
Toolkit

Climate Risk Ready NSW Guide



Published by NSW Department of Climate Change,
Energy, the Environment and Water
<https://www.climatechange.environment.nsw.gov.au/>

First published: June 2026

This version: June 2026

Image credit: John Spencer/NSW DCCEEW

Copyright and disclaimer

© State of New South Wales through Department of Climate Change, Energy, the Environment and Water 2024. Information contained in this publication is based on knowledge and understanding at the time of writing, June 2026, and is subject to change. For more information, please visit the following websites:

For ECCS documents:

<https://www.energy.nsw.gov.au/copyright>

For Water and Environment

<https://www.environment.nsw.gov.au/about-us/copyright-and-disclaimer>

For General NSW Government

<https://www.nsw.gov.au/nsw-government/copyright>



Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

Introduction

The **Climate Risk Ready NSW Toolkit** provides the practical tools and templates that support the [Climate Risk Ready NSW Guide](#). While the Guide sets out the overarching principles and 4-step process for managing climate-related risks and opportunities, the Toolkit helps organisations implement that guidance in practice. It translates the steps of the Climate Risk Ready process into usable resources that support planning, analysis, documentation, stakeholder engagement, decision-making and reporting.

The Toolkit is designed to be used alongside the Guide and referenced throughout each step of the process. Organisations can use all or selected tools depending on their size, risk exposure and climate risk maturity. The resources support a consistent and proportionate approach to completing climate

change risk and opportunity assessments, developing actions, and tracking progress over time. They are intended to strengthen transparency, support integration with existing governance and risk systems, and enable organisations to build capability

and adapt their approach as conditions and priorities change.

Each part of the **Toolkit** aligns directly with a step in the Climate Risk Ready process and is referenced throughout the Guide where it is most relevant.

Toolkit Part 1
1a
1b
1c
1d
1e
1f
Toolkit Part 2
2a
2b
2c
Toolkit Part 3
3a
3b
Toolkit Part 4
4a

Contents

The worksheets, checklists and tables in this toolkit are also available as an editable Word document. Download the *Climate Risk Ready user templates* to record your responses, adapt the tools to your context and save your work:



[Climate Risk Ready Toolkit user templates](#)

Toolkit Part 1	Toolkit Part 1 – Establish a foundation	5
1a	1a – Identifying values at risk	5
1b	1b – PESTLE prompt questions	8
1c	1c – Documentation template	9
1d	1d – Time horizons for climate risk and opportunity management	10
1e	1e – Template: Detailed stakeholder roles and engagement methods	12
1f	1f – Authorising environment explainer	13
Toolkit Part 2	Toolkit Part 2 – Identify, analyse and evaluate climate related risks and opportunities	14
2a	2a – Templates for documenting past and current climate-related impacts	14
2b	2b – Examples of climate-related risks and opportunities	19
2c	2c – Checklist: Reviewing your organisation’s risk management framework and governance	23
Toolkit Part 3	Toolkit Part 3 – Develop and implement an action plan to respond to climate related risks and opportunities	26
3a	3a – Action planning template	26
3b	3b – Action prioritisation checklist	27
Toolkit Part 4	Toolkit Part 4 – Monitor, evaluate, report and improve actions	29
4a	4a – Template for tracking implementation progress	29

Toolkit 1a – Identifying values at risk

This section helps you identify the things that matter most to your organisation, to help focus your assessment efforts. Identifying values at risk helps you focus your climate-related risk and opportunity assessment on what’s most important to your organisation and the people it serves. It also supports clearer communication, better prioritisation, and stronger alignment with your strategic goals and responsibilities¹.

Your organisation’s values may already be identified in documents such as:

- program or project management plans
- statements of intent
- risk registers (regardless of whether climate change has already been recognised as a risk)
- strategic plans or business cases.

When reviewing these documents and considering values at risk more broadly, think about:

- what does your organisation care about that could be affected by climate change or transition pressures?

- what is your organisation responsible for delivering or protecting?
- what would be disrupted, damaged or delayed if a climate hazard or transition driver occurred?
- what matters most to your organisation’s stakeholders – including its community, customers, staff and partners?
- are there pre-identified risks that could be amplified by climate change (e.g. supply chain disruption, infrastructure failure, reputational risk)?

Table 1 below gives some examples of values at risk to help you start identifying the values specific to your organisation.

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

¹ * In this guide, “values at risk” is used in a broad organisational sense referring to the services, outcomes, assets, people, cultural values and strategic objectives that could be affected by climate change. This is different from the traditional insurance or financial metric “Value at Risk (VaR)”, which focuses narrowly on the potential monetary loss of physical property or assets under specific hazard scenarios.

Table 1. Examples of values at risk

Value type	Description	Potential climate change impact
Strategic objectives or goals	The outcomes your organisation is working to achieve – such as reliable service delivery, regulatory compliance, or improved community wellbeing.	If climate change disrupts these objectives, it can affect your ability to meet mandates, deliver public value, or maintain funding and trust.
Core activities or services	The functions your organisation provides – such as transport, education, health, water management, or emergency response.	Climate impacts can disrupt service delivery, increase demand, or create new risks and opportunities.
Assets or infrastructure	These include physical and digital assets - such as buildings, roads, ICT systems, and natural assets.	Damage, degradation or reduced performance due to climate hazards or transition pressures can affect safety, operations and long-term costs.
Financial performance	This includes revenue, expenditure, insurance costs, and asset valuation.	Climate-related risks can increase costs, reduce income, or affect access to funding and insurance. Opportunities may also arise through efficiency, innovation or new markets.
Community wellbeing	This includes health, safety, equity, access to services, and social cohesion.	Climate change can disproportionately affect vulnerable groups and disrupt essential services, making it critical to understand and protect these values.
Cultural heritage	This includes sites, practices and traditions – especially Aboriginal cultural values.	Climate change can threaten places and practices that hold deep meaning, and adaptation must be culturally informed and inclusive.
Reputation and trust	This reflects public confidence in your organisation's ability to manage risk, deliver services and act responsibly.	Climate-related failures or missed opportunities can damage reputation, while proactive action can build trust and leadership.

