



**Submission to Senate Select Committee  
on Responses to Covid-19**

**Comprehensive resilience in contagion, economic shock  
and other disasters**

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## Executive Summary

1. Resilience planning should be grounded in approaches that are comprehensive, generative and directly linked to both individual well-being and larger social interests.
2. Australian disaster planning must simultaneously pursue the twin tracks of immediate emergency management (direct first response) and medium term social and economic security (currently a missing element). A review of planning documents such as 2019 Pandemic Influenza Plan and the Australian Health Sector Emergency Response Plan for Covid-19 released in February 2020 reveal a one-track approach.
3. Warning time must be exploited to the full. Decision-making delay risks higher costs, especially during a pandemic, but also clearly in other disaster situations. Recent Columbia University modelling demonstrates just how crucial it is to minimize delay.
4. Australia's strong Covid-19 response must be compared with even stronger performers, such as Taiwan, where health and economic outcomes were even more impressive, because of better connected and more comprehensive planning and speedier decision-making. Taiwan Covid-19 cases and deaths were a fraction (under 10%) of Australia's, and Taiwan's job losses were only one third those of Australia, for two countries of very similar population size.
5. The second track (medium term social and economic recovery policy) must be integrated into emergency planning. It should draw on top research and analysis collated in advance to avoid ad hoc responses. One example would be planning for an ability to transition from emergency grant support to recovery through using Australia's contingent loans experience. Another would be planning in advance of disasters to draw on our micro-economic reform experience by accelerating new reform and investment agendas.
6. Invigoration of the knowledge environment and knowledge community for disaster planning management, response and recovery is needed to provide for the key missing foundation for future preparedness. The fact that there are only some three university – linked programs with formal and comprehensive accredited training in disaster resilience illustrates our weakness. Education and research initiatives are critical elements to any appropriate response.
7. A suite of reforms and initiatives that can advance Australian preparedness and therefore our well-being in the face of disaster or crisis is proposed as follows:

R.1 That COAG, BCA, ACCI, ACTU, ACF and ACROSS jointly establish a new National Resilience Advisory Commission (NRAC) that is:

- Constituted to formally reflect considered views of key stake-holder representatives across business, labour, and community sectors
- Staffed to develop detailed plans for Resilience Response and Recovery in the event of national crisis, with an emphasis on horizontal structures (eg business to government) and comprehensive approaches that can address second and third order effects
- Inclusive of defence and emergency agencies, including with a view to secondment of agency staff
- Inclusive of leading scholars and other specialists in economic, social and environmental policy.



R.2 Ensure that the new planning arrangements will:

- Reflect a comprehensive approach to resilience including community linkage and embracing social, economic and environmental impact dimensions alongside direct emergency management
- Ensure that policy design takes full account of issues of policy implementation and delivery
- Provide guidance on the full spectrum of possible crisis events and their interaction including natural disasters, cyber-security, and social conflict
- Incorporate contemporary and emerging digital and other technology insights and protections.

R.3 That Universities Australia, TAFE Directors Australia, Independent Higher Education Council Australia and the Australia Human Resources Institute devise and propose a Human Resource and Knowledge Strategy for consideration by NRAC, to define and ensure the optimal provision of capacity and capability in education, training and research for first rate crisis response for Australia. This might include:

- upgrade the National Institute of Disaster Resilience to a university institute with state-based nodes and incorporating a Co-Operative Research Centre
- commission regular academic studies into business, economic, social and environmental resilience for different scenarios, building off global research including case studies.
- commission triennial studies into mental health and domestic violence and equity and cultural aspects of disaster resilience.
- coverage of both STEM and HASS insights and approaches and their integration, of the full training spectrum from basic skills to advanced education and of skill formation in both formal and informal education and training including the workplace.
- comprehensive review of resilience-related qualifications and training to identify gaps and to ensure quality and responsiveness in the qualifications and education and training systems.



## Introduction

Australian<sup>1</sup> policy response to the coronavirus outbreak has followed a two-step process, with containment the highest priority (the bio-medical and humanitarian view) and with economic and social consequences (a whole of society view) occupying a clear follow-on priority. This short submission argues for a different model of pandemic response, one that places the concept of resilience at the centre of national pandemic response and all disaster response, ensuring that the whole of society view is as equally prominent at the outset as the bio-medical and humanitarian view or other disaster specialisation.

The submission has been prepared by several senior researchers associated with the Social Cyber Institute based in part on their work on resilience as a social concept, including with the support of the Rockefeller Foundation in 2011 and 2013, and in part on their work to improve national resilience for large scale cyber emergencies, both in Australia and globally. A reference point for this submission is the work by one of its authors on a large project funded by the Chief Scientist through the Australian Council of Learned Academies on economic development strategies for Australia.

The Social Cyber Institute is the public research and outreach arm of the Social Cyber Group, a recent UNSW start-up. Information on the Social Cyber Institute can be found at [www.socialcyber.co](http://www.socialcyber.co).

The submission has seven parts:

1. Concept of resilience
2. Australian disaster preparedness planning: overlooking wider impacts
3. Warning time for Covid-19 response
4. Comparison between Australian and Taiwan responses
5. Economic response options, including the “return or reform” choice
6. Knowledge environment and knowledge community
7. Recommendations.

## Concept of Resilience

On 14 January, Prime Minister Morrison observed that “We must build our resilience for the future and that must be done on the science and the practical realities of the things we can do right here to make a difference.” On 11 May, Leader of the Opposition, Anthony Albanese said Australia must “secure a more resilient society”. The Australian government supports an Australian Institute for Disaster Resilience (AIDR) and a wide variety of associated programs. Many actors in government and business also have substantial planning for disaster response with components that address resilience to some degree.

How can we define resilience? The AIDR uses the following definition:<sup>2</sup>

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<sup>1</sup> “Australian” here refers to the collectivity of federal, state and territory governments, their parliaments, interest groups, community groups, practitioners, scholars, and other citizens.

<sup>2</sup> See

<https://knowledge.aidr.org.au/glossary/?wordOfTheDayId=&keywords=resilience&alpha=&page=1&results=50&order=AZ>.



