Mainstreaming disaster risk reduction, seriously?

Experts and practitioners from multiple sectors respond to the issue of mainstreaming disaster risk reduction

The argument

We do not know how effectively disaster risk reduction (DRR) is considered in decision-making across different policy sectors, and thus whether the goal of 'mainstreaming' DRR is being achieved. Systematic assessment is required to answer this, and to identify areas for improvement.

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Bluntly, the job of emergency management and disaster policy is to prepare for, and then cope with, problems caused by vulnerabilities created by other policy sectors. Houses in risky locations, people in vulnerable situations and assets at risk from natural hazards are often in such circumstances because of decisions or non-decisions made in land-use planning, development approval, transport, infrastructure, housing, public health, communications and elsewhere. Those policy sectors may overlook or pay scant attention to DRR when decisions are made. Indeed, it might not be part of their mandate.

Many emergency managers would like more serious attention towards the goal of 'mainstreaming' DRR across relevant policy and management sectors, taking a whole-of-government approach or, as it is called in public policy, horizontal policy integration. This is where a matter cannot be dealt with in one policy sector or portfolio alone and thus needs to be attended to in multiple areas across one level of government.[1]

My focus is on public policy and the tools of governments. While DRR is also very much about non-government actors, the space available here is limited and there is a crucial role for policy and law to set goals, provide resources and mandates, enable actions, empower people and encourage behaviours to enhance DRR.

It is not only emergency managers who believe mainstreaming should occur. Government policy recognises that DRR cannot be left to emergency managers alone. Australia's *National Strategy for Disaster Resilience* (Attorney-General's Department 2011) states:

> *Disaster resilience is the collective responsibility of all sectors of society, including all levels of government, business, the non-government sector and individuals* (p.V)

> *Traditional government portfolio areas and service providers, with different and unconnected policy agendas and competing priority interests may be attempting to achieve the outcome of a disaster resilient community individually. This has resulted in gaps and overlaps, which may hamper effective action and coordination…* (p.3).

The National Disaster Risk Reduction Framework (Commonwealth of Australia 2018) states that:

> *…limiting the impact of disasters now and in the future requires a coordinated effort across and within many areas including land use planning, infrastructure, emergency management, social policy, agriculture, education, health, community development, energy and the environment.* (p.4)

We face increasing disasters in a 2–3°C warmer world (AAS 2021, IPCC 2021), so the need to mainstream DRR becomes more urgent. Apart from key policies stating mainstreaming as a goal and committing to achieving it (but rarely saying how), the need for cross-policy sector incorporation of DRR is required to achieve other key social and policy goals:

- **Shared responsibility** is central to Australian disaster policy, extending DRR beyond governments to include individuals, households, communities, businesses and non-government organisations. While the focus here is not on non-government actors, statute law and public policy–the tools of governments–they strongly influence what

these actors can and cannot do or are encouraged or not to do.

· **Resilience** is an ill-defined but core principle in policy and is even in the name of the recently established national and NSW agencies. Resilience demands understanding of and influence on multiple actors and variables interacting in complex ways. The tools at the disposal of governments (law, public policy and administration, mass communication, fiscal power) are crucial to shaping the interplay between natural hazards, communities, individuals and multiple policy and economic sectors so as to encourage resilience.

Thus, the focus is on what governments can do. The goal of mainstreaming DRR across policy sectors and government portfolios is not new (e.g. flood zones, building standards, fire safety regulations, asset protection zones and the like). But is this enough and are there gaps and what reforms are needed? Many emergency managers argue for more, as do others in the community. But we do not really know the answer, in the absence of a systematic review of the adequacy of current incorporation of DRR measures across policy sectors. Could we find out?

Our principal mechanism for learning and improving are formal, post-event inquiries. Analysis of multiple Australian inquiries showed that, while a range of policy sectors are considered, this is patchy and the great bulk of attention and recommendations target emergency services organisations (Cole *et al.* 2018). Considerations such as building regulations and planning get some attention, but usually in a narrow fashion regarding one hazard type and event in one jurisdiction. The Bushfire and Natural Hazards inquiry data base[2] allows interrogation across inquiries, work that is only just beginning. But inquiries are, by definition, single event-focused, not systematic across-hazard types, events, policy sectors or jurisdictions, so only offer partial and dated answers. Broad-scale inquiries such as the 2020 Royal Commission into National Disaster Arrangements[3], while valuable, do not explore the detail of decision-making processes.

