



Australian Government

National Climate Resilience and Adaptation Strategy

2021 – 2025

Positioning Australia to better anticipate, manage
and adapt to our changing climate





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Acknowledgement of Country

The Australian Government acknowledges the Traditional Owners and Custodians of Country throughout Australia and recognises their continuing connection to land, waters and community. We pay respect to the people, the cultures and the elders past, present and emerging.



ARTWORK: Looking After Country
© Elizabeth Yanyi Close 2021



This artwork acknowledges the sovereignty of all Aboriginal and Torres Strait Islander people over many vast landscapes across the country — and their custodianship over that land for tens of thousands of years.

Recognition of shared histories across Australia's landscapes and acknowledging our First Nation people's sustainable practices — since time immemorial — and the place they have in contemporary landcare management and looking after country.

This work is profoundly informed by the interconnectedness of the different facets and textures of the landscape. Elizabeth's motifs and iconography speak to a concept that is central to her practice – Connection to Country.

Elizabeth Yanyi Close is a Panaka Skin Anangu woman from the Pitjantjatjara and Yankunytjatjara Language Groups, whose family links are to the communities of Pukutja and Amata in the APY Lands.



Minister's Foreword



Australians understand what it means to live and thrive in a harsh climate. In recent years we have experienced unprecedented droughts, fires and floods. We know further changes to the climate are inevitable, even with strong and decisive global action to reduce emissions. While we play our part to reduce emissions and mitigate global climate change, we must also prepare our nation and our region for the changes that cannot be avoided.

Adaptation is a critical part of our response to climate change. It means investing and preparing for the future. Successful adaptation will prepare communities, buildings and infrastructure, ecosystems and our economy for a changing climate, and ensure our prosperity, security, and continued economic growth. As Environment Minister, I'm only too aware of the critical role of natural capital, biodiversity and environmental sustainability in building resilience. Our economic prosperity, the amenity of cities and regions and the resilience of our communities, all depend on a healthy environment and effective ecosystem services.

The Australian Government's National Climate Resilience and Adaptation Strategy highlights the importance of continuing to work together as a nation to improve our ability to anticipate, manage and adapt to climate change.

Since the Government released the first National Climate Resilience and Adaptation Strategy in 2015, individuals, businesses and all levels of government have been preparing for our future climate and taking action. I am proud to present the new Strategy, which builds on the 2015 Strategy to enable even greater action.

This Strategy seeks to unlock greater levels of action and investment in adaptation by ensuring that everyone has a clear idea of our national adaptation priorities and progress. The Strategy will catalyse action to protect biodiversity, natural capital and ecosystem services which support our ability to adapt. Our actions will continue to be driven by world-leading science and services and the guidance needed to support informed decisions.

The Australian Government will continue to work with all levels of government, business and the community to ensure our actions to implement the Strategy complement and reinforce existing actions. We will continue to ensure that those who act decisively to prepare for our future climate are in a position to reap the rewards.

I would like to thank the many individuals, businesses, industry bodies, Indigenous people and other experts who contributed to the development of the Strategy. I look forward to continuing to work with you to better anticipate and respond to climate change.

**The Hon Sussan Ley MP
Minister for the Environment**

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Executive Summary

The *National Climate Resilience and Adaptation Strategy* (the Strategy) positions Australia to better anticipate, manage and adapt to climate change. Climate change poses growing challenges to our economic prosperity, the amenity of cities and regions, the health of our environment and ecosystem services, and the wellbeing of our communities. Even with global action to reduce emissions, the impacts of climate change will continue to increase over the coming decades. Adapting and building resilience to our future climate is vital to our future prosperity.

The Strategy is designed to support governments, communities and businesses to better adapt, recognising that adaptation is a shared responsibility that requires sustained and ongoing action. The Strategy operates across four domains — natural, built, social and economic — to drive forward adaptation. It recognises that effective adaptation must be: informed by the best available science and information; delivered through partnerships and investments; and guided by effective governance and coordination.

Our objectives

The Strategy details three objectives to enable more effective adaptation across Australia:

-  **Drive investment and action through collaboration**
-  **Improve climate information and services**
-  **Assess progress and improve over time**

Driving coordinated action

These three objectives are interlinked and will work together to ensure Australians can better protect our natural assets, build community resilience and generate economic opportunities. Through these objectives, the Strategy establishes a framework to ensure continual improvements. Building on the best available information and existing capabilities, the Strategy will help drive coordinated action and guide financial flows to the highest adaptation and resilience priorities.

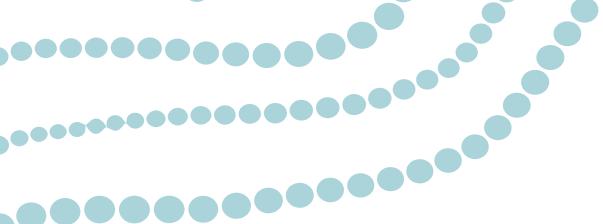
The Strategy establishes an ongoing cycle of national assessments, targeted action, monitoring and review, to support learning and strengthen our national adaptation response over time in line with our commitments under the Paris Agreement. The Strategy also extends to engaging internationally on adaptation and helping our partners in the region.

The Strategy has been informed by consultation with all levels of government, key stakeholders in industry and academia and community groups. The Australian Government conducted workshops with over 300 participants and completed a Have Your Say online public consultation process that attracted over 200 responses. The Strategy has also been informed by multiple reviews, inquiries and reports on climate adaptation and resilience.

This Strategy will be delivered collaboratively with state, territory and local governments, industry and local communities to ensure our collective efforts are aligned and mutually reinforcing.



Photo: Great Ocean Road, Kulin Nation, Victoria



Purpose and Scope

The purpose of the National Climate Resilience and Adaptation Strategy is to set out what the Australian Government will do to support efforts across all levels of government, business and the community, to better anticipate, manage and adapt to the impacts of climate change.

The Strategy complements existing work underway on disaster risk reduction, particularly the work of the National Recovery and Resilience Agency, the ongoing implementation of the National Disaster Risk Reduction Framework and reforms associated with the Government's response to the Royal Commission into National Natural Disaster Arrangements.

Adaptation also helps to reduce the impacts of natural disasters and supports action on emergency preparedness, response and relief – work which is led by the Department of Home Affairs through Emergency Management Australia at the national level.

The Strategy supports Australia's ongoing adaptation commitments and actions under the Paris Agreement, both at home and abroad, including how we share our adaptation expertise, experiences and skills to achieve stronger resilience outcomes in the Indo-Pacific region.

Adaptation goes hand-in-hand with action to reduce emissions

Australia's whole-of-economy Long Term Emissions Reduction Plan sets out Australia's approach to achieving emissions reductions in a practical, responsible way that will take advantage of new economic opportunities while continuing to serve our traditional export markets.

Some investments and technologies for adaptation and resilience will also contribute to emissions reductions, in particular measures to build soil carbon across rangelands, and measures to enhance blue carbon in coastal systems.

Definitions

Adaptation

The process of adjusting to actual or expected changes in climate to reduce or avoid climate impacts, or exploit beneficial opportunities.

Resilience

The capacity of communities, environments and economies to cope with a hazardous event or disturbance, while maintaining their essential functions and structure.

Mitigation

The action we take to limit changes in global climate caused by human activities.

Adapting to Climate Change

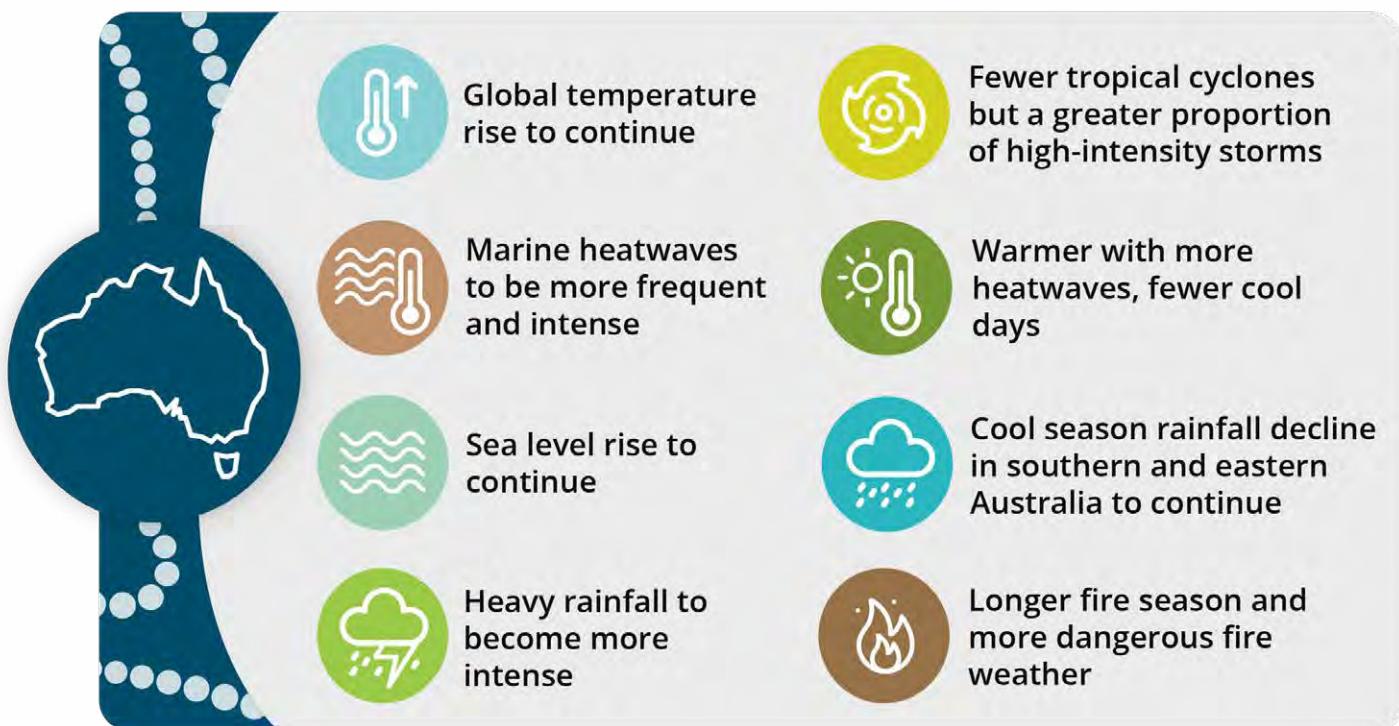
Australians know our climate is changing, with impacts across the country in the form of weather and climate extremes. In recent years, we have experienced severe bushfires, droughts, flooding, and storms.

