CITY SWITCH

Climate resilience for business:

an introduction and practical guide

ResilientCo

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Climate resilience for business: an introduction

Businesses of all sizes, in all industries across Australia will experience impacts of climate change – and many already have. This includes physical impacts from hazard events such as floods and bushfires, operational disruption from regulatory and market changes, and legal exposure and reputational damage from failing to adequately address risks. We must act now to build resilience and reduce the impacts of climate change.

In this section we:

Explain what physical, transition and liability risks are and how they might impact businesses

Provide an overview of how businesses can become more resilient to climate change, both in the short and long term

Climate risk and opportunities for businesses

Climate change creates immediate operational risks and longer-term strategic challenges for businesses. Stakeholders, including customers, investors, regulators and insurers have growing expectations of companies to understand their climate risks and demonstrate accountability, transparency and leadership in responding to climate change and hazard events. While there are growing concerns around climate risk, understanding and managing these risks effectively can create significant competitive advantages for organisations.

Physical risk

Climate change increases 2 types of physical risks:

Acute risks — Sudden extreme weather events such as floods, storms, bushfires and heatwaves. They're becoming more frequent, severe and affecting new areas.

Chronic risks — Gradual changes such as rising sea levels and declining soil quality driven by longer term changes in temperature, precipitation and global ice cover.

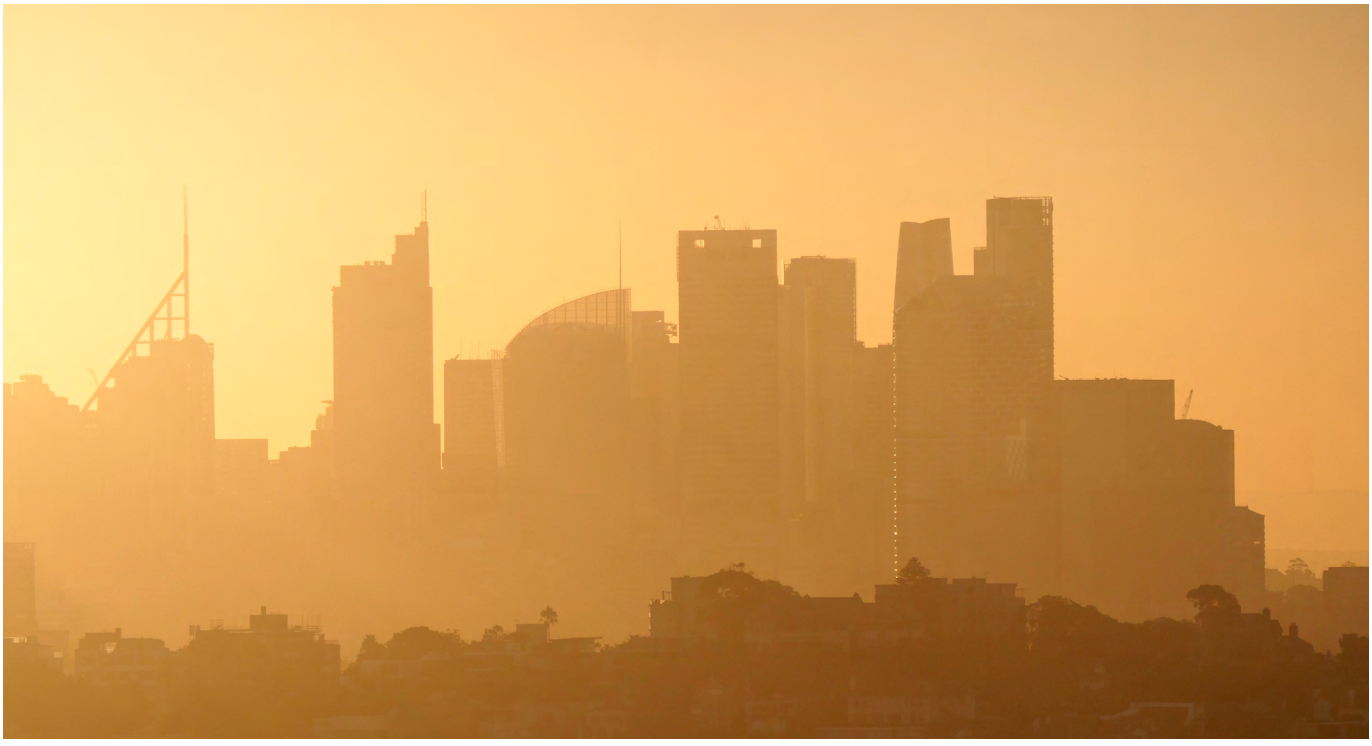
Both types of risks have the potential to damage property and assets, disrupt supply chains, cause interruptions to IT and power systems, and affect employee health and safety. They can impact businesses financially directly and indirectly through delayed projects, increased costs, including insurance costs and reduced productivity and income. Given the growing awareness of the impacts of climate change, businesses may face reputational damage if they do not adequately manage physical climate risk as well.

