

CLIMATE RISK MANAGEMENT GUIDELINE FOR QUEENSLAND GOVERNMENT DEPARTMENTS



**QUEENSLAND
CLIMATE READY
PROGRAM**

SUPPORTING GOVERNMENT
CLIMATE RISK MANAGEMENT



**Griffith
UNIVERSITY**

Queensland, Australia



**Queensland
Government**

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This Guideline is informed by existing guidelines, such as the CSIRO's *Climate Compass* (2018), Queensland Health's *Climate Risk Strategy 2021–2026* (2021) and *Climate Change Adaptation Planning Guidance Guidelines* (2019), and the NSW Government's *Climate Risk Ready NSW Guide* (2020).

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List of Case Studies [†]

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Glossary of Terms

Adaptation: The adjustment to actual or expected climate risks in order to minimise harm and/or maximise beneficial opportunities.

Adaptive capacity: The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.

Baseline Assessment (scan cycle): An initial or high-level first examination of a department to identify the most relevant climate risks, to prioritise further work, or to scope for other cycles of climate risk assessments.

Climate: The average climate conditions over a period of time (typically 30 years).

Climate change: A change in the state of the climate that persists for an extended period, typically decades or longer. Climate change may be a result of natural internal processes or external forcing, such as modulations of the solar cycles, volcanic eruptions, and human influence through atmospheric emissions or land use.

Climate risk: The economic, environmental, and social impacts of changing climate conditions on our human and natural systems. Climate risk is made up of two types of risk: physical (acute and chronic) and transition. These risks give rise to other risks, such as liability and reputational damage.

Climate risk management (CRM): The process of identifying, assessing, and managing climate change impacts, from short-term extreme weather events to long-term gradual changes.

Disaster: A serious disruption in a community or a society or an environment at any scale, due to hazards interacting with conditions of exposure, vulnerability, and capacity, leading to one or more human, material, economic or environmental losses and impacts, and requiring a coordinated response by the State and other entities.

Emissions: The release of human-induced greenhouse gases (GHG) into the Earth's atmosphere.

Emissions reduction: The measurable reduction in the concentration of GHG released into the Earth's atmosphere from a specified activity or over a specified area, and over a specified period of time.

Exposure: The inventory of elements in an area in which hazard events may occur. Exposure is a necessary determinant of risk. It is possible to be exposed to climate risk but not vulnerable (e.g., living in a floodplain but having sufficient means to modify building structure and behaviour to adapt and reduce potential loss).

Greenhouse gases (GHG): The gases that trap heat in the Earth's atmosphere, including carbon dioxide, methane, nitrous oxide, ozone, and some artificial chemicals (e.g., chlorofluorocarbons).

Greenhouse gas reduction: The minimisation of the level to which naturally held or human-generated GHG are released to minimise the extent of future climate change (sometimes referred to as GHG mitigation or abatement).

Impact chain: A visual representation of a theory of change that can include important components of risk, such as vulnerability, as well as indirect and interdependent risks. It can be used to help support the development of management pathways for CRM.

Indirect risk or opportunities: The secondary consequences of a risk, such as impacts or opportunities to supply chains or customers.

Institutional strengthening: The process of increasing the capacity and ability of an organisation to perform its administrative functions and deliver its objectives.

Natural hazard: A natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, social and economic disruption, or environmental degradation (e.g., cyclone) or biological disaster, such as a disease outbreak.

Net zero: The idea of achieving net zero GHG emissions through emission avoidance and through a balance between GHG emissions produced and GHG emissions removed from the atmosphere.

Organisational resilience: An organisation's ability to adapt and evolve to respond to short-term shocks (from natural disasters to significant changes in market dynamics) and to shape itself to respond to long-term challenges. In CRM, this means staff and the organisation are equipped to understand their purpose, roles, and direction.

Project cycle risk assessment: A detailed climate risk assessment and outline of management actions for specific projects, including operational planning and decision making. This is one of the climate risk assessments that is defined in the CSIRO's *Climate Compass* (2018).

Resilience: The ability to anticipate, prepare for, respond, and adapt to acute and chronic climate change, to continue delivery of services and assets, and meet community expectations.

Representative concentration pathway (RCP): A trajectory describing how atmospheric GHG concentrations (not emissions) may change over time. Four pathways were used for climate modelling and research in the Intergovernmental Panel on Climate Change's *Fifth Assessment Report (AR5)* (2014). These pathways depend on multiple factors (e.g., mitigation policies, population growth, economic development, and land use change). They include a stringent mitigation scenario (RCP2.6, representative of a 1°C warming by 2100), two intermediate scenarios (RCP4.5 and RCP6.0, representative of 1.8°C and 2.2°C by 2100), and one scenario with very high GHG emissions (RCP8.5, representative of 3.7°C by 2100).

Risk: The effect of uncertainty on objectives. Risk is calculated from the combination of the likelihood of an event happening and its consequences. It is often represented as the probability of the

occurrence of hazardous events or trends multiplied by the impacts felt if these events or trends occur. Risk results from the interaction of vulnerability, exposure, and hazard. In this Guideline, the term “risk” is used primarily to refer to the risks of climate change impacts.

Risk appetite: The amount (or range) of risk that is considered acceptable and justifiable by a department. Across government, the risk appetite of individual departments will differ depending upon the environment within which it operates. The department’s executive leadership team establishes the risk appetite and tolerance in consultation with its audit and risk committee.

Risk management: The activities used to identify, assess, and treat the impacts of a risk.

Risk owner: An accountable point of contact for an enterprise risk at the senior leadership level, who coordinates efforts to mitigate and manage the risk with various individuals who own parts of the risk. The risk owner reviews and approves risks, controls, and treatments through the risk management process. Risk owners ensure risk is effectively and efficiently managed within target levels and regularly reviews and updates their risk/s.

Risk ratings: A risk rating arises from an assessment of a risk by using a matrix that relates likelihood and consequence and provides a rating that ranges from the lowest level of risk to the highest level based on a set of pre-defined criteria.

Risk tolerance: The levels of risk taking that are acceptable to achieve a specific objective or manage a category of risk. Risk tolerance represents the practical application of risk appetite and

is typically aligned to categories of risk, such as strategy, financial, people, or reputation.

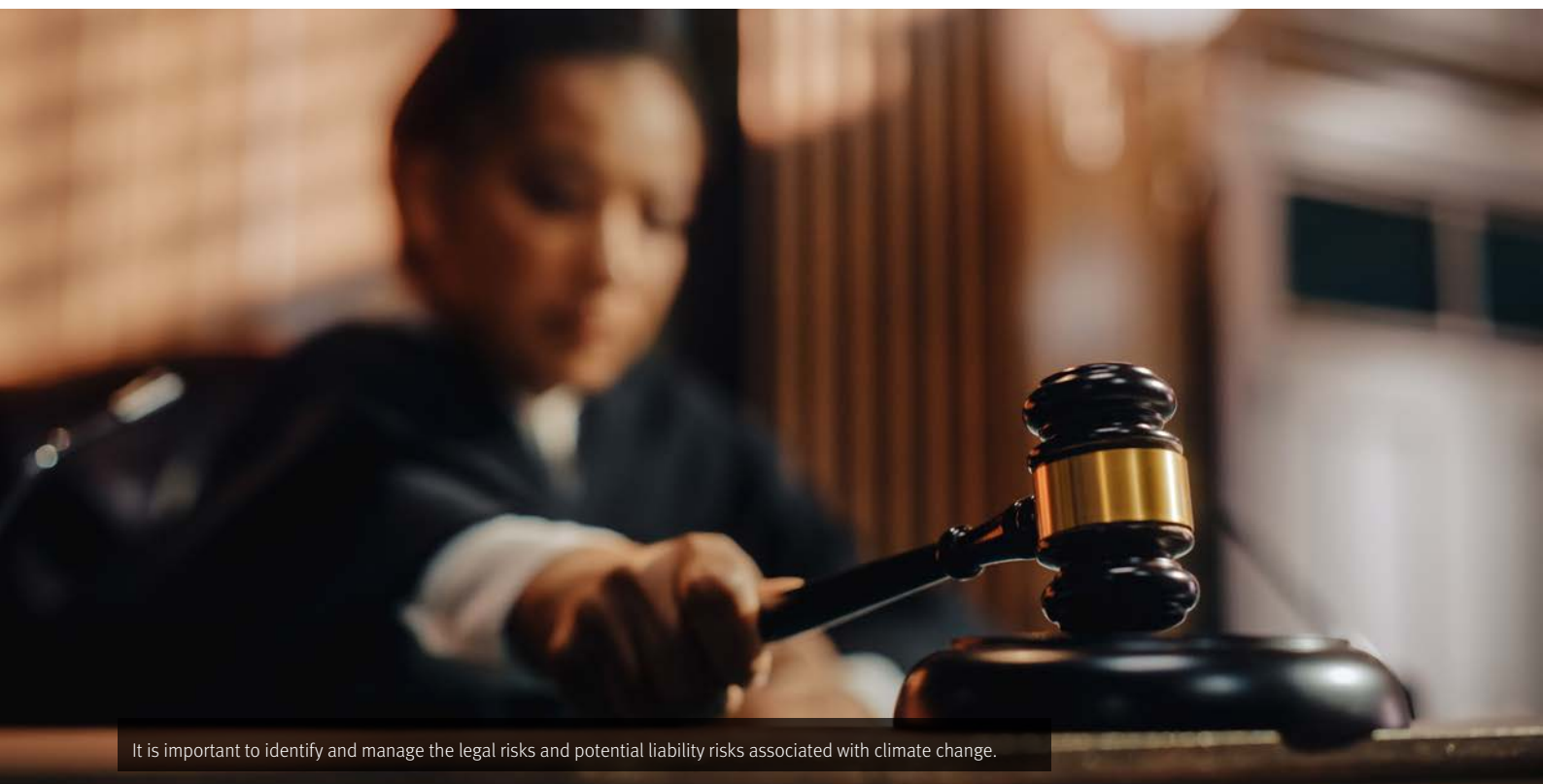
Risk treatment: The process of selecting and implementing measures to modify, reduce, and manage risk.

Strategy cycle (detailed) risk assessment: This is a formal climate risk assessment of a particular area of work (e.g., a policy theme or departmental division) to develop a CRM strategic plan that could go into more detail than an initial assessment (a Baseline Assessment).

Transition: The process of identifying and managing the impacts and opportunities associated with progressing towards a low carbon future.

Uncertainty: The lack of knowledge about climate risks that result from unavoidable variation in climate projections using a variety of models, and/or the unknown trajectory of future GHG emissions.

Vulnerability: The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, climate variability and extremes.



It is important to identify and manage the legal risks and potential liability risks associated with climate change.

EXECUTIVE SUMMARY

The *Queensland Climate Action Plan 2020–2030* (QCAP) establishes an expectation for all Queensland Government departments to take action on climate risk. The State Government Pathway of the *Queensland Climate Adaptation Strategy 2017–2030* (Q-CAS) states that each Queensland Government department “will undertake a detailed climate risk assessment relating to their business and either develop a specific adaptation action plan to address priority climate risks, or incorporate climate adaptation actions into existing plans and risk frameworks”.¹

The Q-CAS recognises that climate change creates risks for the Queensland Government’s assets, services, and functions. It also recognises that climate risk management (CRM) will enable the Queensland Government to continue to “deliver quality frontline services, create jobs and build a strong economy, while protecting the environment and building safer, more resilient communities”.²

It is important that departments recognise that CRM is an iterative process that will require ongoing updates and improvements. Both physical and transition climate risks present potential operational, financial, liability, and reputational consequences to the business of a government department.

The intent of the *Climate Risk Management Guideline for Queensland Government Departments* (the Guideline) is to lay the foundation for ongoing CRM through improved capacity and systems. This document is a “how-to” guide for Queensland Government departments to use in order to embed the consideration of climate risk within their strategic and operational functions in a coordinated and streamlined way. It will support departments to develop principles, minimum standards, best practices, business processes, references, and tools for effective and efficient CRM.

The audience for this Guideline is primarily those working in departmental risk management; however, responsibility for implementing CRM rests across all divisions and roles, including managers and operational staff. In addition, the executive leadership of all departments should be made aware of this Guideline and ensure that a supportive enabling environment exists for taking department-wide action on climate risk.

There are many positive and negative impacts that climate risks and their management present to departments. Development of a structured and comprehensive approach to CRM with coordinated efforts will help departments realise the Queensland Government’s objectives. The structure of the Guideline is detailed below.

¹ Queensland Government, *Queensland Climate Adaptation Strategy 2017–2030*, 2017, 20, accessed 18 March 2022, https://www.qld.gov.au/__data/assets/pdf_file/0017/67301/qld-climate-adaptation-strategy.pdf.

² Ibid.

The *Queensland Climate Action Plan 2020–2030* (QCAP) establishes an expectation for all Queensland Government departments to take action on climate risk.

The State Government Pathway of the *Queensland Climate Adaptation Strategy 2017–2030* states that each Queensland Government department “will undertake a detailed climate risk assessment relating to their business and either develop a specific adaptation action plan to address priority climate risks, or incorporate climate adaptation actions into existing plans and risk frameworks”.

Guideline structure

Section 1 – Introduction

This section provides information on the purpose and approach of this Guideline, outlines who the target audience is, and explains how to use it.

Section 2 – Understanding Climate Risks and the Impact on Queensland Government Departments

This section describes climate risks and impacts, outlines the benefits of managing climate risks, and provides principles to guide effective CRM.

Section 3 – Steps for Department Climate Risk Management

This section provides the four steps for CRM developed by Griffith University. It offers guidance on how to progress the institutional strengthening and capacity building needed to effectively consider and embed climate risk within a department (Figure 1). These steps include:

- **Step 1: Leadership and governance**
 - » Step 1 advises how to identify where a department is positioned on climate risk; recommends how to engage executive leadership; reviews organisational and governance structures; explores corporate roles and responsibilities; and considers resourcing needs. This step supports the delivery of the next three steps, as shown in the diagram below.
- **Step 2: Baseline Assessment and action planning**
 - » Step 2 advises how to build understanding and examine a department's strategic approach to CRM, and how to establish a strategy and action plan to advance progress. It covers how to assess climate risk through a Baseline Assessment process and helps to identify capacity gaps and opportunities for improvement.
- **Step 3: Integration and implementation**
 - » Step 3 clarifies how to integrate climate risk into a department's risk management process and the implementation of risk management actions.
- **Step 4: Monitor, report and evaluate**
 - » Step 4 outlines the monitoring, reporting, and evaluating efforts needed to manage climate risks.

