



Climate Change Risk Management Guide



Topic 3

Exploring Victoria's climate
change risks



Contents

Overview.....	3
Dedicate time to think about climate change and be prepared to act.....	3
Physical risks.....	4
Transition risks.....	5
Revisit your assumptions.....	6
Focus on climate change to better inform your businessdecisions.....	6
Next steps.....	8

This guide was developed and prepared by the Victorian Managed Insurance Authority and the Department of Energy, Environment and Climate Action.

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Victorian Managed Insurance Authority (VMIA) acknowledges the Traditional Custodians of the land on which we do business, and we pay our respects to Elders past, present, and emerging. We acknowledge the important contribution that Aboriginal and Torres Strait Islander peoples make in creating a thriving Victoria.

Exploring Victoria's climate change risks

Find out the different ways climate change can affect your organisation.

Overview

Organisations that consider climate change in their decision-making will be better prepared to respond to its impacts and the community they serve. By confidently acting on the foreseeable risks, you'll set your business priorities and allocate resources to ensure you:

- continue to deliver on your organisation's role and purpose as the climate changes, contributing to a more resilient Victoria
- contribute to reducing greenhouse gas emissions.

In this guide

- Dedicate time to consider climate change and be prepared to act
- What are climate change risks?
- Physical risks
- Transition risks
- Revisit your assumptions
- Focus on climate change to better inform your business decisions
- Next steps.

Dedicate time to think about climate change and be prepared to act

Our climate is changing but there's uncertainty about the nature, timing and velocity of specific events and how these will impact us as individuals, organisations and communities. Spending time to consider how climate change may impact our activities, functions and strategies is putting risk management into practice. This way of thinking applies to decisions you make at home as well as at work. For example, being conscious of climate change will affect decisions about where you live or how you consume energy.

To find out more about managing the risks presented by climate change, please refer to our topic [Using risk management to help you address climate change](#).

What are climate change risks?

Risks occur when a possible event arises that disrupts your ability to meet your objectives. Climate change can present new risks or multiply the risks you're already aware of. It challenges your assumptions about your organisation's resilience and capability to deliver on its role and purpose. The nature of this risk might differ from risks you're familiar with because it needs in-depth assessment, has a longer timeframe and is highly uncertain.

Climate change risks include **physical risks**, **transition risks** and the **liabilities** that flow from each of these. These can have flow-on financial impacts, across your revenues, expenditures, assets, debts, capital and financing. They can impact your service availability, reputation and trust. Your organisation and its directors could be exposed to litigation for failure to act.

We've based our guide on content published by the Task Force on Climate-related Financial Disclosures. Visit [fsb-tcfd.org](https://www.tcf.org) to find out more.

A snapshot of how the Victorian Government is approaching climate-related risks can be found here: <https://www.dtf.vic.gov.au/funds-programs-and-policies/victorian-government-climate-related-risk-disclosure-statement>.

Physical risks

Physical risks arise from changes in the frequency and severity of extreme weather events, long-term changes in weather patterns and rise in sea levels. They include:

- **Acute risks** which are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods.
- **Chronic risks** which are longer-term shifts in climate patterns (e.g. sustained higher temperatures) that will cause sea level rise or chronic heat waves.

Physical risks will particularly affect your organisation if you're already exposed to the climate and have, for example:

- long-lived, fixed assets
- operations in climate-sensitive regions (e.g. coastal or flood zones)
- high reliance on water availability
- dependence on value chains exposed to the above.

Sectors that are more exposed to the physical risks such as agriculture, transportation and building infrastructure, health, insurance and tourism.

Consider a range of time horizons for physical risks

Victoria's climate has already changed and will continue to change over time. To think about physical risks, consider short-, medium- and long-term time horizons and document these in your risk assessments.

What timeframes you choose for risk assessments depend on your organisation's objectives, sector and expected lifetime of capital investment structures, assets, leases and infrastructure. These will affect how you assess risk.

	Timeframe	Notes to help you assess risk
Short-term	2-5 years	This timeframe might be considered long-term for some organisations. Typical likelihood scales can be used to assess risk.