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

Link values at risk to your risk management framework, risk register and strategic objectives

Making sure your values at risk are covered in your organisation's existing risk management framework, corporate risk register and strategic objectives ensures consistency across documents, supports integration with NSW Treasury's disclosure requirements (TPG24-33), and builds a strong case for assessing climate risks and opportunities.

Make sure you add any values-at-risk to your risk register that aren't already covered. Align

language and framing of values-at-risk with your risk framework (e.g. aligns with your organisation's definitions of risk appetite, likelihood, consequence and controls). This will help you apply consistent risk ratings in Step 2 and integrate climate risk into broader risk governance. Use Table 2 below to document how your values-at-risk link with your risk management framework, risk register and strategic objectives.

You will use this foundation in Step 2: Identify analyse and evaluate climate-related risks and opportunities. When assessing likelihood, consequence and adaptive capacity, refer to these linkages. This ensures your climate risk assessment is integrated, not siloed.

Table 2: Template for documenting how values-at-risk align with organisational risk management and strategic priorities. Examples are in italics.

Strategic objective or goal	Value at risk	Existing risk register entry	Climate-related risk or opportunity	Risk management framework alignment
<i>reliable service delivery</i>	<i>ICT systems</i>	<i>system outage risk</i>	<i>increased disruption due to extreme heat</i>	<i>appetite: moderate; rating method: consequence matrix</i>
<i>community wellbeing</i>	<i>access to health services</i>	<i>service continuity</i>	<i>increased demand during heatwaves</i>	<i>appetite: low; rating method: impact scale</i>
<i>financial sustainability</i>	<i>asset valuation</i>	<i>asset impairment</i>	<i>risk of stranded assets due to transition</i>	<i>appetite: low; rating method: financial impact</i>
<i>cultural heritage</i>	<i>Aboriginal cultural sites</i>	<i>not currently listed</i>	<i>risk of damage from bushfire or erosion</i>	<i>appetite: low; rating method: reputational impact</i>
<i>staff safety and wellbeing</i>	<i>workforce exposure</i>	<i>WHS incident risk</i>	<i>increased heat stress and air quality issues</i>	<i>appetite: low; rating method: health and safety criteria</i>



[Climate Risk Ready Toolkit user templates](#)

Toolkit 1b – PESTLE prompt questions

Political

- Are there relevant government policies or strategies?
- Are there upcoming elections or political shifts?
- Are there mandates or expectations from elected officials?

Economic

- Are there financial risks or opportunities related to climate change?
- Insurance or financial risk
- Are there funding sources or budget constraints?
- Are there economic trends affecting your sector?

Social

- Are community expectations changing?
- Are there vulnerable populations or equity concerns?
- Are there reputational risks or public interest issues?
- Are there cultural factors to consider, including First Nations rights and responsibilities?

Acknowledge the importance of caring for Country, cultural heritage, and practices that may need to be restored, supported or protected. Consider engaging with appropriate First Nations representatives to ensure respectful and informed inclusion.

Technological

- Are new technologies or innovations emerging that affect climate risk?
- Are there data or modelling tools available?
- Are there any digital transformation or automation considerations?

Legal

- Are there regulatory requirements or compliance obligations?
- Are there disclosure or reporting standard obligations?
- Are there legal risks or liabilities?

Environmental

- Are there recent or projected climate impacts?
- Are there environmental dependencies or sensitivities?
- Are there natural hazard risks or pressures(e.g. flood, fire, heat)?

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

Toolkit 1c – Documentation template

Use this template to document your organisation's current risk governance and identify opportunities to integrate climate-related risks and opportunities into existing systems.

1. Risk governance structures

Committees, boards or working groups overseeing risk, strategy, sustainability or performance:

[Insert names and descriptions]

How risk information is escalated, reported and acted on:

[Insert process description]

Decision-making authorities and accountabilities:

[Insert details of who is responsible for oversight, assurance and decision-making]

Climate Change Risk Officer (CCRO) or equivalent role:

[Insert name, role, responsibilities or note if not applicable]

2. Risk appetite

Location of Risk Appetite Statement:

[Insert document name or location]

Does the statement reference climate-related risks?

☐ Yes ☐ No ☐ Partially – explain

[Insert explanation]

Summary of climate risk tolerance and escalation thresholds:

[Insert summary]

3. Integration points

Opportunities to integrate climate-related risks and opportunities into:

Risk categories:

[Insert notes]

Risk registers:

[Insert notes]

Reporting processes:

[Insert notes]

Proposed strategic-level climate risk statement (if applicable):

[Insert draft statement]

Identified gaps or improvement opportunities:

[Insert list or summary]

4. Documentation summary

Key findings from this activity:

[Insert summary]

Decisions made or proposed changes:

[Insert details]

Storage location for documentation:

[Insert SharePoint folder, document name or other location]

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

Toolkit 1d – Time horizons for climate risk and opportunity management

Time horizons are the future periods over which your organisation will assess climate-related risks and opportunities. Selecting appropriate time horizons ensures your assessment aligns with planning cycles, asset lifespans and disclosure requirements.