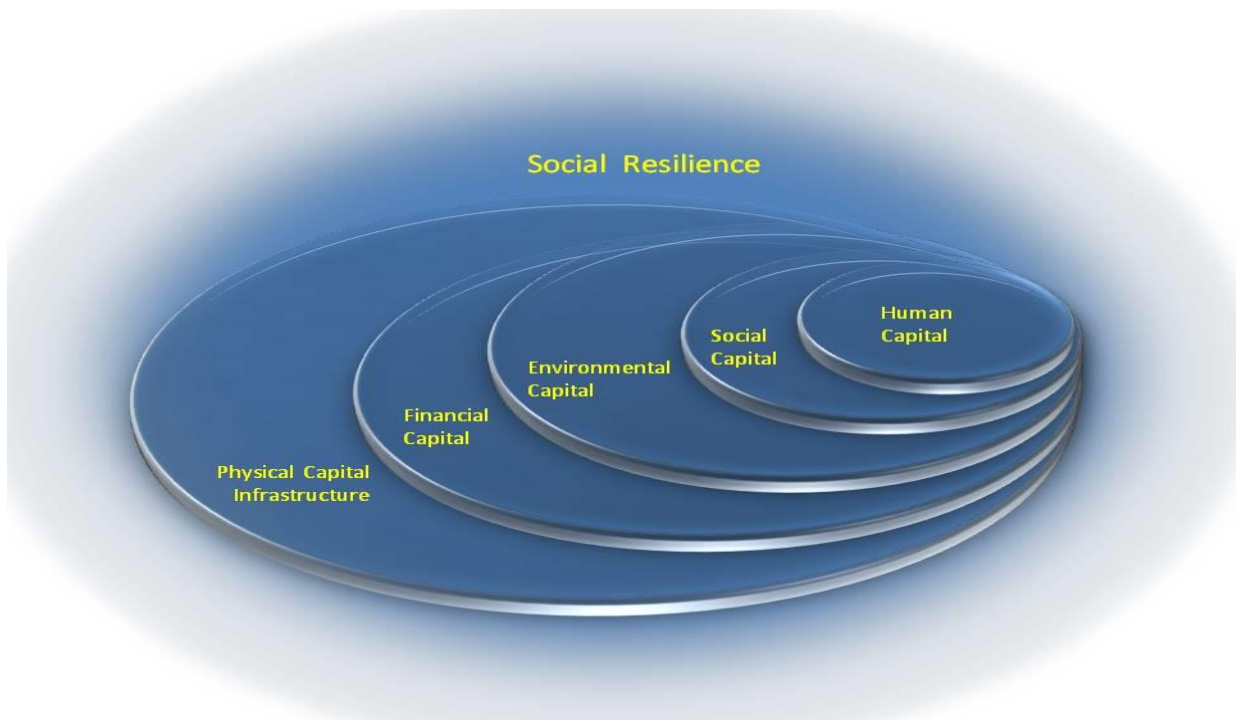
The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

This is insightful and focussed. But, in the view of this submission, it is too limited in its ambition and hence in the preparation for managing disaster. A more comprehensive definition provided by the Bellagio Working Group on Resilience is:

The timely capacity of individuals and groups — family, community, country, or enterprise — to be generative during times of stability, to adapt and reorganise in response to crises.<sup>3</sup>

A key difference between this Bellagio definition and the one we see on the AIDR website is a focus on being “generative during times of stability” and, tellingly, in its regard for individual people. Figure 1, developed by a small interdisciplinary group working at the Bellagio Centre of the Rockefeller Foundation in 2012, devised this graphic representation of the concept, which places human capital at the core of all other considerations.

**Figure 1: Bellagio Working Group Vision of Human-Centred Resilience Policy**



The most important reason for such a focus in the definition of resilience is to remind that as well as putting scientific, technical and engineering knowledge and practice in place, the human dimension (beyond humanitarian needs) must also not only be included, but also placed at its centre. Resilience should be seen as both physical and social.

<sup>3</sup> Bellagio Working Group on Resilience, Note on Resilience. Rockefeller Foundation, 2012.



The Bellagio Working Group on Resilience identified five imperatives for resilience behaviour:

- Build collaborative commitment
- Foster informed judgment
- Co-create social narratives
- Lead bold new actions
- Engage marginalised groups.

Resilience frameworks must be set in times of stability. Patterns of political behaviour that underpin resilience must be developed too at that time, since social resilience relies upon strong bonds across similar groups; bridges among diverse groups; and links between different levels of action. Individuals can then feel reassured and trust that their systems will indeed be able to protect them.

### **Australian disaster response planning: overlooking wider impacts**

A 2020 study on community engagement in disaster management in Australia found little connection between those processes and top level decision-making.<sup>4</sup> While this finding was based on a study of volunteer responders, one might make the same observation to overlooking wider impacts on people, the economy and society.

Consider:

- The 2019 Pandemic Influenza Plan and the Australian Health Sector Emergency Response Plan for Covid-19 released in February 2020 reveal only modest reflections (if any) of wider effects and a near exclusive focus on bio-medical dimensions
- Writing in 2015, Khalili, Harre and Morley observed that “there are no studies to our knowledge that have made a unified framework of social resilience indicators across the three phases of disaster: pre-disaster, response and recovery”<sup>5</sup>
- A report from Emergency Management Australia in 2015 found too that “structured consequence management’ was a poorly-understood concept in Australia, although extremely relevant to catastrophic disaster management”<sup>6</sup>
- The Australian Emergency Management Manual of 2019 does talk about shared responsibilities with communities, business and researchers, and outlines their responsibilities independently of government, but with little to no discussion of horizontal processes for including them in disaster management.<sup>7</sup> The 2019 manual offers little joy on what “consequence management” might mean

<sup>4</sup> Taylor, Maureen, Barbara Ryan, and Kim A. Johnston. "The missing link in emergency management: Evaluating community engagement." *Australian Journal of Emergency Management* 35.1 (2020): 45-52.

<sup>5</sup> Sanaz Khalili, Michael Harre and Philip Morley, “A temporal framework of social resilience indicators of communities to flood, case studies: Wagga wagga and Kempsey, NSW, Australia”, *International Journal of Disaster Risk Reduction*, Volume 13, September 2015, 248-254.

<sup>6</sup> Improving our capability to better plan for, respond to, and recover from severe-to-catastrophic level disasters, Mark Croweller, AFSM, Director General, Emergency Management Australia, 2015, <https://knowledge.aidr.org.au/resources/ajem-oct-2015-improving-our-capability-to-better-plan-for-respond-to-and-recover-from-severe-to-catastrophic-level-disasters/>. This was based on discussion at a workshop convened by Emergency Management Australia to “provide a high level, initial assessment of gaps identified in our national approach to manage severe-to-catastrophic events, and to alert key decision-makers to the issues”.

