



FIRE & FLOOD RESILIENCE • PROGRAM PROPOSAL

WE RISE TOGETHER

Lifting resilience in Australia by 2025 so
fires and floods never become disasters



● ●

Photo credit: Jessica Wyld

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FOREWORD

Before you even consider the loss of life and the hideous impact on our environment, wildfires and floods are projected to cost \$33 billion per year by 2050. They cost the United States \$100 billion a year – right now.

These disasters will increase in frequency and severity in the coming years. We must say, 'Enough is enough' and put an end to communities going up in flames, forests being reduced to moonscapes and endangered species being wiped out.

Resilience is the ability of a system, community or society to adapt and transform from the effects of a hazard.

Our team has spent the past 12 months building a scalable program aimed at lifting national resilience against fires and floods by 2025 and driving exceptional results. It answers questions like: 'What if we can put out any dangerous

fire within an hour?' 'What if every community has the skills and resources to cope with fire and flood disasters?' And 'what if we can improve our landscapes' adaption to fires and floods and measure landscapes in such a way that we can unlock new economic models for natural capital investment for disaster resilience?'

The Fire and Flood Resilience initiative is underpinned by three interlocked Apollo style missions: Fire Shield, Resilient Communities, Healthy Landscapes. We will go where the evidence takes us through the Resilience Data Collective – a common, trusted system for sharing data to support decision making and action. These are based on ground truth, scientific evidence and trusted input from 55 partners across community, corporate, government, research and philanthropy sectors.

This robust program is the first focused and coordinated global effort to achieve the change required. The initial focus is on Australia, and we will establish a sister program in the US and scale activities globally between now and 2025.

We cannot allow ourselves to be in this same position, in 2025. We have the resources, will, talent and expertise to make impact and this can only be achieved together – with our growing team of partners.

Enduring change at speed and with scale is needed across all sectors and at a global level. Our children, our environment and future generations risk a dangerous future without us taking action.

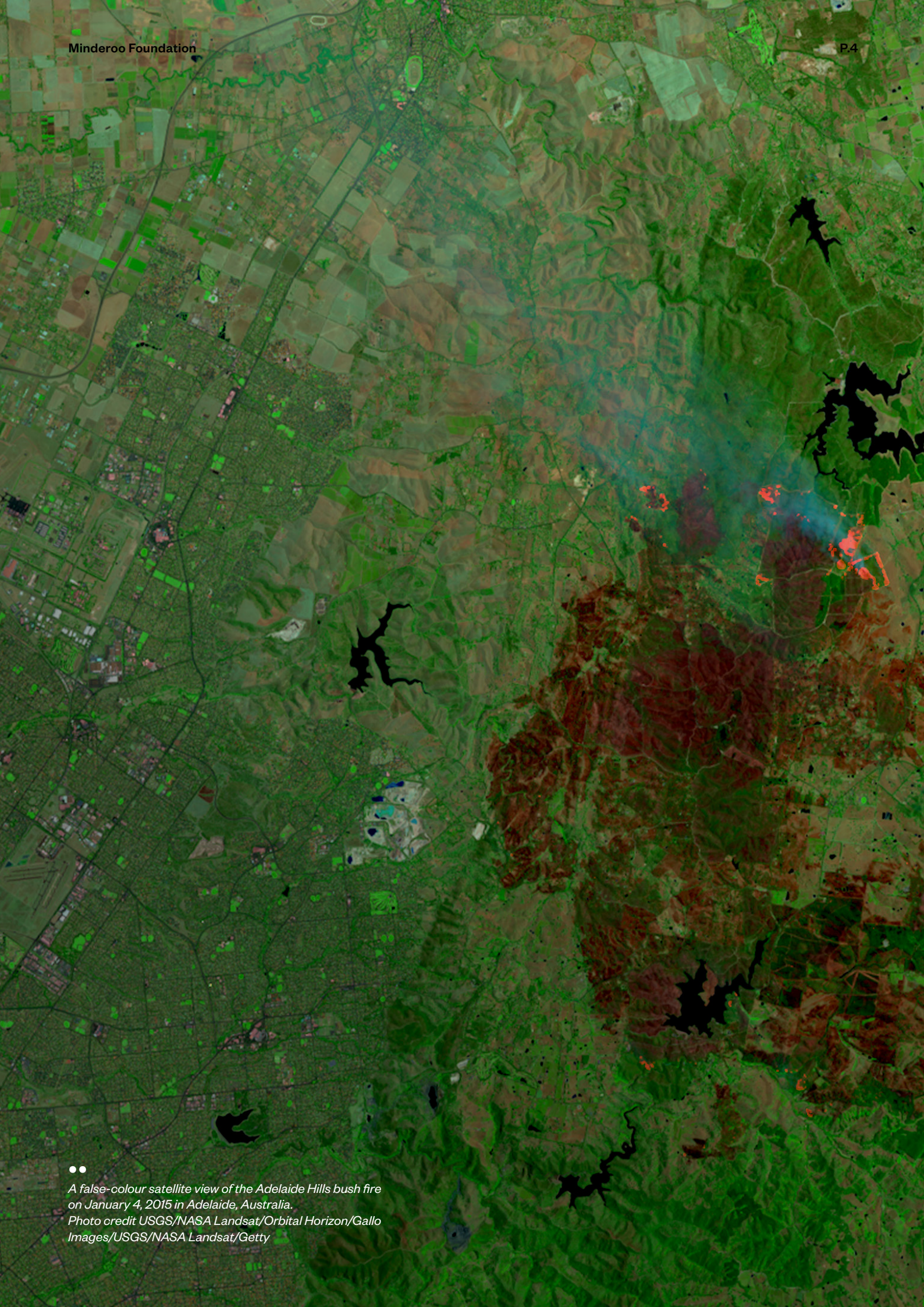
We will never give up until the job is done.



.....
Dr Andrew Forrest AO
Chairman



.....
Nicola Forrest AO
Co-Chair



*A false-colour satellite view of the Adelaide Hills bush fire on January 4, 2015 in Adelaide, Australia.
Photo credit USGS/NASA Landsat/Orbital Horizon/Gallo Images/USGS/NASA Landsat/Getty*

LETTER FROM THE CEO

Welcome to Minderoo Foundation's Fire and Flood Resilience initiative.

This initiative could not be more timely, following the catastrophic California wildfires, Australia's Black Summer bushfires of 2020 and more recently the Perth Hills bushfires in Western Australia in 2021.

Andrew and Nicola Forrest have written a powerful call to arms to increase funding towards our resilience against fires and floods so we can reduce the harm caused by these events by 2025.

We must target the root cause of these recurring disasters.

The Fire and Flood Resilience initiative's program is already achieving this and offers unparalleled potential.

We are calling on leading corporations and funders to take up an opportunity to co-contribute in an evidence-based program with other leading stakeholders to make a generational difference. As part of this you will be exposed to knowledge and expertise in relation to the application of emerging technologies and to a new model for driving systemic change, through the Missions model. Through collaborating with other leading stakeholders, we can multiply the impact across specific programs and align with your priorities.