Climate-related risks and opportunities often emerge over different timeframes:

- Transition risks and opportunities tend to emerge over shorter timeframes due to policy, market and technology shifts.
- Physical risks tend to manifest over longer timeframes due to gradual changes in climate variables and increasing hazard exposure.

NSW Treasury's TPG24-33 climate disclosure requirements recommend assessing risks and opportunities across **short, medium and long-term** horizons.

Recommended time horizons

Use the following guidance to select time horizons for your assessment. These should be adapted to suit your organisation's planning cycles and strategic needs. Example time horizons in Table 1 below.

How to apply time horizons

- use existing planning cycles: align time horizons with your organisation's strategic, asset and financial planning processes.
- consider asset lifespans: for infrastructure or long-lived assets, ensure physical risk horizons match design life and investment planning.
- support disclosure alignment: use three distinct horizons to meet [NSW Treasury's TPG24-33](#) requirements and support future Commonwealth disclosures.
- differentiate risk types: recognise that transition risks may peak earlier, while physical risks may intensify over time.

Example application in Table 2 below.

Step references

Step 1: define time horizons as part of scoping your climate-related risk and opportunity assessment.

Step 2: use time horizons to assess likelihood, consequence and adaptive capacity across different futures.

Step 3: use time horizons to inform the timing of risk treatments.

Step 4: apply time horizons when rating risks and opportunities under different climate scenarios.

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

Table 1: recommended time horizons

Horizon	Transition risks and opportunities (shorter timeframes)	Physical risks and opportunities (longer timeframes)
Short term	12–24 months	To 2040
Medium term	3–5 years	2060–2070
Long term	10–20 years	2090–2100

Table 2: example application

Asset or function	Risk type	Relevant horizon	Reasoning
ICT systems	Transition	Short term	Rapid technology and policy change
Community health services	Physical	Medium term	Increasing heatwaves and service demand
Coastal infrastructure	Physical	Long term	Sea level rise and erosion risk
Vehicle fleet	Transition	Medium term	Electrification and emissions targets

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

Toolkit 1e – Template: Detailed stakeholder roles and engagement methods²

Stakeholder name	Role or function	Internal or external	Area of interest or impact	Influence level	Interest level	Engagement priority	Engagement method	Timing	Responsible team member	Notes
Risk Manager	Enterprise risk oversight	Internal	Risk framework alignment, disclosure compliance	high	medium	engage	briefing paper, regular updates	project start, mid-point, final endorsement	Project lead	Key contact for integrating climate risks into existing registers
Sustainability Lead	Climate strategy and reporting	Internal	Adaptation planning, emissions reduction	high	high	collaborate	co-design workshops, shared documents	ongoing throughout process	Project lead	May be project lead or CCRO
Asset Manager	Infrastructure and maintenance	Internal	Physical risk exposure, asset resilience	medium	high	engage	workshop participation, review draft outputs	during Step 2 and Step 3	Assessment team	Important for identifying vulnerable assets and planning upgrades
NSW Treasury	Regulator	External	Climate-related financial disclosures	high	medium	engage	formal submission, compliance check-in	prior to finalisation of outputs	Governance lead	Ensure alignment with TPG24-33
Local council	Community partner	External	Shared infrastructure and service delivery	medium	high	engage	joint planning session, shared data	during scoping and adaptation planning	Engagement officer	Engage early to identify interdependencies
Community rep	Local resident or group leader	External	Impacts to services, equity and resilience	low	high	consult	survey, targeted engagement session	during scoping and adaptation planning	Engagement officer	May provide insights into vulnerable populations or service gaps
Finance team	Budgeting and financial planning	Internal	Cost-benefit analysis, transition risk exposure	high	medium	engage	review draft outputs, budget planning meetings	during Step 3	Finance lead	Supports prioritisation and funding of adaptation actions
Executive sponsor	Strategic oversight and approvals	Internal	Governance, resourcing, visibility	high	high	collaborate	briefing paper, regular updates	project start, mid-point, final endorsement	Project lead	Critical for securing support and approvals

² Note that this list is demonstrative in nature. It may not capture all the stakeholders you need to include in your assessment.



Toolkit 1f – Authorising environment explainer

An authorising environment is the formal and informal support that enables staff to act with confidence and legitimacy. It ensures endorsement from senior leaders to create the conditions for staff to allocate time, collaborate across teams, and escalate issues when needed.

To build an authorising environment for climate risk and opportunity management:

- secure formal endorsement from executives or governance bodies
- embed climate risk into existing risk management and planning frameworks
- assign clear roles and responsibilities, including a CCRO or equivalent lead
- ensure reporting pathways are visible and supported
- communicate that climate risk is a strategic issue, not just a compliance task.

Talking points to engage leaders

Financial sustainability: “Managing climate risk helps us avoid costly disruptions, protect assets, and make better investment decisions.”

Service continuity: “Climate-related risks can affect our ability to deliver services. Proactive planning ensures we stay operational and responsive.”

Regulatory compliance: “This work is required under the Climate Change (Net Zero

Future) Act and NSW Treasury’s TPG 24-33 and TPP 20-08.”

Reputation and trust: “Stakeholders expect us to lead on climate resilience. Transparent action builds public confidence and sector credibility.”

Leadership accountability: “Endorsing this work signals that climate risk is a strategic priority and that our leadership is committed to long-term resilience.”

Checklist for executive briefing and endorsement

Staff time and expertise

- ☐ have relevant teams been identified (e.g. risk, sustainability, asset management, finance)?
- ☐ is there a nominated climate change risk officer (CCRO) or equivalent lead?
- ☐ are staff available to support workshops, data collection, and analysis?