All businesses should care about climate change risk

Climate change risk and opportunities have the potential to affect businesses current and future financial positions through:

- revenues
- expenditures
- assets and liabilities
- capital and financing.

Source: TCFD



Transition risks

They arise from changes as the world adjusts to a lower-carbon economy. Domestic and international regulations, such as the Australian mandatory sustainability reporting legislation passed in 2024, changing market conditions, market and social expectations, and technological innovation can generate transition risk.

Impacts from transition risks for businesses include increased operating costs, shifting demand for products and services, early retirement of or stranded assets and financial losses.

Liability risks

These come from the potential for legal action when businesses do not adequately respond to climate change or changing regulatory expectations. This can include producing misleading sustainability claims (greenwashing) or inaccurate climate disclosure reports. Organisations may also face liability risks if they fail to address supply chain challenges brought about by hazard events and this impacts their ability to meet their obligations to customers.

Legal proceedings can disrupt business, damage reputations and may also result in financial penalties.

Climate-related opportunities

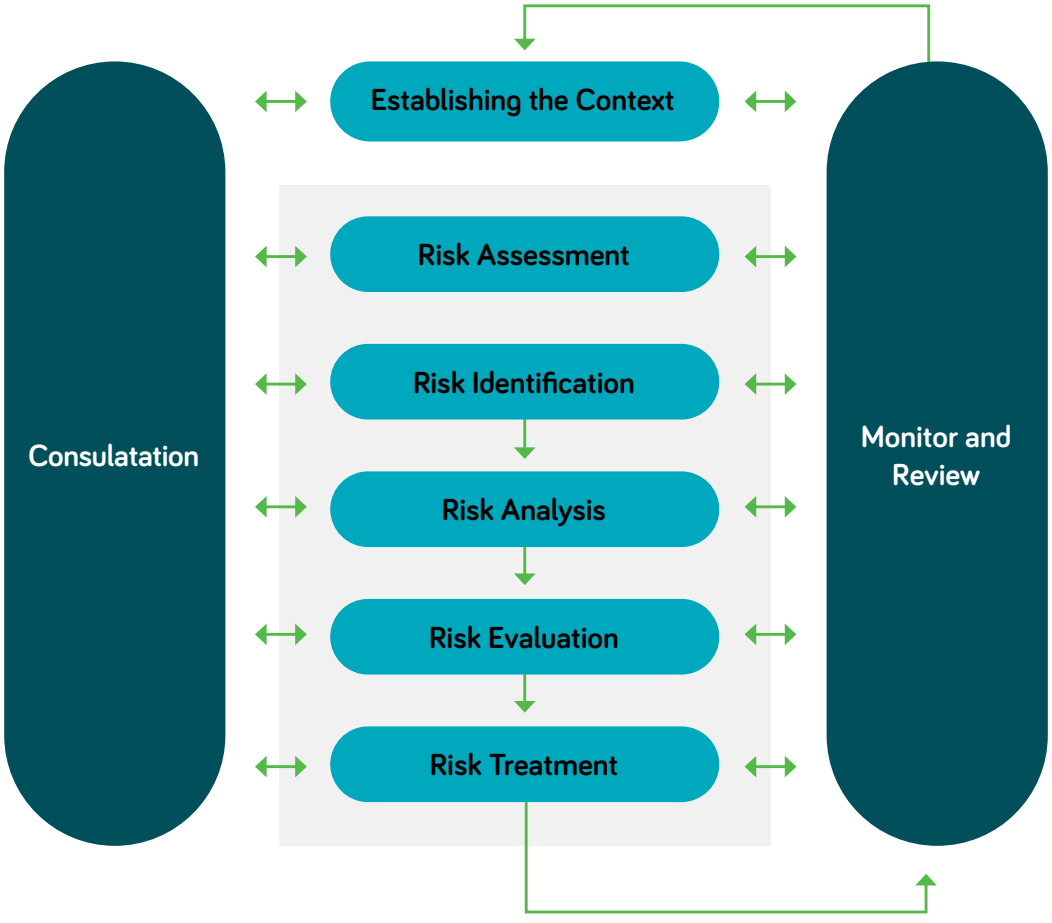
Alongside these risks, proactive businesses can capture opportunities in emerging green markets, save money through efficiency improvements and strengthen stakeholder relationships through climate leadership.