The initiative will lobby for policy changes where necessary and given the scale will become a powerful voice for influence. You will be able to build relationships with talent across



different sectors, gain exposure to global best practices in tackling disaster resilience, and have the ability to influence the geographic prioritisation of projects.

We are committed to driving societal, environmental and economic impact. The program is structured to measure progress through a range of indicators and to be transparent in everything we do.

Our Mission level objectives and quarterly targets are explicitly linked to impact. We will report on the scale of impact across the program streams, the financial impact of the co-contribution and the savings on response and recovery - which we call the Resilience Offset. The Fire and Flood Resilience Blueprint and Resilience Data Collective provide the evidence base to validate and measure outcomes between now and 2025.

Our initiative leaders are among the most talented in the world. Our team has a strong international track record of delivering multi-disciplinary projects with emerging science and technology, partnerships and policy change across industry and government. Their speed, determination and work ethic to make a lasting difference is inspiring.

We are grateful for our partners who have contributed to the development of this robust program, at this pivotal moment in time in which resilience must be developed and global action is needed.

Andrew Hagger

Chief Executive Officer, Minderoo Foundation and Tattarang



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*A local resident rows past a pub
through flood waters on January
6, 2011 in Rockhampton, QLD,
Australia. Photo credit: Jonathan
Wood/Getty images.*

ABOUT US

In the aftermath of the Black Summer Bushfires, on January 9th, 2020, the Minderoo Foundation Fire and Flood Resilience initiative was established, with an AU\$70 million commitment for bushfire response, recovery and resilience. We are seeking to grow the investment towards resilience.

Our vision is audacious. We want to reduce harm caused by fire and floods by harnessing the collective power of communities, industry, government, philanthropy and the research sector to lift Australia

to be the global leader in disaster resilience by 2025.

We listened and we learned from the communities that we supported across the East Coast of Australia in the aftermath of the Black Summer bushfires, and applied these insights into our strategy going forward for the initiative. In September 2020, we co-developed a Fire and Flood Resilience Blueprint with 55 partners, which provides the evidence base for a work program currently being delivered from now to 2025.

We are investing in a combination of system interventions to make sure fires and floods never become disasters for people and places that are vulnerable.

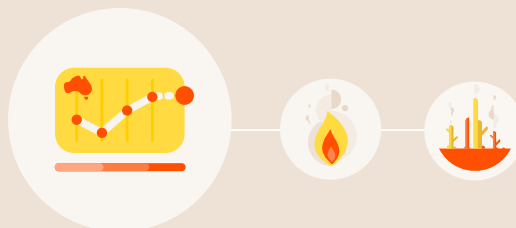
In the event of a fire or flood, we have adaptable plans in place ahead of time to determine how we respond and what recovery activities we conduct, while we continue to focus on national resilience and achieving our ambitious 2025 objectives with our partners.

- Every dollar invested in resilience saves US\$4-11 in response and recovery.



Figure 1: The Resilience Offset is the savings in response and recovery costs, as a result of investment in resilience. Source BCG

**NATURAL
DISASTERS
INCREASE IN
FREQUENCY,
SEVERITY &
SCALE**



IN 2020
24.7^{MIL}
Acres burned
in Australia

IN 2020
4.1^{MIL}
Acres burned
in the USA



Figure 2: Source BCG



● ●
A fire rages in Bobin, 350km north of Sydney – November 9, 2019.
Photo credit: Peter Parks/Contributor via Getty Images

OUR MISSIONS

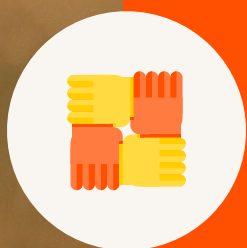
Our Blueprint identifies three missions, to be achieved by 2025:



FIRE SHIELD

What if a fire never became a disaster?

Mission: reduce the scale and impact of bushfires by being able to extinguish dangerous fires within an hour by 2025.



RESILIENT COMMUNITIES

What if every community had the skills and resources to mitigate their disaster risk and bounce back stronger?

Mission: lift Australia's 50 most vulnerable communities to be on par with Australia's 50 most resilient communities by 2025.



HEALTHY LANDSCAPES

What if our environment was optimised for risk reduction and natural ecosystem resilience?

Mission: halve hazard exposure in Australia's 50 most fire and flood prone regions by 2025.



● ●
A firefighter defends a property from a bushfire at Hillville near Taree, 350km north of Sydney – November 12, 2019. Photo credit: Peter Parks/AFP via Getty Images



Minderoo Foundation's Fire and Flood Resilience initiative shares a common goal with AFAC of seeing an Australia that is more resilient to natural disaster. Our partnership on the blueprint and missions allows us to bring together the expertise of emergency services with the support and diverse experience of the Fire and Flood Resilience partners. We look forward to working together in the important next stage of the initiative.

Stuart Ellis AM

Chief Executive Officer, Australasian Fire and
Emergency Services Authorities Council



FIRE SHIELD

**What if a fire never
became a disaster?**

*We aim to reduce the scale
and impact of bushfires by
being able to extinguish
dangerous fires within an
hour by 2025.*

Fires become more
difficult to extinguish
the longer they burn and
the larger they become.
Using the most advanced
technologies in remote
sensing, machine learning
and autonomous vehicles,
the Fire Shield Mission
focuses on four key areas:



Detect

Achieving early and accurate
detection and monitoring of fires
from ground, air or space

Share

Share information in real time
for immediate decisions

Predict

Better predict what fires will do

Respond

Respond quickly to extinguish fire
which is deemed to be a threat

In doing so it aims to dramatically reduce the
impact of fires on communities and landscapes.

Projects underway and opportunities for
collaboration include: improving ground-based
detection, enhancing early warning systems by
activating a citizen scientist network, using
bushfire science and artificial intelligence to
improve detection of ignition and prediction of
spread and intensity of a fire using satellite data
and sensor networks, developing new capabilities
for aerial response and fire suppression, and
creating a national bushfire simulation capability,
by standardising data and enhancing software
and systems.



• •
An ACT Rural Fire Service member oversees water-bombing operations taking place on a fire in Bungendore, Australia – January 9, 2013. Photo credit: Brendon Thorne/Stringer



Australian Red Cross is pleased to partner with Minderoo Foundation's Fire and Flood Resilience. We recognise that effective response and recovery is critical, but so too is lifting resilience ahead of time, to ensure that our communities can bounce back stronger after crisis. We remain committed to working with Minderoo Foundation as missions get underway.

Andrew Coghlan

Head of Emergency Services,
Australian Red Cross

the
power of
humanity

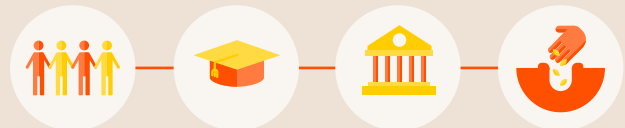


RESILIENT COMMUNITIES

What if every community had the skills and resources to mitigate their disaster risk and bounce back stronger?

We aim to lift Australia's 50 most vulnerable communities to be on par with Australia's 50 most resilient communities by 2025.