Coordination across all steps

Information to support the coordination of CRM is included in Appendix 15. It provides guidance on how to engage and secure executive leadership; how to improve the climate risk culture across a department; how to increase staff awareness and participation; how to enhance institutional capacity and capability; and how to improve knowledge management.

The interactive graphic on the following page expands on the four steps and the coordination required. The guidance provided for each step sets out an overarching objective, guiding questions, desired outcomes, and action areas for CRM.

The steps are also supported by tools that provide supplementary support to this Guideline.



Figure 1: Four steps for climate risk management

HOW TO NAVIGATE THIS GUIDELINE

Section 1: Introduction

Section 2: Understanding Climate Risks and the Impact on Queensland Government Departments

Section 3: Steps for Department Climate Risk Management



STEP 1 LEADERSHIP AND GOVERNANCE

Step 1 provides guidance on how to:

- 1.1 identify the extent to which climate change is a risk to a particular department
- 1.2 secure and seek ongoing executive leadership support to establish strategic direction on CRM
- 1.3 integrate CRM within the organisational structure and system of governance
- 1.4 identify the resources needed to manage climate risks.

Leadership and governance are ongoing requirements for Steps 2–4.



STEP 2 BASELINE ASSESSMENT AND ACTION PLANNING

Step 2 provides guidance on how to:

- 2.1 undertake a Baseline Assessment
- 2.2 develop a forward-facing strategy and action plan for building strategic and operational organisational capacity on CRM.

COORDINATING CLIMATE RISK MANAGEMENT

Coordination across all steps provides guidance on how to:

- improve climate risk culture
 - increase awareness and staff engagement
 - enhance capacity and capability
 - improve knowledge management and sharing.
- (This guidance is set out in Appendix 15.)



STEP 3 INTEGRATION AND IMPLEMENTATION

Step 3 provides guidance on how to:

- 3.1 embed climate risk into the risk management process
- 3.2 interpret climate projections, scenarios, and impacts
- 3.3 undertake a detailed climate risk assessment
- 3.4 understand trigger points and decision thresholds.



STEP 4 MONITOR, REPORT, AND EVALUATE

Step 4 provides guidance on how to:

- 4.1 monitor and report progress
- 4.2 review departmental progress on managing climate risk.



Technological responses such as solar energy can reduce emissions, and help to manage climate risk.

1. INTRODUCTION

The Queensland Climate Action Plan 2020–2030 (QCAP) has set the agenda to prepare Queensland for the climate-related opportunities and risks of the future. The QCAP outlines climate change targets for Queensland to achieve by both 2030 and 2050, as shown below.

The QCAP aligns with the [Queensland Climate Adaptation Strategy 2017–2030](#) (Q-CAS), which aims to support Queenslanders to understand climate risks; use the best available science to inform adaptation; integrate adaptation into policy and processes; and collaborate with partners to achieve climate change adaptation. The State Government Pathway of the Q-CAS commits that “each Queensland Government agency will undertake a detailed climate risk assessment and either develop a specific adaptation action plan to address priority climate risks or incorporate climate adaptation actions into existing plans and risk frameworks”.³ Q-CAS Actions 2.1 and 2.2 highlight the need for departments to incorporate climate risk into existing risk management processes, and to apply a robust risk management framework to protect property, assets, infrastructure, and services.⁴

Identifying and managing the potential impacts of climate risk on Queensland Government departments is critical for ensuring the continuation of the delivery of government services and the protection of public assets. Failure to do so will likely have negative impacts on the achievement of government objectives. The disclosure of climate-related risks and their potential impacts is an emerging area of focus for financial reporting

The *Climate Risk Management Guideline for Queensland Government Departments* (the Guideline) aims to lay the foundation for ongoing climate risk management (CRM) through

improved capacity and systems. This document is a “how-to” guide for Queensland Government departments to use in order to embed the consideration of climate risk within their strategic and operational functions in a coordinated and streamlined way. Applying the Guideline will help departments achieve the following:

- Protect core functions – Understand how climate risks may impact core organisational objectives and operations.
- Prioritise responses to climate risk – Highlight areas that warrant further investigation, investment, or action.
- Seize opportunities – Increase understanding and capacity to respond to climate-related opportunities.
- Improve enterprise-level oversight of climate risks – Embed CRM in existing frameworks and procedures.
- Adapt and transition – Identify, assess, evaluate, manage, and treat risks over time.

The Queensland Government has legislated the following climate change targets:

- Reduce emissions by at least 30% below 2005 levels by 2030.
- Reduce emissions by at least 75% below 2005 levels by 2035.
- Generate 50% of electricity from renewable energy by 2030.
- Generate 70% renewable energy by 2032.
- Generate 80% renewable energy by 2035.
- Achieve zero net emissions by 2050.

Targets are legislated in the *Clean Economy Jobs Act 2024* and the *Energy (Renewable Transformation and Jobs Act 2024)*

³ Queensland Government, *Queensland Climate Adaptation Strategy 2017–2030*, 2017, 20, accessed 18 March 2022, https://www.qld.gov.au/__data/assets/pdf_file/0017/67301/qld-climate-adaptation-strategy.pdf.

⁴ Ibid.

1.1 Purpose and approach

Guideline purpose

The purpose of this Guideline is to lay the foundation for Queensland Government departments to undertake ongoing CRM. It provides information and guidance on departmental CRM, and how it can be effectively incorporated into relevant departmental structures, processes, and procedures. It supports the effort of general risk management within departments, and seeks to ensure they are considering and responding to climate risk as part of this effort. Where appropriate, this Guideline will be periodically reviewed and updated by Department of Energy and Climate (DEC), given that policy, information, and best practice standards evolve over time.

Approaching climate risk management

To draft this Guideline, Griffith University has utilised departmental learning and feedback from Phase 1 and 2 of the Queensland Climate Ready (QCR) Program. The QCR Program was established in partnership with Griffith University and DES to advance the Queensland Government’s understanding of climate change risks and its capacity to manage risks; the capability to deal with risks in a coordinated and consistent way; and the ability to move forward in addressing priority climate risks. The Program used a co-design approach to assist six departments undertake baseline climate risk assessments, while also supporting whole-of-government dialogue on CRM.

Stakeholder engagement workshops were held in May 2022 to identify user needs and expectations for the Guideline. Following this, a draft Guideline was developed, informed by [CSIRO’s Climate Compass](#) (2018), manuals published by the Australian Government’s [CoastAdapt](#) and the NSW Government’s [Climate Risk Ready NSW Guide](#) (2020). The Guideline also underwent a period of user testing and stakeholder review in October 2022. The Guideline also draws information from the strategic intent of the [Taskforce on Climate-related Financial Disclosures](#) (TCFD) to integrate CRM across all layers, such as governance, strategy, risk management, and monitoring and reporting metrics. More information on the development of the Guideline can be found in Appendix 11. More information on [Climate Compass](#) – which informed the section on undertaking a Baseline Assessment (Step 2, Section 3.2), detailed risk assessment (Step 3, Section 3.3), and how it can be used for different levels of risk assessments (scan, strategy, or project cycle risk assessment) – is located in Appendix 12.

The approach to CRM provided by this Guideline aligns with the Queensland Government’s [A Guide to Risk Management \(2020\)](#). Figure 2 summarises the principles, framework, and process encouraged by Queensland Treasury to address strategic and operational risks. Climate risk can be managed in a similar vein by assessing both strategic and operational risks. The [Queensland Government Performance Management Framework Policy](#) (PMF), published in 2022, sets out the mandatory planning, measuring, and monitoring performance and reporting requirements. As the key elements for the PMF are supported by risk management, climate

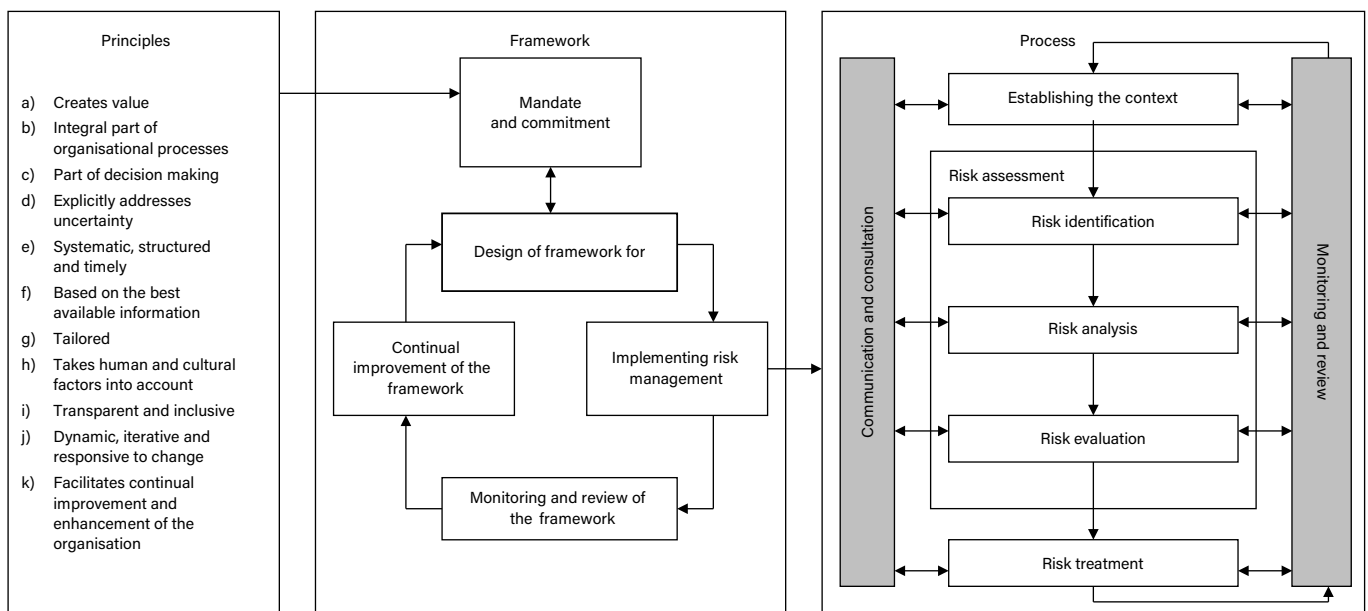


Figure 2: A Guide to risk management – Relationship between risk management principles, framework, and process
 Source: Queensland Treasury, *Queensland Government Performance Management Framework Policy* (Brisbane: Queensland Government, 2022), 8.

risk can be integrated into these mechanisms.

Strategic and operational risks are defined by Queensland Treasury as follows:

Strategic risk: These risks relate directly to a department's strategic planning and management processes. They comprise those risks that could significantly impact a department's ability to achieve its vision and the strategic objectives documented in its strategic plan. These high-level risks require identification, treatment, monitoring, and management by senior executives or internal risk committee. In some cases, these risks may need to be managed by more than one department for the risk treatments to be effective.

Operational risk: These risks relate to the operational actions undertaken by a particular division, branch, or work unit that could have a significant impact on the achievement of either a department's strategic objectives (as documented in the strategic plan), or an individual program's or project management's objectives. Operational risks generally require management by the relevant senior officer responsible for the division, branch, or work unit, or by the relevant program or project board. In extreme instances, managing these risks may need to be escalated to executive management.⁵

There are a few key differences between CRM and traditional risk management. Firstly, while traditional risk management assesses the likelihood and consequence of something occurring based on trends and past experiences, CRM is future facing (although it also considers historic events and trends). Secondly, CRM identifies risk based on potential changes in likelihood and consequences using uncertain predictions. It also categorises different types of climate risks (physical and transition), and accounts for both direct and indirect risks. More information on climate risk types can be found in Section 2.1.

Structure of the Guideline

Section 1: Introduction provides information on the purpose and approach of this Guideline; explains who the target audience is; and outlines how to use it.

Section 2: Understanding Climate Risks and the Impact on Queensland Government Departments addresses key questions, such as: (1) what are climate risks?; (2) what are climate impacts?; and (3) what are the benefits of managing climate risk? It also provides principles to guide CRM.

Section 3: Steps for Climate Risk Management (CRM) provides four steps on how to progress the institutional strengthening and capacity building needed to effectively consider and embed climate risk within a department. These steps are as follows:

- **Step 1:** Leadership and governance
- **Step 2:** Baseline Assessment and action planning
- **Step 3:** Integration and implementation
- **Step 4:** Monitor, report, and evaluate
- **Coordination** across all steps

This Guideline should be used in conjunction with the Guideline Appendices document, and the Excel Spreadsheet titled "Climate Risk Management Guideline Appendices 6-9".

⁵ The State of Queensland (Queensland Treasury), *A Guide to Risk Management*, 2020, accessed 17 November 2022, <https://s3.treasury.qld.gov.au/files/Guide-to-Risk-Management-June-2020.pdf>.

1.2 Who should use this Guideline?

Table 1 describes key users of this Guideline in government departments. A department may choose to seek the support of consultants and subject experts in the CRM activities outlined in this Guideline.

Table 1: Overview of intended users of this Guideline

User	Description of how the Guideline may be applicable
Executive leadership	<ul style="list-style-type: none"> Executive leaders should approve strategic directions for CRM. The executive leadership team is responsible for approving resourcing for CRM activities and monitoring progress on CRM across divisions. Those in this team should elevate climate risks from a business area level to a departmental and cross-departmental issue.
Staff working in risk management	<ul style="list-style-type: none"> These staff members are responsible for providing feedback on whether quality risk management processes and controls are in place, and are effectively operating to achieve organisational objectives. They deliver second-line assurance (consistent with the Three Lines of Assurance model outlined by the Institute of Internal Auditors Australia⁶) through expertise, support, and monitoring, and by challenging risk-related matters.
Staff within the department	<ul style="list-style-type: none"> These staff members are directly involved with identifying, analysing, evaluating, treating, or reporting on climate change and associated risks. If a climate risk is identified that may affect another department business area, then this risk should be communicated to the other business area.
Audit and risk committee (ARC)	<ul style="list-style-type: none"> ARCs can be engaged to provide comments on the CRM and assurance processes that are in place for a department; however, they are not responsible for owning or managing climate risks. ARCs can provide advice on how to manage a climate risk and how it may interact with other risks.