<sup>7</sup> Department of Home Affairs, Australian Manual for Disaster Preparedness, 2019, 9-14, [https://www.aidr.org.au/media/1764/aidr\\_handbookcollection\\_australian-emergency-management-arrangement\\_web\\_2019-08-22\\_v11.pdf](https://www.aidr.org.au/media/1764/aidr_handbookcollection_australian-emergency-management-arrangement_web_2019-08-22_v11.pdf).



- Another indicator of the narrow bio-medical approach in Australia's Covid-19 response focused on people infected was the disregard nevertheless of the impact on medical and care personnel who faced severe moral dilemmas in continuing to work.<sup>8</sup> More attention to this might have prevented some of the infections in aged care facilities and the urgency with which PPE was provided to front-line staff.

In Australia's response to Covid-19, the consideration of wider consequences clearly trailed the public discussion of bio-medical responses. This was captured in early government rhetoric about a "health crisis with economic consequences" rather than recognition from the outset that a global pandemic can simultaneously be a health crisis, a social crisis, and an economic crisis. On 25 February, PM Morrison put it this way: "If we can overcome the virus, then in time we can also address the longer term and medium-term economic impacts".<sup>9</sup>

Of course, physical safety and security during disaster is the core essential priority but, with proper planning, we can also accommodate the wider social and economic consequences suitably and at the necessary time, rather than via ad hoc muddling through after.

### Warning time for Covid-19

On 31 December, China made a formal notification to the WHO of a possible new virus.<sup>10</sup> On 8 January, *New York Times* reported that Chinese researchers had identified the virus. On 10 January, Chinese researchers shared the genome of the new virus globally, allowing Australian researchers to begin work on developing a test and a vaccine. In fact, the announcement of the genome data was made in cooperation with the University of Sydney.<sup>11</sup> On 11 January, China reported its first death.

Chinese actions and news coverage confirmed to the world by 1 January 2020 that a potentially dangerous novel virus had been identified. In spite of severe repressions by China of medical staff and journalists associated with releasing information about China's response to the virus because they were not using officially approved channels, there is little doubt that global community had been alerted both by the Chinese government and by Chinese researchers by 1 January. But it is concerning that on 12 January, the day after the Lab in Shanghai that had shared the genome of the virus with the world was then closed for political rectification.

In the first two weeks of January, China had been more concerned with draconian enforcement of centralised reporting than it was with concealing information about the character of the outbreak. Indeed, it could not have concealed news of the outbreak even if it wanted, since Chinese social media, and even some larger media organisations in the country, such as Caixin Global, had reported the outbreak already. For example, on 31 December, Chinese TV Channel 13 had reported on it.<sup>12</sup> *Yangzi Daily* and the *Chengdu Economic Daily* had also reported on

<sup>8</sup> For a US study, see Rebmann, T., et al. "Emergency Medical Services Personnel's Pandemic Influenza Training Received and Willingness to Work During a Future Pandemic." *Prehospital Emergency Care* (2019): 1-14.

<sup>9</sup> Press Conference, Parliament Houses, 25 February 2020, <https://www.pm.gov.au/media/press-conference-parliament-house-2>.

<sup>10</sup> See <https://www.who.int/csr/don/05-january-2020-pneumonia-of-unknown-cause-china/en/>.

<sup>11</sup> See <http://virological.org/t/initial-assessment-of-the-ability-of-published-coronavirus-primers-sets-to-detect-the-wuhan-coronavirus/321>. This report is dated 15 January, but it is the public confirmation of the submission of the data on 10 January.

<sup>12</sup> See <http://tv.cctv.com/2019/12/31/VIDE9N8qRty36PkLirFVxMW6191231.shtml>.



the virus variously by 1 January. On that day, the *South China Morning Post* carried a report on the health scare.<sup>13</sup> On 1 January, Taiwan announced that all flights from Wuhan would be boarded by its CDC inspectors.<sup>14</sup>

On 6 January, Chinese news agency Caixin carried a Bloomberg report noting that the WHO had “activated its incident-management system at the country, regional and global level” and that “authorities in Hong Kong, Taiwan and Singapore increased precautions at airports to prevent any possible spread of the infections”.<sup>15</sup>

On 7 January, the United States Centers for Disease Control (CDC) [established](#) a 2019-nCoV Incident Management Structure.<sup>16</sup> The American CDC had been supporting China’s CDC with training for pandemic control and had at least one US specialist working in China’s CDC. According to the [Washington Post](#), there had been substantial US/China contacts from 1 January on the Coronavirus outbreak, primarily through US officials in WHO working directly on it.<sup>17</sup>

On 12 January, Taiwan sent two epidemiologists to Wuhan for discussion with Chinese researchers. At this time, some hospitals in Taiwan had already begun setting up treatment facilities dedicated to treating patients with the virus. On 15 January, the Taiwan CDC classified the novel coronavirus as a type of communicable disease, which triggered several legal measures, that included mandated reporting and quarantine.

On 20 January, Australia identified its first possible case and some enhanced health screening was implemented at airports. On 21 January, the Australian government declared the virus to be a disease of pandemic potential and that it had stood up a crisis management group of some sort, which it did not identify in public. On 23 January, PM Morrison elaborated that the “human coronavirus with pandemic potential was added as a listed human disease under the Biosecurity Act of 2015, enabling the use of enhanced border measures” and other control measures.

These timing concerns are of the essence since even short delays can lead to an exponential growth in damage: for Covid this means a rapid multiplication of deaths, as documented vividly for the United States by Columbia University modelling<sup>18</sup>

### **Comparison between Australian and Taiwan responses**

There are two outcome reasons for particularly comparing Taiwan and Australia. The first is that Taiwan achieved remarkable health outcomes, far better than Australia, even though Australia too does remain a world-leader. The second is that the detrimental economic and social impacts incurred by Taiwan have also been significantly lower than those in Australia.

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<sup>13</sup> See <https://www.scmp.com/news/china/politics/article/3044207/china-shuts-seafood-market-linked-mystery-viral-pneumonia>.

<sup>14</sup> <https://www.taipeitimes.com/News/front/archives/2020/01/01/2003728514>

<sup>15</sup> <https://www.caixinglobal.com/2020-01-06/pneumonia-outbreak-widens-to-59-amid-hunt-for-source-101501347.html>.