Empowering people in communities with the support and resources that they need to adapt and mitigate fire and flood risk in the future is key to achieving resilience. The Resilient Communities Mission focuses on four key areas:



- Leadership** Empower and enable local leaders to develop and enact resilience plans
- Knowledge** Accelerate new models of fire and flood resilience education, training and accreditation for generational change
- Resources** Simplify access to resources before, during and after a disaster event
- Investment** Accelerate new investment models to help shift the balance of investment from recovery to resilience

Projects underway and opportunities for collaboration include: community mentorship programs to empower local leaders to drive resilience, new models for risk sharing to ensure improved recovery, built environment resilience, and generational change through early education and new ways of volunteering.



• •
Kingslake and surrounding communities host bush fire recovery events on 19 July, 2009 in Kingslake, VIC, Australia. Photo credit: Raoul Wegat/Getty Images.



IUCN applauds the work of Minderoo Foundation's Fire and Flood Resilience initiative. Building fire and flood resilience on this scale can only be achieved through global collaboration. We are thrilled to be a part of this esteemed group and look forward to contributing to the next stage of this initiative, to drive generational change within our natural environment.

Dr Bruno Oberle

General Director,
International Union for Conservation of Nature



HEALTHY LANDSCAPES

What if our environment was optimised for risk reduction and natural ecosystem resilience?

We aim to halve hazard exposure in Australia's 50 most fire and flood prone regions by 2025.

Fire and flood are necessary for the health of landscapes because they enable critical ecosystems to function, supporting regeneration and growth. However, the increase in severity and frequency of these disasters threatens the ability for them to have a positive impact on the environment. Local knowledge of communities is critical to conserve and protect rich cultural, historical and natural value for future generations. The Healthy Landscapes mission focused on three key areas:



Landscape Knowledge Build a living landscape evidence base to better understand disaster risk needs of landscapes, wildlife and associated communities before, during and after disaster events.

Landscape Investment Standardise and coordinate land management and monitoring to make it more economically viable

Landscape Action Support locally adapted land practices, including cultural land management practices, which recognise fuel load management and ecosystem needs and provide education, skill-building and job creation

Projects underway and opportunities for collaboration include: Landscape restoration and measurement programs leading to increased investment in landscape regeneration, wildlife recovery programs to ensure long term resilience of our threatened species, building generational landscape knowledge through citizen science programs, and supporting indigenous communities to apply cultural land management practices to improve landscape health.



● ●
A drone surveying the landscape. Drones can be used to identify and measure different types of vegetation and wildlife in high risk locations to inform investment in landscapes before and after disasters. Photo Credit: Dendra Systems.



BUILDING A FIRE & FLOOD RESILIENCE DATA COLLECTIVE

Our future in 2025: we have a common, trusted system for sharing significant national and global fire and flood resilience data to support decision making and action.

There are critical gaps in information about our landscapes, communities and hazard levels and information and knowledge is fragmented across different sectors.

Underpinning each mission, is the Resilience Data Collective, which brings together specialised stakeholders to collaborate on data, standards, and platforms to increase the availability and transparency of data. It provides the evidence base to guide the missions and provides measurement indicators to show how the missions have contributed towards lifting resilience.

The group is supporting leading research groups and common platform investments; and bringing together disparate sources of information in different formats and applying these to the problems that emergency services and other stakeholders need to solve when planning to mitigate a fire or flood event.



Using these mechanisms, the group will examine different use cases that align with Mission delivery in relation to earlier detection of fires, high risk landscapes and communities. Resources will be made available so they can be used by stakeholders across sectors.



Evidence base

Identification and analysis of data to form a baseline view of the current state with respect to initiative and mission objectives; and form the basis for investment prioritisation

Data Standards

An ecosystem of partners sharing standardised and relevant high value data into the commons.



Data Sharing

Data analysis and reporting capabilities to inform decision making for enhanced fire and flood preparedness, response, recovery, and overall resilience.

Technology Solutions

A shared secure infrastructure that supports data collection and coordinated rapid response across organisations and jurisdictions.



Several projects underway and opportunities for collaboration include:

- The creation of common ways to identify, describe and record community assets at the national level
- A disaster resilience ecosystem map to help identify stakeholders and sources of information
- A hazard analysis map that provides a view into the complex layers of hazard and resilience
- An Australian Disaster Resilience Infrastructure that is publicly available and stores bushfire data to enable multi-sector research
- An enhanced disaster resilience index that provides detailed insights to guide place based resilience investments at the community level
- The extension of flood forecasting for the most flood prone regions across Australia
- A digital twin to help represent the spatial elements of disaster resilience



Geoscience Australia supports the data driven approach of Minderoo Foundation's Fire and Flood Resilience initiative to enable an understanding of where targeted investment will deliver the best outcomes for lifting Australia's resilience. We look forward to continuing to work with Minderoo Foundation on this important initiative.

Leesa Carson
Branch Head, Community Safety,
Geoscience Australia



Australian Government



● ●
A Satellite image of Bush fire smoke over the city of Sydney in Sydney, Australia – December 21, 2019. Photo credit: Orbital Horizon/Copernicus Sentinel Data 2020/Gallo Images via Getty Images

CO-CONTRIBUTION OPTIONS

There are three different tiers of co-contribution represented in the table below.

Appendix 1 details the Missions and Data Collective Roadmap and milestones that will be delivered by 2025.

MFFRI will pool assets and capabilities across industry,

government, philanthropies, NGOs and the research sector globally within the MFFRI Missions framework. Anticipated monies will be collected over the course of the 2021 calendar year and would be spent in line with the MFFRI work plan and key milestones outlined in the detailed project list in Appendix 2.

PARTNER TYPE	GOVERNANCE
Initiative Level Partners	Seat on the MFFRI Advisory Board
Project Level Partners	Project Level Advisory
Resilience Blueprint Partner	Blueprint Advisory

FUNDING STRUCTURES

1. MFFRI Project Partner Types

Below is an overview of the different partner types for the Initiative in support of Missions and the Resilience Data Collective.