6 The Institute of Internal Auditors Australia, *The Three Lines Model*, 2020, accessed 26 October 2022, <https://www.iaa.org.au/technical-resources/professionalGuidance/the-iaa's-three-lines-model#:~:text=The%20Three%20Lines%20Model%20is,strong%20governance%20and%20risk%20management>.

1.3 How to apply the steps

Section 3 sets out the steps for CRM proposed by this Guideline (summarised in Figure 3), which should be used in conjunction with the Guideline Appendices document, and the Excel Spreadsheet titled “Climate Risk Management Guideline Appendices 6-9”. It is structured into four steps that can be tailored to the individual needs of each department. To facilitate coordination and interaction across the steps, the steps need to be supported by good project management.

- **Step 1: Leadership and governance**

Step 1 advises how to identify where a department is positioned on climate risk; recommends how to engage executive leadership; reviews organisational and governance structures; explores corporate roles and responsibilities; and considers resourcing needs. This step supports the delivery of the next three steps, as shown in Figure 3.

- **Step 2: Baseline Assessment and action planning**

Step 2 advises how to build understanding and examine a department’s strategic approach to CRM and how to establish a strategy and action plan to advance progress. It covers how to assess climate risk through a Baseline Assessment process and helps identify capacity gaps and opportunities for improvement.

- **Step 3: Integration and implementation**

Step 3 clarifies how to integrate climate risk into a department’s risk management process and the implementation of risk management actions.

- **Step 4: Monitor, report and evaluate**

Step 4 outlines the monitoring, reporting, and evaluating efforts needed to manage climate risks.

- **Coordination across all steps**

Information to support the coordination of CRM is included in Appendix 15. It provides guidance on how to engage and secure executive leadership; how to improve the climate risk culture across a department; how to increase staff awareness and participation; how to enhance institutional capacity and capability; and how to improve knowledge management.

The four steps are set out in a logical sequence but can be considered independently or worked on in parallel. Each step sets out guiding questions, a clear objective and action areas; proposes possible outcomes; and provides case studies †, tools, and resources to support implementation.

The tools include templates that have been developed under the QCR Program. Useful website links are also provided. The steps are supported by activities and processes to assist departments with institutional strengthening and capacity building on CRM.

Each department is unique in its operations and services, and will be at a different point along their journey of implementing CRM. For example, some departments might already have appropriate governing structures to manage climate risk, while others may be at different stages of embedding climate change in the performance management framework and corporate risk management processes. Each department will have varying levels of resourcing and commitment to manage climate risk, and will have different service delivery areas, internal and external facing requirements, size, and regional reach. Therefore, each should use and adapt this Guideline to suit their business needs. Regardless of how the process is commenced, leadership and governance are critical across all steps, and CRM is an iterative process that is subject to continuous monitoring and review.



Figure 3: Four steps for climate risk management

† The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Table 2 sets out how each of the four steps are structured in this Guideline. Departments are encouraged to start at the appropriate point for their situation and needs.

Table 2: How each step is structured

Step structure	Description
Guiding question/s	<ul style="list-style-type: none"> The guiding question/s help to frame activities in the four steps and allow departments to use the steps to understand the current state of CRM progress. These questions can be used to benchmark progress and should be considered before proceeding to the next step.
Overarching objective	<ul style="list-style-type: none"> The overarching objective of each step helps users to understand the level of effort and the types of resources that may be required in undertaking it. This can also be used to determine readiness to proceed to the next step.
Key action areas	<ul style="list-style-type: none"> Action areas target topics a department could explore to achieve the overarching objective of the step. Guidance is provided on how to address each area.
Desired outcomes	<ul style="list-style-type: none"> These are the recommended tangible deliverables resulting from the completion of each step.
Case studies	<ul style="list-style-type: none"> Case studies of various Queensland Government departments that are actively managing climate risks have been collated. The case studies document and showcase elements of CRM progress, learnings and experience across the various steps for CRM. The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.
Supplementary resources	<ul style="list-style-type: none"> Resources to help with CRM activities and knowing which ones to use can be a key challenge for many organisations. Griffith University has reviewed the most current resources relevant for departmental CRM, and the Guideline provides links to them.

2. UNDERSTANDING CLIMATE RISKS AND THE IMPACTS ON QUEENSLAND GOVERNMENT DEPARTMENTS

This section focuses on providing information to help departments understand what climate risks are, the impact that they could have on strategic and operational objectives, and the benefits of managing climate risk.

2.1 What is climate risk?

Climate risk means the potential economic, environmental, and social impacts changing climate conditions could have on our human and natural systems. It is made up of two types of risk: physical (acute and chronic) and transition. Both physical and transition climate risks present potential operational, financial, liability and reputational consequences to the business of a government department. Although there are some closely related aspects, it is important to recognise that disaster risks and climate risks are different. On the one hand, disaster risk focuses on the impact of acute events or hazards. On the other, climate change not only influences the frequency and/or intensity of acute hazards, but also large-scale changes to the economy, society and environment, which can have an impact on the long-term strategic and operational objectives of a department. Consequence management should be considered when framing climate risks, which includes identifying the likelihood, exposure, and vulnerability of the risk to a particular component of a department's service delivery.

- **Physical risk** refers to negative impacts of natural hazards caused by human-induced climate change (Figure 5). The impacts can be acute shocks or chronic changes resulting from longer-term gradual shifts in natural hazard patterns. For example, a government department could face damage to state-owned assets and infrastructure, lost revenue, increased insurance and interest costs, higher spending on critical public services and protection of communities from the impacts of changing natural hazard patterns.
 - **Chronic risks** are risks from slow-onset climate changes that result in permanent change, such as sea-level rise or changes to seasons over time.
 - **Acute risks** are risks due to events, such as natural disasters (e.g., heatwaves and floods).
- **Transition risk** refers to risks that arise from societal changes to address climate change, such as changes in values, markets and demand for products and services (Figure 4). This presents material risks to department policy and regulatory frameworks, current and future investment strategies, industry, and technology development plans and service provision. Examples include changes in market demand and reputational risks because of regulatory change at a policy level to limit GHG. Transition climate risks may create strategic risks and opportunities, as identified in the bullet points below. These aspects illustrate how

best practice CRM brings visibility to some of the opportunities that can arise with climate change when it is appropriately managed.

Strategic challenges:

- Changing policy and legislative frameworks
- Shifting customer/stakeholder/community preferences or perspectives
- Technological changes
- Impacts on state credit ratings and the costs of finance
- Stranded assets
- Socio-economic impacts that vary across the regions
- Potential litigation for steps taken or not taken to address climate risk
- Impact on human rights and First Nations people
- Reputational damage

Opportunities:

- Attracting investment and finance for emissions reduction activities
- Structural shifts in the economy as sectors grow or shrink in response to decarbonisation and market shifts
- Socio-economic impacts that vary across the regions

Climate risk manifestation refers to how climate risk may emerge, which can be attributed to:

- exacerbation of existing risks
- emergence of new risk types
- new risk locations
- an increase in risk baselines
- triggering of risk tipping points.

Climate change has the potential to multiply existing threats and may increase vulnerabilities and risk exposure. Information on climate impacts in Queensland and examples illustrating the challenges of physical and transition climate risks (e.g., uncertainty) are outlined in Appendix 13. The uncertainty of climate risk could be due to any of the following:

- The precise nature and timing of climatic changes, particularly at regional and local scales
- The societal, economic, and technological changes that may influence global emissions over time
- The long-term horizons that may not align to other planning timeframes
- The dispersed governance of the functions and roles that can help governments effectively adapt, and of the systems that may be impacted by climate

- The capacity for transitional or transformational adaptation, which is the ability to reduce the cause of the climate risk over the long term by shifting to a low carbon economy.

These uncertainties, however, are not enough reason not to act.

Figure 4 describes examples of how climate risks can impact aspects of department service delivery, and organises them into the following typologies: financial and investment risk; strategic and operational risk; reputational risk; and litigation risk.



Figure 4: Ways in which climate risk can impact service delivery (developed under the QCR Program)

2.2 What are the benefits of managing climate risk?

Climate resilience is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate change. Improving climate resilience involves assessing how climate change will create new or alter current climate risks, and taking steps to better cope with these risks. CRM activities help to build overall resilience, and the *Queensland Strategy for Disaster Resilience, 2022–2027* (QSDR) highlights this through its proposed strategies. Case Study 1[†] provides information on the QSDR; the role that departments can play in building resilience; disaster risk reduction; and associated key messages.

The costs of inaction are becoming material to growth and development (estimated at \$973 billion by 2050, almost half of Australia’s GDP), as are the initial signs of a broad-based shift in markets and consumer demand towards climate action. Conversely, the opportunities from climate risk are estimated to provide an economic benefit of \$380 billion and generate over 73,000 jobs in the next 30 years. For government departments, opportunities can present themselves through early adapting and transitioning to CRM. More information on the opportunities arising from managing climate risk can be found in Appendix 14.

Figure 5 summarises different types of climate risks and opportunities, and the potential positive and negative implications for the Queensland Government. The list of positive and negative

impacts should be considered when a department assesses their climate risk. Risk categories are adapted from the *Final Report: Recommendations of the Task Force on Climate-Related Financial Disclosures* (2017) prepared by the [TFCD](#) and *Climate Change Risk: A Good Practice Guide for Audit and Risk Committees* (2021) prepared by the [UK National Audit Office](#). Note that the potential positive effects depend on effective actions that manage climate risks and capture emerging opportunities in the transition to a low emissions economy, while some of the potential impacts will occur despite climate action because of “locked-in” climate change. Potential positive effects could also include providing certainty for development; commitment to invest in innovative sustainable solutions, products, and new technology; and clarity for the insurance sector (to provide better cost understanding for property owners).

Case Study 1[†] on the QSDR outlines the role that departments play in building resilience and reducing disaster risk. It details how key objectives of the QSDR relate to better understanding; provides advice on taking a systems approach to disaster resilience; and highlights key sources of information that may be useful for departmental CRM policies and strategy development.



Chronic risks are risks from slow-onset climate changes that result in permanent change, such as sea-level rise or changes to seasons over time.

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

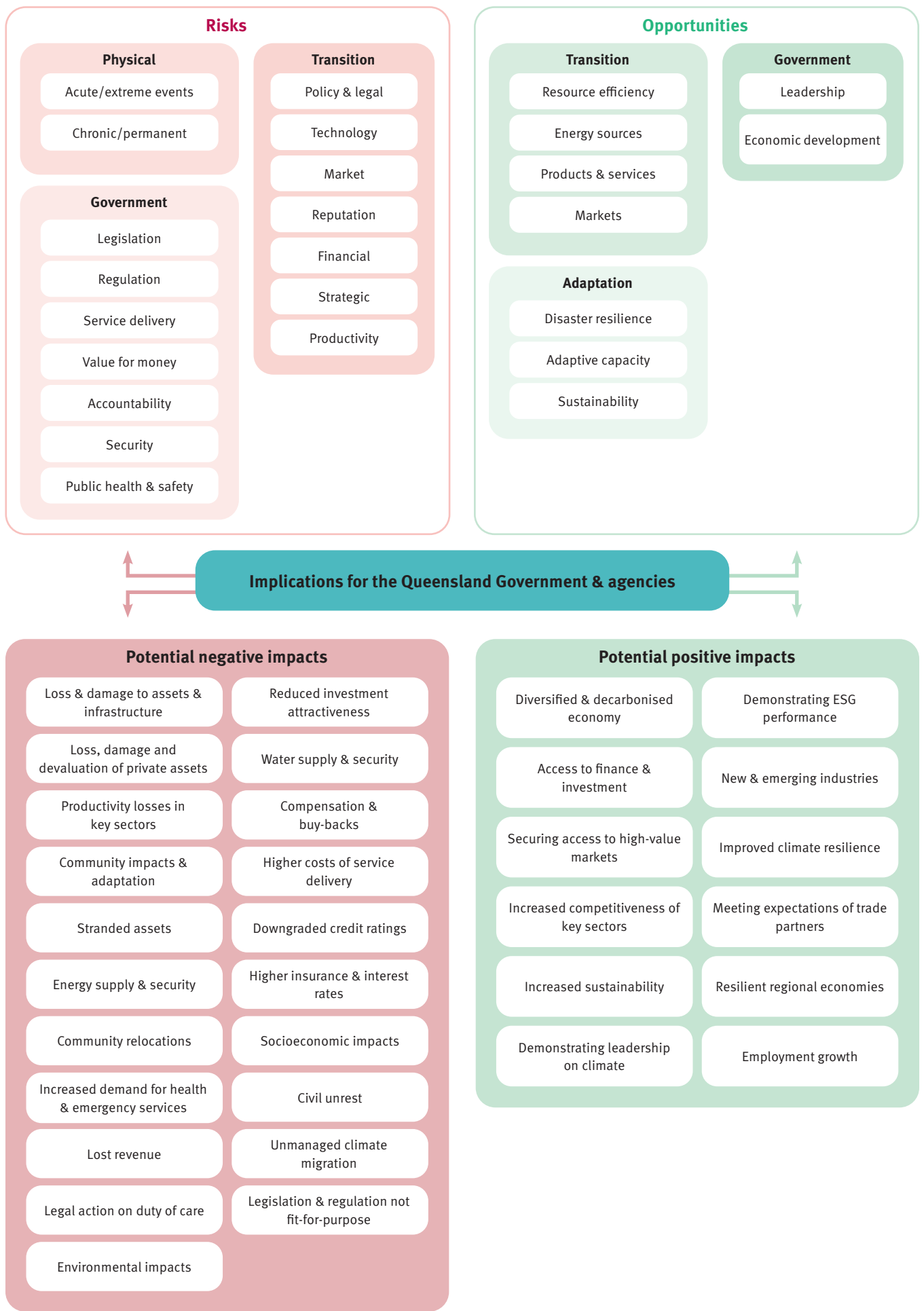


Figure 5: Summary of the different types of climate risks and opportunities, and their potential implications for the Queensland Government and its departments

2.3 Principles to guide climate risk management

Adopting a principles-based approach to CRM will enable departmental governance structures to develop and adopt fit-for-purpose practices and to support decision making at each step of the process. To do this, a department could build on both generic risk management principles as well as principles that relate more specifically to CRM. Table 3 shows the alignment of principles related to general risk management and CRM.