Likewise, within state and territory jurisdictions, emergency management agencies do interact with others: SES on floods and planning and RFS on fire and development approvals. Yet this is often single agency-to-agency, focusing on one hazard type and often very location specific. Inspectors-general of emergency management seek to promote DRR across government portfolios but are recent and their impact is as yet unclear.

We need a serious, systematic process

I argue we need a systematic process to identify gaps where DRR is not or is insufficiently incorporated as a core consideration across policy sectors and how it could be done better. This may not always favour DRR considerations, as a feature of the process would be to identify counter-imperatives and values that lessen or override DRR concerns, such as individual freedoms, housing supply and affordability, transport efficiency, environmental values and asset protection costs. But making those value differences explicit and disagreements over them transparent would be valuable—emergency managers might think DRR is the

most important concern, while others have their own individual and organisational priorities.

DRR is not alone in requiring whole-of-government processes or horizontal policy integration (e.g. environment, see Ross & Dovers 2008) and there are fully achievable policy and administrative mechanisms through which to pursue such a goal.

The following are some broad options for undertaking a systematic review of barriers to and opportunities for mainstreaming DRR.

What are we targeting? Higher-order policies, enabling statutes, regulatory regimes and administrative procedures that instruct how decision-making is carried out and what information and factors must be considered when making decisions in sectors with implications for DRR (see the starting list from the National Framework quoted above: 'including land use planning, infrastructure, emergency management, social policy, agriculture, education, health, community development, energy and the environment', a list that could be expanded).

What scale and scope? A cross-sectoral and cross-portfolio review could be undertaken at state/territory scale, but a national scope would (i) include federal laws and policies, and (ii) allow cross-jurisdictional learning (an advantage of a federal system). The scope should be all-hazards, for greatest effect and for similar sharing of insights, and to identify generic measures that span DRR rather than multiple, overly specific ones.

Through what process? There are options and all should involve some independence and overview and stakeholder engagement: national-scale collaborative policy review process, inter-governmental taskforce, an AFAC-hosted program, commission of inquiry or applied research project.[4] The common elements would be:

1. survey the emergency management community to identify where it believes barriers and opportunities exist

2. interrogate the information from (1) to refine, scope and target policies, statutes and decision-making regimes in communication with agencies in other sectors

3. scrutinise what is identified in (2) to establish the magnitude of issues, countervailing imperatives and possibilities for reform

4. initiate detailed discussions between emergency management and other agencies to develop proposals for mutually agreed reforms where these are achievable and effective

5. develop best-practice guidelines that could be adapted in different jurisdictions.

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1. Vertical policy integration, through levels of government, is also relevant to DRR but is a separate topic.

2. Bushfire and Natural Hazards inquiry, at https://tools.bnhcrc.com.au/ddr/home.

3. Royal Commission into National Disaster Arrangements, at https://naturaldisaster.royalcommission.gov.au/.

4. An overly formal inquiry process is not recommended, for reasons argued in Eburn and Dovers (2015).

Who could run the process? An obvious path is an inter-governmental taskforce (noting that the Council of Australian Governments has been disestablished and no clear location is apparent for DRR in the new National Federal Relations Architecture).[5] Other options are an expert and stakeholder-based review panel, an applied research team, an inspector-general emergency management or similar agency, a parliamentary committee, a public sector commission, the National Recovery and Resilience Agency (assuming state and territory collaboration) or an AFAC-led process. The process would require some longevity, a factor to be considered regarding the organisational home.

What time scale? This is a large body of work, assuming a level of seriousness of intent and level of detail. Depending on the resources provided, a thorough national-scale process would take at least 2 years; a state/territory-level exercise could be quicker. Or, an ongoing review process could be established working through priorities over time. In considering timing, the near certain onset of worse disasters should be kept in-mind, along with the costs of delayed action.

What sorts of reforms might emerge? Sometimes none, where current provisions are deemed sufficient or other values judged more important. Resulting reforms may not seem radical but could make a big difference over time. Options include:

- insertion of an obligation to consider DRR in an agency's statutory objects
- a new step in a regulatory decision-making process
- the addition of consultation with an emergency management agency within a procedure, or
- mandating that particular information be considered in decision-making.

In the words of one department head, 'all this other stuff, put it in my statutory objects and I'll make my people do it – otherwise it's once a month on a Friday afternoon'.