- ☐ is additional training or capability support required?

Budget and external support

- ☐ is internal funding available to support the assessment and management process?
- ☐ will external expertise be needed (e.g. climate scenario analysis, facilitation, technical modelling)?
- ☐ are procurement processes understood and aligned with NSW Government SME procurement guide?

Governance and reporting arrangements

- ☐ has executive sponsorship been secured?
- ☐ are reporting pathways clear (e.g. audit and risk committee, executive papers, treasury disclosures)?
- ☐ will progress be tracked through existing governance structures?
- ☐ are escalation protocols documented and embedded in risk management frameworks?

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a

Toolkit 2a – Templates for documenting past and current climate-related impacts

These templates support Step 2 of the Climate Risk Ready NSW process by helping organisations to document observed climate-related impacts, stakeholder insights and organisational consequences. This builds context and credibility to use the Climate Risk Assessment Tool. *Examples are in italics.*

Organisation name:	
Contact person	<i>e.g. Project Lead</i>
Assessment scope:	<i>e.g. whole-of-organisation, specific program, asset or service</i>
Time period covered:	<i>e.g. last 5 years, last 10 years</i>

Section 1: Summary of observed impacts

Record observed climate-related impacts and categorise them.

Table 1: a template to record and categorise observed climate-related impacts.

Impact type	Impact reference	Description of impact	Date or period	Affected assets, services or stakeholders	Source of information
physical hazard	<i>flood</i>	<i>February 2022 flood event caused damage to regional health facilities and disrupted patient transport</i>	<i>Feb 2022</i>	<i>Health infrastructure, ambulance services</i>	<i>Internal incident report</i>
transition driver	<i>retrofit costs</i>	<i>Introduction of new energy efficiency standards increased retrofit costs for public housing</i>	<i>July 2023 onward</i>	<i>Housing asset management, procurement teams</i>	<i>Policy bulletin, internal budget review</i>
physical hazard	<i>heatwave</i>	<i>Heatwave in western Sydney led to increased emergency department presentations and staff fatigue</i>	<i>Jan 2024</i>	<i>Health services, workforce</i>	<i>Staff feedback, health data</i>
transition driver	<i>procurement</i>	<i>Announcement of net zero procurement targets led to supplier contract renegotiations</i>	<i>Nov 2023</i>	<i>Procurement, legal, finance</i>	<i>Executive briefing, supplier engagement notes</i>

Section 2: Consequences and responses

Summarise the consequences, responses and lessons learned for each identified impact. You could combine this with the previous table.

Table 2: a template to record consequences, responses and lessons learned for each identified impact

Impact reference (from Section 1)	Consequences (e.g. financial, operational, reputational)	Response taken (if any)	Effectiveness of response	Lessons learned or gaps identified
<i>flood</i>	<i>Facility damage, service disruption</i>	<i>Emergency repairs, temporary relocation</i>	<i>Moderate</i>	<i>Need for flood-resilient design standards</i>
<i>retrofit costs</i>	<i>Budget pressure, delayed upgrades</i>	<i>Reprioritised works, applied for grants</i>	<i>Low</i>	<i>Need for early scenario planning and cost modelling</i>
<i>heatwave</i>	<i>Staff fatigue, increased patient load</i>	<i>Adjusted rosters, activated cooling protocols</i>	<i>High</i>	<i>Need for long-term passive cooling upgrades</i>
<i>procurement</i>	<i>Contract delays, legal review</i>	<i>Supplier workshops, contract updates</i>	<i>Moderate</i>	<i>Need for clearer transition risk guidance in procurement</i>

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Section 3: Stakeholder insights

Record any feedback or insights from staff, community members, service users or partners about past and current climate-related impacts.

Table 3: A template to record stakeholder insights on past and current climate-related impacts.

Stakeholder group	Summary of feedback	Date collected	Method of collection
Health workforce	Staff reported increased fatigue and stress during heatwaves, especially in older facilities without passive cooling.	February 2024	Staff survey and debrief sessions
Asset managers	Concerns raised about rising retrofit costs and lack of clarity on future standards.	March 2024	Internal workshop
Procurement team	Reported delays and confusion following new net zero procurement requirements.	April 2024	Team meeting notes
Community representatives	Expressed concern about service disruptions during extreme weather events.	May 2024	Community consultation forum

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



Climate Risk Ready Toolkit user templates

Section 4: Implications for risk assessment

Summarise how the documented impacts will inform your climate-related risk and opportunity assessment.

Table 4: a template to record how the documented impacts will inform your CCROA

Category	Details
Key risks or opportunities identified	• risk of service disruption due to extreme weather; opportunity to improve asset resilience through design upgrades • risk of financial exposure from transition-related policy changes • risk of reputational damage due to delayed procurement responses • opportunity to strengthen stakeholder engagement and preparedness
Relevant climatic drivers	• extreme rainfall, heatwaves, policy shifts, procurement standards • energy efficiency regulations, net zero targets
Timeframes affected	• physical risks: medium to long term • transition risks: short to medium term • stakeholder risks: immediate to medium term
Links to existing risk register entries	• business continuity, asset management, procurement compliance • workforce health and safety, stakeholder engagement

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



Climate Risk Ready Toolkit user templates

Section 5: Impacts on organisational values

Describe how past and current climate-related events have affected your customers, staff, assets or services. It can be used to inform risk identification and scenario analysis.