Table 3: Principles to guide climate risk management

Generic risk management principles	Climate risk management principles
<p>The Queensland Treasury’s <i>A Guide to Risk Management (2020)</i> outlines that many factors contribute to the success of risk management throughout a department. AS/NZS ISO 31000 provides principles that should be adopted by any organisation to successfully manage their risks. While all principles in AS/NZS ISO 31000 are relevant to Queensland Government departments, the following principles align well with CRM principles:</p>	<p>The following CRM principles were suggested by departments involved in the QCR Program in March 2020, and align well with generic risk management principles:</p>
<ul style="list-style-type: none"> • Risk management requires a firm commitment from the accountable officer or statutory body board. • The risk management framework needs to be integrated with other departmental governance processes, such as strategic planning, operational planning, and executive management functions. • Effective risk management is based on a strong organisational culture and an awareness of risk at all levels of the department, which involves encouraging a risk-informed workforce and culture. • Risk management is supported by a program of education, training and development for staff that is devoted to risk management at key levels in a department (e.g., supervisor, manager, director, and executive). • The risk management process designates clear ownership of risk accountabilities, responsibilities, duties, and actions. • The risk management process is proactive, with cross-departmental communication of risks. • The risk management process draws on both current experiences and lessons learned. 	<ul style="list-style-type: none"> • Institutional capacity and understanding needs to be developed and advanced and, where possible, outsourcing development opportunities needs to be avoided. • CRM needs to be integrated into standard policies, processes, tools, and practices of the department. • It is everyone’s responsibility to deliver CRM outcomes, and collective action will improve the outcomes and impact of CRM. • A diverse range of stakeholders (both internal and external) need to be engaged to ensure CRM activities will be most effective and targeted. • Long-term and slow-burn consequences of climate change need to be considered, factoring in for projected changes in climate. • An iterative and structured approach, working to improve CRM maturity over time, needs to be adopted.

3. STEPS FOR DEPARTMENT CLIMATE RISK MANAGEMENT (CRM)

This section of the Guideline provides the steps developed by Griffith University aimed to guide government departments on implementing CRM. The four steps should be seen as flexible, and departments need not take a linear approach. Rather, they should tailor the steps to suit their current CRM maturity. The way activities are stepped out may not represent the reality and practicalities of undertaking CRM. The four steps and their associated key action areas are shown in Figure 6. Table 4 outlines the desired outcomes and an approximate timeline for each key action area. Case studies are used to provide real examples of how Queensland Government departments have been undertaking CRM. †

Ensuring that departments provide supportive internal environments for CRM is central to progressing the four steps, and it requires coordination. This includes ensuring there is leadership and governance to support CRM (Step 1), and a commitment to strengthening the CRM culture of a department, increasing staff awareness and engagement, enhancing capacity and capability, and improving knowledge management and sharing. These activities can help maximise the efficiency and effectiveness of CRM, and further detail is available in Appendix 15.

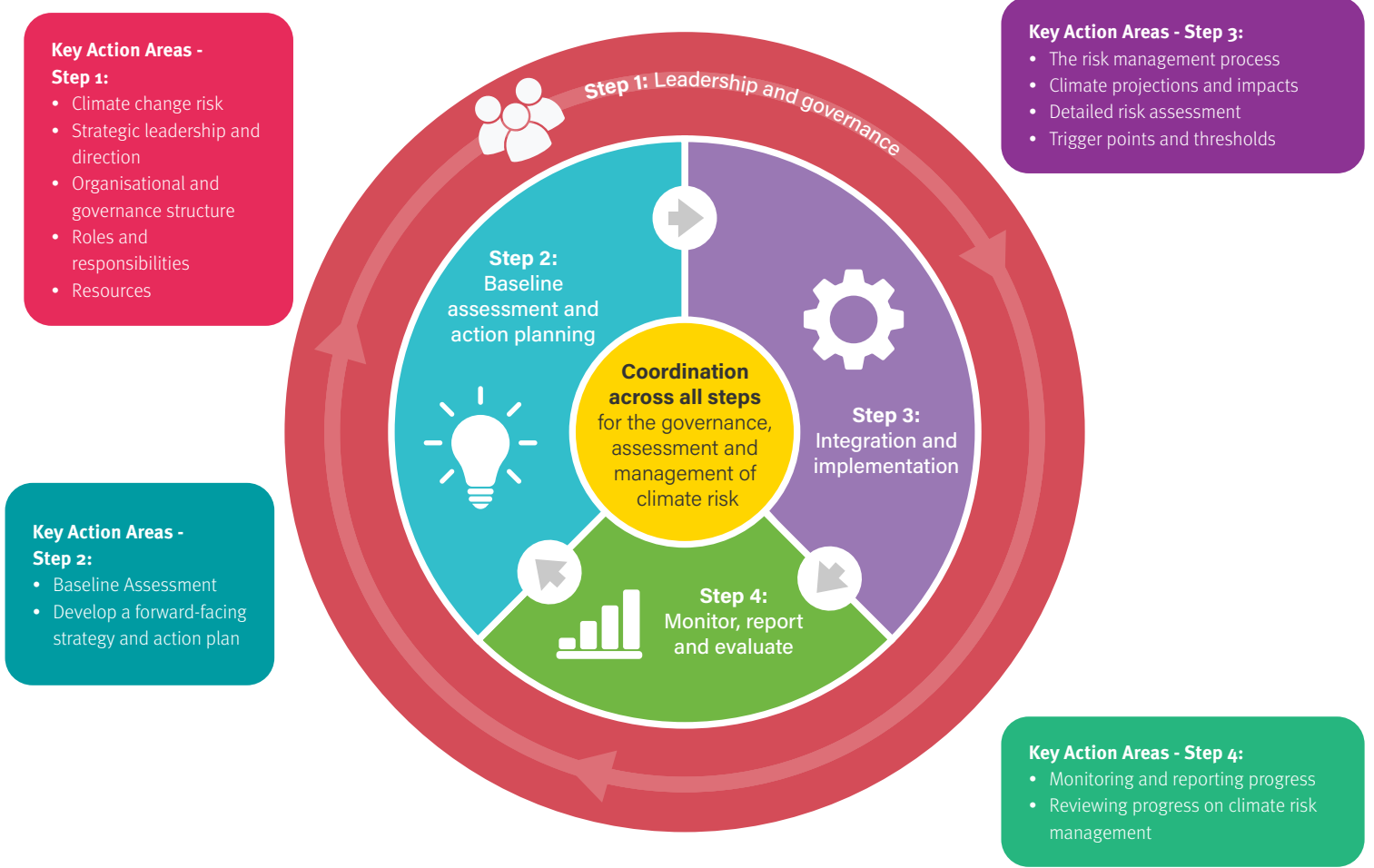


Figure 6: The four steps developed by Griffith University aimed to guide departments on implementing CRM

† The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Table 4: Steps to manage climate risk: Steps and outcomes

Step and action areas	Desired outcomes	Approximate timeframe
Coordinating climate risk management This section (attached as Appendix 15) helps departments: <ul style="list-style-type: none"> effectively coordinate CRM strengthen institutional capacity and capability maximise efficiency and effectiveness in CRM. 		
Increase the CRM culture and awareness in the department, including staff engagement, capacity, and capability building, and knowledge management of CRM	<ul style="list-style-type: none"> The department has identified and established ways to improve its CRM culture; increase its staff's awareness and engagement with CRM; enhance its capacity and capability in CRM; and improve knowledge management in CRM. 	Ongoing commitment
Step 1: Leadership and governance <ul style="list-style-type: none"> Secure executive support to establish strategic direction on CRM. Integrate CRM within the organisational structure and system of governance. Identify the organisational roles, responsibilities, and resources needed to manage climate risks. 		
1.1 Identify the extent to which climate change is a risk to a department	<ul style="list-style-type: none"> The department understands the extent to which climate change is a risk to be considered and how it is positioned to manage the risk. 	3–6 months initially and then an ongoing commitment
1.2 Secure and seek ongoing executive leadership support to establish strategic direction on CRM	<ul style="list-style-type: none"> The department has secured executive support for CRM and accepts the need to identify and manage climate risks that impact its operations. 	3–6 months initially and then an ongoing commitment
1.3 Integrate CRM within the organisational structure and system of governance	<ul style="list-style-type: none"> The department has identified any adjustments to its organisational and/or governance structures it needs to advance CRM. 	2 months once commitment has been gained
1.4 Identify resources needed to manage climate risks	<ul style="list-style-type: none"> The department recognises the corporate roles, responsibilities, and resources it needs to advance CRM. 	Ongoing commitment
Step 2: Baseline Assessment and action planning <ul style="list-style-type: none"> Undertake a climate risk profile and capacity Baseline Assessment (“first pass”) to identify and prioritise high-level climate risks for the department. Identify CRM capacity gaps and opportunities for improvement. Develop a forward-facing strategy and action plan on departmental CRM over the short, medium, and long term. 		
2.1 Undertake a Baseline Assessment	<ul style="list-style-type: none"> The department has identified current and future climate risks and opportunities and how they relate to its core business areas. The department recognises existing CRM activity and gaps. The department has identified its capability gaps and opportunities to improve capacity for CRM. 	6–12 months initially and then an ongoing commitment (review every 2–3 years)

2.2 Develop a forward-facing strategy and action plan for building strategic and operational organisational capacity for CRM	<ul style="list-style-type: none"> The department has an approved approach in place for the strategic management of climate risks and opportunities, which supports incremental and evolving action and implementation. The department has an endorsed action plan for managing climate risk, which supports implementation and periodic review over time. 	3 months initially and then an ongoing commitment to review and update, and include more detail as required
Step 3: Integration and implementation <ul style="list-style-type: none"> Embed climate change into the department's risk management process. Undertake a detailed climate risk assessment based on climate change projections, scenarios, and impacts. Understand trigger points and decision thresholds to help with management planning over a defined pathway. 		
3.1 Embed climate risk in the risk management process	<ul style="list-style-type: none"> The department has embedded climate risks (physical and transition) into its risk management and reporting processes. 	3–6 months, with ongoing review and updates
3.2 Interpret climate projections, scenarios, and impacts	<ul style="list-style-type: none"> The department consistently evaluates past, present, and future climate scenarios to understand the extent of physical climate risks, climate transition risks, and possible impacts on its operations. 	3–6 months, with ongoing review and updates
3.3 Undertake a detailed risk assessment	<ul style="list-style-type: none"> The department has completed a more detailed risk assessment, produced at the whole-of-department scale, service delivery area and project-specific scale where appropriate. 	Up to 12 months
3.4 Understand trigger points and thresholds	<ul style="list-style-type: none"> The department has identified and assessed trigger points and thresholds for management action. 	3 months, with ongoing review and updates
Step 4: Monitor, report and evaluate <ul style="list-style-type: none"> Monitor and report on progress. Review progress on CRM. 		
4.1 Monitor and report progress	<ul style="list-style-type: none"> The department has established monitoring, reporting and evaluation mechanisms to manage climate risk, which are aligned or incorporated into existing operational procedures. The department uses CRM performance measures and indicators to monitor climate risk over time. 	Ongoing in line with existing processes
4.2 Review departmental progress on managing climate risk	<ul style="list-style-type: none"> The department has established regular monitoring and reporting cycles for CRM. The department has identified a relevant group or governance to oversee the implementation process of CRM. 	Every 2–3 years, and/or following government policy directions



3.1 STEP 1: LEADERSHIP AND GOVERNANCE

Step 1 is about executive leaders actively engaging in the process of CRM, taking steps to ensure their department can manage its climate risks in a similar vein to how other types of risk are addressed. This step assists with securing support for CRM through initial awareness-raising activities aimed to enhance understanding on climate risk. This includes comprehending how CRM intersects with the department's role in developing strategic and operational responses. This step helps departments do the following: identify where their leadership and governance are positioned in relation to managing climate risk; engage with ongoing executive leadership; review organisational and governance structures; explore corporate roles and responsibilities; and consider resourcing needs. This step is an overarching element, and action areas within Step 1 should be considered throughout Steps 2–4.

It is important to increase executive level awareness and understanding of climate risk, secure support early in the process, and strengthen leadership and governance for climate risk management.



Overarching objective:	To increase executive-level awareness and understanding of climate risk, secure support and strengthen leadership and governance for CRM
Guiding questions:	<ul style="list-style-type: none"> • What risks does climate change pose to the department? • Is there sufficient departmental understanding and acceptance of climate change and associated risks? • Has the department identified or established any governance structures to manage climate risks? • Are roles and responsibilities for managing climate risks in place? • Has the department allocated sufficient resources to manage climate risks?
Key action areas:	<p>1.1 Identify the extent to which climate change is a risk to a department</p> <ul style="list-style-type: none"> • Identifying the extent to which climate change impacts are a departmental risk and what level of risk it is (enterprise or operational) <p>1.2 Secure and seek ongoing executive leadership support to establish strategic direction on CRM</p> <ul style="list-style-type: none"> • Identifying if a strategic direction to manage climate risk has been set for the department • Engaging executive leadership and staff in CRM <p>1.3 Integrate CRM within the organisational structure and system of governance</p> <ul style="list-style-type: none"> • Identifying whether the level of climate risk requires changes to organisational structures, including governance • Establishing clear roles and responsibilities to identify and manage climate risk (this may involve forming a departmental cross-divisional working group to coordinate CRM activities) <p>1.4 Identify the resources needed to manage climate risks</p> <ul style="list-style-type: none"> • Identifying resourcing requirements to progress CRM
Desired outcomes:	<ul style="list-style-type: none"> • The department understands the extent to which climate change is a risk to be considered and how it is positioned to manage the risk. • The department has secured executive support for CRM and accepts the need to identify and manage climate risks that impact its operations. • The department has identified any adjustments to its organisational and/or governance structures it needs to advance CRM. • The department recognises the corporate roles, responsibilities, and resources it needs to advance CRM.
Case studies:	<ul style="list-style-type: none"> • Case Study 2 [†] • Case Study 3 [†]
Supplementary resources:	<p>Tools and templates:</p> <ul style="list-style-type: none"> • Appendix 2: Template for Terms of Reference for a Working Group provides assistance for those departments undertaking a Baseline Assessment (Step 2, Section 3.2). • Appendix 3: Template for Detailed Workplan for a Working Group can be used to help illustrate the tasks/ objectives set for the working group. • Appendix 5: Checklist Tool for CRM Progress provides a checklist of guiding questions and considerations for each key action area, which can be used to track and monitor progress made on each step in this Framework.

