

Your Council and Climate Change

UNDERSTANDING THE RISKS AND LEARNING TO ADAPT

Understanding climate risk

Training for Victorian councillors,
supported by DELWP and
developed in partnership with



Key messages



Climate change poses more than just a physical risk

- Risks are dependent on level of exposure and vulnerability to hazards
- Councils need to consider physical, transition and litigation risks



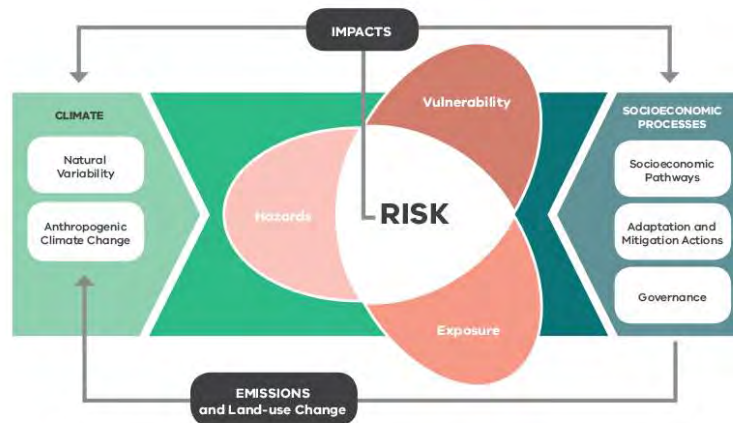
Councils need to tackle climate risk without creating problems for future generations



There are co-benefits of tackling climate risk

- Actions can provide both adaptation and mitigation benefits

Understanding risk



Natural hazards and natural disasters are different: a hazard doesn't automatically lead to a disaster - it depends on whether risk has been assessed, managed and prepared for.

The framework in the slide is already being used for natural hazard management in earthquake or cyclone prone areas. It has been adapted to look at climate risk.

The severity of impacts as a result of weather and climate events is dependant on our level of exposure and vulnerability.

- Hazards refer to possible future events that may cause loss of life, injury, or other health impacts, as well as damage and loss, such as flood events.
- Exposure refers to people, animals, infrastructure, assets in an area where a hazard may occur, such as a house on a floodplain.
- Vulnerability refers to the lack of capacity of people, livelihoods and homes when exposed to a hazard. For instance, people in low social economic communities who can't afford insurance may be more vulnerable to hazards.

An example of how your council could limit exposure is understanding climate projections for flooding and implementing planning overlays so that your municipality doesn't have homes exposed to hazards. Responses may also address vulnerabilities to specific hazards such as a lack of flood insurance.

Types of risk



Physical

- Acute risk
- Chronic risk



Transition

- Policy and regulatory
- Technology risk
- Market risk
- Reputation risk
- Litigation risk

There are different types of risk that your council will face:

Physical risks we've talked about already. These include flash flooding and bushfires, as well as slow onset impacts that more heatwave events pose a risk to physical infrastructure, our natural environments, and human health.

Another risk is transition risks

There is also a need to transition to a zero emissions economy and this to varying degrees and in different contexts is likely to involve changes to policy, technology and markets, for instance - shifts in energy sources and zero emissions technology such as electric cars. Risks occur if these shifts aren't planned for or unexpectedly occur rapidly. For example, council fleet vehicles could be impacted by rapid deployment of new low emission vehicles in other markets.

Transition risk extends to reputational risk – how communities perceive business, industry and governments are taking action on climate change.

Transition risk also extends to potential litigation. There are more examples of the public – consumers, rate payers and community members taking legal action against

decision makers including major corporations, financial institutions (super) and governments for their decision making relating to climate change.

In regards to councils, claims could be made around not planning adequately for climate risks, planning too onerously, and failure to protect properties and assets.