Table 5: A template to record how past and current climate-related events have affected your customers, staff, assets or services

Impact reference	Affected value category	Description of impact	Timeframe of impact	Source of information
Coastal erosion	Infrastructure and assets	Damage to foreshore facilities, increased maintenance and repair costs	Ongoing since 2020	Asset maintenance records
Heatwave	Community wellbeing	Increased health service demand and heat-related illness among vulnerable populations	Summer 2023 -24	Health service data, community feedback
Flooding	Financial sustainability	Emergency response costs and delayed capital works	Feb 2022	Internal finance report
Policy shift	Reputation	Public criticism due to delayed response to new net zero procurement requirements	Nov 2023	Media coverage, stakeholder feedback
Bushfire smoke	Cultural heritage	Smoke damage to heritage-listed buildings and disruption to cultural events	Jan 2020	Heritage team report, event records

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



Climate Risk Ready Toolkit user templates

Toolkit 2b – Examples of climate-related risks and opportunities

Table 1: Examples of physical hazards and related risks and opportunities

Physical driver category (hazard)	Description	Examples of risks	Examples of opportunities (response-led unless marked otherwise)
Extreme heat	Increase in frequency, intensity and duration of hot days and heatwaves.	- health impacts for staff and vulnerable communities - reduced productivity and service disruption - increased cooling costs and energy demand	- improved passive design and energy efficiency - urban greening and shading programs
Flooding (riverine and flash)	More intense rainfall events leading to flash flooding and riverine inundation.	- damage to assets and infrastructure - service disruption and safety risks - increased maintenance and insurance costs	- improved stormwater management and asset design - improved connectivity of wetlands to support waterbird and fish movement (driver-led opportunity) - co-investment in flood mitigation infrastructure - community engagement on preparedness
Sea-level rise and coastal hazards	Gradual rise in sea levels and increased coastal erosion and storm surge.	- asset loss or relocation costs - reduced land availability and planning constraints - reputational risk if unaddressed	- strategic land use planning and managed retreat - nature-based coastal protection - improved long-term asset resilience
Bushfire risk	Increased frequency and severity of bushfires due to hotter, drier conditions.	- damage to assets and disruption to services - health and safety risks for staff and communities - increased operational costs	- improved emergency planning and asset design - increased engagement of First Nations peoples to conduct cultural burning practices

Notes: driver-led risks and opportunities are caused directly by the driver; response-led risks and opportunities are caused by responses to those direct risks and opportunities. Most physical risks are driver-led and most physical opportunities are response-led.

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Table 2: Example transition drivers and their related risks and opportunities

Transition driver category	Description	Examples of risks	Examples of opportunities (driver-led unless marked otherwise)
Policy and regulation	Changes in laws, standards, targets or government policies related to emissions, energy, climate resilience or procurement.	- increased costs due to carbon pricing or new compliance requirements - stranded assets due to policy shifts - reputational risk from non-compliance	- access to funding or incentives for low-emissions upgrades - early compliance builds trust with regulators - improved resilience through policy-aligned planning (response-led opportunity)
Technology	Shifts in available or dominant technologies that affect how services are delivered or assets are managed.	- existing assets or systems becoming obsolete - high upfront costs for new technologies - limited access to low-emissions alternatives	- efficiency gains from electrification or automation - access to innovations to improve service delivery - access to new technologies to reduce emissions
Market and economy	Changes in supply, demand, costs or financial markets as economies transition to net zero.	- rising costs of carbon-intensive inputs - reduced market share for high-emissions services - volatility in insurance or financing	- new markets for low-emissions services or products - reduced operating costs from efficiency gains (response-led opportunity) - improved access to sustainable finance
Reputation and expectations	Changing public, investor, community or stakeholder expectations around climate responsibility.	- loss of trust or credibility - reduced ability to attract staff, partners or funding - increased scrutiny or activism	- enhanced reputation as a climate leader - stronger stakeholder relationships - improved staff engagement and retention
Legal and liability	Litigation or claims arising from climate-related impacts, non-disclosure or failure to act.	- legal action over inadequate adaptation or emissions management - increased insurance costs or indemnity exposure	- reduced liability through proactive disclosure and planning (response-led opportunity) - strengthened governance and compliance culture

Notes: **driver-led** risks and opportunities are caused directly by the driver; **response-led** risks and opportunities are caused by responses to those direct risks and opportunities. Most transition risks and opportunities are driver-led.


[Climate Risk Ready Toolkit user templates](#)

Table 3: Example risk and opportunity statements with optional additions

Type	Statement	Time horizon	Confidence rating	Affected area	Related controls	Assumptions/uncertainties
Risk (physical driver-led)	<i>By 2050, more frequent heatwaves may reduce staff availability and increase service disruption.</i>	Medium (to 2050)	High	Workforce, service delivery	Flexible rostering, heat protocols	Based on SSP2-4.5; assumes current staffing levels and no passive cooling upgrades
Risk (physical driver-led)	<i>By 2030, increased heat-related illness among vulnerable tenants may lead to higher demand for health services and strain on community programs.</i>	Short (to 2030)	Medium	Community services, health	Community outreach, passive cooling retrofits	Assumes no change in health funding or tenant demographics
Risk (compounding)	<i>By 2050, heatwaves and bushfire smoke may simultaneously affect staff health and transport access, compounding service disruption.</i>	Medium (to 2050)	Medium	Workforce, transport, service continuity	Emergency response plans, air quality monitoring	Assumes increased frequency of both hazards under SSP3-7.0
Risk (cascading transition)	<i>Sharp carbon price increases after 2030 may raise retrofit costs, delaying upgrades and reducing building resilience to heat.</i>	Medium (to 2050)	Low	Housing assets, finance, community wellbeing	Retrofit program, procurement strategy	Based on NGFS Disorderly Transition; assumes limited supply of low-carbon materials
Risk (aggregate)	<i>A flood event and a cyberattack occurring together may disrupt asset operations and compromise resident data, reducing trust and service continuity.</i>	Short (to 2030)	Medium	ICT systems, asset operations, stakeholder trust	Business continuity plan, data security protocols	Assumes increased flood risk and rising cyber threats
Opportunity (transition driver-led)	<i>New funding for electrification may enable fleet upgrades, reducing emissions and improving air quality in high-risk regions.</i>	Short (to 2030)	High	Fleet, procurement, community health	EV transition roadmap, grant application process	Assumes funding availability and technology readiness
Opportunity (physical driver-led)	<i>Warmer winters may reduce heating costs and allow reallocation of budget to resilience upgrades.</i>	Medium (to 2050)	Medium	Workplaces, offices, other assets	Insulation and thermal efficiency measures	Assumes warmer-than-average temperatures throughout cooler months (does not account for extreme variations)