Observations show Australia and our region are experiencing rising temperatures, changing rainfall patterns, higher frequency of extreme fire weather days, rising sea levels, rising sea temperatures, and increasing ocean acidification.¹

These extreme weather events are increasing as a result of climate change and these trends are predicted to continue for at least several decades.²

The most recent report of the Intergovernmental Panel on Climate Change finds the Earth is likely to reach global warming of 1.5°C from pre-industrial levels in the 2030s. This will result in further changes with temperatures and extreme weather we have not experienced before.

Predicted changes to the Australian climate



Source: Bureau of Meteorology (BoM) and The Commonwealth Scientific and Industrial Research Organisation (CSIRO)

1. [State of the Climate](#), Bureau of Meteorology and The Commonwealth Scientific and Industrial Research Organisation, 2020

2. [Sixth Assessment Report](#), Intergovernmental Panel on Climate Change, 2021

Adaptation is needed to reduce and avoid economic costs

Climate impacts are imposing economic costs that are projected to increase with global warming. In 2021, Deloitte Access Economics, reporting to the Australian Business Roundtable for Disaster Resilience and Safer Communities, found that disasters currently cost the Australian economy around \$38 billion per year. Assuming current development patterns and population growth continue, this is forecast to reach at least \$73 billion per year by 2060, even with ambitious global action to reduce emissions. Effective early action to adapt can reduce or avoid some of these costs, and the impacts to affected communities.

To take just one sector as an example, higher temperatures and changes in seasonal rainfall patterns are affecting the profitability of Australian farms. Analysis by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) found changes in seasonal conditions have reduced annual average farm profits by 23% or around \$29,200 per farm over the past 20 years, with larger reductions projected to 2050 in the absence of adaptation. These impacts have been most pronounced in south-western and south-eastern Australia. These same climate conditions have also made farm incomes more variable and doubled the risk of years with very low farm returns.³



*Photo: Dry wetland of Kings Billabong at Bottle Bend on the Murray River, Nyeri Nyeri Country, New South Wales
© Arthur Mostead*

³. Special report: Update to the economic costs of natural disasters in Australia, Deloitte, 2021

Adaptation is cross-sectoral

Adaptation involves a range of broad, cross-sectoral challenges. An effective national adaptation response requires coordinated action across the natural, built, social and economic domains. The Strategy uses these four domains as outlined in the diagram below to frame the approach to coordinated adaptation.

There are many interdependencies and relationships between the domains and the climate risks each face, with some risks crossing over into multiple domains to affect whole systems, including the strength of the economy, national security, the resilience of our society and operation of natural systems.

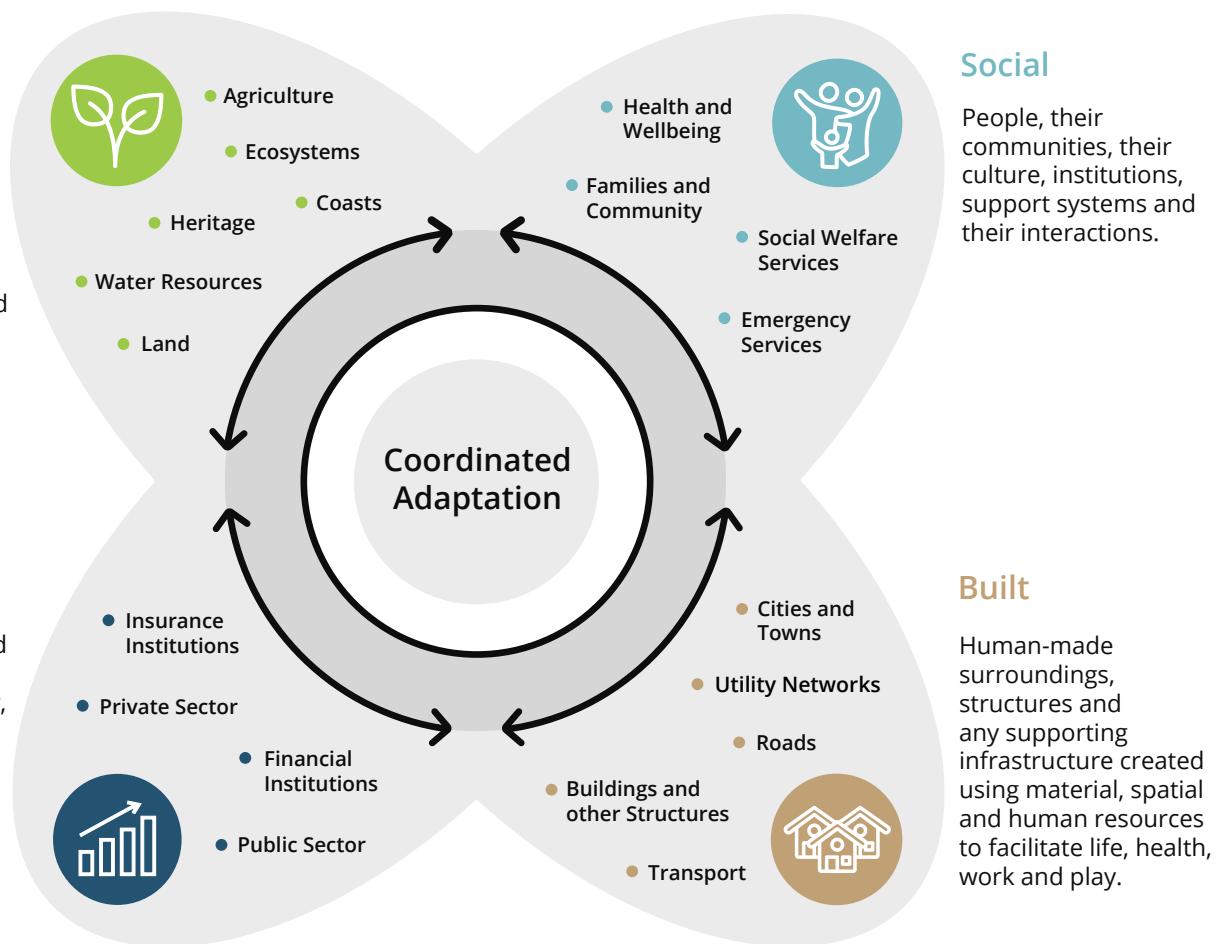
Climate change will impact each domain differently. It is important to recognise that within the four domains are individuals, businesses, communities, organisations and governments, all facing unique challenges and barriers. To respond to these challenges we need to work together on tailored, co-designed solutions.

As the 2021 Australian Government Intergenerational Report notes, innovation and investment in climate-resilient development can significantly increase the adaptive capacity of our regions, towns and cities.

Four Connected Domains

Natural

The landscapes, seascapes, ecosystems, agricultural lands, and diverse plant and animal life within Australia and its ocean territory.



Economic

The production and consumption of goods. Productivity, financial systems, and the economy.

Social

People, their communities, their culture, institutions, support systems and their interactions.

Built

Human-made surroundings, structures and any supporting infrastructure created using material, spatial and human resources to facilitate life, health, work and play.

Examples of adaptation

Some adaptation solutions require coordinated effort and investment from governments, businesses, research institutions, and communities. A selection of practical examples of adaptation include:

- Constructing and retrofitting buildings to withstand increased air temperatures, heatwaves and natural hazard events.
- Building roads and transport infrastructure to withstand heat or account for likely sea level and flooding changes.
- Ensuring that climate change projections are reflected in the design, location and investment decisions of long-life assets such as hospitals, factories, schools and other critical infrastructure.
- Integrating the planting of trees, water retention measures and resilient urban design to reduce the impact of increasing heat in cities.
- Constructing artificial wetlands to provide nutrient, pollutant and sediment capture, reduce stormwater flow during flooding events and enhance biodiversity.
- Restoring seagrasses, mangroves and tidal wetlands (blue carbon) to protect coastal infrastructure from storm surges, and maintain the productivity of fisheries and marine industries.
- Creating partnerships to address larger systemic challenges to community wellbeing and economic prosperity, such as effective investments in resilient housing to offset more frequent and severe climate-related natural disasters and the flow on effects to insurability and insurance affordability.



Photo: Aerial view of coastline and seagrass of the Shark Bay World Heritage Area, Gutharraguda ‘two waters’, Western Australia © Nick Rains



Building on Strong Foundations

Australians have a long history of adaptation and responding to our highly variable climate. Successive Australian Governments have been committed to national action on adaptation and understood that further action is required as the climate will continue to change and impact on communities, environments and industries.

Our national commitment to adaptation is also reflected in our commitment to the Paris Agreement. Climate adaptation is a core pillar of the Paris Agreement and all Parties to the Agreement have agreed to the global goal of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. Australia continues to provide partnership and support to strengthen adaptive capacity in our region.

Guiding principles

The 2015 National Climate Resilience and Adaptation Strategy included guiding principles for adaptation, which also underpin this Strategy and continue to guide national action.

Shared responsibility

Governments at all levels, businesses, communities and individuals all have important roles to play.