It may be that a mandated, ongoing capacity is needed and models from other areas where horizontal policy integration has been pursued could be examined for their suitability (e.g. workplace safety, gender equity, environment: a range of mechanisms are summarised in Ross & Dovers 2008).

We most often link DRR and land-use planning and building regulations, but a systematic review would cast the net widely (see the menu of sectors from the 2018 National Framework). Such a process could expose issues often overlooked with unexpected synergies and co-benefits emerging. Given no such systematic review has been undertaken, it is likely that:

- policy processes not currently seen as candidates for mainstreaming may emerge, presenting unexpected opportunities
- in areas more often identified (e.g. land-use planning), even where significant improvements may not eventuate the increased mutual understanding of different decision-making imperatives would be beneficial.

5. National Federal Relations Architecture, at: https://www.pmc.gov.au/sites/default/files/federal-relations-architecture-diagram.pdf.

For example, there is scant recognition of 'green infrastructure' such as a forested water catchments where these can be prone to disasters (Steele *et al.* 2017). The issue is not trivial. The value of coastal wetlands for protecting assets and lives globally has been calculated at US$447 billion per year and 4,620 lives per year (Costanza *et al.* 2021). There is an argument for such ecosystem services to be properly accounted for in DRR (Walz *et al.* 2021). There may be opportunities for enhancing DRR when policy sectors such as urban development, coastal and environmental management, transport and infrastructure and other policy sectors are scrutinised for their impacts on such protective assets.

Conclusion: is this all unimaginable?

It depends on social and political priorities, as all the avenues suggested above are politically and administratively available. Many other issues have been pursued across government by a variety of institutional measures and policy processes. In the 1990s, pursuing the goal of economic efficiency and competitiveness, some 2,200 pieces of legislation were scrutinised for 'anti-competitive' elements under the National Competition Policy process, enduring monitoring and regulatory mechanisms were put in place and our society and nation were transformed (e.g. McDonald 2007). If we take DRR seriously enough it could be done. It is a social and political choice.

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Responses

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> The argument put forward by Professor Dovers is compelling. I think it is indeed true that 'the job of emergency management and disaster policy is to prepare for, and then cope with, problems caused by vulnerabilities created by other policy sectors'. I think it is also true that 'many emergency managers would like more serious attention towards the goal of "mainstreaming" disaster risk reduction across relevant policy and management sectors, taking a whole-of -government approach or, as it is called in public policy, horizontal policy integration'.

Having had the privilege of leading the National Resilience Taskforce for the Australian Government between April 2018 and June 2019, I can attest to such efforts as evidenced by the development of 3 key policy documents:

- *National Risk Reduction Framework*
- *Profiling Australia's Vulnerability: the interconnected causes and cascading effects of systemic disaster risk*
- *Climate and disaster risks: what they are, why they matter and how to consider them in decision-making.*

In essence, the principal aim of all 3 documents was to follow this trajectory.

We know from the scientific literature and from our own lived experiences that climate-influenced natural hazard events in Australia and overseas, on every island and continent, are becoming more frequent and intense (IPCC 2021[1], IPCC 2018[2]). The Australian summer bushfires of 2019–20 left the world in no doubt that things are worsening, and that loss, damage and the ensuing suffering of humans and non-humans are significantly on the rise. We also know that our current capacity and capability to manage these events is constrained in the face of such overwhelming natural forces and that we cannot continue attempting to address these events in historical or conventional ways. The exponential trajectory of climate change cannot be matched by our incremental improvements in response to their effects.[3]

Therefore, we need to substantially increase efforts in addressing the root causes of the systemic vulnerabilities that leave us collectively, but not equally, susceptible to being harmed from climate change influenced natural hazards, and in so doing, increase efforts in disaster risk reduction. However, to do this, we must accept that disasters are not natural, but, rather, result from where, how and why we place ourselves upon the landscape and the extent in which we know about, consider, respect, regard and integrate the forces of nature on our societies both now and well into the future.[4, 5, 6] In short, disasters only arise when such considerations are inadequate. A natural hazard event does not in itself constitute a disaster.

In this context, higher-order policies, enabling statutes, regulatory regimes and administrative procedures all make a significant contribution to the root causes of disasters. Therefore, a cross-sectoral and cross-portfolio review should be undertaken at a national scale cascading down to states and possibly local governments. Arguably, an applied research project would seem to be the most efficient way to achieve this as it could be undertaken independently and contained within an appropriately scoped, funded and time-limited program of work.