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Table 4: Example of a risk and opportunity prioritisation table

Statement	Time horizon	Likelihood	Consequence	Risk rating	Impact/ Value affected	Strategic importance	Confidence rating	Notes / rationale
More frequent heatwaves may reduce staff availability and increase service disruption.	Medium (to 2050)	Likely	Major	High	Affects critical services	High	High	Based on NARcliM SSP2-4.5 projections
Carbon pricing may increase retrofit costs and delay upgrades.	Medium (to 2050)	Possible	Moderate	Medium	Affects housing upgrades	Medium	Medium	Based on NGFS Disorderly Transition
New funding for electrification may enable fleet upgrades.	Short (to 2030)	Likely	Moderate (positive)	High (opportunity)	Aligns with net zero goals	High	High	Funding confirmed in budget
Sea level rise may increase maintenance costs for coastal infrastructure.	Long (to 2070)	Possible	Major	High	Affects long-term asset planning	High	Medium	Based on NARcliM SSP5-8.5 projections and asset vulnerability mapping
Community partnerships may improve climate resilience and reduce service disruption.	Medium (to 2050)	Likely	Moderate (positive)	Medium (opportunity)	Supports service continuity	High	High	Based on recent pilot programs and stakeholder feedback

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Toolkit 2c – Checklist: Reviewing your organisation’s risk management framework and governance

You can use this checklist to review your organisation’s existing risk framework and governance arrangements and assess their readiness to support climate-related risk and opportunity management. Note any potential changes to risk criteria or governance roles that may be needed based on these early findings or gaps identified.

Risk framework alignment

- ☐ **review how likelihood and consequence are currently defined:** do they allow for long-term risks, scenario-based changes, risks that affect multiple parts of the organisation, and risks that increase in likelihood over time?
- ☐ **check whether time horizons are considered:** does the framework support short, medium and long-term risk ratings?
- ☐ **confirm whether emerging risks (like climate-related risks) are recognised:** is there a process for identifying and escalating new or evolving risks?
- ☐ **assess whether risk appetite guidance applies to climate risks:** can climate risks be prioritised appropriately within existing thresholds?
- ☐ **identify any adjustments that may be needed to accommodate physical and transition risks:** e.g. redefining ‘rare’ events, adding climate-specific consequence categories

Governance alignment

- ☐ **identify who is responsible for oversight* of climate-related risks:** e.g. audit and risk committee, executive leadership team, CCRO
- ☐ **check whether climate risks are integrated into governance processes:** e.g. risk reporting, strategic planning, performance reviews, decision making
- ☐ **check if climate risks are included in enterprise risk registers:** are they tracked alongside financial, operational and reputational risks?
- ☐ **check if there is a process for reviewing and updating climate risks over time:** e.g. periodic reviews, scenario updates, monitoring effectiveness of controls
- ☐ **align proposed changes with enterprise processes:** Work with your organisation’s risk function to ensure any proposed adjustments are consistent with enterprise processes and can be documented transparently.

- ☐ **document all proposed changes:** Record any changes to risk criteria or thresholds that will be used in your climate-related risk and opportunity assessment. This will help ensure consistency when rating risks in Step 2 and treating them in Step 3.

** You may also want to assess and document the climate risk capability (do those with oversight responsibilities understand climate-related risks, opportunities and reporting expectations and do they receive any training on this) of governance roles (e.g. Audit and Risk Committee, Executive Leadership Team).*

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Adaptation action prioritisation checklist – Step 3

Use this checklist after identifying potential adaptation actions. It supports prioritisation, integration, and risk screening, and helps avoid maladaptation across physical, social, institutional, and behavioural domains.

1. Strategic Fit and Integration

- ☐ does this action align with your organisation's climate vision and strategic goals?
- ☐ is it integrated across systems (e.g. infrastructure, biodiversity, community services, governance)?

Could this action unintentionally:

- ☐ undermine another service or asset (e.g. shading grass, blocking drainage)?
- ☐ unintentionally reduce awareness, motivation, or capacity to adapt in future (e.g. through over-reliance on financial instruments or external protections)?
- ☐ displace risk to another group or location (e.g. retreat from one area increasing pressure elsewhere)?
- ☐ reduce future flexibility or lock in a single pathway?
- ☐ have you considered cross-sector impacts (e.g. health, education, transport, finance)?
- ☐ is this action part of a broader adaptation pathway or just a standalone fix?

2. Stakeholder Engagement and Support

- ☐ Have you consulted relevant internal and external stakeholders?
- ☐ Does this action reflect stakeholder values, rules, and knowledge (VRK framework)?
- ☐ Is there buy-in from those responsible for implementation?
- ☐ Have you considered First Nations perspectives or cultural implications?
- ☐ Have you identified any conflicting priorities or resistance?