- **Direct Financial:** Provides direct funding for the MFFRI program or specific projects.
- **Indirect Financial:** Contributes funding to activities such as existing programs or infrastructure that are directly aligned to the MFFRI program of work and provide relevant and beneficial outcomes.
- **In-Kind:** Provides resources at the project level, such as specialised talent or research that are directly aligned to the MFFRI program of work and deliver relevant outcomes which can be applied as part of that program.
- **Data:** Provides data to assist in problem definition, decision support or impact measurement.
- **Public good:** The MFFRI program of work offers an evidence base which measures economic, societal and environmental outcomes. Be part of a program that is pooling resources to lift resilience against fires and floods for the greater public good to lessen the impact and associated costs of these events in the future.
- **Leveraged contributions:** Any contribution in the program will benefit from leverage with others co-contributing alongside to achieve the Mission, workstreams and projects. This means that every dollar that you contribute will receive both a financial and a resilience impact outcome multiplier.
- **Missions methodology:** You will gain experience using the Missions methodology to solve the global issue of disaster resilience by bringing partners together across sectors to enable whole of system change. This model is used by the Defense Advanced Research Projects Agency (DARPA) in the United States to apply deep science and technology to solve complex national challenges.
- **Access to emerging sciences and technology:** By co-contributing towards the work streams and the Missions, initiative partners will be exposed to the following methods and technologies through collaborating with other partners:
 - Artificial intelligence and machine learning, including computer vision and hyperspectral imaging
 - Sensor technologies
 - Satellite and spatial intelligence technologies
 - Risk modelling methods
 - Autonomous systems
 - Knowledge sharing methods
 - Behavioural economics methods
 - Landscape instrumentation
 - Advanced materials
 - Natural capital accounting methods
 - Water management methods
 - Accelerated research translation methods.
- **Talent:** The MFFRI Work Program will be a platform for building relationships across organisations and jurisdictions. These connections will be of value beyond this initiative.
- **Accelerated learning:** The MFFRI Work Program will collaborate with the best and draw on global best practices with transparent reporting to ensure that capabilities and knowledge is lifted for all stakeholders.
- **Policy influence:** The MFFRI Work Program will lobby for policy changes where necessary. Given the scale of the activities and profile of participants, it will be a powerful voice into governments.
- **Geographic prioritisation:** Participants will be able to influence the geographic focus of projects, especially in the case of the pilot projects, ahead of scaling successful outcomes nationally or globally.
- **Brand benefits:** The MFFRI Work Program has a high profile domestically in Australia. The launch of the Program in September 2020 captured the attention of 6.2 million people, or a quarter of the Australian population. It led to 137 unique TV and 67 unique radio spots. The Initiative will continue to build profile domestically and overseas including with consumers. This could include a travelling global art exhibition to showcase the Missions, workstreams and projects, and recognise first responders and the human spirit as well as the impact of extreme weather events.

2. Existing Partners

More than 55 partners across corporate, government, philanthropy and research sectors have assisted in the development of the Resilience Blueprint (see page 40). In some cases, those organisations have also collaborated and co-contributed to projects.

Benefits on MFFRI Work Program Partners of Co-Contribution

The benefits for any participant in the MFFRI Work Program are as follows:

- Impact philanthropy network: Build new relationships with a range of partners, including philanthropies, corporates, government, research and community organisations both in Australia and internationally.

INVESTMENT FUND

We are exploring the establishment of a separate investment fund and due diligence is currently being conducted on the structure of an participation in that fund. In the event that a fund is established, it will be professionally managed by a third party and would not be part of MFFRI.

GOVERNANCE OF THE MFFRI WORK PROGRAM

1. Measuring Outcomes

Progress reporting will take place on a quarterly basis for the individual projects, the Missions and the Work Program in accordance with the impact measurement protocols. The Missions methodology provides a clear baseline and success measures which tie into progress reporting. Where existing measurement protocols don't exist, they will be created and communicated on a quarterly basis. Reporting will also take place on the Resilience Offset.

It is anticipated that financial leverage will be achieved by all MFFRI participants, as will an impact multiplier on all completed projects.

2. Stakeholder Management

Rear Admiral Lee Goddard, former Commander of Maritime Border Command and Commander Joint Agency Taskforce Operation Sovereign Borders has been recruited to lead partner development and is responsible for partner management. Additionally, MFFRI will actively utilise the core Minderoo Foundation Partnerships team, systems and processes to ensure tight alignment across all projects with partners. MFFRI will offer partnership experience, which includes branding and influence opportunities.

3. Exceptional Talent to Deliver Impact

See page number 42 for further information on the extensive experience of the MMFRI leadership team.



BackTrack CEO Bernie Shakeshaft (far left) and Minderoo Chairman Andrew Forrest (second from left) with the Minderoo Foundation Fire and Flood Resilience initiative and BackTrack teams.
Photo Credit: Fire and Flood Resilience team

APPENDIX 1: MISSIONS AND RESILIENCE DATA COLLECTIVE ROADMAP AND MILESTONES



FIRE SHIELD

Reduce the scale and impact of bushfires by being able to extinguish dangerous fires within an hour by 2025.

MID '20 END '20 MID '21 END '21 END '22 END '23 END '24 END '25



DETECT

- Automated ground fire detection
- Multi hazard monitoring and warning times improvement
- Real time reliable detection from ground, aerial and satellite
- Fire detection using multiple platforms (ground, air, satellite)
- Real time integration with multiple sensing capabilities for improved situational awareness



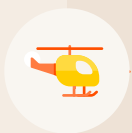
SHARE

- Prioritised community assets
- Interface for on ground decision making
- Reduced communication black spots
- National warning system with two way citizen communication



PREDICT

- Bushfire prediction model (Beta test)
- Bushfire prediction capability rolled out nationally
- Real-time models for augmented decision-making
- New catastrophe, landscape and hazard models to enhance prediction



RESPOND

- Testing of novel suppressants and application technology
- Australian tested DIY suppressant kits for general public use
- Australian standard test of new environmentally benign fire suppressants
- Automated response scenarios based on early detection and prediction
- Improved efficacy of response methods
- Improved efficacy of response methods



HEALTHY LANDSCAPES

Halve hazard exposure in Australia’s 50 most fire and flood prone regions by 2025.

MID ‘20 END ‘20 MID ‘21 END ‘21 END ‘22 END ‘23 END ‘24 END ‘25



LANDSCAPE KNOWLEDGE

- Measuring landscape resilience in pilot locations
- Imaging for wildlife populations
- Published evidence for Cultural Land Management
- Landscape and Wildlife Digital Twin
- Long term landscape health modelling
- National Wildlife Census



LANDSCAPE ACTION

- Cultural Land Management National Network
- Rapid regeneration for resilience
- Adoption of Cultural Land Management Practice Internationally
- Citizen Science landscape health monitoring
- Resilient Land Adaptation Insurance scheme
- Hazard Reduction Native Landscaping Tool
- Automated Hazard Reduction seasonal forecasts and action plans



LANDSCAPE INVESTMENT

- Register of natural capital assets in priority regions
- Resilient Landscape Asset & Natural Capital Modelling
- Natural Capital Assets Data Standardisation
- Incentive model in practice: Resilient Landscapes Superfund Investments



RESILIENT COMMUNITIES

Lift Australia's 50 most vulnerable communities to be on par with Australia's 50 most resilient communities by 2025 dangerous fires within an hour by 2025.

MID '20 END '20 MID '21 END '21 END '22 END '23 END '24 END '25



LEADERSHIP

- Resilience training and plan development (Pilot)
- Scaled resilience plan development in 100 communities
- Digital library Community Resilience Plans for peer learning
- Business Resilience Plans development and digital library



KNOWLEDGE

- Local Disaster Resilience Built Environment Toolkits
- Peer to peer community learning
- Interface for on ground decision making
- Schools Resilience Knowledge building
- Local Disaster Resilience Awareness
- Mental Health awareness
- Volunteer army national database



RESOURCES

- Temporary housing for emergency deployment
- Volunteer corps activated
- Repositioned response/recovery capabilities
- Utility Infrastructure disaster resilience upgrade scheme



INVESTMENT

- Measuring resilience return on investment
- Built Environment Resilience toolkits and Incentives
- Australian tested Shared Risk Model Advocacy
- Landscaping for infrastructure protection
- DIY suppressant kits for general public use



RESILIENCE DATA COLLECTIVE

Building a trusted system for resilience data and collaboration.

