The GAP & IIER-A
National Resilience Project

A National Resilience Framework for Australia

July 2021

This report is a part of a program of work on national resilience through the lens of the COVID-19 experience. It is one of the products of the National Resilience Project being co-led by the Institute for Integrated Economic Research-Australia and Global Access Partners.

DISCLAIMER: This paper represents a broad consensus among participants reached over the course of three months of conversation both in person and electronically in late 2020. Conversations and email exchanges were held under the Chatham House rule of non-attribution to inspire a frank and constructive exchange of ideas. Accordingly, there was a diverse range of views expressed by the individuals involved and not every participant agrees with every statement in full. They are personal opinions that do not necessarily reflect those of the organisers and sponsors of the GAP/IIER-A National Resilience Project.

A National Resilience Framework for Australia

"Hope is not a method" – General Gordon R. Sullivan

Executive Summary

We live in an historic moment of turmoil with a climate and biodiversity emergency threatening the planet, an energy transition underway and the pandemic continuing to spread globally. Long-standing international institutions and alliances appear to be fragile or even crumbling. COVID-19 has exposed fragility in Australia's societal systems for example, the federation structure, our health sector, our lack of manufacturing capability and our extensive global supply chain dependence.

Whilst the Australian initial response to the pandemic was successful in that hard lockdowns contained the spread of the COVID-19 virus, it is not a sustainable situation. We will have to emerge from our quarantine cocoon and reengage with the wider world at some point in time. We must prepare for that; we cannot rely primarily on the reactive responses we have made to date, given the growing scale and complexity of the complex threat we face as a nation.

This report addresses the need for a National Resilience Framework for Australia. It examines the current situation, our society's vulnerabilities, gaps and assumptions, leadership challenges, culture and national narrative barriers, and future requirements. It concludes with recommendations to develop a resilience strategy and resilience actions that will underpin a future, broader, Australian national resilience framework.

Through our examination of Australia's (lack of) resilience, we have concluded that there are three key characteristics or attributes that we need to strengthen in our society to improve resilience. These are:

- **Shared Awareness / Shared Goals**. With shared awareness we can act rationally and prepare accordingly because we have a shared goal - a common aimpoint; without it, we just react to each crisis as it occurs. Shared awareness embraces diversity.

- **Teaming / Collaboration.** We cannot solve our complex challenges by looking for incremental, stove-piped, quick wins; we need a team approach within our nation and, as importantly, with our neighbours and allies.

- **Preparedness.** There is no verb for 'resilience'; the verb 'prepare' is the most relevant in this case. There is an opportunity to learn from Defence preparedness concepts and systems and to adapt and implement them across our wider society. As a nation we need to prepare for future disasters / crises and not just wait to react. "Crossing our fingers" and hoping is not a method we can afford to employ.

A 'Resilient Australia'?

Australia is the land of drought and flooding rains. Resilience is supposedly baked into our DNA: running like red dust through the veins of farmers; iconic in the imagery of rural and regional Australia and dropping easily from the lips of our elected representatives like an impenetrable defensive shield whenever a disaster strikes.

In fresh 'Akubras' and 'R.M.Williams' boots, our elected representatives toss hay bales from a 'ute' and praise the resilience of the Aussie farmer, as the drought grips tighter and suicide rates among rural Australian males reach 25-40 percent above average. We praise the resilience and bravery of our firefighters while ignoring our collective role in their increasing vulnerability to catastrophic events. We expect to 'bounce back' without stopping to ask ourselves whether we should in fact 'bounce forward'. Drought, flood, cyclone, bushfire, pandemic – we are consistently reminded of our 'resilience'. Yet, in the words of one Burracoppin farmer: "our resilience is running out".

Creating a resilient 'resilience narrative' demands humility and a growing awareness that acknowledgment of vulnerability is an essential ingredient for fostering capacity to adapt and support strong communities. An inclusive national narrative requires honesty from political, civic and economic leaders – applying the best available science and a strong dose of empathy to challenging conversations. From coal dependent communities in Central Queensland increasingly teetering atop a swaying house of global economic cards; through to Central Coast beachfront homes crumbling into the ocean – our resilience is hindered by an inability to honestly engage at all levels regarding the scale of the challenges in front of us. It does not have to be this way. Collectively we can create a culture that builds our community up; not drag it down with relentless disasters and carefully staged photo ops.[1]

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[1] Verity Morgan Schmidt at IIER workshop 13 Sep 20, Verity Morgan-Schmidt was founding CEO for climate advocacy organisation, Farmers for Climate Action

A National Resilience Framework for Australia

Background

Between 2017 and 2019, the Australian Government National Resilience Taskforce (NRTF), supported by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), examined Australia's increasing exposure and vulnerability to intensifying natural hazards, with potential for increasing loss and harm. The NRTF developed the *'National Disaster Risk Reduction Framework (NDRRF)'* which emphasises the need for a shift in thinking about natural hazards and disaster impacts. Disaster risk is defined as "a product of the effect of hazard (a sudden event or shock), impacting on (people and things) and the ability for those people and assets and systems to survive and adapt".[2] The Report *'Profiling Australia's Vulnerability (PAV): The interconnected and cascading effects of systemic disaster risk'* key premise is that vulnerability to disasters is inevitable and causes and effects, are both complex and interconnected throughout society. [3] The report also concluded that the consequences of past decisions have had the perverse outcome of engineering structural vulnerability into broad societal domains.

While the existence of the NDRRF, and the endorsement of the First National Action Plan by emergency management ministers in March 2020, appear to be active steps to address resilience, and preparedness, requirements, it must be stressed that these documents are only focused on natural disasters, not unnatural or man-made disasters. There is a growing requirement to consider the term disasters and avoid the term of natural disaster as there may be natural hazards, but the human creates vulnerability. For example, there are growing concerns regarding disasters in Australia because of the pandemic and associated supply chain failures as well as the increasing frequency and severity of cyber-attacks.