Factor climate risks into decisions

Consider the current climate and future change in all our decisions.

Evidence-based, risk management approach

Apply the best available science.

Assist the vulnerable

Support those who are vulnerable to climate-related impacts.

Collaborative, values-based choices

Respect the knowledge and experience of those affected and involve them in decision-making.

Revisit decisions and outcomes over time

Review actions regularly and identify flexible pathways and opportunities.

Established roles and responsibilities

All levels of government, businesses, communities and individuals have important, complementary and differentiated roles in adapting to the impacts of climate change.

These are set out in the 2012 agreement by the Council of Australian Governments' Select Council on Climate Change.

Adaptation Roles and Responsibilities

The Australian Government is responsible for national leadership on adaptation, managing Australian Government assets and services including significant investments in public infrastructure, and providing national climate science and information. It maintains a strong, flexible economy and well-targeted safety net to ensure that climate change does not disproportionately affect vulnerable groups.

State and territory governments have an important role in adaptation, with significant influence through their planning laws and investments in public infrastructure. This includes key areas of service delivery and infrastructure, such as emergency services, environmental protection, health, planning and transport. They also provide science and information at local and regional scales.

Local governments are on the frontline in dealing with the impacts of climate change. They have an essential role to play in ensuring that local circumstances are adequately considered in the overall adaptation response, and local communities are directly involved in adaptation efforts. Local governments are well positioned to inform State and Commonwealth governments about on-the-ground needs of local and regional communities, communicate directly with those communities, and respond to local challenges.

Private parties have an important role to play in managing their own risks, for example, maintaining and protecting private assets and incomes. This provides a strong incentive to act but their capacity to act will differ depending on their exposure to risk, and access to resources and knowledge.

While there are complementary and differentiated roles. It is by working together that we can respond to the challenges of climate change for the benefit of all Australians.

In line with these responsibilities, all levels of government and many businesses have developed plans to adapt to climate change. This new national strategy complements these and will support coordinated action across the Australian Government and in partnership with all governments, businesses, research institutions and communities.

The Strategy aligns with and supports implementation of other national plans and

strategies including the National Disaster Risk Reduction Framework and supporting Action Plans, the 2021 Intergenerational Report, the 2021 Australian Infrastructure Plan, the 2021 Delivering Ag2030 report, Australia's Strategy for Nature, and Australia's International Climate Change Action Strategy that guides adaptation action in our region. Implementation of this Strategy will continue to support the integration of climate information in new plans and strategies as they are developed.

Adaptation strategies at different levels of government and business



Across the Australian Government there are many examples of major initiatives driving adaptation across the four domains.

Natural Domain

Reef 2050 Long Term Sustainability Plan

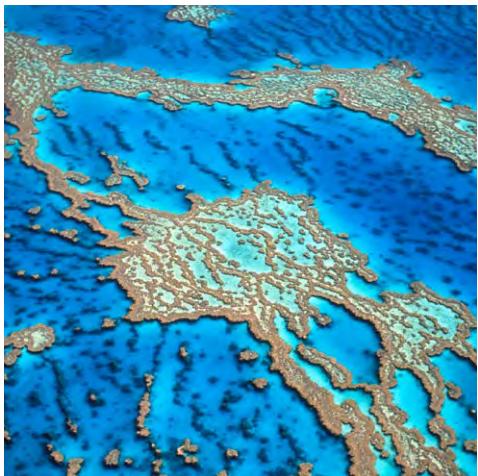


Photo: Aerial view of the coral of the Great Barrier Reef, Queensland © DAWE

The Australian and Queensland governments' Reef 2050 Plan is the overarching long-term strategy for protecting and managing the Great Barrier Reef. The focus of the Reef 2050 Plan is on reducing local and regional pressures to support the Reef's health while adapting to climate change.

The Australian and Queensland governments implement the Reef 2050 Plan in partnership with industry, land managers, scientists, traditional owners and the wider community. The Australian Government is investing \$1.9 billion over the decade to 2023–24 to implement the Reef 2050 Plan.

The Reef 2050 Plan is improving the Great Barrier Reef's resilience to climate change by reducing local and regional pressures, giving it a greater capacity to recover and survive into the future. For example, the Government is providing \$150 million for the research and development phase of the world-leading Reef Restoration and Adaptation Program, to put the Great Barrier Reef at the cutting edge of global efforts to help coral reefs adapt to climate change.

Built Domain

Preparing Australia Program

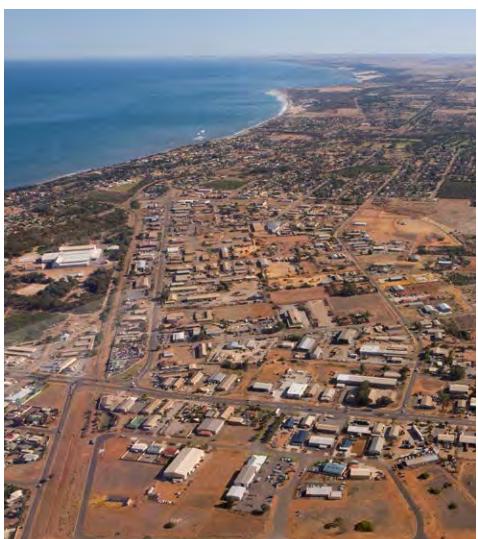
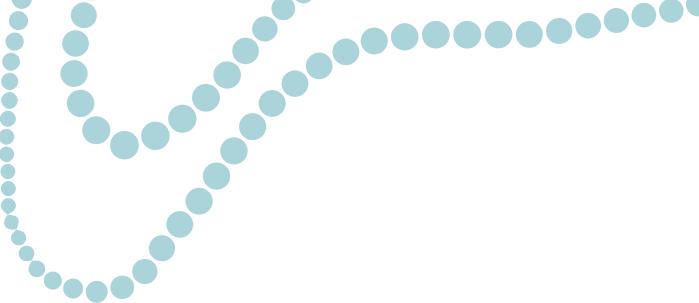


Photo: Aerial view of the coastline near Geraldton township, Yamatji Country, Western Australia © DAWE

On 5 May 2021, the Prime Minister announced the Preparing Australia Program which will invest \$600 million to deliver long term risk reduction and resilience outcomes for Australian communities to ensure they are better prepared for future disasters. The Australian Climate Service is supporting the design of the program.

Managing and reducing risk is key to limiting the impacts of disasters, and risk reduction was a focus of the Royal Commission into National Natural Disaster Arrangements. Managing risk means knowing what could happen, and putting measures in place to reduce the impacts.

The program will focus on initiatives which will reduce the impact of future large-scale disaster events and will invest in the built, natural, social and economic domains. The program aims to make Australia stronger in the face of natural hazards like bushfires, floods and tropical cyclones, and reduce the cost of recovery support as we adapt to climate change.



Social Domain

Future Drought Fund



*Photo: Hay bales on property near Tanunda, Ngadjuri, Peramangk and Kaurna Country, South Australia
© John Baker*

The \$5 billion Future Drought Fund is part of the Government's Drought Response, Resilience and Preparedness Plan. The Fund is investing \$100 million each year to support communities become more resilient to the effects of future drought. These investments are helping farmers and regional communities prepare for the impacts of future droughts and adapt to changes in climate. This will:

- make agriculture more productive and profitable
- enhance the wellbeing of our farming communities
- improve the sustainability and resilience of the natural resources on which agriculture depends.

The Future Drought Fund's ongoing investment in projects across Australia will help farmers and communities build drought resilience as we adapt to climate change.

Economic Domain

Council of Financial Regulators



The Council of Financial Regulators is made up of The Treasury, Reserve Bank of Australia, Australian Prudential Regulation Authority, and Australian Securities and Investments Commission. The Council considers the risks of climate change as part of its discussions and initiatives.



Photo: Eureka tower, Melbourne, Kulin Nation, Victoria

Two current initiatives to increase the preparedness of Australian financial institutions to manage climate risks include:

- implementing regulatory initiatives to help the Australian financial sector better understand climate-related financial risks, address some of the data and standardisation challenges in climate risk assessment and reporting, and support market participants as they respond to the policy, investment and insurance challenges of climate change
- Climate Vulnerability Assessments which aim to identify risk and assist financial institutions adjust their business models.

State and Territory Action

Desalination in Western Australia



The South West region of Western Australia is experiencing a long-term drying trend linked to climate change. Historically, Perth has mostly relied on dams for its water supply. However, modelling of the future climate for the region shows the potential for further reduction in annual rainfall, which poses a threat to water security. The region's population is also projected to grow, placing further pressure on water supplies.

To tackle this situation, the Western Australian Government and the water utility responsible for managing water supply has worked to diversify the state's water resources. Two desalination plants have been built, and together they supply close to 50% of Perth's potable water needs. A third desalination plant has been announced with an initial investment of \$1.4 billion. The desalination plant is anticipated to produce an additional 50 gigalitres of water per year and will be powered by renewable energy. Other sources, either in use or under investigation, include wastewater recycling, stormwater reuse and deep groundwater, as well as demand reduction measures. Long-term planning with analysis of climate trends has helped build long-term water security for Perth.



Photo: Southern Seawater Desalination Plant, Noongar Country, Western Australia

Private Sector Action

Brisbane Airport - New Parallel Runway



Brisbane Airport has considered climate change as part of the planning and design for the long-term viability of the new runway. Key risks identified included increased frequency of extreme weather events, higher temperatures and storm surges.

Outcomes of the adaptation review included changing the location of the additional runway and supporting feed road, raising the height of the runway above regulated standards and investing in a biodiversity plan to create natural barriers to key risks. In addition to the height of the new parallel runway, other climate change impact related measures included in the design were the construction of tidal channels and the installation of a new sea wall along the northern boundary of the airport.