<sup>16</sup> See [https://www.cdc.gov/mmwr/volumes/69/wr/mm6905e1.htm?s\\_cid=mm6905e1\\_w](https://www.cdc.gov/mmwr/volumes/69/wr/mm6905e1.htm?s_cid=mm6905e1_w).

<sup>17</sup> See [https://www.washingtonpost.com/world/national-security/americans-at-world-health-organization-transmitted-real-time-information-about-coronavirus-to-trump-administration/2020/04/19/951c77fa-818c-11ea-9040-68981f488eed\\_story.html](https://www.washingtonpost.com/world/national-security/americans-at-world-health-organization-transmitted-real-time-information-about-coronavirus-to-trump-administration/2020/04/19/951c77fa-818c-11ea-9040-68981f488eed_story.html)

<sup>18</sup> See <https://www.medrxiv.org/content/10.1101/2020.05.15.20103655v1>.





Both countries are economically developed and of similar population size, though Taiwan has much higher population density—a very big risk factor for pandemics. The comparative health outcomes as of 2 May are reflected in Table 1 (baseline data is from the WHO and from the Taiwan government).

**Table 1: Comparative Health Outcomes Selected Countries as of 2 May 2020**

Country/Pop'n	Total cases	Cases/ Mn people	Total deaths	Deaths/ Mn people	Deaths/ 1000 cases
<i>Taiwan 23.8m</i>	432	18	6	0.25	13.9
<i>Singapore 5.9m</i>	17,101	2898	16	3	0.9
<b>Australia 25m</b>	6,767	270	93	4	13.7
<b>New Zealand 4.8m</b>	1,134	236	20	4	17.6
<b>R. of Korea 51.3m</b>	10,780	210	250	5	23.2
<b>Japan 126.9m</b>	14,545	115	454	4	31.2
<b>Israel 8.6m</b>	16,152	1878	227	26	14.1
<b>China 1420.1m</b>	84,388	59	4,643	3	55.0
<b>Belgium 11.6m</b>	49,032	4227	7,703	664	157.1
<b>UK 67m</b>	177,458	2649	27,510	381	155.0
<b>Germany 82.4m</b>	161,703	1962	6,575	80	40.7
<b>Canada 37.3m</b>	53,657	1439	3,223	86	60.1
<b>United States 329m</b>	1,067,127	3,244	57,406	174	53.8

Taiwan’s prevention and quarantine system **performed 16 times better than Australia’s** in terms of **per capita cases** (18 per million for Taiwan compared with 270 per million for Australia) and **per capita deaths** (0.25 compared with 4 per million inhabitants as of 2 May). It is important to note though that the **death rate per 1000 Covid cases was not very different** across the two countries,<sup>19</sup> this probably reflected equivalent standards of health care capability once the cases reached hospital. The marked difference in per capita deaths between Taiwan and Australia was probably the result of earlier non-medical interventions by Taiwan compared with Australia.

Correspondingly, the outcome for Taiwan in economic production cost and jobs lost was starkly different. Taiwan had no shut-down and avoided the consequent catastrophe of around one million people being put out of work through job losses, unpaid furlough arrangements, or withdrawal from the workforce; and the three million or so on additional government welfare payments. Taiwan has even since conducted a civil defence exercise based on a shut-down scenario.

What did Taiwan do differently? It acted very quickly, beginning on 1 January in a way that could bolster political and community confidence that it was doing everything possible to contain a possible virus. In the following seven weeks to the third week of February, it introduced measures which Australia was to introduce only very slowly through March, putting Australia at least four weeks behind Taiwan.

<sup>19</sup> We can remark the amazing achievement of Singapore in health system outcomes, in the very low rate of deaths per cases. Examination of this is also important for future policy in Australia.



One of the best markers for this is that Taiwan banned all cruise ships with suspected cases on 5 February and on 18 March Australia allowed the Ruby Princess to dock and disembark thousands of passengers with little to no health screening.

Australia's biggest gap in response compared with Taiwan was in early control of the international border, and especially with health inspection regimes at the border. Most notably, the officials enforcing health protection at the border were from the Taiwan Centres for Disease Control. See Box 1 for is the Vision of the Taiwan CDC:<sup>20</sup>

#### **BOX 1: Vision of Taiwan CDC**

Disease prevention should be regarded as a battle. Unity, professionalism and action are the keys to success.

##### Principles:

Flexibility in Disease Control - control measures will stay flexible to cope with disease outbreaks at any time ; to develop capability in crisis management ; to actively collect domestic and international disease information ; to stay alert at all time; and to promptly handle disease outbreaks.

Information-based Strategies - A complete information network including a reporting system for notification of disease outbreaks, a reporting system for syndromes, a geographic information system for communicable diseases, an on-line disease surveillance system, and an information system on immunization will be set up for better coordination. Disease control organization will have immediate on-line access to necessary information for more effective and prompt disease control.

Professionalization - Efforts will be made to recruit experts, encourage research, and apply scientific methods to disease control. Control measures will stay transparent and objective. Disease control manpower will be developed, and professionals recruited to upgrade the professionalism of our disease control team.

Involvement of All People - Communicable diseases are preventable through various approaches. The effective control of outbreaks and transmission of communicable diseases, however, depends greatly on the public's understanding of communicable diseases and their prevention measures. Disease control requires the full participation and cooperation of all people.

Internationalization - The Center will continue to actively promote participation in international disease control activities, and to establish close communication and cooperation with all countries in the world. Disease prevention will be used as a channel to facilitate the entry of Taiwan into the World Health Organization as a member.

The health inspection regime implemented by Taiwan at the border was quite strict from 15 January. On 21 January, Australia announced a legal response to the pandemic only six days after Taiwan but did not follow that announcement with an equally high tempo of health enforcement actions.

On 18 February, Australia issued its [Australian Health Sector Emergency Response Plan for Covid-19](#); it had only two phases: “action” and “stand down”; mainly administrative

<sup>20</sup> See <https://www.cdc.gov.tw/En/Category/MPage/BImRdhwVTXGxnmKbziHCew>.



arrangements; there were only light inferences (if any) about nation-wide strict lock down; total international travel ban not foreshadowed

On 28 February, the formal report by the WHO investigation team sent to China (16-24 February) recommended that all countries with cases (i.e. including Australia) “Immediately activate the highest level of National Response Management protocols to ensure the all-of-government and all-of-society approach needed to contain COVID-19 with non-pharmaceutical public health measures.” Yet Australia did not act on this WHO advice. It did not introduce the higher levels of non-pharmaceutical measures for at least four weeks. In fact, as mentioned in the previous paragraph, Australia did not have a multi-level national pandemic response protocol.