Councils have already faced legal challenges in jurisdictions across Australia. For example, a Victorian council decision granted consent for residential developments in a coastal region. But a regional coastal board, set up under the Victorian Coastal Management Act 1995, challenged the council decision at a tribunal. It argued that the proposed developments were inappropriate in light of projected sea level rises as a result of climate change. The tribunal agreed and determined that development consent should not be granted.

Another example is that the Murray Darling Basin Royal Commission report found the Murray Darling Basin Authority demonstrated ongoing negligence in not taking climate change into account. The report found that scientific advice from CSIRO was treated as “inconvenience”; the Authority relied on historical data for water allocations, not future projections; and had deferred climate change consideration to their next strategic review.

We’ll look more at local government roles and responsibilities in a later section.

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Tackling climate risk without creating problems for future generations

It is really important that the course of action taken to tackle climate risk does not have unintended, negative consequences for future generations.



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It's really important that when councils adapt to climate change, the action does not have unintended, negative consequences for current or future generations. This negative consequence is known as maladaptation.

For instance, it is important to maintain thermal comfort in community facilities such as libraries, so that people are at a safe and comfortable temperature. However, using air conditioning increases greenhouse gas emissions. An adaptation which could meet current needs while also reducing emissions is increasing the energy efficiency of buildings to reduce reliance on air conditioning. This keeps the community safe and comfortable, without exacerbating future climate change.

A sea wall might protect private property, but it can exacerbate erosion on other areas of the coast and reduce public access, recreation and other value. A 'living shoreline' which uses vegetation, sand, and rock to stabilize the coast might be more appropriate for protecting the coast and meeting the broader needs of the community.

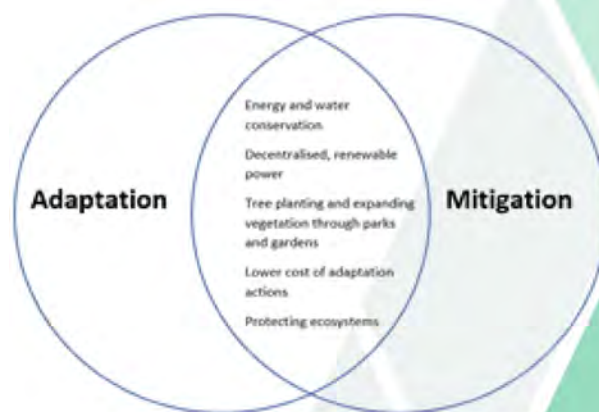
Co benefits of tackling climate change

Mitigation – action councils

take to reduce greenhouse gas emissions

Adaptation – action councils

take to help build community resilience to prepare for and cope with climate change



Taking either an adaptation or mitigation action can have benefits for the other. For example, planting trees can over time absorb more emissions, as well as providing shade and a cooling effect on heatwave days. Similarly, increasing forms of active transport can decrease emissions while also improving air quality – providing a health benefit.

Home energy efficiency measures such as insulation and block out blinds, which can reduce emissions and also be a cost effective way keep a home cool on hot days.

Another example is the Shadeways project at the City of Greater Bendigo, which provides a platform that integrates maps of land surface temperatures to inform users of urban hot spots.

This enable pedestrians and cyclists to understand how their route could expose them to extreme temperatures.

The platform interfaces well known mapping systems such as Google Maps and Apple Maps, allowing users to take advantage of hotspot information using apps they are familiar with. The platform also enables the council to communicate the benefits of

greening and to enable walkers and cyclist to move in comfort and safety.

This example links actions that promote mitigating climate change, such as walking and cycling, with allowing the community to do that at a safe and comfortable temperature, so enabling adaptation to climate change.

Acting on climate change also provides other co-benefits - it improves comfort and health, can lower the cost of living through reduced electricity bills, and increased greening can increase biodiversity.

Acting on climate change also allows us to take hold of new opportunities created by both our transition to a net-zero emissions and a climate resilient future.

Investing in climate change adaptation: Helps us to avoid future costs by building resilience now into our environments, our economy and society; and protects plants, animals, and communities – particularly those most vulnerable to the consequences of climate extremes.

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