Medium-term	5-20 years	Likelihood scales won't work well to assess risks. Use scenario analysis instead.
Long-term	20+ years	Use scenario analysis to assess risks at 2030 and 2050. Look beyond 2050 out to 100 years if you're dealing with: <ul style="list-style-type: none"> • long lifecycle infrastructure • certain asset decisions • certain hazards (e.g. sea-level rise)

See [Victoria's changing climate \(climatechange.vic.gov.au\)](https://climatechange.vic.gov.au).

Transition risks

Transition risks arise from social and economic changes associated with adjusting to the low-carbon economy as required by the Victoria's Climate Change Act 2017. The Act establishes a long-term target of net zero greenhouse gas emissions by 2050. This implies a move away from fossil fuel energy and related physical assets. You can face transition risks through:

Policy

Disruption from policy changes to limit actions contributing to climate change (e.g. introducing policies to reduce greenhouse gas emissions).

Legal

Litigation (e.g. from allegations of a failure to protect citizens from known impacts, reduce climate change impacts, failure to adapt, or adequately disclose climate change risks).

Technology

Disruption from the technological changes that enable a lower-carbon economy (e.g. shifting to electric vehicles and distributed energy systems).

Market forces

Economic disruption from sudden changes in supply and demand (e.g. consumer demands, availability of commodities, products and services and prices).

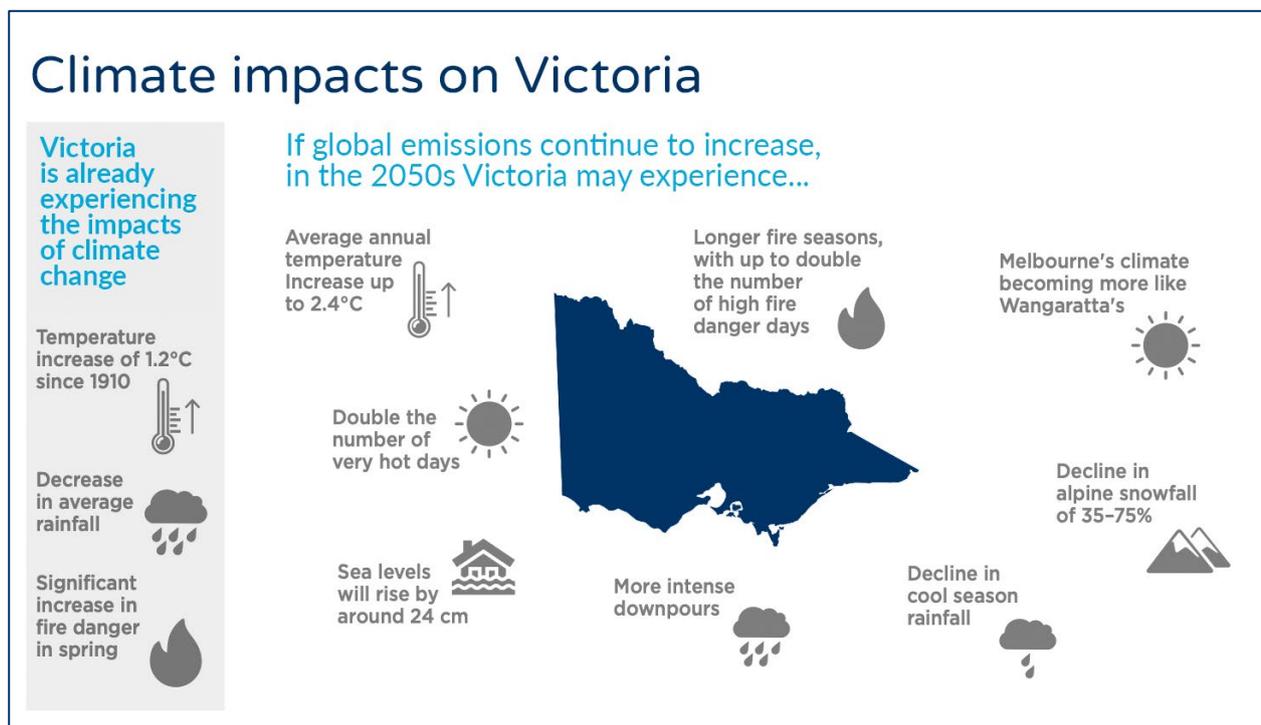
Reputation

Changes to customer or community perception of your organisation. Your actions, disclosure and changing community standards and expectations affects others' trust and confidence in you. Expect increasing public and media scrutiny of both your adaptation activities (e.g. planning for more bushfires) and your contribution to the transition to a low-carbon economy (especially your high-carbon activities).