The Australian government was (at least) four weeks late in introducing key measures, despite earlier formal identification of the problem. If Australia had acted faster, given its own early warning on 21 January, it could be argued that we could probably have saved \$200 bn in direct economic support costs from the Federal govt (not counting state support efforts), and saved between 500,000 and 1 million jobs, given what Taiwan achieved as absolute best practice with that information. We would have avoided the demoralizing, disorienting and economically damaging lock down. We could have saved around 80 lives, based on the comparison with Taiwan. Taiwan did suffer job losses, but they were far less substantial (6,000 in March compared with Australia’s 20,000. In April, Taiwan saw an increase in unemployed people of 36,000<sup>21</sup> compared with Australia’s formal figure of 104,000. But for Australia, a further 483,000 had left the workforce.<sup>22</sup>

Only one conclusion seems possible: poor advice to the government from the Departments of Home Affairs and Health, and their superficial planning for pandemics (plans with no teeth) cost this country much economic and social damage that could have been avoided. Australia did have a 2019 Influenza Pandemic Plan. It had some sophisticated health elements. But it had big omissions: it had few social and economic analyses in it. We did better than almost all countries but could have achieved even more with even better preparation and decision-making. Some pride in outcomes is warranted, but not at the expense of understanding how to do even better. These are lives and livelihoods at stake for our citizens.

### **Economic response options, including the “return or reform” choice**

What has been missing alongside the health plans for a pandemic and indeed alongside other disaster plans such as for natural disasters or cyber disasters is a comprehensive and coherent social and economic management and recovery plan. This perspective is missing from emergency planning and emerges ad hoc from response not preparation. Australia does have a worthy social safety net for normal times, but its adaptability for crisis also needs to be tested and its own resilience better provided for.

A common assumption is that so-called “automatic stabilisers”, such as welfare payments, will operate. But these stabilisers are designed for ordinary business cycle fluctuations and are not tested against major national shocks. Such events have normally given rise to crisis decisions

<sup>21</sup> See <https://www.taipeitimes.com/News/biz/archives/2020/05/23/2003736867>.

<sup>22</sup> ABS, Labour Force Commentary, 14 May 2020, <https://www.abs.gov.au/ausstats/abs@nsf/7d12b0f6763c78caca257061001cc588/a8e6e58c3550090eca2582ce00152250!OpenDocument>.



on matters such as spending schemes and loan schemes that have been put in place for events ranging from the Global Financial Crisis through Drought to Bushfires and Covid-19.

Greater planning and coherence would ensure provisions are in place when needed and give confidence to consumers and businesses and the community in ways that can reduce dramatically the adverse effects of loss of confidence. Again, Australia has managed some such shocks well compared to many countries – but issues that have diverted national focus each time could have been avoided, ranging from pink batts to fire damaged businesses yet to see their support payments, to excluded destitute groups under Covid-19 support programs. There is clear opportunity to do even better.

When we last faced a recession over three decades ago, and a wider crisis of national confidence, a response then that assisted mightily was to review our position through National Summits and establish institutions of consensus such as the Economic Planning Advisory Council which brought together business, unions, community groups and all levels of government. The National Cabinet did this somewhat for the public health dimensions of Covid-19, but it has not effectively addressed the social and economic aspects drawing on like expertise and previous planning. This should be remedied.

The National Cabinet was clearly beneficial for co-ordination and messaging, especially for the public health dimensions of Covid-19 as regards government leaders. And the National Covid 19 Co-ordination Commission has a wider impact brief for recovery and wider though mostly individualized membership. What is needed in both cases is clarity over their standing, structure and processes since they were invented on the run, and their ongoing roles are opaque. It is not clear, for example, how the National Cabinet differs from a COAG Premiers' Conference, except it is in practice co-operating more by consent during a major crisis and health officials are more prominent in advice provided.

State governments are also developing new entities for such circumstances ranging from Resilience NSW and Shaping Futures NSW though to the Tasmanian Premier's Economic and Social Recovery Advisory Council.

Lessons here can be drawn from the Hawke-Keating Howard-Costello reform era that did serve Australia well for the subsequent almost thirty years without recession, a feat not emulated by any other OECD nation. And the prompt for that reform era was a crisis in self-belief as a nation: the danger, as Paul Keating put it, of becoming “a banana republic” or as Lee Kuan Yew projected even more dramatically, “the poor white trash of Asia”.

To help new co-operative and advisory planning institutions, however, a second lesson applies. This is that the knowledge to underpin consensus is needed. It will be the logic and evidence of that knowledge that reduces difference based at best on intuition and worst on ideology and prejudice. These will not be eliminated, but their scope can be much reduced. The basic knowledge here is that first produced by university researchers, with think tanks and consultancies and government agencies taking this in turn to decision-makers for determination and implementation.

This array of ideas and new analysis commissioned after the crisis experience needs to be accessed and synthesized and incorporated into the basic foundations of better future resilience preparation. To take one example only, Australia has at its finger-tips the formula for



transitioning from emergency economic policy into recovery policy. This has been well defined by academic analysts but simply ignored, because of normalcy until it is too late, by officials and politicians. This is the idea of contingent loans, as outlined in Box 2. This idea can be taken by officialdom and prepared properly for future crises and refined so that the anomalies are ironed out in advance. With this idea used, Treasurer Freudenberg might even see a surplus in his lifetime.<sup>23</sup>

### **BOX 2. Innovative Ideas for Recovery: Contingent Loans**

One example of the potential from encouraging new research for crisis management is how to move from a grants phase to recovery loans that are repaid when firms can operate fully again. Social Cyber Institute research has contributed to this idea variously. The idea is potentially hugely powerful because it allows return to budget sustainability despite the high costs of immediate action in meeting crises such as a pandemic under lockdown. This allows those who benefit now to pay back when they can, rather than transfer costs to the children and grandchildren who will otherwise pay for the necessary short-term economic action.