There is not a single definitive list of global threats. The World Economic Forum produces an annual comprehensive list of global risk for short, medium, and long term. In 2021, the top 3 identified risks by hazard remain environmental for the medium and long term.[4] By contrast, Allianz Risk Barometer 2021, is focused on global business risks, and therefore identifies a different risk set with higher priority given to cyber and regulation risk. [5]

The 2019 Global Assessment Report (GAR) by the United Nations Office of Disaster Risk Reduction (UNDRR) provides the basis for guiding and supporting signatories of the Sendai Framework for Disaster Risk Reduction to align and deliver on the Sendai 2030 priorities. (Australia endorsed the Sendai Framework in March 2015.) The Sendai priorities point to the need for a global harmonisation agenda and describes "mainstreaming as a dynamic process that aims to understand risk at the heart of development decisions in policymaking, planning,

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[2] Commonwealth of Australia, National Disaster Risk Framework, accessed on 5 May 21, available at: https://www.homeaffairs.gov.au/emergency/files/national-disaster-risk-reduction-framework.pdf

[3] Commonwealth of Australia, Department of Home Affairs, 2018 Profiling Australia's Vulnerability: the interconnected causes and cascading effects of systemic disaster risk, accessed on 5 May 21, available at: https://knowledge.aidr.org.au/collections/disaster-risk-reduction/

[4] The World Economic Forum, Global Risks Report 2021, accessed on 5 May 21, available at: https://www.weforum.org/reports/the-global-risks-report-2021

[5] Allianz, World Risk Report 2021, accessed on 5 May 21, available at: https://www.agcs.allianz.com/news-and-insights/news/allianz-risk-barometer-2021.html

budgeting, programming, implementation, monitoring and evaluation at national, sectoral and subnational levels, rather than seeing risk management as an add-on". [6]

Current Situation

International

The UN GAR report identifies five main entry points for integrating climate and disaster risk into core development and investment processes: policy and law, organisation, stakeholders, knowledge, and finance.[7] Since Australia's NDRRF aligns with the Sendai Framework, these recommendations and lessons are pertinent to Australia's ongoing efforts to harmonise its national, state, and local approaches to climate and disaster risk reduction and resilience.

The New Zealand National Disaster Resilience Strategy (NDRS) was built on a two-year consultation process focusing on visions, goals, and objectives in the context of changing disaster risks under climate change. The development of a common vision provided a basis for harmonisation across sectors and scales. This, combined with an understanding of the complex and systemic nature of disasters, enabled clearer and fairer allocation of roles and responsibilities for assessing, attributing, and acting on the causes and effects of risks. [8]

Australia

The 2011 National Resilience Strategy[9] is now ten years old, and largely overtaken by subsequent, separate, plans. The 2019 NDRRF endorsed by COAG guides national, whole-of-society efforts to proactively reduce disaster risk to minimise the loss and suffering caused by disasters. This framework is designed 'top down' to guide Australia's efforts to reduce disaster risk associated with natural hazards; it should be expanded to consider other shocks / hazards.

The NRTF provided policy starting points, which set a direction for a national narrative, and development of policy to test and guide future challenges. There are many examples where Australia is demonstrating leading practice in many aspects of DRR, and further investment could make a significant positive difference to Australian communities. A major constraint is that while some policy elements are in place, many of the subsidiary or supportive policy elements such as the social, health or economic policies are at varying standards across the nation.

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[6] United Nations, Report on Global Commission on Adaptation, accessed on 5 May 21, available at: https://gca.org/global-commission-on-adaptation/report

[7] United Nations, Report on Global Commission on Adaptation, accessed on 5 May 21, available at: https://gca.org/global-commission-on-adaptation/report

[8] New Zealand, National Disaster Resilience Strategy 2019, accessed on 5 May 21, available at: https://www.civildefence.govt.nz/assets/Uploads/publications/National-Disaster-Resilience-Strategy/National-Disaster-Resilience-Strategy-10-April-2019.pdf

[9] Commonwealth of Australia, National Resilience Strategy, 2011, accessed on 5 May 21, available at: https://www.homeaffairs.gov.au/emergency/files/national-strategy-disaster-resilience.pdf

Definitions and shared understanding are critical to policy communication. This report uses the following UNDRR definition:

> "Resilience is the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and function". [10]

Disasters are the intersection of hazard, exposure, and vulnerability and occur at the interface between hazards with people. It is not the hazard that causes the vulnerability, but people and actions taken by humans which can cause the vulnerability. This understanding of vulnerability underpins the design of a resilience approach in the face of changing circumstances and future shock.

Federally, there is the NDRRF and how implementation of the national action plan will occur will be clearer once programs are funded. Most jurisdictions now have a resilience strategy and Australian local councils are proactive in implementation of resilience actions, with a limited scope. Local government is the closest level of government to community and represents 'grass roots' resilience aspirations but action is hampered by limited resources. Due to a reliance on external resourcing, councils are worried about cost shifting by Federal government and funding availability. This is complicated by an enormous divide between wealthy and poorer councils across the nation. Against this layering of governance and opaque resource allocation there has been progress by individuals, private companies, and small communities, despite the uncertainty of government policy.

Australia has many positive examples of resilience in action such as Queensland Reconstruction Authority (QRA),[11] East Gippsland Bushfire recovery[12] and Resilient Byron[13] which are all complemented by positive story telling. Fire and Emergency Services Chiefs in all jurisdictions are well practiced in supporting the message around resilience. Farmers for Climate Action have been able to galvanise and embrace resilience for farmers. The Climate Council has been successful in promoting climate change and emergency response but have taken an forthright political approach. While achieving change needs confrontation negative messages can also alienate people and be counterproductive.

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[10] United Nations Disaster Risk Reduction Online glossary accessed on 5 May 21, available at:
https://www.undrr.org/terminology

[11] Queensland Government Queensland Reconstruction Authority Website accessed on 5 May 21, available at:
https://www.qra.qld.gov.au/

[12] Victorian Government East Gippsland community Recovery Website accessed on 5 May 21, available at:
https://www.eastgippsland.vic.gov.au/community/bushfire-community-recovery

[13] Resilient Byron, Resilient Byron Website accessed on 5 May 21, available at:
https://www.resilientbyron.org/

Queensland is well practised at disaster response, and there is a requirement to manage ongoing and chronic stressors. QRA and CSIRO[14] have partnered to develop a harmonised approach with local government agencies. While the desire is consistent amongst all stakeholders there remains significant work to eliminate confusion and misdirection.

Defence may offer some lessons on future thinking and resilience, as the primary role of defence is preparedness. Preparedness refers to a set of actions that are taken as precautionary measures in the face of potential disasters, which can include both physical preparations and training for emergency action. Preparedness is an important quality in achieving resilience by avoiding and mitigating negative outcomes.

It is not clear yet how the COVID-19 response will affect Australia's long-term approach to resilience, but it provides an excellent opportunity to openly discuss the topic. In a rolling cycle of cascading emergencies in 2020 (bushfires and COVID-19), Australian communities have shown that they can come together. There has been renewed willingness by senior leaders to listen to science, data, and the community, but the danger is to view COVID-19 as a temporary crisis and aim to "recover" by returning to past practices which will stifle resilience.

Historically, Australians have often demonstrated agility in the response to crisis but accept organisations and governance arrangements will resume normal adversarial and competitive behaviour once the crisis is over. It is not only organisational behaviour that affects progress of resilience as Australian attitudes have also changed remarkably over the last decades to be more individualistic and less community orientated.