MID '20 END '20 MID '21 END '21 END '22 END '23 END '24 END '25



EVIDENCE BASE

- Mission Progress Measures
- Data Ecosystem Map
- Fire Hazard Analysis Tools
- Flood Hazard Analysis Tools



DATA STANDARDS

- Federated platforms for sharing hazard and resilience data
- Localised community relative asset value and priorities
- Localised exposure, vulnerability and resilience measures



DATA SHARING

- Member-based data sharing collective
- Nationally coordinated public-private data sharing platform
- Research Sector Data Commons for Resilience


APPENDIX 2: MISSIONS AND RESILIENCE DATA COLLECTIVE DETAILED PROJECT LIST




FIRE SHIELD

What if a fire never became a disaster?

Mission: reduce the scale and impact of bushfires by being able to extinguish dangerous fires within an hour by 2025.

Work Stream	Description	Code	Program Element Milestones	Outcomes
 DETECT A combination of emerging technologies will provide us with more accurate, near real time detection and understanding of fires, allowing communities time to safely evacuate and emergency services more time to respond				
Ground Sensing	Real-time ignition, fire, smoke, weather, air-quality sensing and fire monitoring through ground based sensors. Potential extension to comms towers and other viewing locations	FS003	Automated ground fire detection pilot	Improved speed and accuracy of detection of fires through ground situational awareness
		FS012	Real time reliable ignition, fire, smoke, and weather data from ground, aerial and satellite sensors (for prediction models)	
Aerial detection	Real-time ignition, fire, smoke, weather sensing and fire monitoring through aerial monitoring, both using current line scanning systems, unmanned systems and dual use systems such as domestic aircraft	FS012	Real time reliable ignition, fire, smoke, and weather data from ground, aerial and satellite sensors (for prediction models)	Improved fire monitoring and response times with inclusion of new aerial information sources
Satellite detection	Real-time ignition, fire, smoke sensing and fire monitoring through satellites. Improved sensing capabilities, more frequent passes, leading to permanent monitoring down to 1m ²	FS001	Open-source AI Innovation R&D Challenge to assess utility of AI for fire detection and modelling using satellite imagery	Improved fire monitoring and response times with inclusion of new satellite information sources
		FS012	Real time reliable ignition, fire, smoke, and weather data from ground, aerial and satellite sensors (for prediction models)	
Multi-hazard sensing	Real-time and predictive sensing and modelling for floods. Real-time, easy to use information source for multiple hazard types	FS014	Improved hazard monitoring and warning times data	Improved, real time hazard monitoring and warning times

Work Stream	Description	Code	Program Element Milestones	Outcomes
New situational awareness inputs	Novel detection and monitoring capabilities, including citizen sensing	FS008	Innovation showcase program or pilot projects for detection technology specific for EMS use, i.e. social listening tools for EMS or early warning detection (early flowering)	Innovative detection & monitoring, including two-way communication between general public and first responders
		FS021	Real time integration with multiple sensing capabilities for improved situational awareness	
Information fusion	Integration of multiple imaging and data feeds into a single information sharing platform and combined with AI/ML for improved situational awareness	FS006	Ongoing real time detection of hazards with fusion of information from ground, aerial & satellite improving situational awareness	Nationwide situational awareness platform acting as a single source of truth across all agencies & jurisdictions
<div>  SHARE Improvements in capturing, aggregating, analysis and sharing data in close to real time can substantially improve situational awareness and the quality of decision making. The integration of multiple information sources into tailored, actionable hazard notifications will provide the appropriate information in a format that aids decisions by emergency services personnel and provides timely information for the community. </div>				
Asset Prioritisation	Digital solution for on the ground emergency services to identify asset prioritisation at a local, state and national level	FS005	Digital solution for EMS to prioritise assets during disaster	Improved management of assets before during and after disaster events
Communication integrity	Communication backup systems for continuous communication throughout emergency situations when ground based comms infrastructure is damaged	FS007	Reduction of communication black spots through satellite & MESH networks	Open communication for everyone during emergency situations, regardless of damage to infrastructure (focus on emergency services)
Augmented decision making	Incorporation of multiple information sources into a display system which delivers necessary actionable information based on recipient, whether in HQ, on a truck or in public	FS020	UX & interface situational awareness platform for on ground decision making	A UX platform which integrates multiple input sources for real time situational awareness and improved decision making on the ground, and in the air
National warning systems	Integration of jurisdictional information overlayed with new knowledge to provide clear and consistent information to the public. Needs government ownership	FS009	National warning system with two-way citizen communication, and interactive information display	Public warning systems are consistently available across jurisdictions and along borders.

Work Stream	Description	Code	Program Element Milestones	Outcomes
Two-way information sharing	Two-way information between services including EMS on the ground, aerial, at HQ as well as between agencies including across jurisdictions or between fire fighters and national parks/ SES, etc. Citizens are not only the recipients of information, they can also provide valuable intelligence to enhance situational awareness during fires. Whether through social media feeds or direct imaging	FS009	National warning system with two-way citizen communication, and interactive information display	Citizen data input is used as a layer to feed situational awareness
 PREDICT Improving how tools predict fire behaviour, and how effectively organisations use those tools to respond to fires, could help to reduce the impact of fires on our communities. As with any modelling problem, data is critical. Improving how we integrate data and modelling with on-the-ground operations will maximise the value of these tools and our responses. Modelling and AI overlayed with accurate weather, landscape and asset data can accurately predict the spread and intensity of any fire and also help build response scenarios based on risk				
National bushfire simulation	The development of a 'national bushfire simulation capability' that aims to: improve the assessment of risk across climate and short-term weather driven timescales; optimise the benefits and reduce the costs of fuel management initiatives; and to improve the response of fire and emergency services to wildfire events	FS016	Development of additional hazard simulation capabilities	Improved prediction of dangerous fires and other hazards through weather, fuel load and topography statistics
		FS002	National Bushfire prediction model available for testing to EMS	
Novel multi-hazard models	The development of additional hazard simulation capability including smoke, cyclone that aims to: improve the assessment of risk across climate and short-term weather driven timescales; optimise the benefits and reduce the costs of disaster recovery?	FS013	Real time, ongoing and reliable landscape data to feed into prediction models to enhance accuracy	Real-time and predictive situational modelling for floods.
Decision scenarios	Support decision making in real time through modelling and scenario development	FS015	Improved bushfire prediction model integrated in all fire agency platforms	Improved decision making based on predicted multiple outcome scenarios
		FS017	Augmented decision-making platform for disasters	
Predictive modelling inputs	Additional data set collection to feed into prediction modelling	FS013	Real time, ongoing and reliable landscape data to feed into prediction models to enhance accuracy	Real time and reliable data sets to feed into prediction models to enhance accuracy. Data sets include topographic, fuel load density, and canopy height
		FS024	Repurposed catastrophe and hazard model	