Integrating climate into strategy, governance and risk management

Ideally, climate resilience should not be treated as a separate sustainability effort but be integrated into the core business strategy and risk management. As climate change is likely to have impacts across all business functions and affect the financial viability of businesses, it is essential there is board-level oversight, and all executives view climate change as a key consideration within their workstreams.

Assessing risk

Businesses need to understand the climate risks they face throughout their value chain. The level of detail for assessing climate risk can depend on an organisation's capacity and risk appetite. A first pass risk assessment is the most basic. It explores which climate hazards and physical, transition and liability risks might affect the business. This can also be called a sensitivity assessment. A second pass risk assessment is more comprehensive and more closely mirrors a standard risk assessment process. The International Standards Organisation 31000:2018 risk management guidelines include a common framework used in many climate risk assessments. A third pass risk assessment is detailed for a specific component of the value chain and often includes climate, physical, and/or economic modelling.



ISO 31000:2018 Risk Management Process

Developing a business continuity plan

A business continuity plan can help manage climate-related risks that cause short-term disruptions to the business.

Business continuity plans ensure essential functions can continue or be restored within acceptable timeframes, minimising the impact of disruptions on customers, clients, staff, assets and the financial bottom line.

Business disruption scenario	Example
Loss of/unavailability of key staff	A major flood affects key staff members' homes, internet and phone connection meaning they are unable to login and work, even remotely. This delays critical decision making and results in financial impacts for the business.
Denial of access to premises	A major storm has caused widespread destruction including broken tree limbs, fallen power lines and damage to your office building, preventing staff from accessing the premises. Projects that rely on specialist equipment, such as surveying equipment or on-site security infrastructure, like secure shredders, may be delayed and project costs may increase, affecting reputation.
Disruption to critical ICT systems, services and/or communication	Prolonged extreme heat event has led to power grid strain and equipment overheating with servers automatically shutting down to prevent damage. This may limit access to critical documents, affecting operations and revenue, delaying projects, and causing reputational damage.
Failure of critical service provider/ supplier	Bushfires have destroyed critical power and telecommunications infrastructure, affecting your office and staff homes. Senior executive cannot communicate for multiple days. This delays critical decision making and results in financial impacts for the business.
Disruption to supply chains	Major bushfires have cut off multiple roads for several days. This disrupts supply chains and results in delays to completed projects.
Loss of specialised equipment	Extreme weather has flooded the basement of your office where you store specialised equipment. Replacing the equipment has significant financial costs and projects are significantly delayed due to the long lead time for replacement.

Practical strategies to manage these business disruptions include using back-up systems, considering building design and location as well as flexible and remote work arrangements.

Developing an adaptation plan

Once climate risk has been assessed, an adaptation plan should be developed, focusing on the highest or priority risks.

Mitigating risk	Transferring risk	Controlling risk	Accepting risk
Definitions			
Reduce likelihood or impact of risk	Shift risk burden to another party	Use ongoing measures to manage risk	Consciously retain risk with or without action
Examples			
• Create business continuity plans for disruptions • Relocate critical operations from high-risk areas • Decarbonise operations	• Purchase climate-related insurance coverage • Include force majeure clauses in contracts • Use hedging instruments for commodity price risks	• Conduct regular climate risk assessments • Set KPIs and targets for climate resilience • Maintain incident management and escalation protocols	• Ensure adequate financial reserves to buffer risks • Pursue short-term leases before planned relocation

Actions should be developed and prioritised with the relevant functional areas of the business, as well as key executives.