Vulnerabilities, Gaps and Assumptions

Global Change

Australia has a complex relationship with the world when considering global drivers of change, particularly when it comes to energy and climate change. Currently, global, and Australian public interests are being negatively impacted by a dysfunctional world order, with a vacuum of global leadership and policy making that directly impacts change at the global, regional, and local level. In 2021 the Biden Administration is changing the global landscape for emission commitments leading to COP26 and Australia finds itself well behind in global aspirations in addressing climate change. Global drivers of change may have a negative effect on Australia; however, resilience occurs at 'place and time', which means within Australia that change can occur at different scales across national, state, and local layers. Unfortunately, the Federal Government has been the slowest to adapt.

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[14] CSIRO and QRA project discussed at the Workshop on 30 Aug 20.

Understanding Resilience

Resilience is now a term easily hijacked to fit many narratives, and risks becoming a marketing cliché and manipulated for partisan purposes. The rebranding of the Northern Territory Quarantine facility as the 'Centre for National Resilience …' is perhaps the most farcical example of this.[15] Differing interpretations of resilience can be confusing, and the challenge is to prevent 'resilience' being overused to the point where people stop listening. At worst, case stories of resilience will be used to obfuscate and distract from accountability for poor preparedness.

Resilience is not just about shocks and stressors, for example drought, floods, and climate change. It is about addressing risk and changing human behaviour answering questions such as:

- How do we remove or minimise risk from manmade systems?
- What can be done to prevent risk being created in the first place?
- What human systems are constraining a resilient approach to vulnerability?

To stay resilient, a system must be constantly challenged and 'the boundaries probed'. A long period of stability and feeling safe creates complacency which severely compromises resilience. There is no question that Australia is relatively comfortable and successful, even with COVID-19, but the 'if it ain't broke don't fix it' attitude will damage future resilience as our current situation is not sustainable in even the mid-term.

Many of the disasters our nation reacts and responds to are of our own making. Australians have made vulnerable communities, particularly in an engineering and planning sense. For example, coastal erosion from regular storm events on the NSW Central Coast now sees houses destroyed because of ill-conceived exposure to hazard in pursuit of lifestyle. The myth of human control of nature has embedded some deep assumptions that may prevent resilient approaches. Just as the obsession with the 'free market' has seen successive Australian governments outsource our sovereignty to other nations and the global trading system.

A critical component of understanding resilience is that humans cannot control everything - yet many people fight against the unrelenting tides of change to create the conditions that suit an ill-defined vision of what human existence and modern societies should be.

Resistance and Barriers

Resistance to change is a significant impediment in adopting a resilient approach. Barriers to the formulation, adoption and implementation of new policy include inertia, preference for the status quo, and vested interests both in politics and business. Vested interest is powerful and steeped in deliberatively misunderstanding concepts that may affect organisations, communities, and individuals alike. Upton Sinclair expressed this as "It is difficult to get a man to understand something when his salary depends upon his not understanding it".[16] Barriers support the 'conventional wisdom' of the time but also reinforce vulnerability, which create communities without power, and without the ability to express requirements for change.

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[15] https://coronavirus.nt.gov.au/updates/items/2021-04-30-howard-springs-moving-forward-with-expansion

[16] Sinclair, Upton, Captain Of Industry: Being The Story Of A Civilized Man [Two Volumes], 1924

Some institutions have embraced a 'talking down' approach while manifestly failing many moral and governance issues, which has led to the wider malaise of loss of trust in institutions. As was noted at the start of this report, we must have shared awareness if we are to act rationally and prepare for emerging challenges; without it we are fated to just react.

Resilience requires a deeper engagement beyond the 'ten second sound bite'. Resistance to change is reinforced by the greater power of simplistic, certain, and short-term focused arguments over arguments that incorporate nuance, uncertainty, ambiguity, and complexity.

There is a limited (but not unsurprising) ability across society to simultaneously think in terms of nested systems, complex systems, and intersectionality across disciplinary, societal, economic and governance boundaries. The Australian societal and political governance model is stove-piped or compartmentalised, reinforcing a lack of systems thinking. This model was developed for the 'Industrial Age' of a century ago and does not reflect advances in networking and information technology. Compartmentalised officialdom becomes a barrier when the 'do nothing - she'll be right' narrative is perpetuated by elements within a governance system which is then reinforced by promotion and rewards for providing barriers. Thus, the culture and processes can become an institutional barrier that is increasingly deaf to different voices because of short-term political priorities.

The Gap between Strategy and Implementation

There is a core requirement in advancing resilience actions which is to get the policy settings and the environment right for cohesive, aligned, and collective action by communities and individuals, rather than governments. The NDRRF acknowledges this requirement in the Framework Overview Guiding Principles[17] which discuss 'inclusive engagement', 'shared and defined responsibilities' and 'practical change at local, state and national levels.' Similarly, the Action to Reduce Disaster Risk infographic articulates a requirement to 'support and enable locally-led and owned place-based disaster risk reduction efforts'[18]. The intent and guidance already exist for Australia to take 'disaster' preparation beyond the narrow focus of 'natural' disasters.

There has been a tendency to retreat into traditional approaches, short-term government goals, and social media engagement when responding to unexpected stressors. Often people and communities act in emergencies without a national vision and become confused by the lack of resources alternating with a subsequent flood of help in recovery phase. Good top-down resilience frameworks exist, but there are not enough bottom-up initiatives addressing a range of local issues that could improve our society's resilience.

Our way of working often reinforces singular and limited objectives in order to make large complex problems more manageable. This logical approach can result in a near term focus in governance, economic valuations, financial reward, training, budgets, and timelines. By focussing on today and not future complex risks, short-term concerns can crowd out strategic thinking. A current example is where climate change concerns are taking a back seat to the more immediate threat from COVID-19.

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[17] Commonwealth of Australia, National Disaster Risk Framework, ibid, p. 8
[18] Loc. cit

Reassessing Values

Australians, like most nation's peoples, have built a 'heroic' narrative which unifies the nation. The ANZAC myth is strengthened each year and builds on settler stories celebrating stoicism in the face of hardship. Australian mythologies speak to a sense of Australian values, for example the 'fair go', which can be aspirational, but delusional, if it does not take account of barriers. There is also a danger that traditional value-based narratives are invested in a 'permanency of the past' that does not reflect modern Australia. At worst, traditional values can stifle change and alienate people. A message that 'Australians are tough and resilient battling a sunburnt country' will be counterproductive when trying to battle the reality of extreme weather events. Malevolent actors can also exploit national stories to support vested interest.

We rightly derive national pride from the successful economic performance of our nation, particularly over the past 30 years of economic prosperity. Unfortunately, this performance narrative is inconsistent with the 'two or three speed economies' existing across our country which have increased inequality.   The economic system that has evolved since World War II has led to the primacy of the individual as the actor, and if the individual succeeds, then it is because of aspiration and hard work, but if the individual fails, then they are deemed to be weak and then sidelined. The 'winners and losers' narrative emphasising economic success and the free-market is at odds with Australia's proffered myth that we are a people who value a 'fair go' for all.