Photo: Virgin Australia aeroplane landing at Brisbane airport, Turrbal Country, Queensland

Private Sector Action

Lendlease's Barangaroo South Development

Barangaroo is one of the world's largest waterfront urban renewal projects and provides a significant extension of Sydney's CBD. The development at Barangaroo South includes sustainable commercial office space, residential apartments, a hotel, shops, cafes, restaurants, public open space and cultural facilities.

An adaptation plan developed for Barangaroo South includes a significant range of adaptation actions such as:

- increasing shade, water availability, planting trees and using high solar reflectance materials to reduce heat impacts
- upgrading stormwater systems to cope with increased extreme events, including facilitating continual, easy access into and out of the development
- a variety of approaches to reduce water use
- preventing any negative consequences of sea-level rise, including planning for a 0.9 metre sea-level rise over and above Sydney Harbour Foreshore Development Control Provisions.



*Photo: Aerial view of Barangaroo, Eora Nation, New South Wales
© Infrastructure NSW*

Strengthening Australia's Adaptation Response

The Strategy sets out three interlinked objectives to ensure Australians can better protect our natural assets, build community resilience and generate economic opportunities.

Outcome

Australia can better anticipate, manage and adapt to climate change.

Objectives



Drive investment and action through collaboration

Governments, businesses and communities collaborate to build resilience and adapt.



Improve climate information and services

Australia has information to better predict, manage and adapt to climate change.



Assess progress and improve over time

Australia assesses national climate impacts, evaluates adaptation progress and continuously improves.

Actions

- Provide enhanced national leadership and coordination.
- Partner with governments, businesses and communities to act and invest.
- Deliver coordinated climate information and services to more users.
- Continue to deliver world class climate science that informs successful adaptation.
- Deliver national assessments of climate impacts and adaptation progress.
- Monitor and independently evaluate progress over time.

Domains



Natural



Built



Social



Economic

Engaging Internationally and in our Region



Objective 1

Drive Investment and Action Through Collaboration

Governments, businesses and communities collaborate to adapt to climate change.

National leadership and action are needed to ensure Australia makes the right investments for our future. While substantial progress has been made, more needs to be done to integrate climate information into decision-making, co-design new tools for emerging challenges, and scale adaptation actions taken in isolation to deliver national impact.

Adaptation action and resilience building require a coordinated and collaborative effort across all levels of government, businesses and a wide range of organisations, including those with responsibilities for land-use planning, infrastructure, insurance, finance, emergency management, national security, social policy, agriculture, education, health, community development, energy and the environment. With more effective coordination, we can minimise duplication, maximise impact and generate new opportunities for all Australians.

To support adaptation action, the Australian Government will:

- enhance leadership and coordination
- partner with governments, businesses and communities to act and invest.

Provide enhanced national leadership and coordination

The Australian Government will lead a national effort to support decision-makers to plan for and manage climate impacts.

To enhance national leadership and coordination, the Australian Government will establish a National Adaptation Policy Office to coordinate work on climate resilience and adaptation across all governments and provide a central point of contact for businesses and communities. This recognises that climate resilience and adaptation are cross-cutting issues that involve all levels of government, and many departments and agencies. The National Adaptation Policy Office will oversee implementation of this Strategy and report on Australia's adaptation progress.

The Australian Government will lead by example, continuing action across all its agencies to identify and build resilience into its assets, operations and areas of responsibility.

Assessing climate impacts across Government will also support better understanding of systemic vulnerability to climate change and assist in determining adaptation pathways.

This is consistent with leading practice and ongoing international activity to apply the approaches of the Taskforce on Climate-related Financial Disclosures to risk management and disclosure. The Australian Government will continue to implement *Climate Compass: A Climate Risk Management Framework* for Commonwealth Agencies across all agencies and support training and capability development of officials to fulfil these responsibilities.

The Australian Government will ensure climate impacts are factored into delivery of services, policies to promote resilience of vulnerable communities, and partnerships with Aboriginal and Torres Strait Islander peoples. This is in line with the Priority Reform commitments made by all Australian governments in the National Agreement on Closing the Gap.

National leadership extends to engaging internationally on adaptation and helping our partners in the region. Australia is a trusted-partner and plays an active support role in our region and beyond. We will continue to connect and leverage action at the local, national, regional and international scales to better manage climate risk, protect communities, and strengthen the resilience of economies in our region and beyond.

Partner with governments, businesses and communities

The Australian Government will continue to establish partnerships across all domains to drive coordinated action. This recognises that all levels of government, businesses, research institutions and communities have roles to play in adaptation, and collaboration will be needed to build adaptive capacity and drive action.

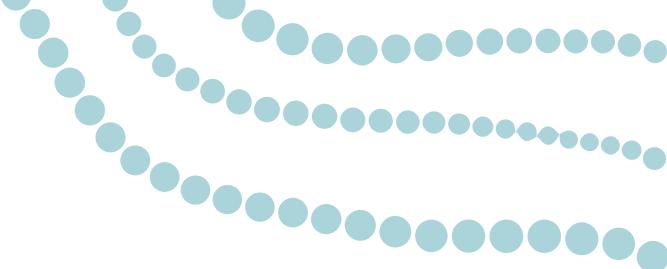
These partnerships will harness the knowledge, skills and perspectives from different sectors and domains that will be needed to support adaptation. Initiatives like the Preparing Australia Program, Future Drought Fund, Reef 2050 program and intended establishment of a reinsurance pool covering the risk of property damage caused by cyclones and cyclone-related flood damage, are examples of the Australian Government working in partnership with states and territories, businesses and communities. These initiatives are directed towards our most immediate and acute climate adaptation challenges.

The Australian Government will seek to establish collaborative mechanisms to help markets incorporate resilience into asset valuations or initial investment decisions.

Adaptive Capacity and Resilience

Building adaptive capacity and resilience requires a ‘systems-based’ approach. The ability of individual businesses or communities to adapt to climate pressures will depend on the systems in which they operate, such as supply chains, health and emergency management systems, and policy settings. Coordinated national action can help identify and implement cross-sectoral or jurisdictional responses to systemic barriers.

Approaches that are locally led and tailored to the specific needs and circumstances of local communities support effective adaptation. These place-based approaches consider different aspects of climate risk alongside other community needs. Place-based approaches require cooperation and coordination between different levels of government and locally engaged agencies.



This work will build off the Australian Government's participation in the international Coalition for Climate Resilient Investment, and related work such as the Resilience Valuation Initiative. Incorporating resilience into financial decision-making will help attract private investment in infrastructure, and other assets, capable of withstanding a changing climate, driving a shift toward a more climate resilient economy.

The Australian Government will support the development of new climate adaptation decision tools and guidance products in partnership with governments and businesses to enable climate impacts to be factored into decision-making.

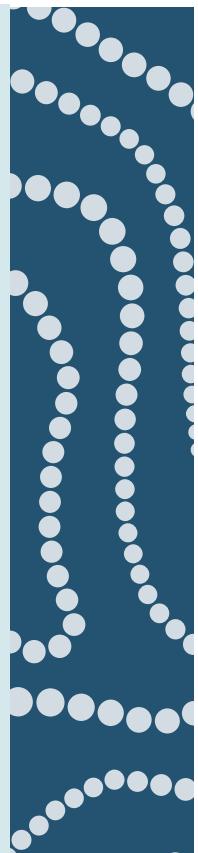
Investors in long-lived assets are seeking agreed approaches that integrate the financial, economic and social impacts of climatic shocks and operational stressors over time. New tools and accounting protocols are also needed to support investment in natural capital and nature-based solutions, such as tree planting to provide shelter and protect waterways and restoration of mangroves to protect coastal infrastructure from storm surges. Improved approaches are also needed to enable clearer recognition of health and wellbeing outcomes of adaptation and integrate these into built environment policies and standards.

Natural Capital and Ecosystem-Based Adaptation

Australia's economy and communities have an enormous dependency on natural capital. Healthy ecosystems provide critical services such as fresh water, regulation of regional water cycles, soil fertility and crop pollination, carbon storage, recreation, and buffering from the impacts of hazards. These services, along with industries such as tourism, agriculture and fisheries that depend on natural resources and assets, are vital for both our prosperity and wellbeing. A changing climate highlights the need to address increasing risks to these ecosystem services.

The Government is working in partnership with interested banks and financial institutions to develop and trial natural capital metrics. These enable the financial sector and land managers to easily value natural capital and pave the way for increased private sector investment in maintaining and restoring our natural environment.

Important steps are also being taken in Australia through implementation of the National Strategy for Environmental Economic Accounting which provides a consistent approach to linking environmental with social and economic data. A major partnership between industry, research and government is also progressing in Australia to assess and value blue carbon for carbon storage, coastal protection, fisheries, and communities. This will prompt investment to protect and restore blue carbon ecosystems.



The Australian Government will continue to facilitate partnerships to incorporate Traditional Ecological Knowledge and western science. There are opportunities to make better use of Aboriginal and Torres Strait Islander peoples' ecological knowledge to improve the health of ecosystems. Incorporating Traditional Ecological Knowledge into decision-making through partnership and employment can have benefits for community resilience and adaptive capacity.

The Australian Government will also continue its practical approach to adaptation and resilience building with our international partners.

Australia has a strong history of providing climate finance, particularly to countries in our region who are among the most heavily impacted by climate change. Australia is integrating climate and disaster resilience outcomes across all sectors of Australia's aid program in the region and is ensuring climate change is embedded in policy solutions to support the region's sustainable recovery from COVID-19.



*Photo: Early season habitat burn taking place on Mornington Station in the Kimberley region, Bunuba Country, Western Australia
© Nick Rains*

National Indigenous Dialogue on Climate Change

Since 2015, the National Environmental Science Program's Earth Systems and Climate Change Hub has facilitated the exchange of information between traditional weather and climate knowledge and western climate change science.