Difference between adaptation and mitigation

Climate change adaptation and climate change mitigation are related but separate concepts. Climate change adaptation refers to making changes to reduce the negative impacts from climate change and harness opportunities to increase resilience. Climate change mitigation refers to cutting greenhouse gas emissions to reduce the scale and potential impacts of climate change. Some actions can be both adaptative and mitigative, but this guide only considers climate change adaptation.

Focusing on social resilience

While businesses may focus on strengthening operations and financial stability in the face of a changing climate, the importance of fostering social resilience cannot be understated. Healthy, happy and better-informed employees, and a connected wider community can be key to managing hazard events effectively, minimising the longer-term business impacts.

Key considerations and suggested actions to build social resilience

Supporting vulnerable employees

- Ensure your business has an effective employee assistance program and regularly encourage staff to use it, particularly after extreme weather
- Foster a positive, inclusive culture where staff feel supported and comfortable to voice any concerns
- Make sure emergency response plans are inclusive and meet staff needs, recognising not all disabilities are visible

Building awareness around climate change

- Embed climate change education in introductory materials, focusing on role-specific risks and responsibilities covering physical, transition and liability climate risk
- Promote climate-related education and awareness programs and courses more broadly to build adaptive capacity so that staff can better recognise risks and opportunities under changing climate conditions

Developing neighbourhood support networks

- Build networks with other tenants, local businesses and communities, creating a strong community fabric that supports everyone in times of crisis

How to build climate resilience: let's get practical

Checklist of steps

Step 1 Assess current and future climate-related hazards

Step 2 Understand what could be impacted by climate change in the short and longer term

Step 3 Determine potential impacts of hazards on your business

Step 4 Identify strategies to manage climate risks

Step 5 Integrate climate resilience risks and actions into strategy, governance and risk management

Key outcomes

After you have completed the checklist and activities in this section, you should:

- understand the potential short-term disruptions and longer-term climate risks and opportunities for your business
- have developed strategies to reduce high priority climate risks and harness opportunities, building the climate resilience of your business

Step 1: Assess current and future climate-related hazards

Australia has already warmed by 1.5°C since 1910, with extreme weather becoming more frequent, severe and unpredictable. Climate-related events today look very different from the past, appearing in regions that historically did not experience these kinds of disasters.

To understand the potential impacts of climate change, consider how climate hazards such as heatwaves, floods, and storms have impacted your business in the past. Think about any near-misses such as a flood that almost affected your site. The climate has already changed and the likelihood of more severe events in new places has already increased for many hazards.

You should also consider how heatwaves, floods, storms and other climate hazards could change in the future. To understand your future climate risks, choose a timeframe that is relevant to your business. For example, if you're leasing a property for 20 years, planning around 2050 emission scenarios makes sense. If you're constructing a building expected to last 50 years or more, using 2070 projections may provide a more accurate picture of potential risks. Typical timeframes used are 2050, 2070, and 2090.

There are many places to find information about climate change. On the next page are some resources you may find helpful. Use resources that consider where your business is located, if possible, rather than larger-scale or Australia-wide projections. If you have business operations in multiple states or regions, you may have to consult multiple climate change resources.

The National Environmental Science Program produced a comprehensive guide on Navigating Climate Portals in 2024. It includes resources with more complex and detailed climate change projections.

Although not a natural hazard, don't forget about transition and liability related changes. Scan any potential climate-related changes in legislation and the market that may impact your business.

Australia-wide

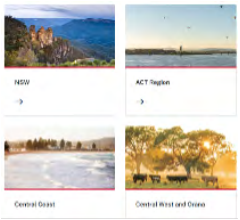
National Climate Risk Assessment

Northern Territory

Northern Territory Projection Summaries

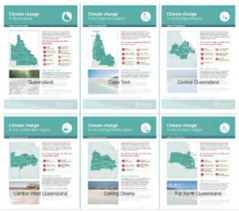
NSW/ACT

Adapt NSW Regional Climate Change Snapshots



Queensland

Regional impact summaries



South Australia

Guide to climate projections for risk assessment and planning in South Australia

Tasmania

Local Government Area Climate Profiles

Victoria

Regional Summaries

Western Australia

Climate Projections Summary

Step 2: Understand what could be impacted by climate change in the short and longer term

It is important to engage managers and staff from across your business when identifying critical functions and longer-term strategic risks to ensure all potential climate impacts are considered.