Values are both explicitly and implicitly prioritised, for example, efficiency and cost reduction is explicitly prioritised in every value chain and codified through rules in the form of business plans or government regulation. Informal rules come about when new norms become established; a young manager observing the ruthless drive for efficiency may adopt this behaviour if they believe it will result in promotion. Importantly, what people value in times of stability and prosperity creates the space for a rising vulnerability that, when a shock / disaster occurs, will be challenged, threatened, or lost. For example, many Australians value cheap internet and energy when there are no threats, but when there is disruption, the values reverse. Yet the concept of paying more for services that perform better during disasters is often considered an untenable idea.

A significant gap occurs because our systems fail to codify the implicit and dynamic nature of 'value' as rules (in public and private sector) through policy development.   Decisions are enabled and constrained by the interaction of systems of values, rules, knowledge. Understanding the dynamics of values-tensions, rules and knowledge helps shape the thinking and the resilient based approaches can Australians take.[19]

[19] Commonwealth of Australia, Department of Home Affairs, 2018 Profiling Australia's Vulnerability: the interconnected causes and cascading effects of systemic disaster risk, accessed on 5 May 21, available at: https://knowledge.aidr.org.au/collections/disaster-risk-reduction/

Action taken at the community level can build robustness irrespective of a range of political futures, but communities cannot build resilience when constrained by an enduring set of rules and systems controlled by unknown and invisible influences.

Organisation and Governance Gaps

Ultimately governments are responsible to assist Australians affected by large scale disruptions and disasters. Emergency management has a long history of engagement with community, and all levels of government work assiduously towards clearer disaster management roles. The gap is beyond the response, where many policy elements within federal government exist, which links back to state / regions and especially city or council governance. Some fundamental questions that continually need addressing in governance policy are:

- Who is responsible?
- Whose voice counts?
- What is the role of the public service?
- Who is responsible for certain issues?
- What level of coordination is necessary to avoid repetition?
- How do NGOs contribute?
- What information sharing is possible or desired?
- Is there a greater role of municipal and city governments?

Resilience requires some ceding of control to those who are to be protected and is shaped by the expectation of a populace of citizens. Unfortunately, governments do not cede control well and when action is required a government often reacts heroically to a crisis saving a grateful population. This flawed, but politically seductive, approach has multifaceted effects:

- The population does not accept responsibility and will pass any accountability for actions to back to the Government.
- There is an expectation that Government can and will be a substitute for insurance.
- If governments fail to the keep public safe, then the erosion of trust is immediate and damaging.
- If there is a failure of service under stress, then the population feel that that is a breaking of the unwritten contract between government and people.

Across governments and institutions of all levels, the funding and investment required to prepare for future challenges does not appear to be a priority. Billions of dollars were spent to support the economy through the COVID-19 pandemic, yet only a few million was tied to the implementation of the NDRRF. On 7 May 2021 $600 million was announced to support the creation of the National Recovery and Resilience Agency[20]. However, it must be noted that when the Productivity Commission reviewed Natural Disaster Funding Arrangements in 2015 it recommended a shift in funding from recovery to mitigation[21], but this was not implemented. At worst, funding for resilience can be corrupted by vested interest and

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[20] Commonwealth of Australia National Recovery and Resilience Agency, accessed on 4 July 2021, available at: https://pmc.gov.au/news-centre/domestic-policy/national-recovery-and-resilience-agency-announced

[21] Commonwealth of Australia Productivity Commission Report on Natural Disasters Funding Arrangement, accessed on 5 May 21, available at: https://www.pc.gov.au/inquiries/completed/disaster-funding/report

reinforce singular goals rather than holistic and coordinated action. With disasters forecast to cost the Australian economy $39 billion by 2050,[22] the slow and inadequate allocations of resource and methods of allocating funds needs to change.

Our society is comprised of highly skilled and knowledgeable individuals, most of whom work outside of the Government sector. However, this community of people can face difficulty in connecting into the Government's hierarchical structure and processes. Engagement between industry groups and the Government is also often constrained by commercial procurement and adversarial contracting arrangements. As was noted at the start of this report, we cannot solve our complex challenges by looking for incremental, stove-piped, quick wins; we need a team approach within our nation and, as importantly, with our neighbours and allies.

Leadership Challenges

There is a lack of honesty and directness from some Australian leaders about our future challenges. To develop a more resilient society, the Australian public need the right information presented to make decisions. Unfortunately, direct messaging is frequently masked by political and commercial interest which then erodes confidence leading to further social fragmentation. However, a framework exists to step away from using communication as partisan spin. The NDRRF, Priority 1 'Understand disaster risk'[23], is precisely about honest engagement with the public. It clearly states a need to 'improve public awareness of, and engagement on, disaster risks and impacts' and to 'identify and address data, information and resource gaps.' Once again, this highlights the need to have honest and open discussions to build shared awareness, if we are to act rationally and prepare for emerging challenges.

With COVID-19 Australia is presented with the best opportunity since World War II to have governments, business, community, and individuals address resilience seriously. It requires leadership and national approaches, but also engagement at an individual and household level. Resilience is a shared responsibility, identified as such in 2011 as a key pillar by the Federal government[24]. Shared responsibility means forming new partnerships between entities who have not worked together before, or who may have been adversaries. This requires leaders with technical mastery but also highly developed 'soft skills'. This type of leadership is exceedingly difficult for leaders in traditional directive roles within defined hierarchies. Unfortunately, there is an underinvestment in building leaders across all sectors and levels with new participative skills which are required to advance shared responsibility. This again highlights that we cannot solve our complex challenges by looking for incremental, stove-piped, quick wins; we need a team approach within our nation.

Community based resilience is potentially the most powerful, most enduring, and most achievable form of resilience. National frameworks and leadership will certainly assist, but resilience is unlikely to be achieved from top-down directive and distant leadership alone. Leaders of traditional and large institutions have better training, access to resources and

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[22] Australian Business Roundtable for Disaster Resilience and Safer Communities, accessed on 5 May 21, available at: http://australianbusinessroundtable.com.au/assets/reports/media-release-nov-11.pdf

[23] Commonwealth of Australia, National Disaster Risk Framework, ibid, p. 9

[24] Commonwealth of Australia, National Resilience Strategy, 2011, accessed on 5 May 21, available at: https://www.homeaffairs.gov.au/emergency/files/national-strategy-disaster-resilience.pdf

better understanding of complexity, but the hubris attached to 'big' leadership can stifle community stakeholder engagement. Local leadership uses trusted networks and is directly accountable to its constituency in a way national and international leaders will never be able to achieve. Investment in local leadership, able to prepare their communities for shocks, is key to future resilience.

The Resilience and Sovereignty Challenge

The systems that Australians rely on for their livelihoods and productivity every day are only partially understood by most people. While it is impractical for every Australian to understand every detail of all systems, there is a requirement for us collectively to understand exposure to systemic risk to ensure Australia remains resilient. Australians struggling to raise children, pay the bills and keep their jobs, do not have the headspace to devote to pondering the systemic risks underpinning their daily existence. This is a role for many of our political, public service, civic, academic, and business leaders at all levels.

