens & O'Kane, "Final Report of the NSW Bushfire Inquiry", 31 July 2020.
- 116 Owens & O'Kane, "Final Report of the NSW Bushfire Inquiry", 31 July 2020.
- 117 Owens & O'Kane, "Final Report of the NSW Bushfire Inquiry", 31 July 2020.



The Internal Displacement Monitoring Centre (IDMC) is the leading source of information and analysis on internal displacement worldwide. Since 1998, our role has been recognised and endorsed by United Nations General Assembly resolutions. IDMC is part of the Norwegian Refugee Council (NRC), an independent, non-governmental humanitarian organisation.

The Internal Displacement Monitoring Centre 3 rue de Varembé, 1202 Geneva, Switzerland +41 22 552 3600 | info@idmc.ch

www.internal-displacement.org

f www.facebook.com/InternalDisplacement

www.twitter.com/IDMC_Geneva