Short-term disruptions

Climate-related hazards such as heatwaves, storms, and floods have the potential to cause significant short-term disruptions to your business by affecting your critical functions.

Critical functions for your business may already be defined as part of your general risk management process. A critical function can't be suspended for a short period (defined based on the needs of the business) without causing safety, financial, legal and/or reputational damage. To determine your critical functions:

- review existing plans
- answer key questions with your executive/department leads:
  - What is the short period within which critical functions must not be offline or come back online to avoid safety, financial, legal and or reputational damage for your business?
  - What activities, processes, or systems must continue within this time to avoid damage to your business?
  - Who are the key staff and teams, and what are the key infrastructure or systems, required for these activities?

Depending on the size of the business and diversity of activities, this process may be extensive.

Examples of critical functions

Critical function category	Critical activity
Client/customer support	Client communication, order processing and service delivery
Financial operations	Payroll, accounts payable/receivable and financial reporting
IT & data management	Server access, data backups and system maintenance
Human resources	Employee communication and personnel records management, OHS, WHS
Project management	Maintaining project timelines and deliverables

Longer-term risks

As well as impacting your business's critical functions, climate change may result in longer-term more strategic risks and opportunities.

When assessing your strategic climate change risks, consider the full range of assets, functions, and people within your business that could be exposed to harm or disruption. This includes physical infrastructure, staff health and wellbeing, service delivery, supply chains, financial stability, and your organisation's reputation.

At the same time, identify where there may be opportunities to strengthen performance, innovate, or gain a competitive edge, whether through improved operational efficiency with new technologies, investment in resilient technologies to reduce down time, or evolving to meet changing customer and community needs and preferences, thereby increasing market share.

Examples of risk/opportunity categories

Risk category	What could be at risk?
Assets	Buildings, specialised equipment, IT infrastructure and servers, company fleet
Operations	Supply chain continuity, distribution networks and transport routes, energy availability, access to critical resources
Administration	Record management, data security, communication systems
Staff wellbeing	Staff health and safety, mental health and stress, workforce availability, productivity, safe working conditions
Business development	Market shifts, business expansion/ new ventures, company positioning on sustainability (including climate reporting requirements)
Stakeholder and client relationships	Client trust and loyalty, community engagement and support, supplier reliability, stakeholder confidence
Sales and marketing	Business reputation and positioning, digital channels and e-commerce reliability, customer demand and consumption patterns
Finance	Insurance affordability, affordable operational costs, asset depreciation, financial forecasting and budget accuracy, funding opportunities, access to financial reserves
Legal and reputational	Compliance with climate-related regulations, public perception and media scrutiny, insurance coverage for climate-related risks

Step 3: Determine potential impacts of hazards on your business

Once you understand your critical functions, risk categories, business components at risk, and relevant hazards, you need to determine:

- what business disruptions cause the critical activity to be impacted (the 'dependencies') and what climate hazards could trigger this disruption
- what climate hazards could impact your risk categories and business components at risk
- the potential consequences of disruptions to your critical functions and activities, and potential consequences when risks turn into experienced impacts