Global trade and diverse supply chains are essential for Australia's future prosperity. We are a part of the global trading community, but have become increasingly reliant on that global system, and in the process have risked, and even forsaken, our national sovereignty chasing the lowest price. Australia now needs to redesign critical components of our supply chains under a 'smart sovereignty' model. 'Smart sovereignty' does not mean everything must be made in Australia, rather it infers an intelligent level of Australian based manufacturing capability and associated domestic supply chains, with appropriate research and development facilities and a skilled, experienced workforce.[25] A concept of 'smart sovereignty' is required which will address some of the following gaps:

- What are critical goods and services that must have an Australian owned and operated capability?

- How does Australia consider the trade-off of national resilience against global supply chains?

- Is Australia exposed to increased risk by over reliance on cheap access to foreign markets? What is the impact of degradation and failure of global supply chains?

- Are commercial entities responsible for building redundancy into systems?

- What must be regulated and what can be a market response?

- Who is responsible for 'smart sovereignty?

- Who is responsible for protecting long and complicated supply chains?

- What is outsourced and where does the outsourced function reside?

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[25] Smart Sovereignty is discussed in the 2020 IIER-A Submission to the Joint Standing Committee for Foreign Affairs, Defence and Trade inquiry into The Implications of the COVID-19 pandemic for Australia's Foreign Affairs, Defence and Trade - https://www.jbcs.co/iieraustralia-projects

In December 2020, the Joint Standing Committee on Foreign Affairs, Defence and Trade (JSCFADT) tabled a report in Parliament entitled Inquiry into the implications of the COVID-19 pandemic for Australia's Foreign Affairs, Defence and Trade[26]. Following an extensive period of public consultation, the Committee concluded that:

> '… there needs to be a methodology to determine what systems, infrastructure and supply Australia needs to function as an independent first-world nation, and which inputs to those systems are critical… In the case of products, services or assets which are both economically essential and subject to supply risks, and thus classified as critical, there is an argument for at least some degree of sovereign domestic capability. In most circumstances this would require government involvement, whether in the form of direct or indirect support to sovereign capability, or some form of government oversight or regulatory control.'[27]

The Report recommended that 'within 12 months the Australian Government define which critical national systems are essential to Australia's ability to function as a secure, prosperous first-world nation.' As at June 2021, the Government has not provided a formal response to JSCFADT report and the recommendations that were made. It appears unlikely that defining 'critical national systems' will occur within the 12 month period recommended by the Committee. Failing to identify these 'critical national systems' will inevitably impede progress towards achieving sustainable, national resilience.

Key Assumptions and Gaps

Our assumptions frame our resilience. Australia has built a society that aims to control all aspects of nature to make humans safe, but this creates vulnerability. To confront these assumptions a powerful narrative must be developed which is underpinned by understanding the nature of change. Short-termism or 'quick win' thinking is deeply embedded in the Australian society; we tend to focus on today, not on future interacting and cascading risks.

There are also relationship gaps between governments, political, private sector and community decision-makers, and citizens. Improved resilience outcomes require information sharing, which is honest, sensitive, respectful, engaging, meaningful and actionable, emphasising a sense of urgency where needed. People need to be motivated into action rather than misled into inertia.

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[26] Commonwealth of Australia, Joint Standing Committee on Foreign Affairs, Defence and Trade, *Inquiry into the implications of the COVID-19 pandemic for Australia's foreign affairs, defence and trade*, December 2020, https://parlinfo.aph.gov.au/parlInfo/download/committees/reportjnt/024552/toc_pdf/Inquiryintotheimplic ationsoftheCOVID-19pandemicforAustralia'sforeignaffairs,defenceandtrade.pdf;fileType=application%2Fpdf
[27] Ibid, pp 78-80

Energy Transition - Our Risky Assumptions

When power supplies are interrupted, our society is severely affected. In Australia there is a widespread dependence on diesel generators for backup power. During the South Australian 2016 System Black Event some generators failed because of a lack of adequate maintenance. An example was the Royal Adelaide Hospital which was severely disrupted by the failure of backup power.[28]

In 2011, Superstorm Sandy resulted in almost $70 billion in damage across the north-east of the United Sates. Eight million people lost their power for days and, in some cases, weeks. Such power outages can result in chaos in supply systems with the loss of refrigeration, traffic lights, electrified public transit, airports, streetlights, water pumping facilities and emergency services. [29]

The expectation is that our future world will be more likely to be disrupted by events that will cause power disruption . This will include malevolent actors conducting cyber-attacks. The ransomware attack on the largest oil pipeline in the United States in May 2021, and the subsequent scenes of panic-buying behaviour, highlighted yet again that a society can very quickly unravel when key energy sources are compromised.

Future resilient power systems need designed redundancy, backup systems and microgrids. However, resilient energy systems design is both a social and technological challenge.

Future Requirements

Change the thinking

There are a multitude of comprehensive lists and reports describing vulnerability and risk but there is a lack of foresight capability to examine the trends, and a broken nexus between policy advice, action, and foresight. The uncertain nature of risk may be reduced by strategic foresight techniques which offer a method of imagining futures. A key weakness is where policymakers need to make policies for unknown and uncertain futures yet concentrate on linking policy with analysis with little future thinking. This fundamental weakness is illustrated in Figure 1.

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[28] AEMO, Final Report on South Australian Black system event 28 Sep 2016 , March 2017, accessed on 5 May 21, available at: https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2017/Integrated-Final-Report-SA-Black-System-28-September-2016.pdf

[29] World Vision Super Storm Sandy Facts 2012, accessed on 5 May 21, available at: https://www.worldvision.org/disaster-relief-news-stories/2012-hurricane-sandy-facts
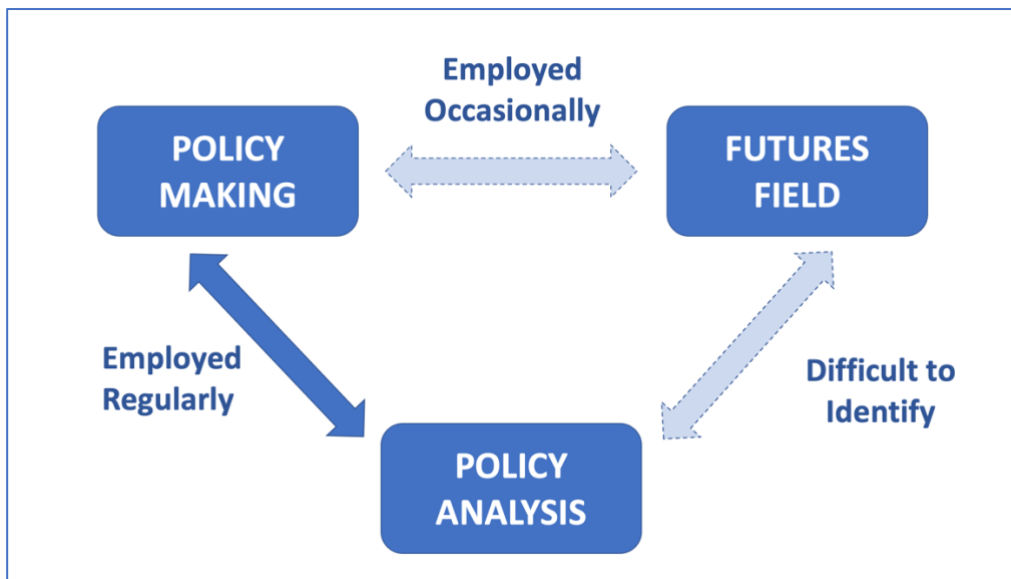
FIGURE1: BUILDING BETTER FORESIGHT INTO POLICY ANALYSIS [30]