<https://theconversation.com/give-people-and-businesses-money-now-they-can-pay-back-later-if-and-when-they-can-134998>

[https://johnmenadue.com/glenn-withers-virgin-australia-voluntary-administration-and-beyond/?mc\\_cid=4386356821&mc\\_eid=bfdf564406](https://johnmenadue.com/glenn-withers-virgin-australia-voluntary-administration-and-beyond/?mc_cid=4386356821&mc_eid=bfdf564406)

<https://www.afr.com/policy/economy/how-to-make-jobkeeper-last-for-longer-20200513-p54sfe>

Beyond the immediate recovery path, there is the long-term recovery path to be considered. The adage of “not letting a crisis go to waste” has the serious insight of ensuring that attention and concern can translate into more considered and lasting improvement in national wellbeing. “Reform or return” is a choice that confronts Australia in coming out of the pandemic. The choice should be a no-brainer.

At the foundational university research level, one systematic road map of the way forward for recovery has in fact been designed by Australian leading academics and consultants through the Australian Council of Learned Academies. One report for the Council pulled together all the major reforms for Australia’s future which remain to be implemented, as developed by major reviews and inquiries across all areas for the nation<sup>24</sup>. This means worthy content is already in place ready to be drawn on. Social Cyber Institute associates were contributors. It is also being augmented by a wide array of university and think tank analysis of the crisis and recovery, as well as more specialized research on possible further crises of the future<sup>25</sup>.

<sup>23</sup> South Africa has managed coronavirus well amongst African countries. The President’s Co-ordinating Council (PCC) is one reason for this. President Cyril Ramaphosa has also established a President’s Economic Advisory Council (PEAC) which is to guide recovery and reconstruction.

<sup>24</sup> <https://acola.org/australia-comparative-advantage-saf01/>.

<sup>25</sup> For example, looking to the wide range of intelligence concerns, many of which can relate to issues raising resilience issues, such as terrorism and conflict, the Academy of the Social Sciences in Australia (including SCI contributors) has worked with the Office of National Intelligence to scan the actual and potential social knowledge contribution to that field: <https://socialsciences.org.au/publications/social-science-research-intelligence-in-australia/>.



But the basic insight is that this is the time to indeed pursue the list of attested structural reforms that can improve the operation of Australia's economy and society and to complement these with the list of investments in Australia's capability that can utilise the opportunities offered by those reforms.

The structural reforms and the analyses that document their nature and attest their benefit are summarized in Box 3, as drawn from the ACOLA report cited, with associated modelling therein.

**BOX 3: STRUCTURAL REFORM: ACOLA MODEL**

- Tax reform (Henry)
- Spending and regulation reform (PC)
- Privatisation/contracting out reform (PC)
- Free trade agreements improvement (CIE)
- Competition policy enhancement (Harper)
- Federalism reform (Twomey & Withers)
- Industrial relations reform (PC)
  
- The contribution of such reforms to standard of living could be of the order of over 11.0% by 2030.

The capability investments and the analyses that document their nature and attest their benefit are summarized in Box 4, also drawn from the ACOLA Report.

**BOX 4: Investment Reform ACOLA Modelling**

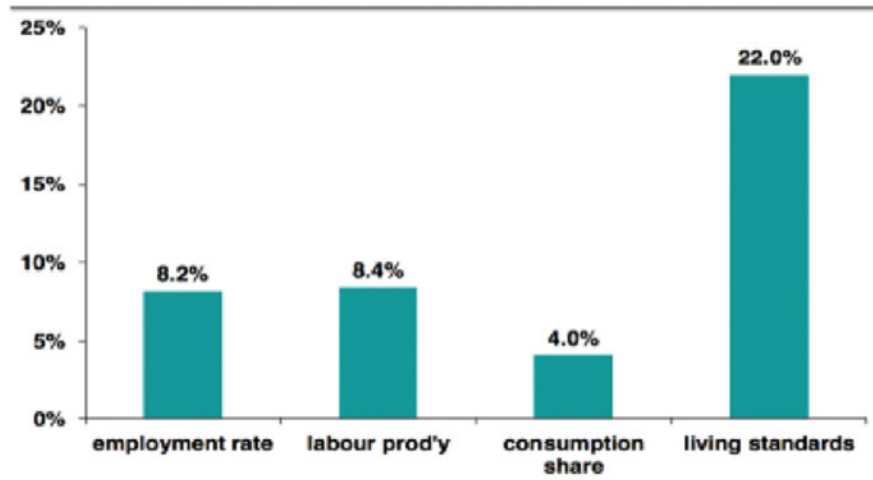
- Labour participation enhancement (PC)
- Infrastructure enhancement (IA)
- Education enhancement (UA/TDA/ACPET)
- Research and innovation enhancement (OECD)
- Immigration enhancement (MCA)
  
- The contribution of such reforms to the Australian standard of living could be of the order of over 11.0 % by 2030.

Box 3 corresponds to a lot of reforms often sought by the progressive right in politics. Box 4 corresponds to many initiatives often sought by the progressive left in politics. If we could walk on two legs what a wonderful economic future Australia could have, Indeed, the ACOLA modelling of these initiatives all together shows that each package would add about equally to Australia's prospects, and that jointly we could return to a path of greatly enhanced national wellbeing

Figure 2 shows the estimated gains from such twin track reform according the ACOLA reports.



**Figure 2: Estimated Gains from Twin Track Reforms**



Around the reforms and investments, wider issues again of grand human concerns over the huge challenges with sustainability and equity must also be built in. And the ACOLA report does seek to address these too, as does the wider domain of university and other research that seeks to comprehend national, regional, and global threats and possibilities<sup>26</sup>.

Within the reforms and investments, one area that transcends the divide of reform and investment is education, skills and innovation. This is human and knowledge capital and this capability remains much under-invested in Australia. And under-investment in knowledge and skills for resilience planning itself represents a neat case study illustrating what this broad deficiency in investment looks like in detail. As we look to future resilience for further shocks and crises, we can be better prepared as a nation by investing better across the nation in the skills for resilience and their deployment, as part of this focus on our people.

There can be numerous dimensions to this, and a Human Resource Strategy for National Resilience must be part of the new planning work in train. In the end, it is the human capabilities in place for those designing and then managing crisis response, and delivering the policies and services, that make this meaningful on the ground for individual citizens in Australia.

As an illustration, for any major crisis we can now see how crucial a wide set of skills in modern IT and communications are for all involved and associated with this is the understanding of modern cyber skills and cyber security. Cyber skill as a foundation for emergency response is seen in everything from Contact apps for infection tracking to Zoom delivery of medical advice, from necessary on-line banking during lockdown to protection against scams during crisis dislocation. And the possibility of cyber-attack or even a ‘cyber storm’ as a source of crisis itself must be contemplated and prepared for, as emphasized by SCI analysis.<sup>27</sup> So, both in response to any crisis or as a source of crisis attack itself, cyber education must be central to resilience.