Transition risk will affect most economic sectors and industries. Its clearest impact is on agencies, whose function relates to fossil fuel-based industries, energy-intensive activities and transportation.

Transition risks are more likely to materialise in the short and medium-term but consider the long-term too.

To assess both physical and transition risks, you'll need to consider climate policy trends domestically and globally. See Victoria's latest climate change policies at climatechange.vic.gov.au.



Updated from Victoria's Climate Science Report 2019. Department of Energy, Environment and Climate Action (Formerly Department of Environment, Land, Water and Planning, 2019, Victoria's Climate Science Report 2019. Melbourne Victoria. Available online at: [Victorias-Climate-Science-Report-2019.pdf](https://climatechange.vic.gov.au) (climatechange.vic.gov.au)

Revisit your assumptions

Climate change is a risk multiplier – it exacerbates or accelerates risks you already face. If you've recorded weather-related risks in your risk register without considering climate change, you might've underestimated the level of risk and need to reassess.

Focus on climate change to better inform your business decisions

Managing risk is about learning to make good decisions despite uncertainty, rather than removing it. We have a whole topic on making decisions in situations of uncertainty, and below we show how considering climate change can help an emergency services organisation make decisions by revisiting the assumptions it's making.

For more information refer to [Making decisions in situations of uncertainty](#) on our website.

Climate change affects whole organisations and communities. You should consider its impacts in the decisions you make about:

- how you'll operate (goals and strategy)
- what'll enable you to operate (activities and functions)
- how you work with others (suppliers, clients, and community).

Decisions facing an emergency services organisation

In this example, the focus is mainly on physical risks, but transition risks are also relevant:

Decisions about our	Climate change impacts	We should revisit our assumption about
People	<p>Longer fire season, more extreme weather events and higher operating temperatures can increase work demand, make working conditions for staff more hazardous and lower productivity.</p> <p>This increases both physical and psychological stress on workers and can contribute to direct harm resulting in injuries, deaths or indirect harms such as violence, mental illness or substance abuse.</p>	<ul style="list-style-type: none"> • future workforce numbers • rostering and shift patterns • choice of right personal protective equipment (PPE) • how we work with other agencies
Buildings, infrastructure, and equipment	<p>Increased intensity of extreme weather events, heatwaves, flooding and coastal inundation could damage our buildings or equipment.</p> <p>This can include:</p> <ul style="list-style-type: none"> • vehicle parking • chemical and equipment storage • evacuation and incident control centres • PPE 	<ul style="list-style-type: none"> • where we build • what design we choose • whether we need to relocate • location of critical equipment • sharing sites with other agencies • anticipated useful life of our equipment.
Fleet	<p>to contribute to the State's effort to move to a low carbon economy, our future fleet will need to reduce its carbon emissions. New technologies may reduce our capabilities or require new ways of working in the air, on land and in the water.</p>	<ul style="list-style-type: none"> • when we'll trial new technologies to either reduce energy usage or change fuel source • how we run and maintain our fleet • how we'll measure our emissions reduction performance.
Information and technology assets	<p>higher temperatures increase peak energy demand and the chance energy outages could disrupt IT and communications systems.</p>	<ul style="list-style-type: none"> • how we ensure adequate backup power to maintain critical business functions • the vulnerabilities of our information and technology systems' being in different physical locations • our business continuity, disaster recovery and crisis response plans.

Look at how your insurances protect you

Many climate risks come with the possibility of financial loss. It's reassuring to know these exposures can be minimised through your insurance program but you need to consciously evaluate which of your risks can benefit from insurance protection.

Read more at our guide: [Minimising your exposure to insurable risk](#).

Next steps

1. Review your risk register.
2. Consider how climate change will affect your existing risks.
3. Identify gaps and review assumptions considering [Victoria's climate change](#).
4. Work with risk owners to plan improvement opportunities for both physical and transition risks.