Understanding what people value (our things, our lifestyle, our lives) and the connection to systemic risks and consequences, is necessary in creating a groundswell and compelling case for change at all levels.

This understanding must then address the fundamental questions for the future:

- Do populations need to retreat?
- What balance is there between lives and livelihoods?
- Is some loss acceptable and who bears the loss?
- What level of resistance is necessary?
- When does it make sense to preserve, and when to abandon and adapt?
- What are the tipping points?

The Australian economy has been described as remarkably resilient. In this case this use of the word resilience reinforces the success of the traditional approach, and not an argument for adaptation. The Global Financial Crisis was largely avoided in Australia, but because the response and recovery were successful the reversion to "normal" was swift and potential lessons ignored. Success hampered the ability to learn. *(We run the risk of making the same mistake and failing to learn from COVID-19 because we viewed our initial response as 'successful'.)*

Many economists understand that GDP as a marker of societal and economic success alone, has run its course, and there is the rise of wellbeing budgets in New Zealand, Scandinavia, Scotland, and Iceland.[31] Several organisations have had a change over the past few years

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[30] Van Dorsser, C., Taneja, P., Walker, W., and Marchau, V. (2020). An integrated framework for anticipating the future and dealing with uncertainty in policymaking. Futures. Available at: https://doi.org/10.1016/j.futures.2020.102594

[31] OECD, The Economics of Well Being, 2019 accessed on 5 May 21, available at: https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=SDD/DOC(2019)2&docLanguage=En

moving from that typical shareholder focus to a stakeholder focus. Kate Raworth has developed the concept of 'Donut Economics' which aims to ensure that no one falls short on life's essentials (from food and housing to healthcare and political voice), while ensuring that collectively we do not overshoot our pressure on Earth's life-supporting systems.[32] Evolutionary economic thinking will support national resilience.

Develop an Informed Strategy

An inclusive national resilience strategy requires political shrewdness, power, wealth, leadership, persistence and a deep understanding of social change processes and practices that:

- inform strategic and purposeful interventions to shift thinking and understanding of individuals and communities, and
- build the capabilities and conditions for collective and coordinated actions to weaken the factors reinforcing the existing system and create or enhance alternatives that promote more inclusive visions of the future.

Some of the factors that should be considered by the strategy are the need to:

- Provide a vision of 'what are the characteristics of a resilient society' which are guided by resilience and sustainability principles.
- Facilitate engagement across layers of governments and civil society to support different choices, behaviours, decisions, and action.
- Identify the approaches to engage new voices and perspectives that help to build capability, agency, innovation across minorities, NGOs, charities, and private sector.
- Identify future scenarios for the evolution of 'pooling risk' and the insurance industry.
- Consider investment requirements and the use of social capital which allow market forces to work with resilience approaches.
- Identify the key points of leverage (Tipping Points) and how any intervention will work.
- Identify and address values that are unconditional, conditional and the relationship between the two extremes.
- Encourage the greater use of widely available scientific thoughts, reports and insights which explain future challenges and the need to address systemic thinking.
- Employ a maturation approach which gradually builds concepts such as risk, vulnerability, systemic adaptation, prediction of hazards, shock, and stressors.

The Australian Disaster Resilience Index[33] describes a range of capacities for resilience, both coping and adaptive, go a long way to defining what these characteristics are. This Index is world leading and the intent is to update it each time there is new Census data. For more local measures, or characteristics of resilience, there are initiatives as the Torrens Resilience Scorecard Index which is deployed by many local governments and communities.[34]

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[32] Raworth Kate, Donut Economy, 2020 accessed on 5 May 21, available at:
https://www.kateraworth.com/doughnut/

[33] Bushfire and Natural Hazards CRC, Australian Disaster Resilience Index: building safer, adaptable communities, accessed on 4 July 2021, available at: https://adri.bnhcrc.com.au/#!/

[34] Flinders University Torrens Institute, Developing a model and the tools to measure community resilience , accessed on 4 July 2021, available at:
https://www.flinders.edu.au/content/dam/documents/research/torrens-resilience-institute/community-resilience-report-toolkit.pdf

Implement Resilience by Design

The NDRRF states that, 'Australians depend on reliable and affordable food, water, energy, telecommunications, transport networks (including road, rail, aviation and maritime), and financial services. These functions also depend on each other. The networks that ensure the sustained delivery of food, water and energy involve complex interactions between infrastructure, people, the environment, money, and technology. A failure in any of these elements could have wide-ranging consequences across communities, businesses, governments and economies.'[35]

These interconnections and interdependencies will not spontaneously form into a cohesive system to deliver a resilient Australia. Therefore, a 'resilience by design' approach is proposed which requires sound and ongoing implementation of strategic concepts to allow resilience to be built 'bottom up' but framed 'top down'. This implies a collaborative method which requires deep community engagement and listening to create common goals and mutually supporting actions. Resilience is enabled by networks and external services beyond the control of one individual, community, or government. Three key shifts are required:

- From thinking to doing (supporting action).
- From isolated silos to ecosystem (policy coherence).
- From Government to civil society and private sector (shared responsibility).

Resilience by design shapes preparedness outcomes. Preparedness is a concept/process in military planning and operations that comes from an understanding of the evidence and data to support good decision making to mitigate risk. Trade-offs at the individual, national, and global level need to be assessed, communicated, and adjusted as circumstances change. The price of resilience is a willingness to bear the cost of preparedness, and this relies on evidence of the costs (and who incurs them) and the benefits that preparedness generates (and who the beneficiaries are). Currently there is an absence of high-quality data to inform decision making.