<sup>26</sup> As an immediate current example bringing together social scientists across Australia see Academy of the Social Sciences in Australia, Climate Change Discussion Paper, May 2020 (forthcoming).

<sup>27</sup> <https://newsroom.unsw.edu.au/news/general/australia-prepared-cyber-storm>



## **Knowledge Environment and Knowledge Transfer**

The global community has a fully-developed and comprehensive knowledge base for maximising effectiveness of responses to large-scale disasters.<sup>28</sup> There is a however a disconnect between such disasters as a policy priority and the key actors in knowledge transfer: universities, vocational education and other providers of professional education.

In Australia's case, the Institute for Disaster Resilience provides a thorough list of available courses, both in formal education and in professional and community development.<sup>29</sup> In testing the adequacy of these, it is sign of issues that in the long list of course descriptions for available courses, the word "economic" appears once, and there is no occurrence of the words "pandemic" and "cyber". The 22 mentions of "health" relate to management of care provision during emergencies or disasters.

Equally, in the case of university education contribution, one of the few with a comprehensive approach is the Master of Disaster Resilience and Sustainable Development at the University of Newcastle. It offers to enable students to "understand resilience and sustainable development principles, and systematically apply them to the design of public, private, non-governmental and civil society organisations and the built environment". It is the only course in Australia where students receive UN co-certification which is co-certified by both the United Nations Institute for Training and Research (UNITAR) and the United Nations Office for Disaster Risk Reduction (UNISDR). This course, offered by the Faculty of Engineering and the Built Environment, had four graduates in 2019.

Another important and seemingly unique offering is the Graduate Certificate of Business in Emergency and Disaster Communication at the University of Southern Queensland: "communication skills for all phases of disaster management, with special emphasis given to change communication, community engagement and disaster management in your home country".

A third degree tending toward a comprehensive approach is the Master of Emergency and Disaster Management at Charles Darwin University. With a regional focus on Australia, Indonesia and the Asia-Pacific region, it adopts an "interdisciplinary approach to managing effective responses to various types of emergencies and disasters" and "provides for a holistic, in-depth understanding of disaster cycle management including prevention, preparedness, response and recovery".

Overall, and as with many other countries, accredited disaster preparedness courses are located largely in regional or second tier universities, especially focused on health management during a disaster, and there are very few of them. This could be improved upon in Australia by those institutions.

For operational and front-line orientation, however, AIDR itself does offer a well-developed program of professional development across the country.<sup>30</sup> AIDR therefore offers an important

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<sup>28</sup> See for example the Sendai Framework, ...

<sup>29</sup> See <https://knowledge.aidr.org.au/resources/study-disaster-resilience/>.

<sup>30</sup> See <https://www.aidr.org.au/programs/professional-development-program/>.





focal point for an Australian knowledge community, and it also has its own journal which carries outstanding research and analysis in the field.

To the extent that there was been any vigorous public debate in Australian from January to March about second order effects from the Covid-19 outbreak, and there was very little, it is striking that there was little referencing by public figures to existing research and case studies on those matters. The response under pressure became very monochromatic, with a health focus, and even there, there was very little recourse to, or referencing of, academic research or case studies.

The fount of all knowledge became a body of Australian health specialists who were civil servants, few of whom appeared to have any direct experience of management of epidemics, let alone a pandemic. They performed well, but drew on general professional capability and their intuitions. Australia was well served by this, in the event, as the particular people delivered well. The question that remains though is whether there is further systematic added value available for the future that even further enhances efforts made.

The dangers of reliance on such a system are demonstrated rather convincingly by the fact the United States and the United Kingdom had been rated by the Global Health Index as the top two countries for pandemic response based largely on the civil service arrangements and non-pandemic public health capabilities.<sup>31</sup>

The World Economic Forum's *Global Risks Report 2020* warned that the "window of opportunity is closing" for countries and communities to quickly "mitigate against the worst outcomes and build resiliency across communities and businesses".<sup>32</sup> Figure 3 below, taken from the report, illustrates the connectedness of emerging trends and possible disasters.

SCI recommends there needs to be a cautioned approach against the emergence of "unconscious bias" among stakeholders and policy communities, and against the dangers of inadequate knowledge, in understanding the compounding and cascading effects both of global trends and potential emergent disasters (imagined and unimagined). WEF advocated an approach of global connectedness (an ecosystem approach) and described an under-appreciation of infectious diseases, the power of cyber connectivity and capability to address many of these problems.

There are several principles we draw from our analysis of the current situation, in Australia, as in most countries.

- The need for resilience planning goes further than government or organisations looking after their own turf.
- The leading knowledge centres are not adequately addressing even the basic technical aspects of resilience preparedness.
- Understanding of technical and societal consequences of a disaster, especially for a cyber disaster, are insufficient.
- Horizontal consultation, responsiveness and communication are key elements.