In 2018, the National Indigenous Dialogue on Climate Change enabled Indigenous peoples from across Australia to come together to provide recommendations about what climate-change information, capacity-building and engagement would be of greatest value to Indigenous communities. This event highlighted the importance of an ongoing dialogue which led to the National First Peoples Gathering on Climate Change held in Cairns in 2021. This Gathering was an opportunity to celebrate, learn from and enhance First Peoples-led climate change action.

Outcomes from the two events included recommendations from Australia's First Peoples to:

- continue the dialogue between scientific and traditional (two way) knowledge of climate change
- support Indigenous-led projects based on two-way knowledge about climate risks
- create opportunities for peer-to-peer learning between Traditional Owners as the best means of strengthening the application of their traditional knowledge
- provide Traditional Owners the opportunity to shape the forms of communication and engagement that represent the best value for their communities.

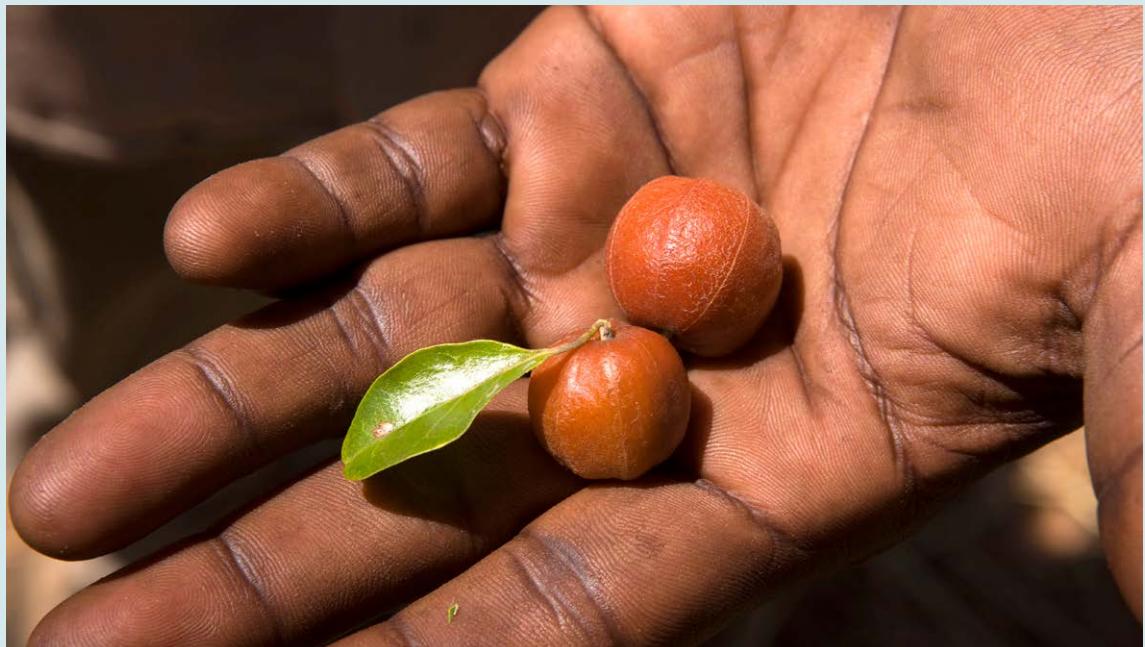
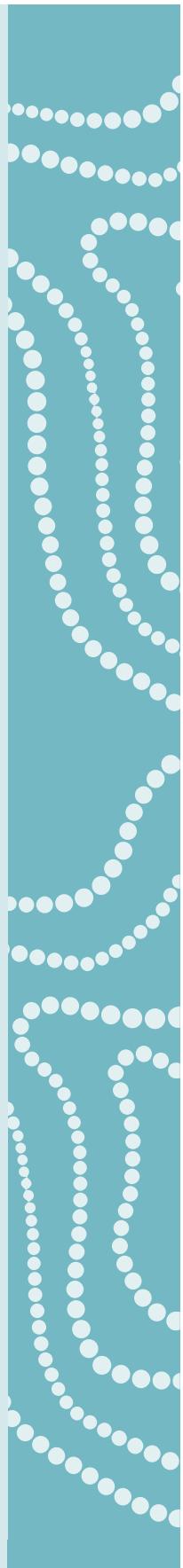


Photo: Hands holding quandongs picked from a tree near Banjal Bay on Anjo Peninsula, Wunambal Gaambera Country, Western Australia © DAWE



Australia's International Climate Support Programs

Climate change is leading to a rapid and unsustainable rise in the demand for humanitarian assistance as Indo-Pacific nations struggle to recover from extreme and more frequent cyclones, floods, droughts and coastal inundation.

Australia is a trusted partner and plays an active support role in our region and beyond, including by funding:

- governance and adaptive planning to prepare for and respond to the adverse impacts of climate change
- adaptation programs that are gender-responsive and socially inclusive and strengthen community resilience in partner countries, especially for the most vulnerable
- adaptation initiatives in areas of mutual priority including infrastructure; science, research and meteorological support; and agriculture, fisheries and water.

Australia's climate financing totalled \$1.4 billion between 2015 and 2020, making a significant contribution to strengthening adaptation, building disaster resilience, supporting climate-sensitive water and agriculture initiatives, as well as investments to reduce emissions through low-emissions technology solutions in our region.

Australia has increased its commitment to provide at least \$1.5 billion over 2020–2025 to be implemented through our international development program. This includes \$500 million from 2020–25 to the Pacific to support adaptation and mitigation efforts.

Australia is committed to strengthening cooperation in the Indo-Pacific Region including:

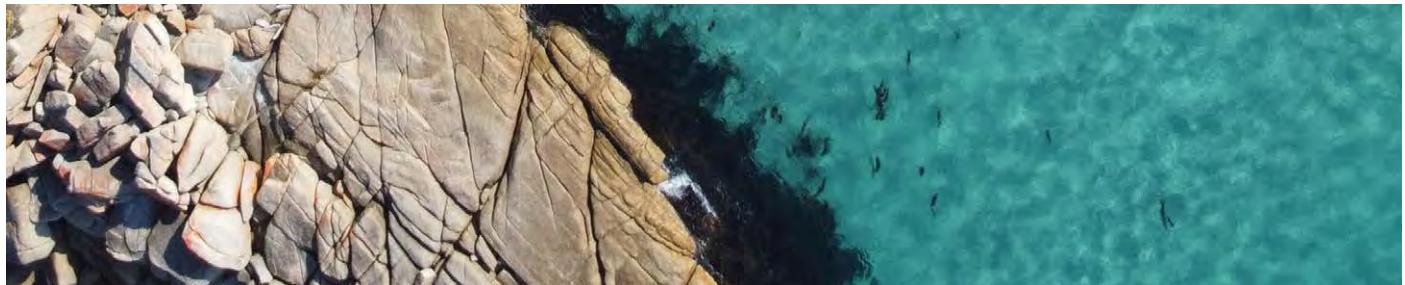
- increasing our climate financing and responding to the needs and priorities of small island developing states that are the most vulnerable to climate change
- strengthening climate-resilient infrastructure, including through the Coalition for Disaster Resilient Infrastructure (CDRI) Initiative and working together to develop early-warning systems that protect vulnerable communities
- working together to strengthen climate information systems and share the latest climate science and technologies and ensure the region is better prepared to deal with the impacts of climate change.

Australia will continue to work with international partners to address climate change through mitigation, adaptation and finance.

The background image shows a vast landscape of rugged, layered red rock formations under a clear blue sky at sunset. The rocks are textured and weathered, with patches of green grass and small trees growing in the crevices. A decorative circular pattern of white dots is overlaid on the bottom right corner of the image.

**We adapt together not alone.
Collaborative leadership
brings people together to
develop solutions, share best
practice and scale individual
adaptation investment
to deliver value for all
Australians and the region.**

Photo: Aerial shot of rocky coastline, Bay of Fires, lutruwita, Tasmania



Objective 2 **Improve Climate Information and Services**

Australia has information to better predict, manage and adapt to climate change.

Climate information and services are critical to drive action. Every day, people, businesses, communities and governments are making investment decisions which could lock in future costs if they do not accurately account for climate change.

Providing authoritative climate information and services enables decision-makers to make investment decisions based on the best available information and provides the best chance of accurately accounting for climate change. Authoritative government information provides a baseline capability that can facilitate a growing services market of industries and businesses that can tailor or modify this baseline information for their specific needs. Developing authoritative, nationally consistent climate information that supports adaptation requires work to coordinate underlying approaches and develop best practice guidance or standards. Authoritative climate services also need to be developed so that information is tailored to the needs of users.

To enable decision-makers around the country to access consistent and authoritative climate information, the Australian Government will:

- deliver coordinated climate information and services to more users
- continue to deliver world class climate science and research that informs successful adaptation.

Deliver enhanced climate information and services to more users

The Australian Government will partner with all stakeholders – including states and territories, businesses, and research institutions – to draw together climate information and inform risk assessments. This information will inform planning, action and evaluation.

The Australian Government has made investments in the Australian Climate Service and related initiatives including the Commonwealth Scientific and Industrial Research Organisation's (CSIRO) Climate Resilient Enterprise. There are also significant climate service and advice capabilities within state and territory governments and the private sector.

To promote closer collaboration, the Australian Government will play a coordination role across the climate information and climate science landscape to promote collaborative investment to build national capability. The Australian Government will work with state and territory governments, and the private sector, to deliver a truly national capability to enable decision-makers to better manage disaster risk and adapt to climate change. The Australian Climate Service will look for opportunities to scale successful state, territory and other information services through partnerships and collaboration. This will ensure that new investments and existing initiatives support adaptation across the natural, built, social and economic domains.