The Royal Commission into National Natural Disaster Arrangements (NDRRA) made specific recommendations with regards to national coordination arrangements, and in so doing, referred to the need for long-term policy improvement:

- Recommendation 3.1 Forum for ministers — Australian, state and territory governments should restructure and reinvigorate ministerial forums with a view to enabling timely and informed strategic decision-making in respect of:
  - long-term policy improvement in relation to natural disasters
  - national preparations for, and adaptation to, natural disasters

- response to, and recovery from, natural disasters of national scale or consequence including, where appropriate, through the National Cabinet or equivalent intergovernmental leaders' body.

- Recommendation 3.2 Establishment of an authoritative disaster advisory body — Australian, state and territory governments should establish an authoritative advisory body to consolidate advice on strategic policy and relevant operational considerations for ministers in relation to natural disasters.

The results that would emerge from Professor Dovers' proposal could help establish a sound basis in which to give effect to these recommendations by identifying the key policy drivers and challenges that sit at the root cause of the very disasters that the NDRRA investigated.

The systematic assessment of disaster risk reduction in decision-making across different policy sectors is essential in my view if we are to collectively position ourselves for more frequent and intense climate-influenced natural hazards into the future; a future that without systematic reform will inevitably lead to otherwise avoidable harm and suffering of countless humans and non-humans within the planetary ecosystem we all call 'home'.

1. Intergovernmental Panel on Climate Change (IPCC) 2021, *Summary for Policymakers. In: Masson-Delmotte VP, Zhai A, Pirani SL, Comnnors C, Pean S, Berger N, Caud Y, Chen L, Goldfarb MI, Gomis MI, Huang M, Leitzel, E, Lonnoy JBR, Matthews TK, Maycock T, Waterfield O, Yelekci R, Yu & Zhou B. (eds.) Climate Change 2021: The Physical Science Basis, Contribution of Working Group 1 to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.*

2. Intergovernmental Panel on Climate Change (IPCC) 2018, *An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. In: Masson-Delmotte VP, Zhai H-O, Portner D, Roberts J, Skea PR, Shukla A, Pirani W, Moufouma-Okia C, Pean R, Pidcock S, Connors JBR, Matthews Y, Chen X, Zhou MI, Gomis E, Lonnoy T, Maycock M, Tignor M & Waterfield T (eds.). Geneva, Switzerland: World Meteorological Organization.*

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I strongly agree with Professor Dovers that we do not know how effectively disaster risk reduction (DRR) is considered in decision-making across different policy sectors. DRR should be mainstreamed in social and economic planning across all sectors and jurisdictions and a systematic approach is required to take this work forward.

If it were possible to put on glasses that enabled us to see disaster risk, the risk would not sit neatly within bureaucratic or sectoral silos or jurisdictions but would flow across them in many directions. DRR is as much a finance, health, tourism, aged care and security issue, as it is a disaster management issue. However, disaster risk tends to be viewed by governments narrowly as a disaster management issue and therefore within the bureaucratic remit of disaster management agencies. Although these agencies are the most acutely aware of the consequences of poor disaster risk management, they are not well-positioned bureaucratically to mainstream DRR work across other government agencies.

Dovers touches on this point when he notes that 'emergency managers might think DRR is the most important concern, while others have their own individual and organisational priorities'. When I was the United Nations Secretary General's Special Representative for Disaster Risk Reduction at the United Nations Office for Disaster Risk Reduction, I used to advocate for stronger DRR action by United Nations member states, by pointing out the huge annual cost of disasters—then estimated at $520 billion.[1] There are places where disaster risk is already being incorporated in core economic planning.[2] But this tends to be primarily where disasters are already a major drain on economic development. For decision-makers in many other countries, however, the annual costs of disasters currently seem too small to trigger the transformation in risk management called for in the *Sendai Framework for Disaster Risk Reduction 2015–2030*.

This isn't surprising given that there are many competing challenges within each country and globally that involve costs similar to the annual losses from disasters. For example, the annual cost to the global health sector of smoking is $422 billion[3]; of child abuse and neglect in East Asia and the Pacific is $209 billion[4] of deforestation is $2–5 trillion[5]; of malnutrition is $3.5 trillion[6] and of avoidable blindness is $632 billion.[7] The business case for investment in DRR is very compelling, but it is also compelling for many other investments.