Some key resilience by design considerations include the need to:

- Address policy settings, rules, and regulations, and where possible embed resilience into existing national operational approaches such as emergency management.
- Address governance, decision-making, responsibility, funding, and utilisation of all three tiers of government to avoid duplication of effort.
- Embed economic requirements, infrastructure planning and critical infrastructure demands into resilience approaches. Infrastructure Australia has commenced consideration of these requirements in the Infrastructure Plan.[36]
- Build values into key performance metrics.
- Design teamwork across disparate networks and invest in building and exercising human social networks.
- Create an environment for assessment and management of future unimagined risk.

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[35] Commonwealth of Australia, National Disaster Risk Framework, ibid, p. 5
[36] Infrastructure Australia Infrastructure Plan 2016 accessed on 4 July 2021, available at:
https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-plan-2016

> **Resilience-by-Design – It can be done**
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> The National Freight and Supply Chain Strategy 2019-2020 Annual Report provides an example of a nascent resilience-by-design undertaking by the Australian Government:
>
> Action Item 1.1, Initiative 1, identified the need for a Freight Resilience Pilot Project as part of the National Disaster Risk Reduction Framework. The Annual Report noted that the findings of the Pilot Project 'validated the need for a national capability as a foundational element for implementing the National Disaster Risk Reduction Framework and showed a clear dividend from Australian asset owner, supply chain entities, communities and businesses having better decision-ready information and advice including to inform strategic infrastructure investment.' Lessons from the Pilot 'will inform the design of a national capability to provide industry, government and the community with the information and guidance to make risk-informed decisions to improve Australia's resilience.'

The capacity and inclination to think about risk and resilience more holistically, and with a view to the future, clearly exists across the political leadership. By taking this approach and applying it more broadly, and incorporating assessments about interconnections and interdependencies, will be a significant first step on the journey to a more resilient Australia.

Change Leadership Culture and Decision-Making Approaches

Good leadership exists when effective and desired outcomes are achieved for the common good through igniting a passion, shared understanding, and commitment in others to act. Australian leaders and decision makers have shown themselves to be extremely willing and capable of shifting cultural, disciplinary, social and economic norms, ideas and practices in response to a 'crises' (e.g., the initial responses to COVID-19). Key here is recognition or acknowledgement that a 'crisis' exists and that ready alternatives are available and promoted by trusted people and communities. The resilience challenge is too large for a prominent few to lead adequately and non-prominent leaders are equally important. A crisis creates the freedom or conditions for leaders to act.

The key challenges, or opportunities to improve decision-making are to:

- Empower the many thousands of non-prominent leaders and invest in subordinate decision makers in communities.
- Develop narratives, scenarios, assessment approaches, foresighting, and evidence etc to build understanding and aid communication.
- Be ready with the strategic actions to support responses and recovery efforts that shift the trajectories and build resilience.
- Build the capacities and capabilities in preparation for future shocks.
- Provide people with leadership opportunities to learn what it means to lead in the future and reinforce by positive messaging.
- Build on our existing knowledge rather than continually starting again with new governments, departments, decision makers, and people in key roles.

- Embrace the technological opportunity of data driven approaches and Artificial Intelligence which may soon offer capability for better decisions.

Address and Develop Supporting Narratives

A strengths-based narrative is part of a way forward for communicating resilience, to alleviate fear, and to map out a pathway ahead. An important principle of resilience is to build on place-based narrative and experience of regular hazards, such as cyclones. This demonstrates that communities can be resilient when they act together and it helps develop a frame to prepare for a sustainable and thriving future, rather than being unprepared for inevitable shocks. 'War' is an inappropriate metaphor to employ when building a resilience narrative. While politicians and other senior leaders may use messages that are driven by fear in maintaining a sense of safety and security, this message eventually leads to fatigue and a 'switching off'.

To develop meaningful narratives, it is important to listen to, and learn, what is important to each group, and use systems thinking to frame the resilience message using appropriate language. There is a significant opportunity to be gained by using the traditional Australian narratives as a starting point. Some well-formed narratives in the Australian psyche are the stories of self-sacrifice, whether it be Military, surf life savers or volunteer emergency service workers. Bravery, security, national success, trust, national heroes, icons - are all wrapped into a continuing story of safety. The traditional narratives are simple stories with cascading complexity and can be told to children in a simple way or to adults with direct messages.

Narrative and messaging building is an undertaking supported by public relations, media, and use of information technology. However, the modern age of media has brought many challenges regarding the accuracy and credibility of stories with the 'pollution of fact' that will continue apace as societies are deluged with disinformation and spin. Truth has become malleable and active measures to undermine truth and trust have become rife. The scale, speed and sophistication of disinformation campaigns have increased considerably over the past few years where it is now difficult to discern marketing from news and what happens in Australia from what is global. Unfortunately, post-truth and 'alternative facts', if espoused by elected officials to gain short term advantage, give oxygen to conspiracy theories and the disruption that flows consequently. A whole-of-society approach is needed to build resilience against disinformation campaigns.

Key Concepts and Ideas

There is a lack of honesty about our collective futures, and a large group of Australians feel disempowered and forgotten. Many people do not have the agency for personal resilience or capacity to address the inequalities of power and wealth. There is a 'shared responsibility' which needs new partnerships between groups who have not worked together before, and who may have been adversaries.

Leaders have the responsibility for providing the environment and tools to enable trust. Truth underpins strong positive stories and the narrative needs to be factual and where necessary direct. The aim is to encourage a national narrative where it is one consistent narrative with thousands of stories told to different audiences at different time.

It may be possible to effect change by embracing a 'Resilience by Design' approach, meaning systematic design and ongoing building of resilience through a collaborative methodology across Australian society. The aim should be to map vulnerability and consequences in the Australian ecosystem and shift focus from purely tasks underway to potential future problems and desired outcomes.

> The challenge to the framing of current solutions is the assumption that these already address the future risks, which is generally not the case with novel, unprecedented, emergent, and changing threats. In such situations the 'solutions' can only be identified or developed through an inclusive process underpinned by effective adaptive learning.

Conclusions

We live in an historic moment of turmoil with a climate and biodiversity emergency threatening the planet, an energy transition underway and the pandemic continuing to spread globally.   Long-standing international institutions and alliances appear to be fragile or even crumbling. COVID-19 has exposed fragility in Australia's societal systems, for example, the federation structure, our health sector, and our global supply chain dependence.

Whilst the Australian initial response to the pandemic was successful in that hard lockdowns contained the spread of the COVID-19 virus, it is not a sustainable situation. We will have to emerge from our quarantine cocoon and reengage with the wider world at some point in time. We must prepare for that; we cannot rely on the reactive responses made to date given the growing scale and complexity of the threat we face as a nation.

Sadly, the dominant economic narrative of our time remains an individualistic and free market one reinforced by an existing set of values, rules, and knowledge, which has led to a brittleness in our society. Increasing economic inequality and a lack of access to opportunity means that not all Australians have the same 'fair go'. Ultimately, becoming a resilient nation requires the recalibration of our economic ideology where Australians become stronger, more empathetic, and more resilient communities. This is the 'Citizenship versus Client' conundrum of modern western democracies.