Work Stream	Description	Code	Program Element Milestones	Outcomes
 RESPOND As larger, longer and more simultaneous fires demand more from our firefighters and firefighting resources, close collaboration between states will be vital. There is a range of promising technologies to trial, adopt, scale and integrate into Australian emergency response systems.				
Suppressants	Encouraging the creation of more fire retardant and suppressant options in Australia	FS004	Manufacturing & innovation programs for suppressants and application technology (ground, aerial & private use)	Provide Australian certified and tested and environmentally friendly fire suppressant solutions for EMS use
		FS010	Australian standards and testing capability of environmentally benign fire suppressants	
Novel delivery systems	Explore new delivery systems to assist in responding to fires which can be utilised to enhance respond speed and accuracy during disasters	FS004	Manufacturing & innovation programs for suppressants and application technology (ground, aerial & private use)	New delivery systems outside of fire trucks and helicopters. Increasing the use of UAVs or other technology to efficiently respond to fires nationwide
		FS011	Research & analysis on efficacy of response methods	
Home use suppressant	Exploration of DIY suppressants for general public use	FS019	Australian tested DIY suppressant kits for general public use	Home use suppressant kits for personal use amongst the general public
New skills/jobs	With the introduction of new technologies, there will be a number of new jobs created that will require bushfire expertise	FS018	Education programs and career paths for new technology training	Highlight of new jobs created with the introduction of technology in the bushfire resilience work. Training programs and clear career paths to upskill workers on the technology adopted
Logistics and operational analysis	Modelling the most efficient staging and use of firefighting assets, both aerial and ground	FS022	Optimised response capability and logistics scenario support with time to response information for EMS	Optimal firefighting response methodologies applicable in various scenarios
		FS011	Research & analysis on efficacy of response methods	
		FS023	On ground, automated response scenarios based on early detection and prediction information	
		FS025	Research validated, optimal disaster response method	




HEALTHY LANDSCAPES

What if our environment was optimised for risk reduction and natural ecosystem resilience?

Mission: Halve hazard exposure in Australia's 50 most fire and flood prone regions by 2025.

Work Stream	Description	Code	Program Element Milestones	Outcomes
 KNOWLEDGE Work with others to build a national "living landscape" evidence base to better understand disaster risk and ecosystem needs before, during and after disaster events				
Landscape Instrumentation	Continuous and real time measurement of landscape attributes from the ground, air and satellite that give high resolution information about the land's hazard and exposure resilience and / or risk such as fuel load, soil moisture levels, erosion	HL010	Consistent measurement of hazard exposure & risk: Multilayer Landscape Instrumentation Ground, Air, Satellite in pilot regions	Improved assessment of bushfire and flood risk and ecosystem health. Automated measurement and instrumentation of landscapes for building natural capital accounting and improve assessment of bushfire risk and ecosystem health
		HL008	Instrumentation Pilots	
		HL003	Landscape health long term projection modelling	
Asset building and classification	The articulation and understanding of the relationship of landscapes and species to surrounding communities and land uses	HL010	Consistent measurement of hazard exposure & risk: Multilayer Landscape Instrumentation Ground, Air, Satellite in pilot regions. Build an environmental, cultural and built asset database	Knowledge of environmental, cultural and built assets in the landscape for decision prioritisation
Cultural Land Management	Building of traditional land management practice for fire and water and health of landscapes according to traditional indigenous methods and building an evidence base and education to support use of traditional land management methods with both public and private land-owners	HL0009	Cultural Land Management Education Network and Resources	Empowerment of traditional land management practitioners and recognition of traditional land management knowledge for landscape action
Resilient Wildlife Monitoring	Understanding of community / regional level wildlife populations in hazard prone areas and the plan to protect them prior, during and post disaster. Understanding of how wildlife population interact with resilient landscapes	HL012	National Wildlife Census	Wildlife populations living database available at national, state, regional and community levels. Endangered species in hazard prone landscapes seen as protectable asset Knowledge base to improve local action for wildlife resilience
		HL011	Drone thermal imaging for wildlife populations	
		HL017	Digital Twin Ecology and Wildlife Initiative	

Work Stream	Description	Code	Program Element Milestones	Outcomes
 ACTION Implement locally adapted land practices which recognise both fuel load management and ecosystem needs and provide education, skill-building and job creation				
Traditional Land Management: Practice (Traditional owners/ Indigenous land management)	Provide a scalable program of traditional land management practice for resilient landscapes adopted by public and private land owners across Australia to make land more resilient to natural disasters such as fire and floods	HL004	Cultural Land Management Pilot	More resilient landscape to fire and flood through reduced fuel load and improved water management using traditional methods.
		HL005	Scale fee for service Cultural Land Management Practice Nationally	Development of employment opportunities for indigenous land practitioners through broad adoption of appropriate traditional land management practices
		HL019	Adoption of Cultural Land Management Practice Internationally	
Land adaptation and planning	Preparation of land (private and public) to reduce hazard exposure	HL014	Rapid Regeneration Resilience Programs: (e.g. Drone seeding)	Accurate and actionable risk-based frameworks that can be applied to a range of natural and built landscape contexts
		HL004	Cultural Land Management Pilot	Improved post-disaster recovery of native species
		HL007	Hazard reduction landscaping tool	Employment / job creation for traditional land management with private landowners
Land regeneration (hazard exposed land)	Regeneration of land post fire and flood events to reduce hazard exposure	HL014	Rapid Regeneration Resilience Programs: (e.g. Drone seeding)	Actionable risk-based frameworks for regeneration that can be applied to a range of natural landscape contexts Improved post-disaster recovery of native species
Citizen ecology and hazard monitoring	Use of apps and platform that engage citizens in providing insights / data about health of landscapes pre- and post-disaster. Records observations of flora, fauna and fungi in areas affected by bushfires	HL006	Citizen Science: AI Wildlife and Ecology monitoring scale up (international)	Large scale data collection and analytics bringing new knowledge on flora and fauna within the landscape. Improved knowledge of landscape health and threatened species within the community
Hazard reduction seasonal preparation	Incorporate land preparation as part of community leadership disaster risk planning	HL018	Automated Hazard Reduction hyper local seasonal forecasts and action plans	Accurate and actionable risk-based frameworks that can be applied to a range of natural and built landscape contexts
		HL015	Hazard Reduction adaptation resilience and land value scheme (risk reduction and insurance premiums)	


Work Stream	Description	Code	Program Element Milestones	Outcomes
 INVESTMENT Implement locally adapted land practices which recognise both fuel load management and ecosystem needs and provide education, skill-building and job creation				
Natural Capital: Inputs and incentivisation	Incentives for different types of land / regions (e.g. farming, private, public) to measure the health of their landscape and provide inputs to ascertain health and value of the natural environment. (The System of Environmental Economic Accounts (SEEA))	HL013	Resilient Landscape Asset Modelling - natural capital accounting validated with partners in pilot regions	New environmental investment models which provide incentives for land management for fire and flood resilience
		HL016	Incentive model in practice: Resilient Landscapes Superfund Investments	
Natural Capital: Outputs	Investment model development suitable for different regions/ types of land for hazard risk reduction	HL001	Register of natural capital assets in hazard prone regions. Testing of return on investment models	Resilience-based land investments are more economic viable and accessible
Natural Capital: Standardisation	Standardised valuation measurement of natural capital and natural capital investment	HL002	National Capital Assets Data Standardisation Recommendation	Landscape as an asset is can be standardised and valued across regions / nationally



RESILIENT COMMUNITIES

What if every community had the skills and resources to mitigate their fire and flood disaster risk and bounce back stronger?