Climate change will rapidly alter this calculation by increasing the frequency and severity of hazards and the scale of the associated disasters. The costs, as Australia's bushfire season of 2019–20 vividly demonstrated, are escalating rapidly. The history of global efforts to reduce disaster risks suggests that major improvements are possible, particularly if they are progressed immediately in the wake of major disasters when governments are under intense

political pressure to act. Without these triggering events, change tends to be—at best—incremental. With more frequent major disasters, political support to reduce disaster risk and build national resilience, including by mainstreaming both climate risk and disaster risk more broadly in economic and social planning and investments, will accelerate.

Indeed, it is already accelerating within the private sector. Sophisticated analysis by the world's largest asset manager, Blackrock, is even now detecting major climate-change impacts on the value of investments, including evidence that the most climate-resilient utilities trade at a premium.[8] The company is advising its investors that this premium will increase over time as climate-change risks and dangers compound. As the financial losses resulting from sudden-onset hazards that climate change is amplifying (such as bushfires, drought, floods, storms and heatwaves) and from progressively intensifying hazards (such as sea level rise, changes in rainfall patterns and rising temperatures) increases, enormous amounts of capital will be directed away from assets exposed to disaster risk and towards more resilient assets and investments.

Although conducting a systemic review of the barriers to mainstreaming DRR would be unlikely to transform disaster risk management in Australia in the short-term, it would still be useful in identifying opportunities to further integrate DRR into decision-making. The review should nevertheless develop recommendations both for pragmatic and transformational changes. In the case of the latter, this should include developing a blueprint for an Australia that has fully integrated and mainstreamed DRR across sectors, bureaucracies and jurisdiction. The blueprint would serve both as a reference point for the incremental improvements that are politically possible today and for the transformational changes that will become more possible after the next major disaster.

1. Natural Disasters Force 26 Million People into Poverty and Cost $520bn in Losses Every Year, New World Bank Analysis Finds, at www.worldbank.org/en/news/press-release/2016/11/14/natural-disasters-force-26-million-people-into-poverty-and-cost-520bn-in-losses-every-year-new-world-bank-analysis-finds.

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3. Global economic cost of smoking-attributable diseases, at https://tobaccocontrol.bmj.com/content/27/1/58.

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5. Deforestation Costs to the World…Wow, Big $$$, at www.nrdc.org/experts/jake-schmidt/deforestation-costs-worldwow-big.

6. Cost of Malnutrition, at www.glopan.org/cost-of-malnutrition.

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Climate change is driving worsening extreme weather events, contributing to insurance affordability and availability issues in parts of Australia. As Professor Dovers identifies, resilience is a core policy principle that is rapidly gaining prominence but is often poorly understood across the community. Importantly, it is not currently considered in building codes, building standards, or within building regulation around Australia.

For the Insurance Council (ICA), resilience across the built environment and at-risk communities is the ability to prepare for and adapt to severe weather events, ultimately improving the societal and economic costs of recovery. Practically, the ICA is seeking to ensure improvements in what we build, where we build it and how it is built, with resilience measures embedded into the National Construction Code. Solving this challenge is not just about what we build next, it's also about how existing homes can be rebuilt, retrofitted or renovated.

Combined, these measures will play a critical role in addressing the challenges Dovers lays out across sectors when he says; '… Houses in risky locations, people in vulnerable situations and assets at risk from natural hazards are often in such circumstances because of decisions or non-decisions made in land-use planning, development approval, transport, infrastructure, housing, public health, communications and elsewhere'.

A recent report from the ICA, *Climate Change Impact Series: Tropical Cyclones and Future Risks*[1], demonstrates the critical role of incorporating resilience measures into building construction. The report found that houses in Australia are not resilient to tropical cyclones, which are expected to become more severe and frequent as the climate changes.

For new builds, the report found that homes should be built to a standard that protects property and minimises the damage, loss and disruption caused by worsening extreme weather events. It identifies examples of pathways that would address key gaps in the current Australian construction code and associated standards, helping to bolster the resilience of new homes. Critically, the report indicated that at least 20% of modern homes affected by a tropical cyclone were found to have some form of water ingress damage regardless of wind speed. Updating the building code to address water ingress in new builds will help to reduce damage.