We humans struggle to deal with complexity. However, we must face reality if we are to be able to prepare for and deal with the range of complex threats that are likely to impact us in the coming decades.   The discussions held in the many workshops conducted under the National Resilience Project led us to conclude that there are three key characteristics or attributes that we need to strengthen in our society for improved resilience. These are:

- **Shared Awareness / Shared Goals**. With shared awareness we can act rationally and prepare accordingly because we have a shared goal - a common aimpoint; without it, we just react to each crisis as it occurs. Shared awareness embraces diversity.

- **Teaming / Collaboration.** We cannot solve our complex challenges by looking for incremental, stove-piped, quick wins; we need a team approach within our nation and, as importantly, with our neighbours and allies.

- **Preparedness.** There is no verb for 'resilience'; the verb 'prepare' is the most relevant in this case. There is an opportunity to learn from Defence preparedness concepts and systems and to adapt and implement them across our wider society. We need to act; to quote General R. Sullivan, hope is not a method.

Unfortunately, it is difficult to develop shared awareness when there is a widespread absence of desire to address the immense challenges and to look forward with clear foresight. This complacency results in an absence of strategy to address collective and systemic problems. Faced with a crisis, the reactions are then to retreat to traditional structures, short-term government thinking, occasionally a 'revolving door' of leadership, and ubiquitous social media-driven reactive policy.

In many cases our systems and ways of thinking, deciding, and allocating resources are part of a structured hierarchical system resistant to change. Our goal should be to avoid stove-piped governance actions and to seek to align actions through integrated policies, supported by foresight analysis, that is informed by research. With such a broad range of issues to address it becomes hard for the community to understand what the core issue is and ultimately how they can contribute and make a difference. It is difficult to develop a narrative that enables leaders to make necessary changes. Australians need to believe that what is required to be done is necessary and will be for the benefit of all, not just for the few.

Recommendations

A Resilience Framework

A national approach to resilience-building demands an 'all hands-on deck' approach to government and its interactions with the community. Disasters force us to act in this way and demonstrate that we can, as a nation achieve success. The challenge, and the opportunity, currently presented by a compounding set of national crisis events, is to learn from the experience. Without clear articulation from the government, Australians will simply have the equivalent of being told to 'just do better'.

Designing a resilient Australia and preparing for potential disasters, both natural and unnatural, does not need another Royal Commission or Taskforce or a review by the Chief Scientist. The framework already exists: The National Disaster Risk Reduction Framework, supported by the Profiling Australia's Vulnerability Report, provide the foundational documents to build a wide-reaching resilience strategy for the nation.

A Resilience Strategy

An overarching resilience strategy should encompass four aspects:

- **Firstly**, the nature of the systemic threats is complex and hard to grapple with by using simple policy manoeuvres. Bureaucracies are designed to reflect ministerial portfolios rather than systemic complexity, and the interplay between chronic stresses and acute shocks both reflect and exacerbate this situation. Solutions demand long-term social policy thinking coupled with emergency preparedness and response, which are fields that have traditionally not interacted deeply nor successfully.

- **Secondly,** 'resilience' requires a degree of ceding of control. This is not something that governments do well. Similarly, despite an impressive tradition of community engagement, our emergency services are inherently hierarchical. To complicate matters further, our federation structure is not necessarily fit for purpose for addressing the complex challenges we face today. This combination of factors can inadvertently result in increased levels of reliance vice resilience.

- **Thirdly,** while climate change is but one of a range of systemic risk exposures, it is both an existential threat and a catalyst for other risks to materialise. We must adopt a balanced approach to tackling climate change, both in mitigation and adaptation, to address the broad set of risks presented by these environmentally driven threats.

- **Fourthly,** relating back to community-driven considerations of resilience, 'resilience' as a concept is a helpful organising construct for professionals in various fields; however, while the word is easily understood at a national level, this is not the case at a community level, where people are not sure of just what they are being asked to do when told to be 'more resilient'

Resilience Actions

Australians cannot respond to the many global factors in play today, and in the future, until we better understand our own internal vulnerabilities and the threats that we may have to face. To address this, the following actions are recommended:

- **Establish a National Resilience Team**. A National Resilience Team comprising Federal, State/ Territory, Business, and community representatives to advise and guide an integrated approach to improving our national resilience. This would not be an executive / delivery entity but rather an advisory body with the authority to range across Federal and State/Territory Government agencies and to engage with the business and public communities to identify, assess and propose actions that would help integrate across the multitude of resilience related activities underway in the nation.
  - The task would be to bridge the silos of agencies responsible for infrastructure planning, energy, social cohesion, housing, health care, education, economic development, social welfare, disaster management and environmental protection.
  - The goal would be to support communities, metropolitan and regional areas, and the nation to better anticipate, withstand, respond to, recover from, and adapt to the inevitable disruptions will face in forthcoming decades.

- **Develop Shared Awareness and Shared Goals.** A National Resilience and Risk Management Strategy should be developed, supported by a national threat and vulnerability register
- **Prepare.** As a nation we need to prepare for future disasters / crises and not just wait to react. "Crossing our fingers" and hoping is not a method we can afford to employ.

Making these Resilience Actions a reality is not a policy or intellectual blank-sheet-of-paper scenario. The Federal Government has already found the language to describe the necessity to 'understand', 'team' and 'prepare'. It resides in the National Disaster Risk Reduction Framework, under the heading 'Drivers for Action'. We can begin to 'drive' the 'resilience actions' we need to recognise that the impacts of disasters can be long term, complex, and intangible. Collectively, we are only now beginning to fully understand indirect, flow on and cumulative effects of disasters. We do know that disasters can trigger long-term challenges across a range of areas … Factors such as health and wellbeing, economic resources, social capital and knowledge influence a person's ability to prepare for, respond to, and recover from disasters.'[37]

> It can be done. And the order of the words above is key to our future resilience as a nation. That is to 'prepare', then 'respond' and finally 'recover'. When the preparation is made with an honest acceptance of the risk, the scale of response will be manageable and proportional, and the recovery phase will set the parameters for another period of preparation based on lessons learned. This is the cycle of resilience.

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[37] Commonwealth of Australia, National Disaster Risk Reduction Framework, ibid, p. 5

Workshop Participants

This component of the National Resilience Project was led by Neil Greet, who is also the lead author of this report. Dr Paul Barnes, Research Fellow, Institute for Global Development – UNSW, assisted with the project and was a co-author. Other contributing authors include Anne Borzycki and AVM John Blackburn AO (Retd).

A total of 20 emergency management sector and 7 national security professionals participated in the workshops for this report.

The Individuals listed below have agreed to be identified. Their listing should not be interpreted as their personal agreement with all aspects of this report, nor necessarily representing the organisations they are associated with.

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