Mission: lift Australia's 50 most vulnerable communities to be on par with Australia's 50 most resilient communities by 2025.

Work Stream	Description	Code	Program Element Milestones	Outcomes
 LEADERSHIP Enable local leaders to develop and enact resilience plans				
Resilience Planning	Develop and deliver training modules designed to improve the leadership capacity of current and emerging leaders. Resilience plans may include infrastructure development, exercising disaster scenarios, recovery planning and preparation, economic planning, asset prioritisation, land use planning and mitigation planning.	RC006	Complete resilience training and plan development in 10 communities.	Communities will have local leaders who are able to work within their communities and together with government and non-government bodies to develop and maintain Disaster Resilience Plans
		RC015	Scale resilience training and plan development to 100 communities	
Hyper local disaster Preparation	Create Disaster Resilience Plan Guidelines for use by Community Leaders when working within their communities in Plan development. Hyper local preparedness	RC016	500 Community Resilience Plans digital library	That community Leaders are given the resources to prepare targeted plans to their communities, which are accessible by landowners and visitors
		RC018	100 Business Resilience Plans digital library	
Economic bounce back Planning	Provide support and guidance to communities as they develop recovery plans focused on economic resilience	RC018	100 Business Resilience Plans digital library	Community leaders are given the resources to prepare targeted plans to their communities, which are accessible by landowners and visitors
Community Cohesiveness	Provide support and guidance to communities as they develop recovery plans focused on community cohesiveness	RC016	500 Community Resilience Plans digital library	Communities have access to infrastructure and resources needed to enhance community cohesion
		RC011	Peer to peer community learning program	
		RC012	Local Disaster Resilience Awareness Campaign	

Work Stream	Description	Code	Program Element Milestones	Outcomes
 KNOWLEDGE Accelerate the creation of new models of resilience education, training and accreditation for generational change				
Data and knowledge sharing	Risk and mitigation intelligence shared for improved planning and preparation	RC002	Identify initial communities for resilience building	Communities are able to share knowledge about identifying risk and have the knowledge to introduce mitigation strategies
		RC004	Local Disaster Resilience Toolkits	
		RC012	Local Disaster Resilience Awareness Campaign	
Community Health	Programs aiming to build community cohesiveness through local events and knowledge building. Make an Entertainment Pod available for community engagement. Provide a Pilot Training initiative to Community Gatekeepers in the NSW Lower East Coast	RC009	Mental Health awareness Program	Gatekeepers receive the skills needed to identify community members who may need assistance with a mental health issue
		RC012	Local Disaster Resilience Awareness Campaign	
School Emergency Management and Resilience training	Development of nationally consistent emergency management training and volunteer programs at high school level. Pilot: Assessment of the Gingin High School Cadetship Program	RC003	Schools Resilience Program	Build ongoing volunteer capacity and knowledge of disaster resilience through education and training in high school level
Volunteer accreditation program	Volunteer accreditation programs, which identify the skills and characteristics require to support resilience programs	RC017	Volunteer national database	Accredited program for volunteers
Community peer to peer learning	Community learning networks	RC011	Peer to peer community learning program	Communities prepare, adapt and recover more effectively through learning of lessons and support provided through peer networks
 RESOURCES Simplify access to resources before, during and after a disaster event				
Response Recovery Resourcing	Developing a plan for FFR to action in a future event requiring on the ground action. Complete the roll out of Accommodation Pods and redeploy used units as they are returned. Service and place into storage at the completion of this phase of the operation	RC001	Temporary housing resources established for emergency deployment	Have an effective strategy to respond to any disaster requiring a FFR response
Resilience resource coordination	Support installation of Fire Fighting and response/recovery resources in strategic locations to support community preparedness and recovery	RC005	Prepositioned response/recovery capabilities	Fire fighting and response/recovery capacities upgraded through prioritisation and long-term community planning

Work Stream	Description	Code	Program Element Milestones	Outcomes
Infrastructure continuity	Support ongoing availability of infrastructure in strategic locations to support community preparedness and recovery	RC014	Utility Infrastructure disaster resilience upgrade scheme (communications, energy water)	Provision of accredited volunteers for a range of needs
Volunteers	Alignment of volunteer programs to needs and skills within the community	RC010	Volunteer corps pilot activated	Accredited program for volunteers which provides skilled volunteer resource before during and after disaster events
 INVESTMENT Accelerate new investment models to help shift the balance of investment from recovery to resilience				
Built environment resilience	Planning tools and insurance incentivisation for resilience of built environment	RC008	Built Environment Resilience Toolkit and Incentives	The creation of practical steps to follow when planning, building and retrofitting at risk communities
Resilient and prepared infrastructure	Preparedness investments in infrastructure protection designed to manage ignition risk	RC007	Landscaping for infrastructure protection	More resilient infrastructure and reduced ignition
Shared risk	Developing and implementing shared risk models for built environment	RC013	Shared Risk Model Advocacy: landholder, mortgage lenders and insurance	Improved preparation and recovery through shared risk and resilience incentivisation
Shifting the dial	Recognising the need for increased investment in Resilient Community Infrastructure	RC008	Built Environment Resilience Toolkit and Incentives	Funding is allocated to making communities more effective and resilient as opposed to responding to a disaster
			Landscaping for infrastructure protection	



RESILIENCE DATA COLLECTIVE

What if we can understand and quantify hazard risk, exposure and vulnerability across our communities and environments?

Our future in 2025: We have a common, trusted system for sharing significant national and global fire and flood resilience data to support decision making and action.

Work Stream	Project Description	Code	Program Element Milestones	Outcomes
	Overall Program Management & Consulting	RDC000	Applies to all initiative and mission objectives	Parallelise streams of work and increase capacity to address significantly higher number of use cases
Evidence Base 	Mission Dashboards	RDC001	Empower missions with evidence and measures in a self-service form to make project and priority decisions	Missions can leverage internal and external data and tools to identify new opportunities, inform key priorities and measure progress
	Hazard Analysis Tools	RDC002	Provide the FFRI initiative, partners, and ecosystem stakeholders evidence to help understand and manage bushfire and flood risk in Australia	Data and analysis of bushfire and flood hazard risk exposure, vulnerability, and resilience levels to provide the FFRI initiative, partners, and ecosystem stakeholders with tools to inform resilience investments
	Resilience Communities Evidence Analysis	RDC003	Long term mission investment prioritisation based on fire and flood hazard risk to support and inform Resilient Communities mission objectives	The mission team has the data analysis and insights necessary to develop prioritised roadmap aligned with mission objectives and to identify, inform and prioritise related projects
	Healthy Landscapes Evidence Analysis	RDC004	Long term mission investment prioritisation based on fire and flood hazard risk to support and inform Healthy Landscapes mission objectives	The mission team has the data analysis and insights necessary to develop prioritised roadmap aligned with mission objectives and to identify, inform and prioritise related projects
	Fire Shield Evidence Analysis	RDC005	Long term mission investment prioritisation based on fire and flood hazard risk to support and inform Fire Shield mission objectives	The mission team has the data analysis and insights necessary to develop prioritised roadmap aligned with mission objectives and to identify, inform and prioritise related projects
Data Standards 	Community Asset Database	RDC006	Support common operating picture for community scale resilience, response, and recovery	High risk regions have a standardised database of community assets with key attributes and relative importance available for designing preparedness, response and recovery to fire and flood