The Australian Climate Service will work with states and territories and user representatives to focus on:

- delivering robust and useful climate services to support proactive decision-making

- building on existing capabilities to enhance our understanding of the physical, social and economic impacts to inform adaptation action
- supporting the development of best practice climate adaptation analysis in collaboration with states and territories, industry and academic partners.

The Australian Climate Service will work with the National Adaptation Policy Office to prioritise support for critical sectors of the economy and contribute to national assessments of climate impacts and adaptation. It will continue to provide uninterrupted support to the National Recovery and Resilience Agency and Emergency Management Australia.



*Photo: View of rainstorm over the desert of Mount Conner Lookout, Pitjantjatjara Country, Northern Territory
© Allan Fox*

Continue to deliver world class climate science that informs successful adaptation

Climate information and services relies on high-quality science.

Climate science builds understanding of how the climate is changing, including the scale and pace of change, what climate Australians in different regions can expect in coming decades, and approaches for effective decision-making and adaptation.

Australia's climate is unique, and we cannot solely rely on science or services from other countries to understand our local climate impacts and future opportunities.

Australian Government Investments in Climate Science

Australia has a long history as a leading contributor to Southern Hemisphere and Southern Ocean climate science. The Australian Government's investments in climate science include:

- The National Environmental Science Program, Australia's long-term environment and climate research commitment. The program includes a cross-cutting adaptation mission focused on the identification of intervention actions across the natural and built domains.
- CSIRO's Climate Science Centre provides climate and Earth system modelling to better understand climate variability.
- The Bureau of Meteorology's Research and Climate Services Programs, which are developing seamless weather and climate risk-based services, provide insights from minutes to decades to improve decision-making and risk reduction.
- The Australian Research Council Centre of Excellence for Climate Extremes, where researchers focus on physical processes underlying extreme rainfall, droughts, heatwaves, and other events.
- The Australian Antarctic Division leads the Australian Antarctic Science Program which supports critical research for understanding Australia's weather and climate. Using its unique Antarctic research infrastructure with national and international researchers, it provides fundamental understanding and long-term monitoring to improve modelling, forecasting and climate projections.



The Australian Government will seek to harmonise climate science initiatives with stakeholders to grow locally-relevant national-scale capability. This will include foundational climate science; applied research into climate impacts across the natural, built, social and economic domains; and the delivery of advice to support both investments today and long-term adaptation planning.

The Australian Government will continue to invest in climate science and promote innovation to inspire and develop the new generation of multidisciplinary scientific leaders. This will include improvements to the Australian Community Climate and Earth System Simulator and the production of next generation climate projections and scenarios by the Australian Climate Service to help decision-makers identify climate adaptation and resilience risks and opportunities. This investment in next generation climate projections is part of the Australian Government's response to the Royal Commission into National Natural Disaster Arrangements which recommended the development of updated climate projections underpinned by a common set of trajectories and timelines.

By working together, governments and researchers can support improved understanding and assessment of climate impacts with a comparable and coordinated set of projections and scenarios information. The Australian Government is already collaborating with states, territories and researchers on a roadmap to coordinate this nationally important effort. A coordinated set of projections and scenarios information will enable a wide range of users to more efficiently assess their climate risks and plan for potential opportunities. The projections and scenarios will use the latest international climate science and build on existing international frameworks – including the Task Force of Climate-related Financial Disclosures and Network for Greening the Financial System – to provide information tailored for Australian circumstances. These will be developed through a co-design process involving key climate service providers and end-users.

The Australian Government will also continue to share its expertise with the region and international community in areas that underpin effective adaptive responses to climate change, including climate science and meteorology and disaster preparedness and response.

Enhancing Australia's Climate Science Capabilities

The Australian Community Climate and Earth System Simulator (ACCESS) enables scientists to undertake foundational climate research and modelling.

ACCESS is an integrated climate modelling suite incorporating atmosphere, ocean and land surface models, including sea-ice and ocean biogeochemistry. Different configurations of ACCESS allow the simulation of climate on time scales ranging from months to millennia. For example, the Commonwealth Scientific and Industrial Research Organisation and the Bureau of Meteorology use ACCESS to contribute to major international climate modelling and prediction projects, including the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change.



Australian Expertise Assists our Pacific Neighbours

As a trusted partner, Australia shares scientific expertise with our region to support their efforts to tackle climate change.

The Bureau of Meteorology, together with Geoscience Australia, works with the 14 Pacific Island Meteorological Services through the Climate and Oceans Support Program in the Pacific to monitor, analyse and communicate information about climate, oceans, and sea levels. This program provides critical information to support planning and decision-making in key sectors such as agriculture, water and sanitation and health.

The CSIRO is updating climate change projections for the western Pacific to better communicate the impacts associated with 1.5 degree and 2.0 degree temperature rise scenarios in 14 Pacific countries, and how these changes could impact production in specific sectors.

The Australian Institute of Marine Science is piloting the ReefCloud platform in Fiji and Palau, which uses innovative technology and artificial intelligence to monitor the conditions of coral reefs, gathering data about how they are affected by pressures including climate change.

Australia is supporting national climate action and improving livelihoods in the Pacific through our investments in restoration and conservation of blue carbon ecosystems.

Australia also contributes to the multi-donor Kiwa Initiative: Nature Based Solutions for Climate Resilience, an initiative led by the French Development Agency (AFD) that aims to strengthen resilience to climate change by providing biodiversity conservation for Pacific Island ecosystems, communities and economies, through grants to community organisations, Pacific Island countries and territories and regional organisations.



Photo: Aerial shot of Malake Island, Ra, Fiji



An ongoing effort to ensure all Australians have the information they need. By enhancing our understanding of climate impacts – whether that is for the detailed engineering specifications of a large dam or choosing the right variety of trees to plant – we make better decisions to adapt to climate change.

Photo: Aerial shot of rocky coastline, Bay of Fires, lutruwita, Tasmania

Photo: Bridge over a creek in the Gondwana Rainforests, Yugambeh language region, Queensland



Objective 3 **Assess Progress and Improve Over Time**

Australia assesses national climate impacts, evaluates adaptation progress and continuously improves.

Assessing progress on adaptation requires regular assessments of national progress to inform and prioritise effort and monitoring and evaluation. An integrated collaborative national assessment will support planning and investment in adaptation and resilience building across the Australian community. Monitoring and evaluation of the Strategy will complement assessments of climate impacts and adaptation progress, and the effectiveness of investments and actions.

To support the National Adaptation Policy Office and decision-makers around the country to assess our national priorities and embed continuous improvement, the Australian Government will:

- deliver national assessments of climate impacts and adaptation progress
- monitor and independently evaluate progress over time.

Develop and deliver assessments of national climate impacts and adaptation progress

The Australian Government will undertake a regular assessment of national climate impacts and adaptation progress to determine opportunities and underpin the setting of priorities for action plans and adaptation partnerships.

A regular, robust and reliable national assessment will ensure there is a shared understanding amongst governments, businesses and communities of adaptation and resilience building priorities.

The national assessment will be co-designed and delivered in consultation with governments, business, professional groups and researchers. It will build on existing assessments undertaken in Australia by governments, industries, and local communities rather than replace the initiatives underway. Over time this regular process, recurring every five years, will support harmonised approaches to assessing our risks and taking action. These assessments will provide insights into the vulnerability of assets or sectors at a range of scales.

The national assessment will involve economic modelling and analysis to assess the costs and benefits of climate impacts and adaptation efforts in key sectors. This will include information on the impacts of a changing climate on infrastructure, and the likely costs of adaptation, to facilitate private sector capital flows.

The national assessments will improve over time and, as Australia develops environmental economic accounts, the assessments will include changes in the extent and value of our natural capital important for adaptation.

The assessment will help Australia meet its international reporting obligations under the Paris Agreement and the Sendai Framework for Disaster Risk Reduction.

Monitor and independently evaluate progress over time

The Australian Government will deliver a national approach to monitoring adaptation progress co-designed with governments, businesses, professional groups, and researchers. The Australian Government will task the Climate Change Authority to assess implementation of this Strategy.

Knowledge from monitoring and evaluation will provide important feedback to decision-makers and stakeholders. It will improve the effectiveness and efficiency of policies and increase accountability for risks and adaptation commitments.



Photo: *Kingston and Arthurs Vale Historic Area, Norfolk Island © DAWE*



A recurring national assessment and defined metrics to evaluate progress on adaptation will ensure we are objectively tracking progress, enhancing action and ultimately prioritising investments to ensure future economic prosperity.

Photo: Bridge over a creek in the Gondwana Rainforests, Yugambeh language region, Queensland

Australia Adapts – Together Not Alone

This Strategy provides the enabling framework that Australia needs to adapt to climate change and safeguard future prosperity, security and economic growth.

Adaptation goes hand-in-hand with action to reduce emissions and recognises that we must prepare for the climate we are now living in, and the changes to climate that are underway. Sustained action from all governments, businesses and communities will be required over decades to adapt to climate change.

This Strategy sets in place the critical elements we need to measure and improve our adaptation efforts. The three interconnected objectives in the Strategy are to drive increased action, enhance information and assess progress to improve over time.

Through the implementation of these objectives, we will position Australia to better anticipate, manage and adapt to climate change. These objectives apply to adaptation in the natural, built, social and economic domains and will enable all actors to take stronger action to adapt to climate change.

The Strategy also sets the path to deeper cooperation with our Indo-Pacific neighbours, international partners, and the global community. By working together, we can share our expertise and experience to better target our investments and maximise benefits to the communities most exposed to climate impacts.