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Key Action Area 1.1

Identify the extent to which climate change is a risk to a department

Guiding question:

1. What risk does climate change pose to a department?

Considerations for Key Action Area 1.1

- Is climate change identified as an activity (such as strategic objective, any evidence of climate change strategy or policies, etc.) or as a risk for a department?
- Is climate change identified in any executive leadership briefs?
- Has any work been undertaken to assess climate risk to date?
- Is climate change currently reported on in the risk management process?

Not all departments will be exposed to the same level or types of climate risk. Therefore, each department needs to individually consider how climate change poses a risk to the delivery of its objectives, as well as identify any strategic opportunities. The business area responsible for leading the department's risk management should lead the process of determining the extent of risks and impacts that climate change presents to a department's strategic and operational objectives, and how (if at all) climate risks are being managed.

It is important for a department to identify what may already be in place towards managing climate risk, noting that initial exploratory work may be needed. CRM activities may be part of current business as usual, but they may not be referred to in such a direct way. In the case that the enterprise risk management function of the department has not identified how climate risks could impact the department, it would be useful to engage in some awareness-raising activities (see Appendix 15 for some ideas). A department could also look at the risk appetite statement to see if and how climate risk may impact the level and tolerance of risk for existing risk management categories. For example, climate change will change the risk level associated with financial risk, such as through the cost of adapting and transitioning to a low carbon economy but also through changes to insurance policies and wider government policy.

Departmental awareness of climate risks provides an important foundation for strengthening CRM activities. Conducting a staff survey can help to ascertain their level of awareness, and survey findings can be used to support executive level understanding of how climate risk could impact the department's service delivery across all of its operations. Ideas for questions to include in a staff survey can be found in Case Study 12 †.

If further understanding of climate risk and impacts is needed within a department, experts (such as those from DEC) may be called upon to present on climate science and impacts. Departments should also consider engaging relevant experts to help run awareness-raising workshops and/or learning exercises that can help all areas of a department (including the executive leadership) understand any risks that climate change poses to a department. This could consider the following: the implications for achieving strategic and operational objectives; the impact of not acting on climate risks; and the financial costs and savings by acting on climate risks. Some guiding questions for department workshops and/or learning exercises can be found in the staff awareness and engagement section of Appendix 15.

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Key Action Area 1.2

Secure and seek ongoing executive leadership support to establish strategic direction on CRM

Guiding question:

2. Is there sufficient departmental understanding and acceptance of climate change and associated risk?

Considerations for Key Action Area 1.2

- Has executive leadership been briefed on climate risk management?
- Has executive leadership endorsed a Baseline Assessment?
- Is there ongoing executive support to manage climate risk?

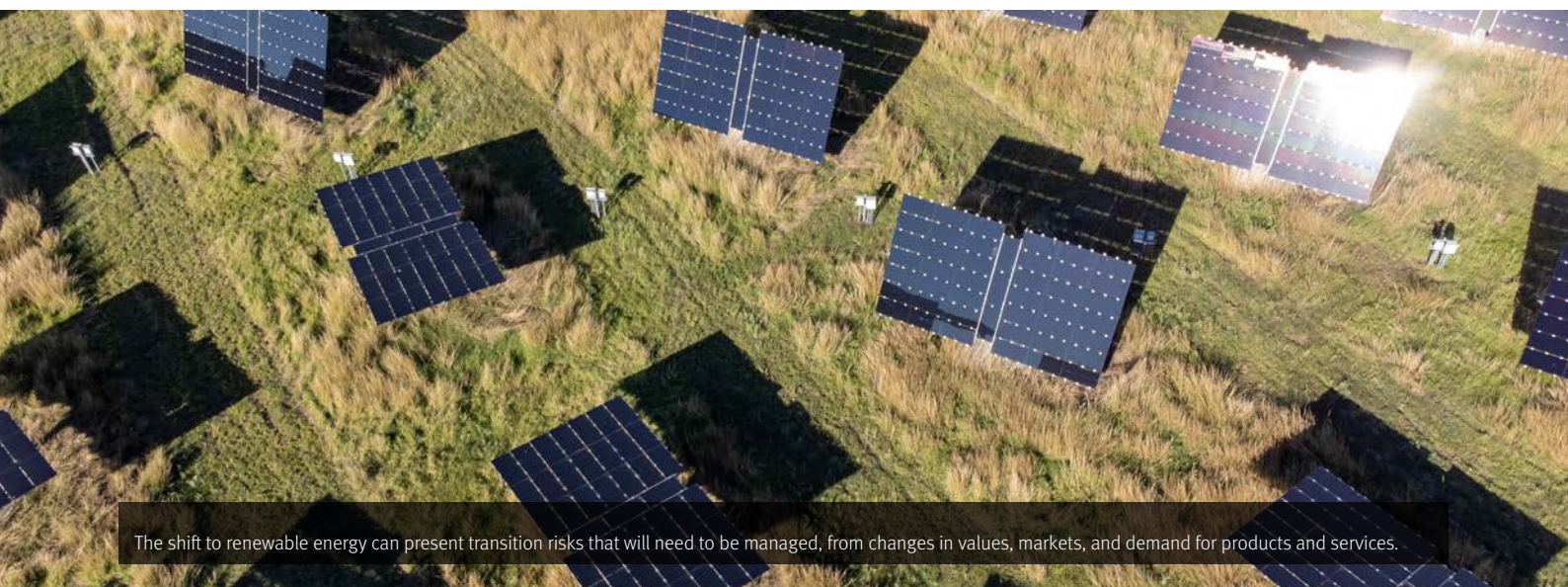
Executive leadership support is needed to pave the way for a department to manage climate risks as they drive commitment supports with resource allocation, etc. Executive leadership should be properly informed about climate risks and opportunities, and should take responsibility for ensuring a department's strategic and operational consideration of climate risks. To help departments' executive leaders establish a strategic direction on climate risk management, they should be briefed on the need to conduct a Baseline Assessment of the department's climate risks and capacity to manage these. Case Study 2[†] provides an example of how one Queensland Government department successfully secured executive support for a Baseline Assessment and subsequent strategic direction on CRM. Having executive leadership support early in the process will help advance CRM and make it easier to implement across a department in a streamlined, timely manner, with the resourcing and commitment required.

It is advised that the department's internal legal services are engaged during the process of CRM to identify and discuss how to manage any potential liability issues. Discussions and outcomes from these meetings may also assist with leadership discussions and securing executive support.

As well as securing initial executive support, it is vital to establish ongoing executive support to assist with review and updates to CRM

activities. With commitment from executive leadership for CRM, a department may be better equipped to overcome the factors that inhibit effective risk management. Some of these are as follows:

- A lack of support for a risk management culture from executive management
- A lack of time and resources allocated to risk management
- Difficulty in identifying and assessing emerging risks, especially cross-departmental risks
- A lack of independent assurance over the effectiveness of the risk management framework
- A lack of clarity over risk ownership and the responsibility for risk management
- Over- or under-treatment of risks
- Unnecessarily complex risk documentation.



The shift to renewable energy can present transition risks that will need to be managed, from changes in values, markets, and demand for products and services.

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Key Action Area 1.3

Integrate CRM within the organisational structure and system of governance

Guiding questions:

- 3. Has the department identified or established any governance structures to manage climate risks?
- 4. Are roles and responsibilities for managing climate risk in place?

Considerations for Key Action Area 1.3

- Has executive leadership considered an appropriate committee or structure for climate risk management?
- Have clear roles and responsibilities been outlined and secured?
- Has a cross-departmental working group been considered and established where appropriate?

Governance

Governance is an important consideration for ensuring a department takes a strategic and coordinated approach to managing climate risks. This will help to ensure a department properly assesses and manages climate risks and opportunities, makes appropriate strategic decisions, and sets and reports on relevant goals and targets. Executive leadership should consider an appropriate executive committee structure to ensure climate risks and opportunities are identified, understood, managed, and reported on. External membership or contribution should be considered across all options where appropriate to ensure adequate and independent expertise in decision making on climate risk. The Baseline Assessment process outlined in Step 2 (Key Action Area 2.2) can help identify further details on any gaps and opportunities in a department’s governance structure to manage climate risk.

A few options for departments to consider are outlined below (and illustrated in Figure 7); however, they should be adjusted to suit the department’s governance model.

- Option 1: Developing a new separate sub-committee or strategy group that focuses on climate risk
- Option 2: Implementing a climate risk component that is embedded across all existing committees
- Option 3: Strengthening an existing working group to assume a formal governance and reporting role to executive leadership to explicitly consider climate risk as a subset

Departments’ governance arrangements for CRM may also benefit from utilising the following:

- A champion at the executive leadership level or an executive member charged with CRM responsibility
- A CRM advisory group comprising external membership
- The external Audit and Risk Committee (ARC), which may be charged with overseeing the CRM process and providing external advice and support

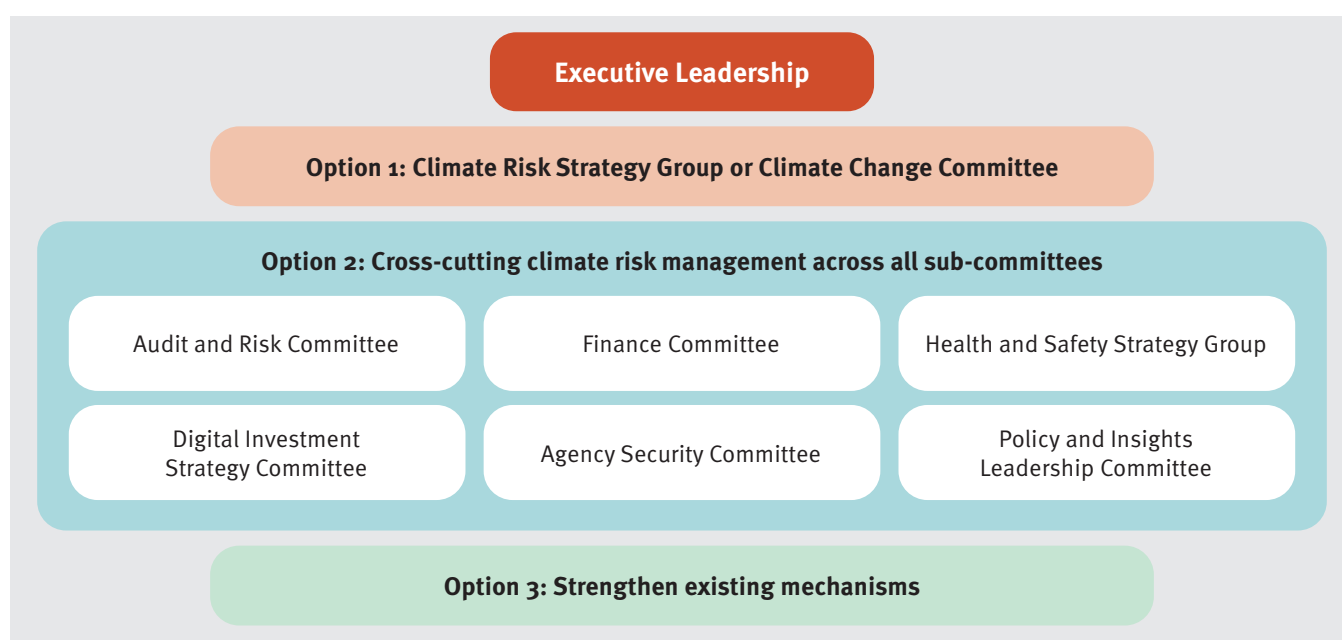


Figure 7: Options of ways to include climate risk into the governance structure of departments, as practiced by agencies that have participated in the QCR Program

A group (such as one of those outlined in Option 2 in Figure 7) dedicated to working on integrating climate risk across the department can help to coordinate and align various components of CRM. A committee, group, or team could be formed that sits alongside other committees, such as the human resources committee and the people and culture committee. This team could support the executive leadership to help coordinate the approach taken by a department towards addressing climate risk, and it can be used to help align a vision and strategy. The group should include staff who have been authorised to make decisions and should represent each of the different business areas, including risk management. An important element to consider is deciding where the team, committee, or group will be positioned in the governing and organisational structure for the department, and identifying various functional responsibility. Once a consensus is gained, the group can help to maintain a streamlined and consistent approach to climate-related decision making and ensure that it is taking a whole-of-department approach.

Departments that have participated in the QCR Program have identified the critical importance of CRM being conducted with the support of an authorising environment and executive leadership. However, it is not guaranteed that a department will reach the governance structure that is desired initially, so it is important to develop a framework for CRM irrespective of the governance structure. For example, QCR Program participants found that having good project management and the right operating environment, including support from a dedicated working group, was also critical.

Roles and responsibilities

Climate change and the reality of possible impacts when addressing them as part of departmental CRM activities can increase mental health and broader wellbeing issues for individuals and teams. This is an important factor to be considered when implementing CRM, and staff should be made aware of the support services available to them.

Establishing defined roles and responsibilities will strengthen a department's ability to identify and manage climate risks. Specifically, departments need to be clear on who is responsible for CRM, who manages critical decision-making processes, who helps operationalise process changes, and who helps to manage and coordinate any process change. Further, people's roles and responsibilities need to be clearly defined, from undertaking a preliminary investigation to more advanced activities such as a Baseline Assessment (Step 2, Key Action Area 2.2) to incorporating climate risk into existing risk management procedures (Step 3, Key Action Area 3.1). Each department will have executive and divisional staff who may have a role to play in collectively identifying and managing departmental climate change impacts and risk.