Work Stream	Project Description	Code	Program Element Milestones	Outcomes
Data Sharing 	Resilience Data Collective	RDC007	Broad multi-sector contribution of knowledge, expertise, resources, and data	A multi-stakeholder collaboration is established to collaborate on addressing key resilience use cases at an ecosystem level
	Data Ecosystem Map	RDC008	Intelligence on disaster resilience data ecosystem stakeholders	Illustrate the data infrastructure and stakeholders in the fire and flood disaster resilience ecosystem to support the initiative, missions, and partners to identify gaps, identify opportunities and creation of value.
	Bushfire Research Data Commons	RDC009	Research sector enablement for advancement of understanding of resilience	An ARDC bushfire data common in support of the research sector is established and made available publicly with contributions from government and industry
Technology & Data Platforms 	Resilience Index Scale Up & Refresh	RDC010	Establish national scale platform to baseline and measure resilience levels at community and statistical area levels	The Australian National Disaster Resilience Index (ANDRI) is extended to include localised community data and updated with periodic refreshes
	Flood Extended Forecasting Platform	RDC011	Enhanced prediction for flood hazard	Create a BOM supported platform that provides extended flood forecasting for to Nepean Valley that it is extended to all high-risk flood catchments nationally
	Digital Twin for Disaster Resilience	RDC012	Disaster related spatial intelligence	State (NSW, VIC & QLD) sponsored digital twin platforms are able to ingest and provide fire and flood related resilience, response and recovery intelligence for access by authorities, industry and the public

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Nature

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Turner



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Westpac

Wonnarua Nation
Aboriginal Corporation

MFFRI has a range of other partners
in addition to the Blueprint partners.

MEET THE TEAM



Adrian Turner

CEO, Fire and Flood Resilience initiative, Minderoo Foundation

Adrian is an experienced corporate leader and has a strong track record of building innovative companies and organisations that tackle complex challenges.

At Minderoo Foundation, Adrian is CEO of the Fire and Flood Resilience initiative which was established in January 2020 with a \$70 million commitment from Andrew and Nicola Forrest. The collaborative Initiative aims to see Australia become a global leader in fire and flood resilience by 2025.

In addition to his responsibilities at the Minderoo Foundation Adrian has co-chaired AustCyber, the national Program to build a vibrant domestic cybersecurity industry.

Prior to joining the Minderoo Foundation, Adrian was the

founding CEO of CSIRO's Data61, the digital and data specialist arm of Australia's national science agency.

He previously spent 18 years in Silicon Valley and was co-founder of Borondi Group, co-founder and CEO of Mocana Corporation, had profit and loss responsibility for Philips Electronics connected devices infrastructure and was Chairman of the Board for Australia's expat network, Advance.org.

Adrian is an avid reader and writer with deep interests in AI, data economics and biosecurity, as well being an artist. He graduated from UTS and completed the Executive Program for Managing Growth Companies at Stanford University and authored the book BlueSky Mining – Building Australia's Next Billion Dollar Industries.



Karen O'Connor

Missions Lead, Fire and Flood Resilience initiative, Minderoo Foundation

Karen is responsible for the design and delivery of a series of large-scale, multi-disciplinary, outcome-focused Missions. These Missions will draw on national and global expertise to accelerate innovation in mitigating bushfires and other natural disasters to help Australia become a global leader in fire and flood resilience before 2030.

Karen has been designing large scale innovation programs for a number of years at Minderoo Foundation, CSIRO - Australia's national science agency and the Department of Defence.

She was previously Director of National Digital Missions

at CSIRO's Data61, part of a team aiming to drive national scale outcomes and deliver a transformative model for the Australian industrial research sector.

Karen also had a long-standing career with Defence Science and Technology and played an integral role in the delivery of the \$730 million Next Generation Technologies Fund, including the development of their Grand Challenges program.

Karen has a Ph.D. in Medicine and a Master of Public Health. Prior to her work in innovation programs Karen was a researcher in molecular biology and epidemiology and has wide-ranging applied research experience addressing autoimmune diseases, HIV, field-deployable diagnostics and traumatic brain injury.

MEET THE TEAM



Lee Goddard

Head of Partnerships, Fire and Flood Resilience initiative, Minderoo Foundation

Rear Admiral Lee Goddard CSC, RAN, recently completed his tenure as Commander Maritime Border Command and Commander Joint Agency Task Force Operation Sovereign Borders, to join Minderoo Foundation after a decorated career serving for over three decades in the Royal Australian Navy.

RADM Goddard leads Minderoo Foundation's Fire and Flood Resilience initiative network of collaborators.

Prior to his promotion to Rear Admiral – the second highest rank within the Royal Australian Navy –

RADM Goddard was seconded as a Branch Head to the Department of Prime Minister and Cabinet.

During this secondment RADM Goddard served as International Policy Branch Head and then Head of the Asia-Pacific Economic Cooperation (Papua New Guinea) Task Force. In this role he led the whole of government coordination of Australia's logistics, event and security support to PNG for its hosting of the APEC summit in Port Moresby in 2018.

Throughout his career RADM Goddard has commanded a number of warships and served at sea aboard Australian, Canadian, Malaysian and US Navy ships, and on operations in the Middle East. He was awarded the Conspicuous Service Cross (CSC) in 2007.



John Sukkar

Data Ecosystems Lead, Fire and Flood Resilience initiative, Minderoo Foundation

John is charged with establishing and growing a data collective across the national and global disaster response, recovery, and resilience ecosystem to up lift our collective capabilities and serve as an evidence base for our fire and flood resilience Missions.

The Resilience Data Collective will form the basis of the program in collaboration with key partners in the national and global system; and a vision to creating a model for federated data sharing that establishes Australia as a world leader in this space.

John has extensive experience leading product engineering teams in enterprise, large scale cloud

and consumer products. Before returning to Australia in 2019, he spent 17 years in the US and led product development programs at Microsoft, launching several global product releases in Office365, Windows10 and Xbox; as well as new product launches in Clinical Trial Management and Biotech solutions.

Prior to joining us, John was Director, Engineering and Design at the CSIRO's Data61 and led the team that launched data.gov.au, nationalmap.gov.au and a number of other key initiatives.

John has a degree in Mechatronic Engineering from the Western Sydney University, is a UNSW AGSM alumni; and holds a number of industry certifications including PMI PMP, Scrum Master and ITIL.

● ●
*Signs of regrowth are seen
amongst the bushfire affected
blue gum forestry west of
Parndana, Kangaroo Island, South
Australia on February 23, 2020.*





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