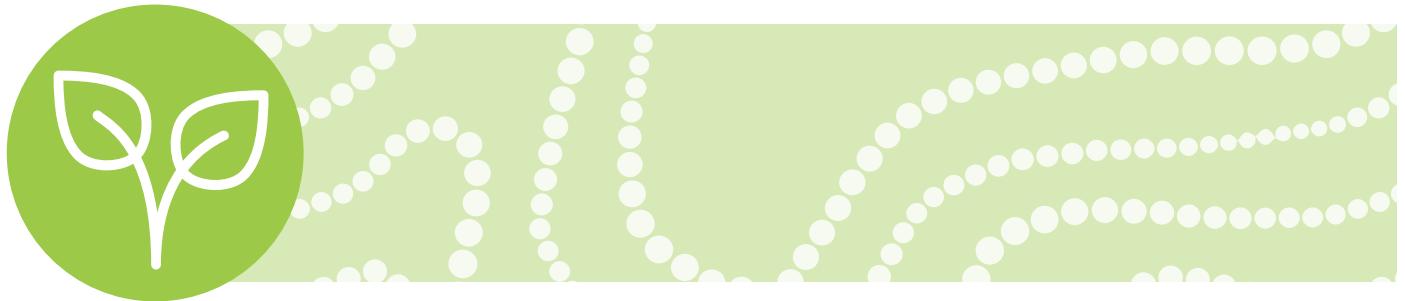
Implementation timeframes

| Objectives | Actions | Now | 1-2 Years | 5 Years + |
|----------------------------------------------------------------------|----------------------------------------------------------------------------|-----|-----------|-----------|
| Objective 1 Drive investment and action through collaboration | Provide enhanced national leadership and coordination | ✓ | ✓ | ✓ |
| | Partner with governments, businesses and communities to act and invest | ✓ | ✓ | ✓ |
| Objective 2 Improve climate information and services | Deliver enhanced information and services to more users | ✓ | ✓ | ✓ |
| | Continue to deliver world class science that informs successful adaptation | ✓ | ✓ | ✓ |
| Objective 3 Assess progress to improve over time | Deliver national assessments of climate impacts and adaptation progress | ✓ | ✓ | ✓ |
| | Monitor and independently evaluate progress over time. | ✓ | ✓ | ✓ |



Successful implementation of the Strategy will deliver:

- **People coming together to develop solutions, share best practice and scale individual adaptation investment to deliver value for all Australians.**
- **The information, tools and the support we need is readily available and used to build community resilience, ensure economic prosperity and protect our natural systems.**
- **Australia evaluates and reports on progress, climate impacts and opportunities, prioritising adaptation investments and ensuring continual learning.**
- **Our regional neighbours and international partners derive lasting benefit from Australian support and co-design solutions to ensure a stable, secure Pacific and a prosperous, sustainable global community.**



Annex: Four Domains

Natural Domain

Ensuring our natural environment and agricultural industries can adapt to the changing climate will preserve our natural capital, improve productivity, and protect heritage.

Australia's biodiversity and ecosystems are some of the most diverse on Earth. However, there are limits to the capacity of natural systems to adapt to the impacts of climate change. Climate change impacts species health and distribution and exacerbates the impacts of other environmental pressures.

The Australian Government's new ten-year Threatened Species Strategy (2021–2031), includes a focus on climate change adaptation and resilience. The Threatened Species Strategy identifies actions that are needed to assist threatened species adapt to climate change – taking into account interactions with other threats – including risk-based conservation planning and identifying and conserving places that will be refuges for threatened species.

Australia's coasts and water resources hold enormous economic, cultural, social and environmental significance.

The \$100 million Australian Government Oceans Leadership Package includes action to restore blue carbon ecosystems like seagrass and mangroves that play a key role improving the health of coastal environments and protecting native species and habitat.

Australian farmers, fishers, foresters and local communities are active stewards of the environment, and the Australian Government is committed to supporting them in this role. For example, both the Agriculture Biodiversity Stewardship Package and Future Drought Fund support on-ground work and natural resource management activities to strengthen sustainability and build drought preparedness and resilience. Additionally, programs such as the Rural Research and Development Corporation Climate Initiative provide an important contribution to achieving the agricultural sector's goal to exceed \$100 billion in farm gate output by 2030.

Indigenous Australians have cared for Country for thousands of years and, in implementing traditional and innovative land management practices, demonstrate how the natural environment can be better prepared for the future climate. For example, in Victoria, Traditional Owners are working with land and fire management agencies to reintroduce the proactive burning of small areas at different points in the year.

The Australian finance and banking sectors are increasingly looking to invest in conserving and restoring our natural capital. In 2020, G7 Finance Ministers endorsed the market-led Taskforce on Nature-related Financial Disclosures (TNFD), which aims to deliver by 2023 a disclosure framework to assist companies identify nature-related risks and opportunities, including from climate change. The Government is supporting these efforts through the development of natural capital metrics, environmental economic accounts and market-based approaches to provide incentives to invest in environmental management and protection.



Photo: Mount Donna Buang, Warburton, Milyirrtjarra, Victoria



Annex: Four Domains

Built Domain

Adapting the built environment to a changing climate provides resilient, safe, and liveable spaces for Australians to live, work, play, and innovate.

Australia's built environment is more than buildings. It includes green and urban spaces, cities and towns, and the networks of roads, transport, energy, water and telecommunications infrastructure that connect them.

In cities, the effects of rising temperatures can be exacerbated because of the urban heat island effect, caused by the prevalence of heat-absorbing materials such as dark-coloured pavements and roofs, concrete, urban canyons trapping hot air, and a lack of shade and green space. Gradual impacts like sea level and temperature rise, and extreme events like floods, heatwaves and bushfires, can also affect the liveability of our urban environments and pose challenges for ageing publicly and privately owned assets and infrastructure systems that were not designed and built with climate change in mind.

Australian governments, experts, industry, and communities continue to develop standards and practices to improve the resilience of the built environment to climate change. For example, the Darwin Living Lab, a collaborative project between the CSIRO, the Australian Government, Northern Territory Government, and the City of Darwin is testing and evaluating heat mitigation measures to inform tropical urban design by using real world experiments. A key element of this initiative is the development of green infrastructure strategies for Darwin, redesigning green spaces in the city to be useable, attractive, cooling, and beneficial to residents. Other innovative ideas will support Australia to adapt to rising temperatures and increased frequency of heatwaves. For example, different materials have been trialled in Adelaide to reduce road surface temperatures in order to cool surrounding areas and combat the urban heat island effect.

Adaptation and resilience planning will help build resilient communities. Recognising the increasingly complex role infrastructure plays in supporting resilience, Infrastructure Australia and Infrastructure NSW partnered on the research project Pathway to Infrastructure Resilience. The project aims to increase resilience by identifying opportunities to improve how infrastructure is planned. This included collaboration with 600 experts across Australia from government, industry, peak bodies, academia, and civil society organisations. A Pathway to Infrastructure Resilience recommends a whole-of-system, all-hazards approach to resilience planning that focuses on strengthening an infrastructure asset, network, and sector, as well as the place, precinct, city, and region where the infrastructure operates.

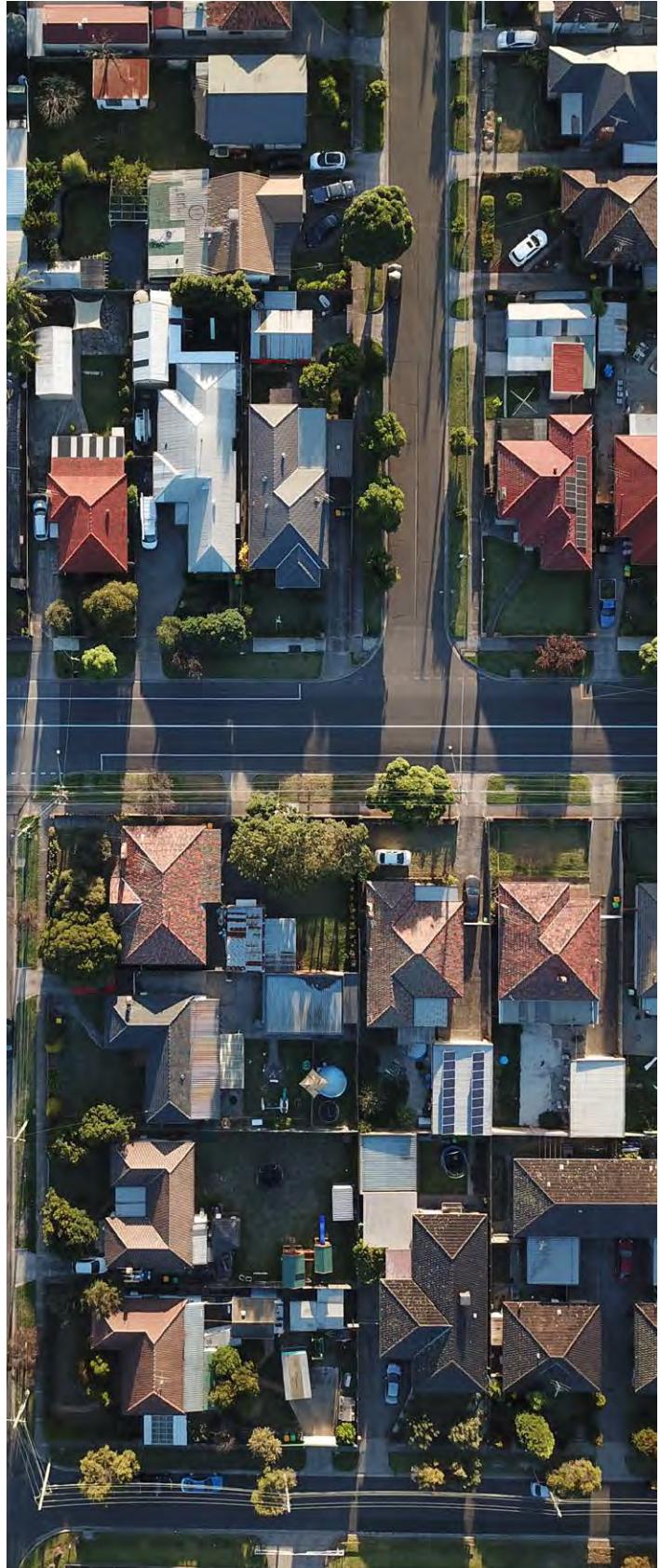


Photo: Residential housing, Melbourne, Kulin Nation, Victoria



Annex: Four Domains

Social Domain

Action taken now to increase the adaptive capacity of society will position Australian communities to thrive into the future, despite a harsher climate.