The ICA report focused on new builds, however, retrofitting older homes is also essential. The 2017 Queensland Household Resilience Program[2] is a prime example. The program evidenced the power of public investment in improving homes to provide greater resilience to extreme weather. One key benefit of this investment has been the quantified downward pressure on insurance premium costs. In total, just over $20 million was contributed by the Queensland and Australian governments to facilitate targeted building work and the retrofitting existing

properties to better withstand the natural peril risks faced in different parts of Queensland. Government contributed 75 per cent of the cost of approved building works up to a maximum grant of $11,250 per house, targeted to homes north of Bundaberg. During its operation, 3,100 grants were provided, with the majority going to roof replacement work (76.5% of grants approved), window protection and door and garage door replacement. Participants in the program subsequently saw an average saving of 7.5 per cent on their insurance premiums, with some savings up to 25 per cent.

As extreme weather events become more frequent and severe, we can adapt, prepare, protect and rebound. This cycle builds resilience, reducing the cost of recovery across the community and the economy. An insurable Australia is a resilient Australia and mainstreaming resilience measures into what we build, where we build and who builds it, is essential to better protect Australians.

1. Insurance Council of Australia 2021, *Climate Change Impact Series: Tropical Cyclones and Future Risks. At: https://insurancecouncil.com.au/wp-content/uploads/2021/12/2021Nov_Tropical-Cyclones-and-Future-Risks_final.pdf.*

2. Household Resilience Program, at www.qld.gov.au/housing/buying-owning-home/financial-help-concessions/household-resilience-program.

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> Australia is in the early stages of coordinating national effort to understand and address systemic disaster risk, especially at a national level. I note Professor Dovers' principal argument – that we do not know how effectively disaster risk reduction is considered in decision-making across different policy sectors, and thus whether the goal of 'mainstreaming' disaster risk reduction is being achieved – and the case for a systematic assessment.

Mainstreaming disaster risk reduction is a key means to harness the collective effort needed to make the systemic changes required to prevent new and to reduce existing disaster risk and manage residual risk. The present and emerging challenges we face are unlike those of the past. Disaster risk is growing and our systems are increasingly complex, interconnected and interdependent. This requires a fundamentally new and progressive approach to provide the best advice to government and the best service to the public; one of common purpose and integration.

Addressing these systemic challenges requires individuals and organisations to enhance their existing assessment and decision-making approaches and processes across all domains of resilience, at all levels and phases of their decision-making, to:

- understand the current barriers and greatest points of influence

- gauge the importance and ease of access to relevant information to support disaster risk reduction, including for example, climate projections and resilience indices
- consider governance arrangements, particularly within government, that are response and preparedness centric.

I welcome Dovers' goal of mainstreaming disaster risk reduction. This is something being actively worked towards at the National Recovery and Resilience Agency (NRRA). We have made great progress, building on the National Disaster Risk Reduction Framework as the national policy scaffold that guides transformational actions. The framework was released in April 2019 with collective and integrated actions facilitated through a National Action Plan, the second of which is under development and due for release later in 2022.

The Royal Commission into National Natural Disaster Arrangements recognised the need for the Australian Government to step in and take a leadership approach to disaster risk reduction, resilience and recovery efforts. In response, for the first time, the Australian Government has established a national agency to lead disaster risk reduction across all sectors—the NRRA.

Managing systemic disaster risk is key to achieving the NRRA's outcomes and is relevant to all areas including preparedness programs, community engagement and recovery activities. As our Co-ordinator General, the Hon Shane Stone AC QC, noted in his article published in this edition, we have a responsibility to ensure that the major programs that we run, such as the $600m Preparing Australia Program, the Black Summer Bushfire Recovery Grants and the Emergency Response Fund are fundamentally premised in disaster risk reduction and making communities safer against natural hazards. We are marrying this approach with a locally implemented approach to solutions that are best exemplified by our network of recovery support officers based in communities across the country.

Government policy recognises that disaster risk reduction cannot be the responsibility of emergency managers alone. Accordingly, the NRRA is using its convening powers to break down some of the silos, reaching across multiple policy streams and sectors to draw disaster risk reduction into their policies, programs and investments.

The complex, dynamic setting for this policy investment makes cause-and-effect difficult to understand as hazards, vulnerabilities and risks are changing. Many of the drivers of disaster risk are not new and continue to be present, and are only being compounded by a changing climate. A focus on obtaining more data and information on these drivers through a systemic assessment could delay immediate action to manage the effects of disaster, however, it is beneficial for long-term risk reduction. We need to provide robust, trusted, credible and consistent disaster risk information now to those in all policy sectors to implement disaster risk reduction policies, acknowledging that there are and will continue to be gaps. We also know that the strategic learnings from an assessment and evaluation of our policies and their impact on the ground should be included as a continuous process across the cycle of policy design, implementation and assessment. One step towards this will be the mid-term review of the *Sendai*

Framework for Disaster Risk Reduction 2015–2030, which the NRRA is leading and delivering by September 2022. This review will be a preliminary assessment of how far we are in moving toward a more resilient country, against the goals of the Sendai Framework. Further, we are building monitoring, evaluation capabilities and learning from the disaster risk insights generated by Australian Climate Service. Systemic risk reduction efforts will become increasingly informed by this evidence base, including through future iterations of the National Action Plan.