3. Maladaptation Risk Screening

For each action, ask:

- ☐ Could this increase greenhouse gas emissions (e.g. energy-intensive cooling systems)?
- ☐ Could it disproportionately burden vulnerable groups (e.g. cost-shifting, relocation)?
- ☐ Does it have high opportunity costs (e.g. using funds that could deliver broader benefits)?
- ☐ Could it reduce incentives or capacity to adapt in future (e.g. reliance on subsidies or insurance)?
- ☐ Could it lock in future limitations (e.g. infrastructure that can't be retrofitted or scaled)?

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Toolkit Part 1
1a
1b
1c
1d
1e
1f
Toolkit Part 2
2a
2b
2c
Toolkit Part 3
3a
3b
Toolkit Part 4
4a

4. Prioritisation Criteria (MCA Inputs)

Score each action (e.g. 1–5) against the following:

- ☐ **Urgency:** Is immediate action required?
- ☐ **Preparatory value:** Will it reduce future damage or costs?
- ☐ **Range of effect:** Does it address multiple risks or systems?
- ☐ **Efficiency and effectiveness:** Is it a good use of resources?
- ☐ **Socioeconomic implications:** Will it benefit or harm communities?
- ☐ **Technical feasibility:** Can it be delivered with current capabilities?
- ☐ **Robustness:** Will it work under different climate futures?
- ☐ **Flexibility:** Can it be adjusted over time?
- ☐ **Political and cultural acceptability:** Is it likely to be supported?
- ☐ **Cost–benefit ratio:** Is it economically sound?

5. Implementation Feasibility

- ☐ Is this action feasible under current policies and regulations?
- ☐ Are resources (funding, staff, time) available or accessible?
- ☐ Can this action be staged or scaled if needed?
- ☐ Is there a clear owner or responsible party?
- ☐ Is the action compatible with existing business-as-usual processes?

6. Adaptation Pathways Planning

- ☐ Have you identified trigger points or thresholds for implementation?
- ☐ Have you assessed lead times for planning and delivery?
- ☐ Have you defined decision points for review or adjustment?
- ☐ Can this action be visualised in a pathway map?
- ☐ Does the action support long-term resilience and flexibility?

7. Regret-Based Framing

- ☐ Is this a no-regret option (beneficial under all futures)?
- ☐ Is it a low-regret option (small additional cost for future benefit)?
- ☐ Is it a medium- or high-regret option (only beneficial under specific futures)?
- ☐ Have you considered how this action performs under uncertainty?

8. Enablers and Barriers Review

- ☐ Have you identified enablers (e.g. supportive policies, funding, partnerships)?
- ☐ Have you identified barriers (e.g. conflicting rules, lack of knowledge or values)?
- ☐ Have you planned tasks to address key barriers before implementation?
- ☐ Have you considered how to build adaptive capacity (e.g. training, awareness, governance reform)?



Toolkit 3a – Action planning template

You can use this template in combination with the Climate Risk Assessment Tool to record the essential details for each adaptation or transition action. Start with your prioritised risks and opportunities from Step 2. Once completed, the information can be fed directly into the Risk Register tab of the Climate Risk Assessment Tool to ensure consistency and support monitoring over time.

Table 1: Action planning template

Risk/opportunity	Action (enough detail to make it actionable)	Timeframe	Responsibility (role or team)	Resources (human and financial)	Triggers / thresholds	Co-benefits or trade-offs	Trade-offs / maladaptation risks
<i>Flood risk to depot</i>	<i>Upgrade drainage system</i>	<i>Short-term</i>	<i>Asset Manager</i>	<i>\$50k</i>	<i>Rainfall exceeds design capacity</i>	<i>Improves service continuity</i>	<i>Increased maintenance costs</i>
<i>Increased heat stress for staff</i>	<i>Develop and test heatwave response plan</i>	<i>Short-term</i>	<i>WHS Manager</i>	<i>Staff training budget</i>	<i>Heatwave warning issued</i>	<i>Protects health and productivity</i>	<i>May require additional cooling energy</i>
<i>Extreme heat disrupts essential services</i>	<i>Update asset management plans and response procedures to plan for extreme heat conditions</i>	<i>Medium-term</i>	<i>Infrastructure Lead</i>	<i>Internal resources</i>	<i>Annual asset review cycle</i>	<i>Improves resilience of critical services</i>	<i>Potential upfront cost burden</i>
<i>Opportunity to purchase affordable electric vehicles</i>	<i>Create electrification roadmap for fleet and plant</i>	<i>Medium-term</i>	<i>Fleet Manager</i>	<i>\$250k</i>	<i>Procurement cycle for new vehicles</i>	<i>Reduces emissions and operating costs</i>	<i>Disposal of old fleet may create waste</i>
<i>Urban heat island effect increases risk of heat stress in urban areas</i>	<i>Implement urban heat strategy to improve natural cooling and provide areas for refuge (e.g., surface treatments, shade)</i>	<i>Long-term</i>	<i>Planning Team</i>	<i>\$500k</i>	<i>Temperature exceeds design threshold</i>	<i>Improves community amenity and biodiversity</i>	<i>Higher water use for vegetation</i>

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Toolkit 3b – Action prioritisation checklist

Use this checklist as a reflective guide after identifying potential actions. It supports prioritisation, integration, and risk screening, and helps avoid maladaptation across physical, social, institutional, and behavioural domains.

1. Strategic fit and integration

- ☐ Does this action align with your organisation's climate vision and strategic goals?
- ☐ Is it integrated across systems (e.g. infrastructure, biodiversity, community services, governance)?