Departments should consider establishing an operational level, cross-divisional working group to help advance climate action and to incorporate climate risks within the existing risk management process. Such a group should have representatives from all divisions/ service delivery areas and, where possible, leverage suitable existing working group(s). The working group could be supported by some

executive level staff who provide oversight and strategic direction, but should consist of "doers" who implement the action on the ground. Initially, it is recommended that climate risk working groups hold meetings every two weeks to help establish the department's approach to climate risk management. If this is not practical, it is recommended that meetings are held monthly until the group has established roles and responsibilities and have made some progress, and then later move to quarterly meetings.

An alternative pathway to forming a working group is utilising the risk coordinators group of a department to help integrate and coordinate the consideration of climate risk in the risk management process. If this less formal approach is taken, the department should still be mindful that engaging with executives may benefit the process in terms of securing resources and capacity.

When forming a working group or engaging with risk coordinators, be sure to do the following:

- Brief executive leadership on the need for a working group and resource requirements.
- Link with executive governance structures, possibly as the working group supporting a governance structure.
- Encourage executive leadership to identify or nominate divisional representatives, or identify cross-departmental champions for the working group.
- Develop terms of reference and a detailed workplan for the working group.
- Provide periodic reporting to executive leadership and departmental communications.
- Educate the working group on climate science and impacts to raise their awareness and understanding.

A Terms of Reference template and a Workplan template for a cross-departmental working group are attached in Appendix 2 and 3, respectively, and they provide a good starting point for departments. Educating the working group is important before engaging with other staff across divisions on tasks related to CRM. This includes educating the group on what climate change is and how it may affect the organisation and using examples to help illustrate the potential impacts. Activities could include bringing external experts in and utilising the coordination activities set out in Appendix 15.

Case Study 3[†] discusses examples of roles and responsibilities that Queensland Fire and Emergency Services (QFES) created to enhance climate-related decision making. The advisory group provided recommendations, advice, and guidance on climate-related matters. The case study explores how the advisory group has contributed to a more streamlined and consistent approach to climate-related decision making.

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Key Action Area 1.4

Identify the resources needed to manage climate risks

Guiding question:

5. Has the department allocated sufficient resources to manage climate risks?

Considerations for Key Action Area 1.4

- Are appropriate resources to advance CRM in place?
- If a working group has been established, are there representatives across all divisions?

Departments that were part of Phase 1 of the QCR Program identified lack of adequate resourcing as a critical issue and barrier to progressing CRM. Those departments that secured sufficient human resources and commitment made significantly more progress with their Baseline Assessments and resulting recommendations and actions than those that had not. QCR pilots have included cross-divisional working groups ranging between eight and 12 people. These groups were found to be most effective when at least one or two representatives from each division were involved, as this helped manage the workload and ensured full representation of business functions.

Suggestions for resourcing to work on CRM, based on lessons arising from Phase 1, are outlined below.

- Allocate appropriate human resourcing and financial investment to facilitate and coordinate CRM activities (e.g., one senior full time employee for two years).
- Identify and engage people who understand the nature of the business needed to undertake initial and Baseline Assessment activities.
- Identify people across a department who are better placed to provide input into CRM based on their existing roles, responsibilities, and oversight.

Step 1 allows for departments to be flexible in their approach towards CRM. Departmental approval of resourcing and how leadership and governance structures are managed will vary between departments. Some CRM activities may not be able to be addressed until some evidence has been collated through other steps of this Guideline (particularly the Baseline Assessment and initial work to identify climate related risks to service delivery). Therefore, action areas in Step 1 should be reviewed and monitored regularly in accordance with departmental strategic priorities and government policy.

Once a Baseline Assessment has been conducted and an action plan outlined (Step 2, Section 3.2), actions and associated roles and responsibilities should be clearly determined. Some of these actions may be outsourced to consultants if required.



Flood events are likely to become more common and are likely to require modifications to assets, infrastructure, services, and behaviours, to adapt and reduce potential losses.



3.2 STEP 2: BASELINE ASSESSMENT AND ACTION PLANNING

This step helps a department to examine its strategic approach to CRM or, if one does not exist, to establish a strategy for CRM. It covers how to assess climate risks and opportunities, and capacity gaps using a Baseline Assessment template.

Overarching objective:	To ensure that a department is recognising climate risks as a strategic issue and responding accordingly through development of a Baseline Assessment, strategy, and action plan
Guiding questions	<ul style="list-style-type: none"> • Does the department understand its climate risks and opportunities? • Are the priorities and responsibilities identified to manage these risks well understood? • Does the department have an agreed department-wide approach for strategic management of climate risks and opportunities? • Does the department have an endorsed strategy and/or action plan for managing climate risk that supports implementation and periodic review (high level strategy/action plan that gets more detailed over time)?
Key action areas:	<p>2.1 Undertake a Baseline Assessment</p> <ul style="list-style-type: none"> • Engaging executive leadership to provide strategic direction for CRM • Engaging staff and convene a cross-divisional working group to advance CRM • Undertaking a Baseline Assessment (high-level strategic assessment) • Reviewing profile of governance structure and core business areas • Identifying and mapping departmental climate risks and opportunities (adaptation and transition) • Assessing current activities to address climate risks • Identifying capacity and capability gaps and opportunities to improve CRM • Reviewing and update Baseline Assessment regularly <p>2.2 Develop a forward-facing strategy and action plan for building strategic & operational organisational capacity for CRM</p> <ul style="list-style-type: none"> • Developing a strategy and action plan, using findings from the Baseline Assessment • Reviewing and updating strategy and action plan regularly as more detailed climate risk assessments are carried out (Step 3)
Desired outcomes:	<ul style="list-style-type: none"> • The department has identified current and future climate risks and opportunities and how they relate to its core business areas. • The department recognises existing CRM activity and gaps. • The department has identified its capability gaps and opportunities to improve capacity for CRM. • The department has an approved approach in place for the strategic management of climate risks and opportunities, which supports incremental and evolving action and implementation. • The department has an endorsed action plan for managing climate risk, which supports implementation and periodic review over time.
Case studies:	<ul style="list-style-type: none"> • Case Study 4 [†] • Case Study 5 [†]

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Overarching objective:

To ensure that a department is recognising climate risks as a strategic issue and responding accordingly through development of a Baseline Assessment, strategy, and action plan

Supplementary resources:**Tools and templates:**

- Appendix 1: QCR Program Baseline Assessment Template can assist departments with the Baseline Assessment process.
- Appendix 4: Baseline Assessment Flow Diagram can be used to help a department identify the various steps involved in undertaking a Baseline Assessment.
- Appendix 6: Template for Baseline Assessment Envisioning Scenarios and Timeframes can be used to help a department undertake a climate risk assessment.
- Appendix 7: Template for Baseline Assessment Risk Identification can be used alongside the Baseline Assessment Word template, to help a department identify climate risks.
- Appendix 8: Template for Baseline Assessment Capacity Assessment can be used alongside the Baseline Assessment Word template to help a department identify the capacity gaps and opportunities for a department to explore.
- Appendix 9: Template for Climate Risk Assessment Matrix and Prioritisation can be used to help a department categorise climate risks using a risk matrix and to prioritise them in line with existing risk management processes.

Resources:

- CSIRO's [Climate Compass](#) is the national guidance for climate risk assessments for Commonwealth Government departments and can also be applied by State Government departments.
- [ISO 31000](#) Risk Management is the international standard for undertaking a risk assessment.
- The Queensland Government's [A Guide to Risk Management](#) details its risk management process.
- The [Climate Risk Ready NSW Guide](#) supports NSW Government departments to assesses and manage their climate risks.
- [Queensland Health's Climate Risk Strategy 2021–2026](#) provides an example of a how a Queensland Government department developed their own climate risk strategy relevant to their business operations.
- CoastAdapt's [Working with Consultants](#) (2017) offers advice on how to engage with consultants if external support and advice is needed to advance CRM.
- Queensland Department of Transport and Main Roads' [Climate Change Risk and Adaptation Assessment Framework for Infrastructure Projects](#) (2020) provides guidance on typical adaptation and resilience risk treatments to address potential climate change risks in the context of DTMR.
- IAP's [Quality Assurance Standard for Community and Stakeholder Engagement](#) (2015) is a key resource on best practice stakeholder engagement, including external stakeholders.

Key Action Area 2.1

Undertake a Baseline Assessment

Considerations for Key Action Area 2.1

- Is the Baseline Assessment informed by, and adapted according to, the department's core business areas?
- Is a clear profile established of the department's governance structures and core business?
- Are key stakeholders identified and engaged?
- Are physical and transition risks identified?
- Is the status of the risk management approach assessed?
- Are key capacity and capability building gaps and opportunities identified, including strategic and operational responses?
- Key questions to help establish capacity and capability gaps and opportunities:
 - What climate change and CRM capability exists in the department?
 - Does knowledge and application of climate risk vary across the department's divisions?
 - Is there limited "line-of-sight" identifying climate change as a risk (e.g., are climate risks only assessed for a 12-month period, and does the department consider risks that are not material yet may become so in the future)?
 - What is the capacity of the department to manage identified climate risks?

Guiding questions:

6. Does the department understand its climate risks and opportunities (adaptation and transition)?

7. Are the priorities and responsibilities identified to manage these risks well understood?

Planning a Baseline Assessment

Baseline Assessments can help departments identify and understand relevant climate risks and opportunities. This is also sometimes referred to as a high-level strategic assessment, a scan cycle or a first pass risk assessment. The intent is to gain a preliminary understanding of climate risks facing a department, to prioritise further work that is needed, and to ensure the reporting/monitoring in place identifies where risk impact levels have been reduced. This involves the following:

- Using outcomes from Step 1 (Leadership and governance) to summarise a department's governance structures and core business areas' ability to address and manage climate risk
- Identifying and mapping climate risks as they relate to a department's core business areas
- Assessing current activities to manage climate risks and the effectiveness of these actions
- Identifying capacity and capability gaps and opportunities to improve CRM across a department.

The QCR Program developed the Baseline Assessment template (Appendix 1), which has been used by six Queensland Government departments under the QCR Program. The template can help departments examine how climate risks might be addressed and help them explore how capacity and capability to manage these risks can be improved. A Baseline Assessment process helps provide clarity on the priorities for a more detailed climate risk assessments, outlined in Step 3 (Key Action Area 3.3). Departments will likely need to adapt the template to fit their unique characteristics.

Undertaking a Baseline Assessment should be seen as an iterative

process, as both the risks posed by climate change and a department's or government's priorities and strategic objectives will change over time. The initial Baseline Assessment process can take around 12 months.

The process is most effectively delivered by a cross-divisional departmental working group, as outlined in Step 1 (Key Action Areas 1.3 and 1.4), with representation from all divisional areas of service delivery. It is critical that the executive leadership endorses a workplan to develop a Baseline Assessment and establishes a working group to deliver it, because it requires people who understand the organisation to conduct the assessment. Appropriate resources and capacity to undertake the Baseline Assessment are required. If a department sees fit, external partners can be engaged as critical friends/support to provide guidance and advice. Appendix 4 provides an overview of a Baseline Assessment process and the critical friend support shown through the QCR Program as an example that could be followed.

Departments that participated in the QCR Program found that it is important to ensure executive-level support is gained early in the process. Participants also found the most effective results were achieved when the appropriate process and approach was used, based on the organisational context and complexity of the department's service delivery and functional areas.

QCR Program participants also identified many benefits of undertaking a Baseline Assessment, including improving awareness and engagement; establishing a base template that can be used to consider, assess, and record climate risks; identifying gaps to manage the risks; and instigating new initiatives and driving progress forwards to decision makers (e.g., directors-general, executive leadership, audit teams). The baseline process has also

led to including climate change in departments' risk appetite statement, developing enterprise operating risks, and engaging with consultants to conduct department-wide detailed level climate risk assessments.

All areas of a department should be engaged in the development of a Baseline Assessment.

Undertaking a Baseline Assessment

The first action of any Baseline Assessment is to modify the template to suit a department's core business and any changes in climate change policy and direction for Queensland. The key point here is that a department will own the Baseline Assessment document and will be responsible for its outcomes. The template is therefore a starting point.

The second action of the Baseline Assessment is to develop a clear climate risk profile of a department, including governance structures, policy obligations, core business areas, and key services. This provides the basis for considering how climate risks could impact the department's strategic and operational objectives. Step 1 will help with collecting and collating some of the key information needed for profiling a department.

Some departmental strategic documents to consider when profiling include the Ministerial Charter Letter, Administrative Orders, Service Delivery Statement, Annual Report and Strategic Plan. Some departments may also have priority initiatives or similar that include more than the Strategic Plan for consideration too. These documents provide information on a department's core business, audit and risk management, governance structures, delivery priorities, key responsibilities, key services, budget overview, infrastructure and assets, primary sectors and markets, and secondary sectors and markets.

It may be helpful to engage key internal stakeholders within a department, across Queensland Government more broadly, and relevant external stakeholders. This diverse experience, representation, and relevant expertise will help ensure the profiling is robust.

Depending on how strategic and high level the Baseline Assessment is approached, thought may be given to envisioning a timeframe and climate emissions scenario for the assessment as a first pass. More detailed climate scenario analysis and projections, and how they relate to various climate risks and impacts for a department, can be worked on in more detail with strategy- and project-level climate risk assessments, information of which is found under Step 3. However, identifying an initial timeframe and climate scenario as a starting point can help frame thinking about climate risks (Appendix 6 can be used to assist in this).

A high-level assessment of a department's climate risks should then be completed as part of establishing a department's climate risk profile (a skeleton structure for this is provided in the Baseline

Assessment template in Section 2.2 of Appendix 1). Appendix 7 can be used to help with the identification of risks using an Excel workbook to frame thinking and understanding of potential physical and transition risks for the department. This includes consideration of the following.

- Physical risks in relation to service delivery/departmental functional areas, including:
 - Increased rainfall
 - Increased occurrence and severity of drought
 - Fewer, but more intense, cyclones
 - Occurrence of extra-tropical storms (the projections are uncertain)
 - Increase in number of severe fire weather days
 - Sea-level rise and enhanced coastal erosion
- Transition climate risks, including:
 - Policy and regulatory response changes
 - Changes to technological developments
 - Changes to the financial market
 - Shifts in stakeholder preferences
 - Influence on reputation
 - Legal risks
 - Strategic risks
 - Productivity risks.