We know that Australia is susceptible to disasters as demonstrated by recent floods, cyclones and bushfires. We can never be disaster-proof, but we can be better prepared. This requires people to think and act differently about the occurrence of these events, including governments, emphasising that disasters are not natural but the consequence of the decisions we make as a society. The NRRA is an advocate for joined-up strategic approaches within the disaster risk reduction space to reduce harm and suffering, prevent the creation of new risk and mitigate existing risk. This will deliver the best advice to government and the best service to the public. We recognise that, in our realm, the science of decision-making and the science of behavioural and systemic change may be more pertinent to reducing systemic disaster risk than previous emphasis centred on managing individual hazards.

Linda Scott

Councillor, City of Sydney

President, Australian Local Government Association

For most of the past 150 years, local governments have been supporting at-risk communities through countless bushfires, floods, drought and cyclones. Because they are the level of government closest to these recurring events, councils have been assigned significant emergency management responsibilities by Australia's state and territory governments.

In Victoria, for example, councils are charged with emergency management responsibilities ranging from prevention through to emergency response and recovery, as well as building the resilience of communities to future emergency response.

In Queensland, councils are delegated with appointing local disaster management groups (chaired by the mayor or another elected member of the council) whose roles include:

· developing, reviewing and assessing effective disaster management practices

· helping local government to prepare a local disaster management plan

· ensuring the community knows how to respond in a disaster

· identifying and coordinating disaster resources

· managing local disaster operations

· ensuring local disaster management and disaster operations integrate with state disaster management.

Local governments are key players in Western Australia's emergency management arrangements, being tasked with establishing, managing and chairing local emergency management committees for their districts. As well as managing recovery efforts, these councils are also responsible for ensuring that local emergency management arrangements are prepared and maintained.

In South Australia, all 68 councils are provided with tailored assistance by the Local Government Association of South Australia based on their self-identified needs. The value of supporting individual councils to develop plans was highlighted during the disastrous bushfires on Kangaroo Island in 2020 when 23 South Australia councils provided 220 employees and 68 units of plant and equipment to help support the Kangaroo Island Council firefighting efforts.

The local government sector's willingness to do whatever is required to improve disaster emergency response and help mitigate the effect of future events is not in doubt—a point I have reiterated at the National Emergency Management Minister's Meeting. But when we don't get the support and resources we need to carry out delegated responsibilities, our ability to protect communities is compromised.

The 2020 report of the Royal Commission into National Natural Disaster Arrangements[1] had plenty to say on this matter. Noting the widespread view that a locally led response is 'one of the strengths of the disaster management system' and a 'foundational principle', the report recommended that state and territory governments should:

· ensure local governments can effectively discharge the responsibilities devolved to them

· review their arrangements for sharing resources between their local governments during natural disasters.

Many state governments, however, are still to officially respond to this recommendation for councils to be given more support and responsibility. This is especially concerning given budgets are under increased pressure from decreased revenue and additional expenditure due to the COVID-19 pandemic.

Regional and rural councils whose communities are frequently affected by disasters than those of urban councils, have been the hardest hit by the pandemic because they have fewer alternative sources of revenue. Budget repair is likely to be prolonged, especially in states where council rate increases are capped. Without extra resources, the ability to support local communities through disaster events such as we've just witnessed in southeast Queensland and NSW, and to prepare for future events, will be compromised.

To guard against this eventuality, the Australian Local Government Association is calling for a once-off injection of $1.3 billion of Financial Assistance Grants from the Australian Government. These grants are incredibly important for councils because they are untied, which means they can be used to address local needs and priorities. Unfortunately, they have declined over the past 3 decades from around 1% of federal taxation revenue to around 0.5%. We are calling on Australia's next federal government to restore these grants at least to 1% of taxation revenue.

We also urgently need more investment in specific mitigation and community resilience measures. Less than 5% of Australia's disaster funding goes to mitigation and resilience-building. This is an astonishingly low figure given the near certainty of more frequent and extreme weather events in the future.