Could this action unintentionally:

- ☐ undermine another service or asset (e.g. shading grass, blocking drainage)?
- ☐ unintentionally reduce awareness, motivation, or capacity to adapt in future (e.g. through over-reliance on financial instruments or external protections)?
- ☐ displace risk to another group or location (e.g. retreat from one area increasing pressure elsewhere)?
- ☐ reduce future flexibility or lock in a single pathway?
- ☐ have you considered cross-sector impacts (e.g. health, education, transport, finance)?
- ☐ is this action part of a broader adaptation or transition pathway or just a standalone fix?

2. Stakeholder engagement and support

- ☐ Have you consulted relevant internal and external stakeholders?
- ☐ Does this action reflect stakeholder values, rules, and knowledge (VRK framework)?
- ☐ Is there buy-in from those responsible for implementation?
- ☐ Have you considered First Nations perspectives or cultural implications?
- ☐ Have you identified any conflicting priorities or resistance?

3. Maladaptation risk screening

For each action, ask:

- ☐ could this increase greenhouse gas emissions (e.g. energy-intensive cooling systems)?
- ☐ could it disproportionately burden vulnerable groups (e.g. cost-shifting, relocation)?
- ☐ does it have high opportunity costs (e.g. using funds that could deliver broader benefits)?
- ☐ could it reduce incentives or capacity to adapt in future (e.g. reliance on subsidies or insurance)?
- ☐ could it lock in future limitations (e.g. infrastructure that can't be retrofitted or scaled)?

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)

Toolkit Part 1
1a
1b
1c
1d
1e
1f
Toolkit Part 2
2a
2b
2c
Toolkit Part 3
3a
3b
Toolkit Part 4
4a

4. Prioritisation criteria (multi-criteria analysis inputs)

Score each action based on how much it reflects the statement for your organisation. The actions with the highest scores are the ones you should consider being priority against the following (e.g. 1-5):

- ☐ **Urgency:** Is immediate action required?
- ☐ **Preparatory value:** Will it reduce future damage or costs?
- ☐ **Range of effect:** Does it address multiple risks or systems?
- ☐ **Efficiency and effectiveness:** Is it a good use of resources?
- ☐ **Socioeconomic implications:** Will it benefit communities?
- ☐ **Technical feasibility:** Can it be delivered with current capabilities?
- ☐ **Robustness:** Will it work under different climate futures?
- ☐ **Flexibility:** Can it be adjusted over time?
- ☐ **Political and cultural acceptability:** Is it likely to be supported?
- ☐ **Cost-benefit ratio:** Is it economically sound?

5. Implementation feasibility

- ☐ Is this action feasible under current policies and regulations?
- ☐ Are resources (funding, staff, time) available or accessible?
- ☐ Can this action be staged or scaled if needed?
- ☐ Is there a clear owner or responsible party?
- ☐ Is the action compatible with existing business-as-usual processes?

6. Pathways planning

- ☐ Have you identified trigger points or thresholds for implementation?
- ☐ Have you assessed lead times for planning and delivery?
- ☐ Have you defined decision points for review or adjustment?
- ☐ Can this action be visualised in a pathway map?
- ☐ Does the action support long-term resilience and flexibility?

7. Regret-based framing

- ☐ Is this a no-regret option (beneficial under all futures)?
- ☐ Is it a low-regret option (small additional cost for future benefit)?
- ☐ Is it a medium- or high-regret option (only beneficial under specific futures)?
- ☐ Have you considered how this action performs under uncertainty?

8. Enablers and barriers review

- ☐ Have you identified enablers (e.g. supportive policies, funding, partnerships)?
- ☐ Have you identified barriers (e.g. conflicting rules, lack of knowledge or values)?
- ☐ Have you planned tasks to address key barriers before implementation?
- ☐ Have you considered how to build adaptive capacity (e.g. training, awareness, governance reform)?



Toolkit 4a – Template for tracking implementation progress

This table is adapted from NSW Evaluation Framework and Climate Risk Ready guidance.

Action	Indicator/Metric	Target	Baseline	Frequency	Responsible	Escalation Trigger / Threshold
Staff training on climate risk	Number of staff trained	80% of staff by June 2025	10%	Biannual	HR Lead	Training completion <50% by mid-year
Integrate climate risk into risk register	Risk register updated	All priority risks included by Q2 2025	Partial	Annual	Risk Manager	Missing climate risks in register
Reduce Scope 1 and 2 emissions	Tonnes CO ₂ e	50% reduction by 2030	2020 baseline	Quarterly	Sustainability Lead	Emissions trend off-track for target
Implement adaptation actions	% of priority actions implemented	100% by 2028	0%	Quarterly	Project Lead	<50% implementation after 2 years
Review climate risk maturity	Health Check completed	Every 3 years	Current level	Triennial	CCRO	No improvement in maturity level
Embed MERI in governance	MERI reporting in Audit & Risk Committee papers	Included every quarter	Not embedded	Quarterly	Governance Officer	MERI report not tabled
Monitor service disruptions	Number of climate-related disruptions	Reduce by 20% over 5 years	Current average	Annual	Operations Manager	Increase in disruptions year-on-year
Track policy changes	Number of relevant policy updates integrated	All major changes within 6 months	N/A	Ongoing	Policy Lead	Missed compliance deadline
Community engagement	Number of engagement sessions held	4 sessions per year	0	Quarterly	Engagement Lead	<2 sessions held annually

Toolkit Part 1

1a

1b

1c

1d

1e

1f

Toolkit Part 2

2a

2b

2c

Toolkit Part 3

3a

3b

Toolkit Part 4

4a



[Climate Risk Ready Toolkit user templates](#)