The third action of the Baseline Assessment template (section 3 of Appendix 1) guides departments in identifying areas for improvement regarding CRM capacity. Appendix 8 can also be used to help frame a capacity assessment and thinking about capacity gaps and opportunities at three different scales: the enabling environment, the organisational level, and the individual level. The following could be considered when identifying areas for improving CRM capacity:

- Key capacity gaps
- Capacity building opportunities
- Guidance on strategic responses to CRM
- Institutional strengthening
- Leadership
- Knowledge growth
- Accountability
- Guidance on operational responses to CRM
- Identification of climate risks
- Measurement, assessment, and reporting of climate risks
- Treatment of climate risks.

Some approaches a department could take to identify and respond to capacity and capability gaps and opportunities include:

- Carrying out targeted interviews, a survey, or workshops across divisions to identify what capacity and capability exists in a department, and what the gaps, needs and opportunities are for improvement
- Identifying existing opportunities for capacity and capability building and training that could incorporate CRM



Physical risks such as increased occurrence and severity of drought can have considerable impacts on water supply and quality, affecting service delivery.

Key Action Area 2.2

Develop a forward-facing strategy and action plan for building strategic & operational organisational capacity on CRM

Guiding questions:

8. Does the department have an agreed department-wide approach for the strategic management of climate risks and opportunities?
9. Does the department have an endorsed strategy and/or action plan for managing climate risk that supports implementation and periodic review (high level strategy/action plan that gets more detailed over time)?

Considerations for Key Action Area 2.2

- Does the strategy align to a department's strategic priorities, outline risks and opportunities, provide information on leadership and governance, and consider the coordination of tasks?
- Does the strategy include strategic and operational responses to climate risk management?
- Does the strategy identify specific, measurable, achievable, relevant, and time-bound (SMART) targets?
- Is the action plan developed to evolve and become more detailed over time?
- Does the action plan consider:
 - which regions and assets have the highest risk, and what to do now as opposed to in the future?
 - how much time and resources should be allocated on adaptation and transition (i.e., are they focused on in equal measure and has the relationship between them been considered)?
 - how the voices of affected stakeholders and communities can be incorporated?
 - how perspectives on risk management and adaptation will evolve over time?
 - the frequency of review and updates?

The Baseline Assessment template in Appendix 1 provides a structure that could be used for developing a strategy and action plan. For departments developing a strategy and action plan to manage climate risks, the following activities covered in other areas of this Guideline could be useful to consider, including:

- Awareness-raising and engagement activities (Appendix 15)
- Incorporating climate change in the risk management process (Key Action Area 3.1)
- Considering climate projections and impacts for service delivery (Key Action Area 3.2 and Appendix 16)
- Undertaking more detailed risk assessments for service areas and projects (Key Action Area 3.3)
- Identifying trigger points and thresholds for different management actions (Key Action Area 3.4 and Appendix 17)
- Establishing or strengthening knowledge management and sharing platforms (Appendix 15)
- Undertaking a range of activities to improve climate capacity and capability (Appendix 15)
- Monitoring, reporting, and evaluating progress (Key Action Area 4.1 and 4.2).

An initial high-level strategy and action plan can be developed to provide a starting point for CRM, which can become more detailed

over time as different levels of climate risk assessments are undertaken. The different levels of climate risk assessment include provision of review and updates to the baseline (high level), and more detailed climate risk assessments through use of strategic risk assessments (division/area focused) or project-level specific assessments of climate risk. This process of periodic strategy and action plan development is outlined in Figure 8 and Step 3 of this Framework (Section 3.3).

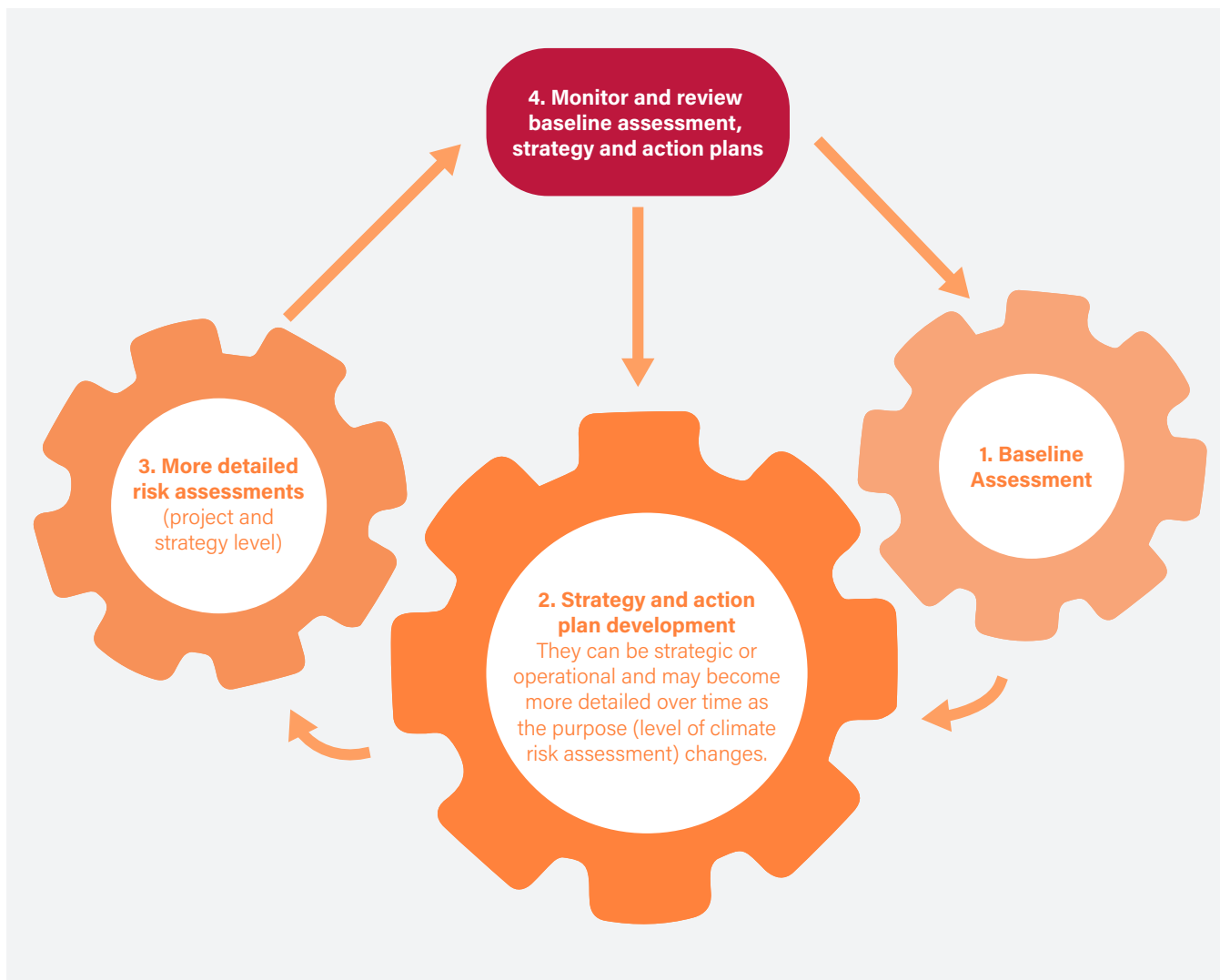


Figure 8: Strategy and action plan development

Develop a CRM strategy

Building on the Baseline Assessment, the strategy for CRM should be developed to manage climate risks according to the department's strategic objectives. This strategy can be stand-alone or be integrated into existing strategies.

The CRM strategy should clearly articulate the challenges and opportunities across a department, including where engagement and collaboration with other departments is necessary. It should align with a department's strategic priorities, outline climate risks and opportunities, provide information on leadership and governance, consider communications and engagement, implementation, and reporting. Consideration of a department's risk tolerance, available resources, and the capacity for change management over time is important to the strategy. Overall, a department's strategy for CRM needs to be SMART. When setting objectives, departments should refer to Section 6.1 of Queensland Treasury's [A Guide to Risk Management](#), to ensure the strategy is aligned with others developed for other risk types.

Some examples of strategic and operational responses that could

be included in a CRM strategy are summarised in Table 5. When developing a strategy, it is important to have a discussion on the position of climate risk as a strategic priority in relation to other organisational and government priorities. The level of priority may influence the ability to take action. Prioritisation of risks should be aligned with the standard process of risk prioritisation that is conducted for other risk types defined by the department.

Table 5: Examples of strategic and operational responses to climate risk

Strategic responses to CRM:	Operational responses to CRM:
<ul style="list-style-type: none"> • Institutional strengthening, including raising awareness and enhancing sustainable procurement • Supporting development of a community of practice and climate champions, encouraging inter-departmental involvement and collaboration • Empowering leadership and decision making that addresses climate risk • Encouraging knowledge growth, such as peer to peer learning, support programs and mentoring • Ensuring accountability and alignment between strategic priorities and organisational and governance structures • Integrating climate change into the risk management process 	<ul style="list-style-type: none"> • Measuring, assessing, and reporting on climate change activities and climate risk • Strengthening financial accountability and reporting for CRM • Improving the resilience of assets and facilities • Providing CRM training • Maintaining regular communications on CRM, updating CRM material on departmental intranets, and considering CRM at team planning days • Including CRM in recognition and reward schemes in line with existing programs

Queensland Health’s [Climate Risk Strategy 2021–2026](#) is a good example of how the Baseline Assessment process was used to help inform and drive strategy development. See Case Study 4[†] for information on Queensland Health’s approach to develop this strategy, which included extensive consultation.



Physical and transition climate impacts can cause financial risk. In relation to physical impacts, financial risk includes the cost of adapting, changes to insurance policies, managing liability, and the cost to repair damaged assets. In relation to transition impacts, financial risk includes the cost of meeting stakeholder needs and expectations, investment strategies, and changes to service provision.

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Develop a CRM action plan

A CRM action plan should deliver the department’s CRM strategy. Creating an action plan is best undertaken collaboratively with identified stakeholders and risk owners, to ensure it is inclusive and comprehensive. Consultation with external stakeholders (e.g., local government and utilities) could also be helpful as they will have information that may need to be considered and incorporated into the action plan. When identifying the most relevant stakeholders, it is useful to consider diversity of perspectives and experience, representativeness, relevant expertise, their ability to influence the process and their proximity to potential climate risks that have been identified. A key resource on best practice stakeholder engagement including engaging with externals can be found in the International Association for Public Participation Australasia’s [Quality Assurance Standard for Community and Stakeholder Engagement](#) (2015).

Actions planning should include identifying actions that reduce the likelihood and consequence of climate risks and take advantage of opportunities that arise. Depending on a department’s capacity to manage climate risks, it may choose to prioritise actions based on short-, medium-, or long-term timeframes rather than having a long list without including a timeframe for implementation (e.g., Case Study 5 †. However, it may not be possible to reduce the likelihood and consequence of climate risks (and existing controls, options, management, etc.) until these risks have been assessed in more detail (part of Step 3 in Section 3.3).

The following should be considered by departments when developing an action plan for CRM.

- Reflect on controls already in place and how they can be leveraged.
- Think about how to increase organisational resilience and climate risk maturity.
- Identify planning, engineering options, social, community and

education options.

- Consider short-, medium-, and long-terms actions (internal and external facing).
- Consider the risk tolerance to the department.
- Identify options that fit in with broader strategic objectives and existing priorities.
- Identify and consider the co-benefits of options.
- Consider the capacity for adaptive management as conditions change over time.
- Consider the ability to be sustainable through supporting long-term resilience and capacity building.
- Agree on decision criteria that will be used to identify and evaluate actions and document rationale. Criteria could include time to implement, cost estimation of the action, extent to which negative impacts will be minimised, potential co-benefits, time to seek approvals, the cost and ability to get funding and other risks that may accompany the option.
- Engage stakeholders to validate decision making.
- Use a flexible action planning approach, given some of the uncertainties of climate change.
- Ensure the action plan outlines a sequence of tasks necessary for implementation, such as strategic, operational and maintenance responses.

A timeline may be added to the strategy and action plan, with more detail and clarity added periodically, to include key outcomes and performance targets, particularly those in relation to the adaptation response to climate risks. Figure 9 illustrates some examples of activities that could fit into a logical timeline for CRM. When a department carries out actions in Step 4 (Section 3.4), it is easier for them to monitor progress on CRM activities and achievements if an established timeline is in place.

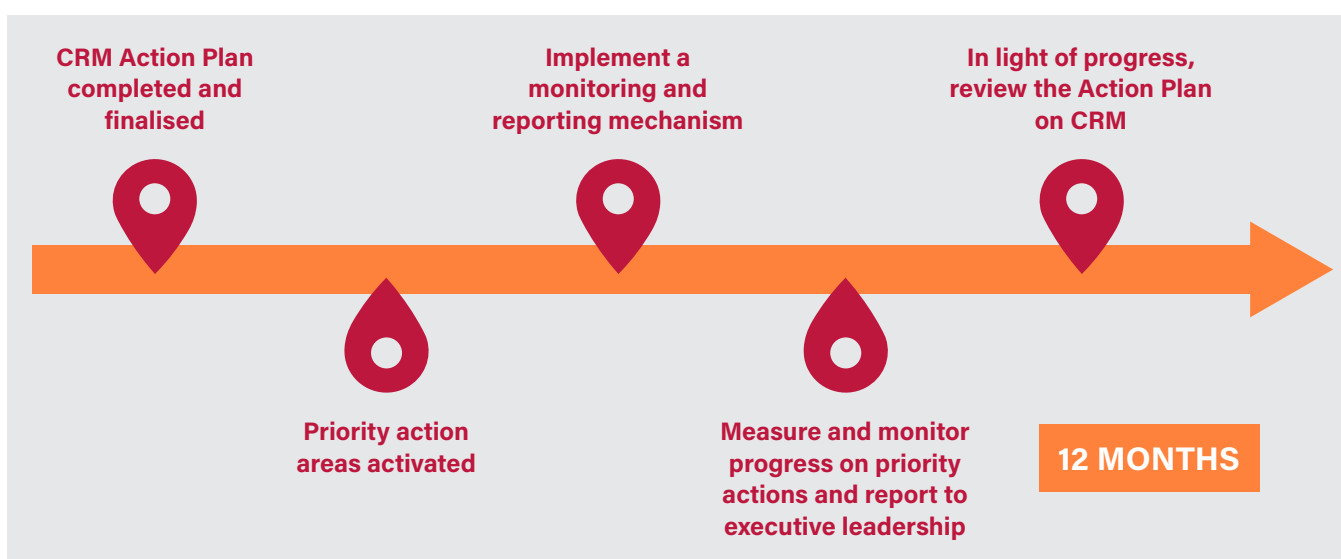


Figure 9: Example timeline of milestones for action plan delivery

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3.3 STEP 3: INTEGRATION AND IMPLEMENTATION

This step is about integrating climate risk and implementing CRM actions into a department’s risk management process. These actions may have been identified through a Baseline Assessment or established under development of a strategy and action plan; both are outlined in Step 2 (Section 3.2).