In the lead-up to this year's federal election, the Australian Local Government Association will call for a targeted disaster mitigation program of $200 million per annum for 4 years so that councils can reduce the costs of response and recovery while strengthening community resilience.

To date, Australia's progress on developing a sustainable, coordinated and comprehensive national approach to disaster preparedness and recovery has been slow and fragmented. Communities recognise this. They're also aware of the clear and compelling consequences of climate change and are demanding that governments be more proactive in their responses.

We're ready to do just that, in close partnership with all levels of Australian governments. In working together, we can improve our readiness for future events and that no community is left behind.

1. Royal Commission into National Natural Disaster Arrangements, at https://naturaldisaster.royalcommission.gov.au/.

Robert Webb

AFAC Chief Executive Officer, Melbourne

> We have spoken for some time now about shared responsibility for disaster resilience, a core principle of the *National Strategy for Disaster Resilience*.[1] In the community context, the notion of shared responsibility has seen individuals and groups step up to understand and adapt to the risk of natural hazards in their location and take action to prepare for whatever may come.

Some community members go further, by choosing to join their local rural fire brigade or SES unit to protect their community during times of adversity. AFAC, as the National Council for fire and emergency services, represents some 290,000 members across rural and urban fire agencies, SES and land management. The vast majority, some 250,000 members, are volunteers, stepping up each day to train and prepare and to take on the role of first responders to assist their local community during emergencies and disasters.

That said, we hear a lot about resilience, and as the recent floods in NSW and Queensland exemplify, communities are resilient. But the effects of climate change mean that we are seeing an increasing frequency and severity in natural hazard events leading to disasters, with some communities exposed repeatedly. It is the compounding nature of these events that have the greatest impact on communities.

Our fire and emergency service agencies do their absolute best to manage these emergencies when they occur. The real value comes when we all deal with these risks at the systemic level. Without this alignment, communities will continue to be exposed and vulnerable to disasters.

We need to work together across all levels of government and across sectors to understand the risk landscape and to work collaboratively to reduce it. There are many possibilities cited such as mitigation, building back better, land-use planning, etc. The question is, how can we best collectively build momentum?

At AFAC, we know that we can't solve these problems in silos. AFAC is built on the practice of collaboration and mutual support, bringing expertise from across the emergency management sector to develop best-practice doctrine and then sharing this knowledge widely to strengthen our collective understanding and capability.

It is the case, as Professor Dovers notes, that 'the great bulk of attention and recommendations target emergency service organisations' in disaster inquires and royal commissions. We need to be conscious throughout inquiry processes of what we want to achieve and what we need to learn.

The purpose of an inquiry is not to point the finger at the organisation or person responsible. Used poorly, reviews can lead to knowledge and expertise leaving the sector as we seek to blame someone or something for the disaster that has occurred. Reviews and inquires, used well, help to unravel some of the current complexities in the risk reduction policy space, and provide lessons for a more cohesive approach.

There is a way forward. The *National Disaster Risk Reduction Framework*[2] established the priorities for Australia to reduce disaster risk. Tools, such as the *Systemic Disaster Risk Handbook*[3] from our partners at the Australian Institute for Disaster Resilience, provide guidance on implementing this framework.

The Systemic Disaster Risk Handbook goes beyond hazard-by-hazard approaches to assessing risk. It guides leaders and decision-makers from all sectors to adopt a mindset focused on systemic risks, to know why that is important to disaster risk reduction and resilience and how to apply that thinking to their work. It has been developed to promote and guide consideration of systemic risk and resilience analysis as part of any decision, review, update or development of contemporary practical instruction or risk assessment processes.

Increasing climate and disaster risks are making challenging work for fire and emergency services. Like all sectors, taking a systemic approach to reduce disaster risk will improve the safety of the current workforce and its sustainability into the future. Across all sectors, keeping the needs of communities at the forefront will align our approaches and makes the solution achievable.

1. Australian Government 2011, *National Strategy for Disaster Resilience, at:* https://knowledge.aidr.org.au/resources/national-strategy-for-disaster-resilience.

2. Australian Government 2018, *National Disaster Risk Reduction Framework, at:* https://knowledge.aidr.org.au/resources/national-disaster-risk-reduction-framework.

3. Australian Institute for Disaster Resilience 2021, *Systemic Disaster Risk Handbook, at:* https://knowledge.aidr.org.au/resources/handbook-disaster-risk.