The social domain includes our people, our communities, culture, institutions, support systems, and the interactions between them. This includes families, health and education systems and services, social services and emergency management services.

There are strong relationships between the quality of the environment – of air, water, and food systems – and physical and mental health and wellbeing. These relationships need attention as climate change challenges the health and wellbeing of Australians and the capacity of its health and social support systems, now and in the future.

As we adapt in the social domain, particular attention should also be given to how vulnerable communities experience the impacts of climate change.

Adaptation must be inclusive and account for the underlying factors that contribute to vulnerability, such as issues related to geography, culture, age, gender, diversity, disability and other socioeconomic status. For example, rural communities can be particularly vulnerable to increasing droughts, bushfires and heatwaves. Heatwaves can also disproportionately impact the elderly, children, outdoor workers, and those already suffering from chronic disease.

The Australian Government's consideration of adaptation issues will seek to improve equality and fairness for vulnerable communities.

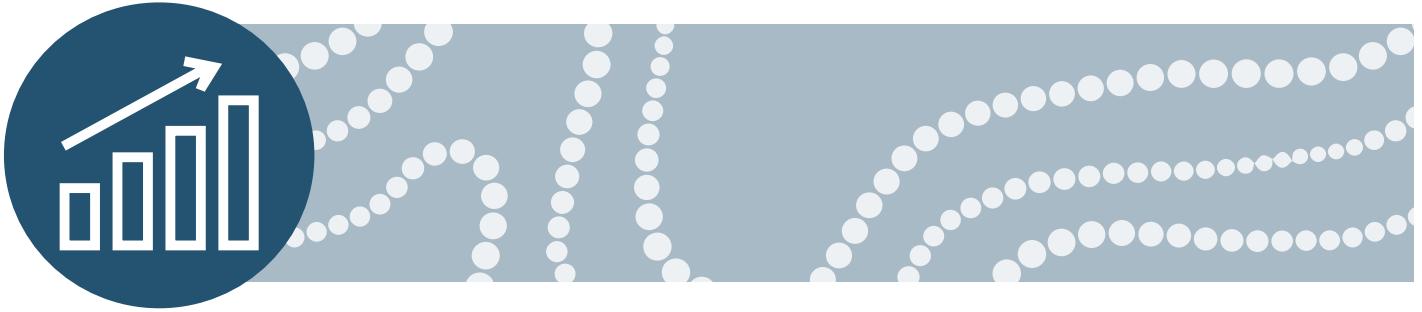
Australia's efforts to adapt to climate change are supported by strong social institutions and assets. These include high levels of education, a strong public health system, and leading climate and health research.

Research to date has underpinned robust action to address chronic diseases and environmental health threats. In response to the catastrophic bushfires of 2019–2020, the Australian Government, through the Medical Research Future Fund, is investing in research into the physical and mental health impacts of bushfire smoke. The National Health and Medical Research Council has also established a special initiative to strengthen the Australian health system's resilience, preparedness, and responsiveness to changing environmental conditions and extreme weather events.

There are many other initiatives currently being implemented to improve the resilience and adaptive capacity of Australia's social domain. For example, the Australian Capital Territory Government (ACT) has developed a Wellbeing Framework, and reports on the factors that impact on the wellbeing of Canberrans. The ACT Government is also helping those who rent housing to adapt their homes to climate extremes, including through workshops, factsheets, assessment tools and guides, and free advice on how to reduce energy costs. Around Australia, many local governments now have heatwave plans in place that clarify responsibilities and outline measures that can enhance long term community resilience.



*Photo: People working in the sun to build a fence at Muggon Station, Nanda Country, Western Australia
© Nick Rains*



Annex: Four Domains

Economic Domain

Australia has a strong economy that is projected to continue growing over the next 40 years, positioning Australia to respond to future challenges and seize opportunities.

Climate change has the potential to impact our economy in many different ways. Some of our most important industries and biggest employers are dependent on the climate, such as the agriculture and tourism industries. Climate change could impact the productivity and competitiveness of certain industries, the nature of work in those industries, future occupations, and structure of our economy.

Better understanding and proactively managing climate change impacts will help Australian businesses to continue to prosper, and our people to continue to have access to secure and meaningful jobs and opportunities in our future climate.

Making efficient and well-targeted investments in adaptation now can reduce risks and avoid significant costs in the long-term, while taking advantage of opportunities. For example, increasing the climate resilience of our agriculture industry will allow us to remain competitive in global markets, providing employment for Australians and potentially attracting further investment – boosting our capacity and productivity. Similarly, investing in climate resilient infrastructure will help to avoid locking in climate risk and future costs to repair, upgrade or replace the infrastructure which could reduce future economic growth and productivity.

Australia's financial sector will continue to play an important role in shaping how we plan for and adapt to climate change:

- Banks and lenders are considering the impacts that climate change risks could have on borrowers and capital markets.
- More businesses are seeking to understand, manage and disclose climate risks, as parts of efforts to strengthen corporate governance and maintain investor confidence.
- Financial regulators are providing guidance to businesses to ensure climate risks are being appropriately managed and consumers are protected.

Insurance can also be an important risk management tool for individuals and businesses that exposed to climate-related risks. As the climate changes and natural disaster and extreme weather risks increase, it is likely that the cost and availability of insurance will be affected. Some individuals and businesses may find that purchasing or amending insurance policies helps to transfer some risks at a fair cost. Others may find that actions to reduce their exposure to risks, and therefore their reliance on insurance, are more effective. Consumers will need to carefully consider their own circumstances when making decisions on the costs, benefits and risks of different insurance options.

The Australian Government has announced its intention to establish a reinsurance pool covering the risk of property damage caused by cyclones and cyclone-related flood damage. The pool will seek to improve the accessibility and affordability of insurance for households and small businesses in cyclone-prone areas, which are mainly located in northern Australia. This work complements other efforts in place to address underlying risks such as the Preparing Australia Program.

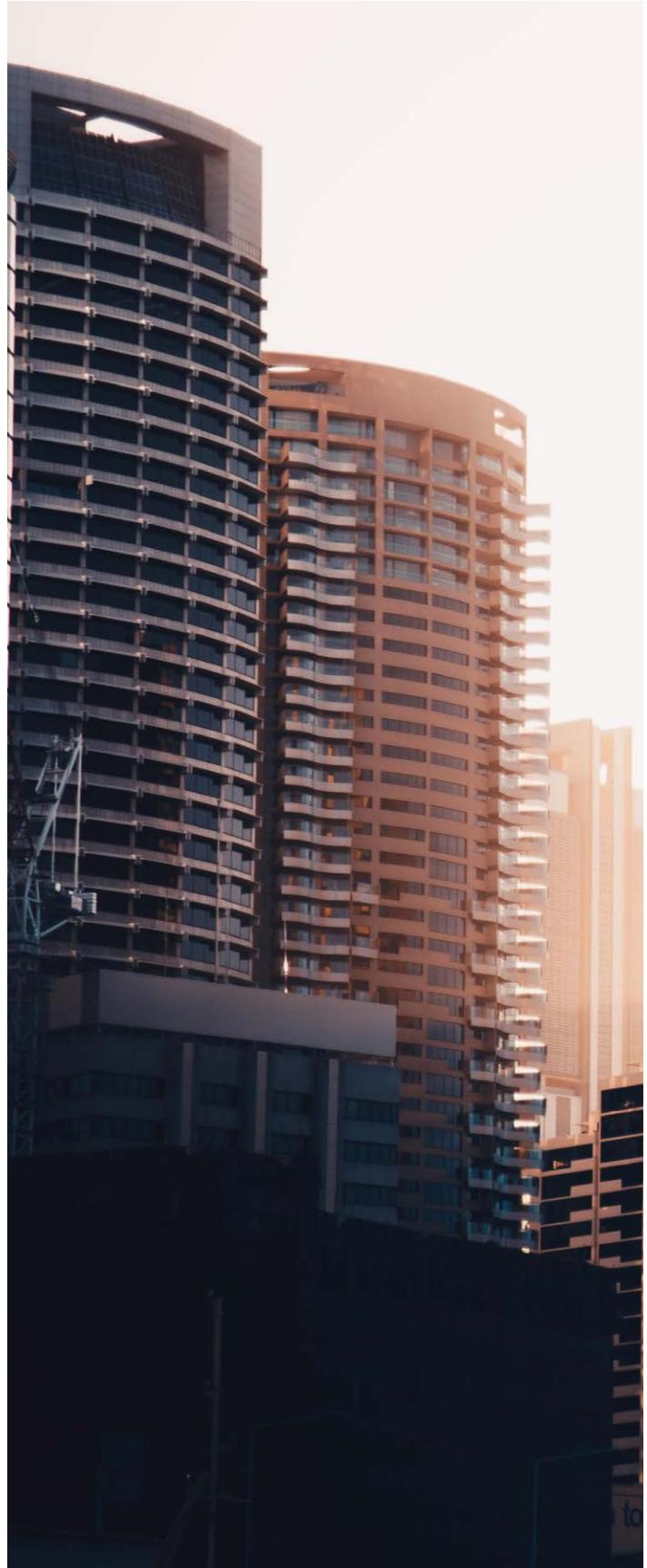


Photo: View of Sydney CBD, Eora Nation, New South Wales

