THE INSTITUTE FOR EFFECTIVE POLICY

SUBMISSION TO THE EMERGENCY RESPONSE FUND AMENDMENT (DISASTER READY FUND) BILL 2022

The Institute for Effective Policy (IEP) is an an independent, non-partisan think tank whose mission is to educate groups and individuals about effective political engagement, and to advocate for nonpartisan evidence-based policy that benefits the world as much as possible. We prioritise issues that are not highly contentious in Australia's political environment, but which we consider to be overlooked or neglected.

IEP welcomes the opportunity to make a submission to the inquiry on the Emergency Response Fund Amendment (Disaster Ready Fund) Bill 2022. We support the bill and welcome the increased focus on disaster risk reduction and resilience. However, we also recommend amendments to give a greater focus to *calamitous natural disasters* – events that could cause 10,000 fatalities, reduce GDP by 10% or could cause equivalently catastrophic consequences in a 1-year period.

Recommendations

IEP recommends the following changes to the Disaster Ready Fund.

Recommendation 1

Allocate **10%** of the Disaster Ready Fund's disbursements to projects addressing calamitous natural disasters.

IEP judges 10% of the Fund to be a reasonable insurance policy against these events. We call this the **10-10-10 rule**: we should allocate 10% of disaster funding to calamitous disasters that could cause 10,000 fatalities or reduce GDP by 10% in a 1-year period.

Recommendation 2

Define 'natural disaster' in the legislation and explanatory memorandum of the bill as below. This definition is consistent with the National Disaster Risk Reduction Framework's definitions.

A natural disaster is a natural process or phenomenon that causes a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one of more of the following: human, material, economic or environmental losses and impacts, or an equivalently negative impact.

Examples of natural disasters include, but are not limited to the following: geomagnetic storms, pandemics, volcanic activity, collisions with outer-space objects, bushfires, landslides, floods, earthquakes, tsunamis, droughts, cyclones, heat waves and cold waves.

What are calamitous natural disasters?

Calamitous natural disasters refer to natural disasters which could cause 10,000 fatalities, reduce GDP by 10% or could cause equivalently catastrophic consequences in a 1-year period.

By comparison, the 2009 Black Saturday bushfires led to 173 fatalities, whilst in 2021 COVID-19 caused 1,317 fatalities. Whilst these events were devastating for Australia, they do not fall within the scope of calamitous natural disasters.

Disasters that fall into this category include:

- **Geomagnetic storms:** Excess energy released from the sun could cause cascading failures in electrical grids and our communication systems, including GPS, by disturbing the Earth's magnetosphere. This could trigger year-long blackouts. Estimates on the likelihood range from 1 in 25 years to 1 in 150 years.
- **Pandemics:** Pandemics, both more deadly and more contagious than COVID-19, are possible. Likelihood estimates of a pandemic with 10-50 million deaths globally range from 1 in 25 years to 1 in 200 years. (COVID-19 has, to date, led to 6.5 million deaths globally.)
- **Volcanic eruptions from abroad:** A magnitude-7 volcano, even abroad, would cause abrupt global cooling, mass crop failings and severely disrupt global supply chains, leading to financial losses equivalent to that of the COVID-19 pandemic.

- **Collisions with outer-space objects:** Asteroids and comets could penetrate the atmosphere and impact the Earth's surface. The likelihood of a collision capable of destroying a city is estimated to occur every 1 in 10 times each century.

Australia is currently inadequately prepared for calamitous natural disasters

Fundamentally, calamitous natural disasters represent a systemic blind spot in emergency management and particularly at the National Emergency Management Agency (NEMA), the agency administering this fund. There are several reasons for this:

- Many of NEMA's subject matter experts are focused on, and excellent at, addressing things that fall in the normal sphere of emergency management – fires, floods and storms – but are neither focused on, nor have expertise in, non-traditional risks, such as geomagnetic storms.
- Subject matter experts in calamitous events tend to be academics with little connection to practical emergency management work, meaning their views are often overlooked or undervalued.
- Acting on calamitous natural disasters requires long-term thinking, as these events make no headlines until they occur (by which time it is too late). This disincentivizes immediate policy action.

As a result, grants from the Disaster Ready Fund will be **unlikely to be spent in the most cost-effective way** because these calamitous natural disasters will likely not occur to grant applicants as something that might be funded, or decision makers in NEMA as something that should be funded. The best way the grant program can be assured of achieving value for money is to specifically embed a process that requires consideration and funding of a full gamut of hazards.