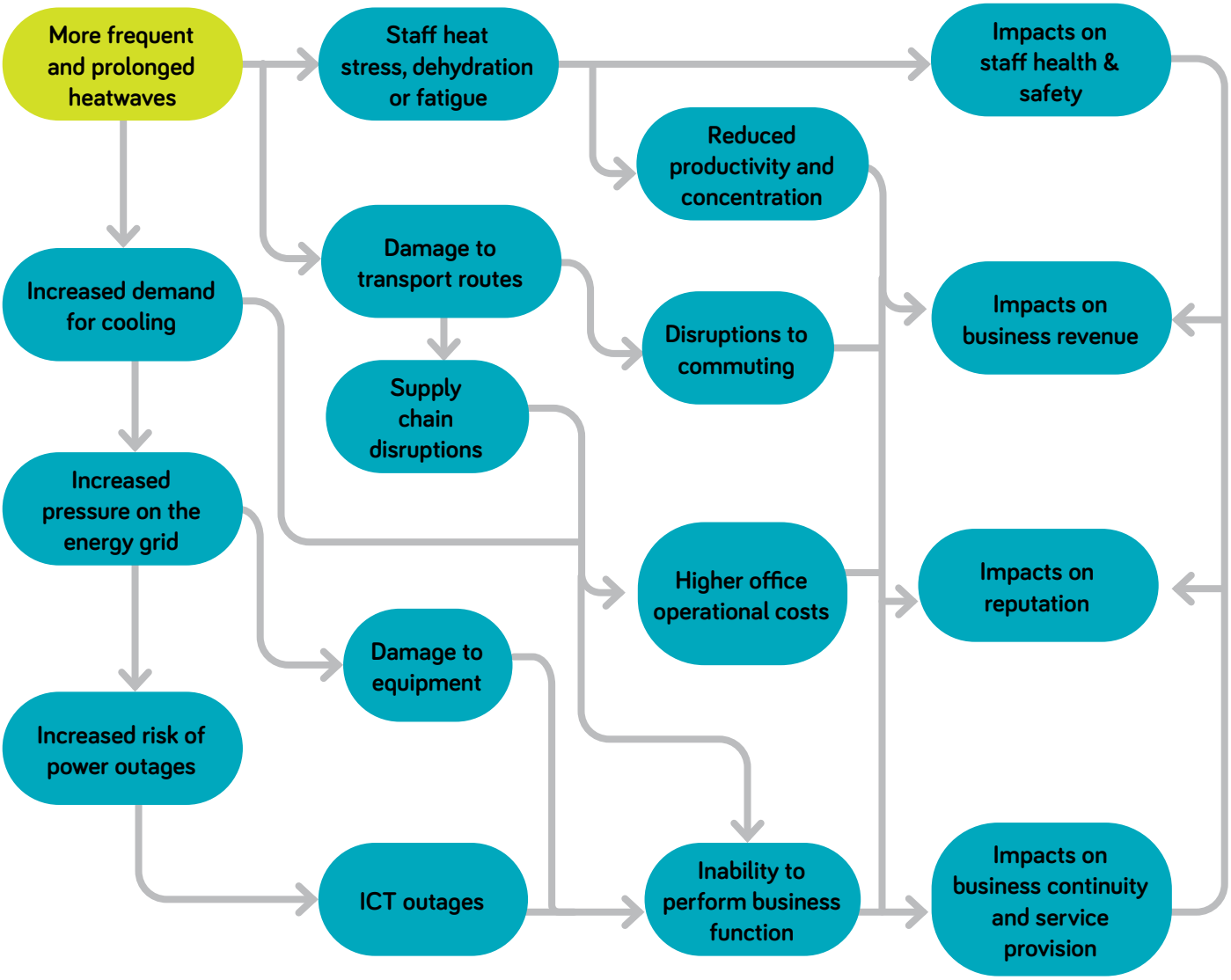
Examples of potential impacts from climate hazards

 **Heatwaves**	• Increased cooling demand and higher electricity costs • Risk of power outages and IT disruptions • Decline in staff productivity and wellbeing due to heat • Health risks such as heat stress in poorly ventilated buildings • Transport disruptions reducing staff attendance
 **Bushfires**	• Smoke and poor air quality causing respiratory issues and fatigue • Reduced productivity and need for remote work • Evacuation orders and commuting disruptions • Power and telecommunications outages interrupting operations
 **Flooding**	• Transport route damage delaying commuting and supply chains • Power outages and IT disruptions • Water ingress damaging equipment and causing mould • Costly repairs and maintenance • Health risks from contaminated water and unsafe travel
 **Severe weather**	• Damage to buildings, signs and outdoor infrastructure • Flooding and debris blocking transport routes and delaying supply chains • Power and telecom failures disrupting IT and remote work • Safety risks from flying debris and slips • Increased operational costs and downtime

Throughout this activity, think about impacts to assets or systems not within your control that could affect your business. Key assets relevant to most office-based businesses to consider include power infrastructure and communications (including internet).

Heatwave impact chain

This flow chart provides a good overview of how one event (a heatwave) can have cascading impacts across multiple systems in and out of the control of a typical business. You could consider creating impact chains for all relevant hazards for your business to understand where the risks and dependencies occur.