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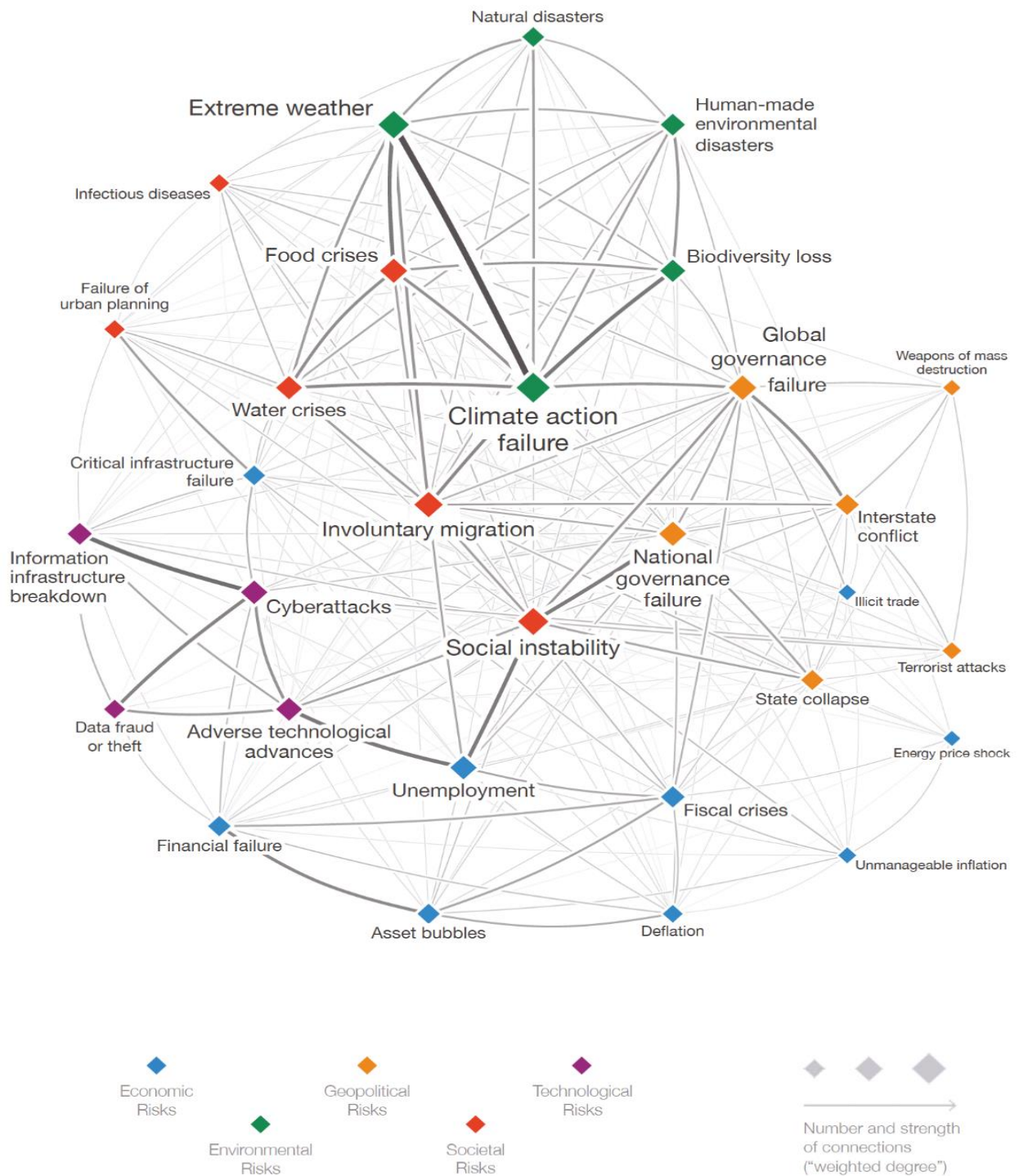
<sup>31</sup> See <https://www.ghsindex.org/>. Australia ranked fourth here.

<sup>32</sup> <https://reports.weforum.org/global-risks-report-2020/executive-summary/>.



- There is a need to shift the focus from events to recovery objectives and to build capabilities to handle the recovery aspect of unanticipated events.
- Disaster risk reduction practices need to be inclusive and accessible in order to be efficient and effective.

**Figure 3: WEF Concept of Connectedness of Emerging Trends and Possible Disasters**





New education pathways are required to develop the necessary knowledge communities and even an enhanced well-schooled government, business and community workforce to effectively respond to a disaster, especially in the cyberspace. We need to promote and champion thought leaders and advisors, as well as the front-line fire-fighters and health workers. As the Bellagio Working Group recommended, we need generative social practices that can create social foundations of resilience for non-disaster times that translate well into disaster resilience. We need to foster creative thinking about the unthinkable.

To return to the lessons learned from Covid-19 responses for future disasters, including in cyberspace, we can identify several baseline elements which Australia does not currently possess:

- A knowledge community of specialists in the digital economy.
- A cyber disaster response blueprint based on horizontal contributions from defence, government, the private sector, communities, and individual citizens.
- A community consensus on civil defence in the modern era, building on the view of Major General Marcus Thompson, the head of the ADF's Information Warfare Division, that we are all unwittingly cyber combatants.
- A steadily increasing investment in resilience studies, capabilities and policy development building out through the five layers of capital: human, social, environmental, financial and physical.

### **SCI Recommendations**

1. That COAG,<sup>33</sup> BCA,<sup>34</sup> ACCI,<sup>35</sup> ACTU,<sup>36</sup> ACF<sup>37</sup> and ACOSS<sup>38</sup> jointly establish a new National Resilience Advisory Commission (NRAC) that is:
  - Constituted so as to formally reflect considered views of key stake-holder representatives across business, labour, and community sectors
  - Staffed so as to develop detailed plans for Resilience Response and Recovery in the event of national crisis, with an emphasis on horizontal structures (eg business to government) and comprehensive approaches that can address second and third order effects
  - Inclusive of defence and emergency agencies, including with a view to secondment of their staff
  - Inclusive of leading scholars and other specialists in economic, social and environmental policy.
2. Ensure that the new planning arrangements will:

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<sup>33</sup> COAG: Council of Australian Governments.

<sup>34</sup> BCA: Business Council of Australia.

<sup>35</sup> ACCA: Australian Chamber of Commerce and Industry.

<sup>36</sup> ACTU: Australian Council of Trade Unions.

<sup>37</sup> ACF: Australian Conservation Foundation.

<sup>38</sup> ACOSS: Australian Council of Social Services.



- Reflect a comprehensive approach to resilience including community linkage and embracing social, economic and environmental impact dimensions alongside direct emergency management
  - Ensure that policy design takes full account of issues of policy implementation and delivery
  - Provide guidance on the full spectrum of possible crisis events and their interaction including natural disasters, cyber-security, and social conflict
  - Incorporate contemporary and emerging digital and other technology insights and protections
3. That Universities Australia, TAFE Directors Australia, the Independent Higher Education Council Australia and the Australia Human Resources Institute devise and propose a Human Resource and Knowledge Strategy for consideration by NRAC, to define and ensure the optimal provision of capacity and capability in education, training and research for first rate crisis response for Australia. This might include:
- upgrade the National Institute of Disaster Resilience to a university institute with state-based nodes and incorporating a Co-Operative Research Centre
  - commission regular academic studies into business, economic, social and environmental resilience for different scenarios, building off global research including case studies.
  - commission triennial studies into mental health and domestic violence and equity and cultural aspects of disaster resilience.
  - coverage of both STEM and HASS insights and approaches and their integration, of the full training spectrum from basic skills to advanced education and of skill formation in both formal and informal education and training including the workplace.
  - comprehensive review of resilience-related qualifications and training to identify gaps and to ensure quality and responsiveness in the qualifications and education and training systems.