This systemic blind spot is reflected in the current policy landscape. There are some policies that help government mitigate calamitous natural disasters, such as:

- The Australian Space Weather Forecasting Centre, run by the Bureau of Meteorology (BOM), which gives daily forecasts of the likelihood of geomagnetic storms
- The Australian Government Crisis Management Framework, which takes an all-hazards approach to emergency management

However, most responses to calamitous natural disaster events are based on hazard agnostic frameworks, rather than hazard specific plans. These frameworks are suitable for slow-onset events, but do not sufficiently address readiness and do not facilitate immediate action for rapid-onset events. Pandemic preparedness measures are a notable exception to this, although COVID-19 still exposed several gaps in Australia's ability to respond. Specific mitigation measures for known calamitous natural disaster events should complement Australia's all-hazards approach to disaster management.

Increased funding for calamitous natural disasters is in line with recommendations or concerns raised by a range of policy documents:

- The **Productivity Commission's 2014 inquiry into natural disaster funding** identified cognitive biases relating to natural disaster risk that limit funding to calamitous events, such as a focus on short-term gains or natural disasters that are more well-known.
- The **National Disaster Risk Reduction Framework** argues that it is important to build resilience to natural disasters occurring at 'unimagined scales, in unprecedented combinations and in unexpected locations.'
- The **United Nations' Sendai Framework for Disaster Risk Reduction**, which is endorsed by Australia and forms the basis for Australia's own risk reduction framework, identified during their Midterm Review the need to address risks that could seriously damage human well-being on a global scale or cause human extinction, including pandemics, supervolcanic activity and threats from outer space objects.

Policy action on calamitous disasters represent value for money

If these disasters occur, they can create damage substantially more significant than the typical natural disasters Australians face. Calamitous natural disasters therefore require a proportionately significant response.

There are two reasons why action on these disasters represent value for money:

1. **Because of how high the stakes are, even small mitigation measures could be very impactful.**

As an example, prior research on about earierother coronaviruses fast-tracked COVID-19 vaccine development, so that vaccines were approved by regulators within 12 months instead of the typical 10-year period. This in turn greatly accelerated Australia's transition to less stringent restrictions, illustrating how minor preventative measures can considerably reduce harm during an actual crisis.

2. **As these calamitous natural disasters are less well-known, there is more "low-hanging fruit" available to mitigate them.**

There is currently no awareness, for example, of which parts of the electrical grid are most vulnerable to geomagnetic storms. Power lines that are built on soil with high iron content can be much more vulnerable to geomagnetic storms, so surveying the iron content of soil where power lines are built would help critical infrastructure owners and operators identify the most vulnerable parts of the grid. This would then allow them to put in place targeted resilience measures that can be rapidly activated in response to a BOM forecast of a catastrophic space weather event.

A robust grants programme could draw out these and other kinds of highly impactful response measures. But that only works if a clear signal is sent that funding is available to prepare for catastrophic disasters, and that it is appropriate for decision makers to accept those kinds of grants.

The Disaster Ready Fund can ensure Australia is more prepared for calamitous natural disasters

Implementing the recommendations in full would:

- **Combat the systemic underfunding of calamitous natural disasters.** Allocating a specific proportion of funding to these disasters ensures that the Disaster Ready Fund delivers value for money.
- **Allow the Australian government to fund significant mitigation measures for calamitous natural disasters.** This could reduce the probability of these events and improve Australia's resilience to them.
- **Raise the profile of calamitous events.** Allocating funding to these disasters and including them in the definition of natural disasters raises awareness of them to all levels of government, the private sector and the general public. This increased awareness also helps identify the best ways to mitigate the risks and where there are gaps in expertise.
- **Include in the legislation a common-sense definition of natural disasters.** This would replace the current definition, which circularly defines natural disasters as 'a natural disaster in Australia.' Re-defining the term will increase clarity as to what the fund can be used for.

In the event that policymakers judge 10% to be too high a proportion of the fund to be earmarked for calamitous natural disasters, we would strongly urge them to implement a similar requirement allocating a smaller proportion (such as 5%), rather than decline to implement any requirement. While the amount allocated matters, it is critical that clear direction is provided to ensure attention is given to these serious but overlooked risks.

IEP appreciates the opportunity to comment on this bill and is available to give oral evidence at the Committee's convenience should it require further information.