Determine likelihood and consequence to prioritise key risks

If your business has the capacity, take the information gathered so far and integrate it into your business's standard risk register or risk management system. This may include analysing the likelihood and consequences of each risk to determine an overall risk rating. These risk ratings will help you prioritise risks more effectively. For example, you may prioritise only those that are 'high' or 'extreme' depending on your company's risk appetite. This will also support integration of climate risks into your business's standard governance and risk management processes (Step 5).

The ISO 31000:2018 Risk Management Guidelines and AS5334-2013 Climate change adaptation for settlements and infrastructure – A risk-based approach provides helpful guidance to complete this risk assessment.

Step 4: Identify strategies to manage climate risks

Using the information gathered in steps 1, 2 and 3, you should now start to identify adaptation strategies to reduce the likelihood of short-term disruptions to your critical activities and long-term impacts of climate change on your business. You can take the outputs of this activity and integrate them into your standard project management processes, including assigning responsibilities, timelines and budgets.

Short-term disruptions

Actions to manage short term disruptions may include (non-exhaustive):

- developing a business continuity plan and completing a business impact assessment for each critical activity or function
- identifying key staff roles and responsibilities in an emergency
- developing a communications plan for all stakeholders including staff, clients, suppliers, and customers
- establishing physical back up power and communications systems
- considering the storage/disposal of critical or sensitive data

It is useful to integrate climate-related risks and actions to manage short term disruptions into a specific business continuity plan. Your organisation may already have a business continuity plan, or you may need to work with the risk team and executive to develop one. The goals of a business continuity plan are to:

- identify and prioritise functions critical to meeting business targets
- ensure service is maintained and minimise the impact of disruptions on the business and stakeholders
- develop response and resuming actions based on the criticality of business functions
- build resilience within business operations
- highlight roles and responsibilities for key workforce positions.

Steps to develop a business continuity plan

Step	Description
Assess business processes and functions to identify critical functions	Identify and assess all business processes to determine which functions are essential to maintaining operations. Any function that cannot be suspended for a short period (defined based on the needs of the business) without causing safety, financial, legal and or reputational damage is considered critical and will require a business impact assessment.
Conduct a business impact assessment for each critical function	Undertake a business impact assessment for each critical function and assess the potential impacts of disruption, interdependencies, ownership, resource requirements and the maximum acceptable outage – the longest period a critical function can be disrupted before causing unacceptable consequences for the business, staff or other stakeholders.
Develop critical function response plans	Outline the minimum resource requirements, activation triggers and actions to be taken during the disruption to maintain and/or restore operations. Each plan is managed by a relevant business process owner who addresses the loss of the function through the emergency, continuity and recovery phases.
Develop an overarching business continuity plan	Define organisational responsibilities and arrangements, outline how incident severity will be assessed and detail team activation procedures and ongoing operational actions. The plan identifies the responsibilities of key business leads, with particular emphasis on direction setting, and effective communication to teams at an organisational level.
Test and maintain the business continuity plan	Ensure the plan is tested with relevant staff and kept up to date as knowledge about climate change and the likelihood of other disruptions changes.

Longer-term risks

Actions to manage longer-term climate risks include (non-exhaustive):

- policies and procedures to alert staff to work from home if unsafe to travel to work
- an effective employee assistance program
- relocating critical assets, for example from the basement to a higher level or your entire premises
- assessing climate risk before committing to the location of new buildings to prevent developing in a hazard-prone area
- diversifying your supply chain and customer base, particularly if they are sensitive to climate change or in locations that could be particularly impacted
- insurance covers climate-related hazards

There are many strategies businesses can adopt to build resilience to the longer-term risks from climate change. A climate change adaptation plan or climate resilience plan can be a useful document to justify taking actions, and record the actions, timelines and responsibilities.

Some actions will be general while others will be hazard specific. For example, relocating specialist equipment from a basement to a higher level within a building may protect against floods but it won't protect against heatwaves if the equipment is sensitive to heat and there is a power outage. On the other hand, developing a communications plan for use during a disaster could appropriate for multiple different risks and hazards.

There are lots of resources available online to support you to identify appropriate actions to reduce your climate risks and increase your resilience.

Prioritising actions

Depending on how many actions you identify and the capacity of your business, you may want to undertake a prioritisation process to identify a short list of actions or create a strategic order to implement actions. A multicriteria analysis is a helpful tool to support this process. You may consider:

- effectiveness
- cost
- feasibility
- urgency
- secondary (positive and negative) impacts
- other

The multi-criteria analysis process can range from a simple qualitative assessment using input from key stakeholders and executive to a complex assessment using quantitative data and modelling.

Remember to consider opportunities here too! Are there new markets or products that your business could leverage to grow into the future?

Step 5: Integrate climate resilience risks and actions into strategy, governance and risk management

Now that you understand the climate-related risks your business faces and have identified actions to reduce them, climate resilience should be integrated into your business's strategy, governance, and risk management processes. Climate change has the potential to affect every part of the business and the bottom line. It is everyone's responsibility to understand and address climate risks from operational staff to the executive and board.

Activity templates

Use these activity templates as you work through each step. You can either print these tables (A3 recommended) and fill them in manually or copy the structure to another document such as Word or Excel to complete.

Activity 1 - Hazards

Fill in the following table to understand what hazards have impacted your business in the past and which may impact your business in the future, based on the relevant climate projections. Outcomes of this activity will feed into activity 2.

An example has been provided. Please add other hazards if relevant for your business/location.

Step 1			
Hazard	**Have you experienced impacts from this hazard in the past? (Yes/No)**	**List the impacts experienced in the past**	**Do you think you will experience impacts from this hazard in the future? (Yes/No)**
Heatwaves/extreme heat	Yes	The train system broke, and staff were unable to get to work. Periodic power outages occurred affecting productivity and access to online documents. Outdoor workers had to cease working impacting our ability to meet deadlines on projects and increasing costs.	Yes
Heatwaves/extreme heat			
Extreme cold			

Step 1			
Bushfires			
Flooding			
Hail			
Extreme rainfall			
Coastal erosion			
High winds			

Step 1			
Tropical cyclones			
Landslips (often triggered by flooding/ extreme rainfall)			
Sea level rise			
Drought			
Ocean warming/ acidification			
Legislative changes			

Step 1			
Market changes			

Activity 2 - Disruptions and adaptation activities

Fill in the following tables to identify short-term disruptions, long-term risks and potential adaptation actions. Examples are provided.

There may appear to be overlaps between short term disruptions and long-term risks. If the impact of a heatwave, flood or storm affects a critical function, consider it within short-term disruptions. This provides you a clear picture of critical risks that may have safety, financial, legal and/or reputational repercussions for the business.

Short-term disruptions

Step 2		Step 3			Step 4
Critical function category	**Critical activity**	**What can disrupt this critical activity?**	**Which hazards can cause this disruption? (use outputs of activity 1)**	**What are the potential consequences?**	**Adaptation action**
Client Support	Ability to access secure documents	Office access issues Power/ IT system failures	Floods Storm	Service delays Financial penalties	Determine if you can print key documents Include clauses (for example, Force Majeure) in contracts allowing for service delays due to extreme weather-related disruptions
Client Support	Ability to meet contractual obligations	Supply chain disruptions Power/ IT system failures Staff unavailability	Floods Bushfire Severe weather	Financial penalties Loss of revenue Legal action	Ensure remote work capabilities Set up backup power and IT systems Diversify your supply chain

Step 2		Step 3			Step 4
Financial Operations	Payroll	Key staff being offline Power/IT not working	Heatwaves Floods Cyclones Storms	Fines Compromised staff wellbeing	Cloud-based payroll system Backup generators
Financial Operations	Ability to pay suppliers	Key decision makers being offline Power and IT not working	Storms Severe weather Floods	Inability to meet contractual agreements Tarnished business reputation	Pre-scheduled payments Communication plan with clients Backup power Clauses in contracts

Step 2		Step 3			Step 4

Longer-term risks

Step 2		Step 3		Step 4
Risk category	**What's at risk?**	**What hazards contribute to this risk? (use outputs of activity 1)**	**What are the potential consequences?**	**Adaptation action**
Assets	Damage to technical printers	Flooding Bushfire Heatwaves	Financial losses Operational disruption Inability to meet client obligations	Move printers from the basement to a higher level Ensure printers are located in cooler areas, away from windows and consider installing back-up temperature control systems
Operations	Disrupted supply chain	Flooding Bushfire Storms	Delayed product and/ or service delivery Contractual penalties Operational downtime Loss of revenue	Supplier diversification Digital supply chain monitoring Flexible contracts

Step 2		Step 3		Step 4

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