Key to this step is normalising CRM (both physical and transition risks) in a department’s established corporate risk management process. This step also covers:

- climate projections and impacts for service delivery
- more detailed risk assessments for service areas and projects
- trigger points and thresholds for different management actions.

It is important for departments to spearhead climate risk assessments and CRM themselves, so they not only build capability but also attain executive support and set in place processes to manage climate risk. Departmental capability and managing, responding to, and reducing climate risk is built from undertaking detailed risk assessments and improving departmental capacity on CRM (see Appendix 15 for details). Where external support is sourced to assist with integration and implementation of CRM actions, departments are encouraged to ensure that external providers have a good understanding of the business’s operational environment and utilise a co-design approach.

Overarching objectives:	<p>To enable short-, medium-, and long-term actions to manage climate risks.</p> <p>To implement climate risk in relevant departmental processes such as corporate risk management and mechanisms to enhance knowledge and capability, and account for future investment, business needs and opportunities.</p>
Guiding questions:	<ul style="list-style-type: none"> • How is climate risk managed within the corporate risk management process? • Have different climate change projections and scenarios been considered within a department to inform risk analyses? • Are more detailed risk assessments required in line with the CRM strategy and action plan? • Have trigger points and thresholds been considered for climate risk management?
Key action areas:	<p>3.1 Embed climate risk in the risk management process</p> <ul style="list-style-type: none"> • Strengthening CRM in the risk management process • Assessing and understanding climate change projections, scenarios, and impacts in the context of the department and its business <p>3.2 Interpret climate projections, scenarios, and impacts</p> <ul style="list-style-type: none"> • Investigating additional data for detailed risk assessments at the service area and project scale to quantify other components of physical risk <p>3.3 Undertake a detailed risk assessment</p> <ul style="list-style-type: none"> • Undertaking strategy and project cycle risk assessments for areas of service delivery using <i>Climate Compass</i> and adapting them to suit a department • Reviewing other risk assessment methods to build knowledge base • Developing risk ratings to inform prioritisation and management of risks <p>3.4 Understand trigger points and thresholds</p> <ul style="list-style-type: none"> • Identifying trigger points and thresholds • Exploring impact chains to help inform risk, vulnerability, and exposure • Updating and implementing strategies and action plans to treat risks

Desired outcomes:	<ul style="list-style-type: none"> • The department has embedded climate risks (physical and transition) into its risk management and reporting processes. • The department consistently evaluates past, present, and future climate scenarios to understand the extent of physical climate risks, climate transition risks, and possible impacts on its operations. • The department has completed a more detailed risk assessment, produced at the whole-of-department scale, service delivery area and project-specific scale where appropriate. • The department has identified and assessed trigger points and thresholds for management action.
Case studies:	<ul style="list-style-type: none"> • Case Study 6 [†] • Case Study 7 [†] • Case Study 8 [†] • Case Study 9 [†] • Case Study 10 [†]
Supplementary resources:	<p>Tools and templates:</p> <ul style="list-style-type: none"> • Appendix 6: Template: Baseline Assessment Envisioning Scenarios and Timeframes can be used to help a department select a timeframe and climate scenario for a high-level or detailed climate risk assessment. • Appendix 9: Template: Climate Risk Assessment and Prioritisation Example: can be used to illustrate how a department could categorise climate risks using a risk matrix and prioritise them in line with existing risk management processes. • The QFES's Risk Assessment Process Handbook (2018) outlines a method to apply risk ratings using matrices and inform the prioritisation and management of risk. • Queensland Health's Climate Risk Strategy and Adaptation Planning Guidelines (2021) presents three templates that can be modified for both high level (scan cycle template) and detailed risk assessments (detailed cycle template). • The Queensland Department of Transport and Main Roads' Climate Risk Assessment for Infrastructure Projects (2020) provides guidance on undertaking climate risk assessments for infrastructure projects. This includes a risk assessment template that is provided in a Microsoft Excel and report format. • Appendix 17: Examples of trigger points, thresholds, and management is helpful in identifying these aspects. <p>Resources:</p> <ul style="list-style-type: none"> • The CSIRO's Climate Compass is a risk management tool developed for Commonwealth Government departments to bring climate risk into current risk management processes and help identify, prioritise, and put plans in place to manage risks and opportunities emerging from climate change. Further information on key pages to refer to is found in Appendix 12 of this Guideline. • Queensland Future Climate website contains data and information on future climate change in Queensland, including access to high resolution, downscaled climate projections. • The CoastAdapt's Information Manual offers a methodology for undertaking a coastal risk assessment. • The Climate Risk Ready NSW Guide was prepared to assist NSW Government agencies to manage climate risks. • Queensland Health's Detailed Cycle Assessment provides an example template for doing detailed risk assessments. • CoastAdapt has a series of checklists and tools for first-pass and second-pass risk assessment.

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Key Action Area 3.1

Embed climate risk into the risk management process



Considerations for Key Action Area 3.1

- Is climate risk embedded into the corporate risk management process?
 - Is it in the risk register?
 - Is it considered in the risk appetite statement?
 - Is it considered in the risk management guidelines?
- Is CRM integrated into the department’s philosophy and organisational culture?
 - Is CRM integrated into planning, reporting, and decision-making structures at both the strategic and operational levels?
- Has the process of embedding climate into the risk management process helped to streamline operational procedures in climate risk reporting and management?

A straightforward, effective, and efficient way to advance CRM is to incorporate climate risk within the corporate risk management process. This embeds climate risks into existing departmental procedures that have regular monitoring and reporting cycles. It is recommended to embed it early in the journey of CRM as it is a critical part of departmental CRM decision making. The approach

should be tailored to suit a department’s existing risk management processes and should include consideration of climate risks in the risk register, risk appetite statement and any risk management guidelines.

Table 6 provides more detailed guidance.

Table 6: Options to incorporate climate risks into existing corporate risk management processes

Corporate risk management process	Description of how climate risk can be included
Risk register	<ul style="list-style-type: none"> • The risk register of a department could be updated to incorporate climate risks for specific assets and services of the business operation. This would help ensure that the outcomes of a climate risk assessment are accurately reflected and monitored as part of business-as-usual risk management. • There are two approaches to consider: 1) the creation of one or more specific climate risks; and 2) climate risk assessments for existing and new risks. These approaches are not mutually exclusive. • Existing risks documented in the risk register should be evaluated to consider the impacts of climate change. • The risk register could also record one or more overarching climate risks, capturing the broader impact of climate change on a department’s objectives. • Integrating climate risk into the enterprise risk register would provide a single point of truth and assist with: <ul style="list-style-type: none"> » straightforward access, use, and review of departmental risks » risk escalation and de-escalation processes » assurance monitoring and reporting processes. • Appendix 9 provides information on how CRM can be incorporated into the risk register using a climate risk assessment matrix and an example of how to approach the prioritisation of risks.
Risk appetite statement	<ul style="list-style-type: none"> • Climate risks could be included in a department’s risk appetite statement, which defines the level of risk that the department is prepared to accept to achieve its objectives. It enables planning and developing necessary strategies to reduce the risk to acceptable levels. The statement provides guidance for evidence-based decisions and supports a consistent approach across a department. A risk tolerance would be applied that could identify where there is scope to accept higher levels of residual risk for greater benefit, or where tighter controls are required. Risk appetite levels and tolerances would be defined by the executive leadership in consultation with the ARC of a department.

Corporate risk management process	Description of how climate risk can be included
Risk management guidelines	<ul style="list-style-type: none"> Climate risks could be incorporated in a department’s risk management guidelines. This would provide an overview of the key concepts for managing climate risk, and describe the best practice for identifying, assessing, treating, and monitoring risk within a department. These guidelines advise the steps to be taken when managing a risk and completing risk assessments. Including climate risks would promote consistent climate risk assessments and reporting procedures. Existing risk matrices within a department’s risk management guidelines may need to be updated to incorporate climate risks to better reflect the uncertainty and long timeframes associated with climate change. This will enable climate risks to be considered consistently alongside other enterprise risks. Climate risks introduce an increased level of uncertainty and therefore potentially higher risk. To address this, an additional likelihood criterion of “uncertain” could be allocated to the risk matrix. When climate risks are uncertain, it makes it hard to predict their impact, and to control the damage once they occur. This is an added level of complexity within CRM.

Incorporating climate risk in the enterprise risk management process can be approached in different ways. Figure 10 shows an example of how climate risk can be integrated and considered in existing risk management categories. Some climate risks may go beyond the scope of individual departments to assess and respond in isolation, and a whole-of-government approach may be required to address these.

Effectively embedding risk management into the organisational culture is key to achieving integrated climate risk management. A challenge for all departments is to deliver an appropriate level of investment in strategic climate risk management – both in time and

resources – and to clearly communicate the importance of CRM as a core component of the department’s business. Information to help accomplish organisational culture is outlined in Step 1 (Key Action Area 1.3) and further information is found on pages 11, 12 and 25 of the Queensland Treasury’s [A Guide to Risk Management](#), with reference to vertical and horizontal integration, as well as organisational culture and the importance of a risk management champion.

Case Study 6 † shows the approach TMR took to integrate climate change into their risk management processes.



Figure 10: Example of including climate in enterprise risk management (adapted from *TCFD Status Report, 2022*)

† The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Key Action Area 3.2

Interpret climate projections, scenarios, and impacts

Guiding question:

- 11.** Have different climate change scenarios and projections been considered within a department to inform risk analyses?

Considerations for Key Action Area 3.2

- Are a range of climate projections and scenarios considered in the department's climate risk assessments?
- Are different timeframes considered in these assessments (i.e., short, medium, and long term)?

As a department advances its understanding about climate risk, it will be necessary to consider climate change projections and scenarios to inform more detailed analysis and evaluation of climate risk.

It is useful to consider past trends to gain an idea of climatic change and impacts, but the focus should be on current and potential future trends when exploring the potential impacts of climate change. Trends in climate risk and impacts should be looked at when a department explores and furthers understanding of exposure, vulnerability, and capacity to manage different climate risks. The future includes the short term (2030), mid term (2050) and long term (2070 to 2100 and beyond).

More information to assist with interpreting climate projections and impacts is provided in Appendix 16. This additional information can be used to help determine the timeframe for climate risk assessments, the climate change scenarios to use, and information on Queensland-specific climate projections. When conducting strategy- and project-level climate risk assessments (which is a more detailed assessment of climate risk compared to a Baseline Assessment, described in Step 2 of Section 3.2), Appendix 6 can be used to assist with identifying timeframes and climate scenarios

to help frame thinking about climate risks. For these more detailed climate risk assessments, multiple timeframes, projections, and scenarios may be selected.

When evaluating climate projections and impacts on departments' service delivery, it is important to understand:

- Risks will change over time – for example, 1%AEP (annual exceedance probability) flood events are likely to become more common.
- Risks that might be acceptable now might be unacceptable at a future date.
- There will be increased intensities of natural hazards in the future, such as bushfires and tropical cyclones.
- Economic, social, and technological changes in response to climate change could create new transition risks for a department.

Key definitions for considering climate projections and impacts

The Intergovernmental Panel on Climate Change (IPCC) defines **exposure** as the inventory of elements in an area in which hazard events may occur. Hence, if population and economic resources were not located in (exposed to) potentially dangerous settings, disaster risk would not exist.

Vulnerability is defined as the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, climate variability and extremes.

Capacity is an important element in most conceptual frameworks of vulnerability and risk. It refers to the positive features of people's characteristics that may reduce the risk posed by a certain hazard. Improving capacity is often identified as the target of policies and projects, based on the notion that strengthening capacity will eventually lead to reduced risk.

These terms are important for CRM, as they impact the ability to anticipate risk, respond to the risk, recover, and change because of the risk.

Key Action Area 3.3

Undertake a detailed climate risk assessment

Considerations for Key Action Area 3.3

- Since completion of the Baseline Assessment, have more detailed risk assessments been undertaken?
 - Do these include climate risk assessments at the strategy scale?
 - Do these include climate risk assessments at the project scale?
- Do the more detailed risk assessments include risk ratings and the appropriate prioritisation of risks and management actions?
- Are the outcomes being tracked in a strategy and action plan?
- Are the risks being treated?
- Has a timeframe been set to review the strategy and action plan?

Guiding question:

12. Are more detailed risk assessments being undertaken in line with the CRM strategy and action plan?

Where climate risks have been identified, a more detailed risk assessment will be required. This can help to establish the source of the risk, the event(s) that could trigger the risk, an assessment of the potential impact on the department, and possible management options for the risk. The process of detailed risk assessment and management is relatively standardised, and Queensland Treasury's [A Guide to Risk Management](#) recommends following the process outlined in ISO 31000.

A number of resources already exist that build on ISO 31000, and guide the process of detailed climate risk assessment and management. The CSIRO's [Climate Compass](#) is a recommended resource for departments completing a climate risk assessment. More information on using *Climate Compass* as a tool for risk assessments at different levels of detail is found in Appendix 12. Tools such as the CoastAdapt's [Information Manual \(2018\)](#) can be used to help evaluate options for climate action planning, such as Step 4 of CoastAdapt under "[assess options and prepare a plan](#)".

Case studies 7–10 provide examples of detailed climate risk assessments from a selection of Queensland Government departments. Case Study 7[†] explores how a department adapted the detailed cycle in *Climate Compass* and CoastAdapt's templates for a detailed risk assessment. This detailed climate risk assessment was used to explore high priority risks in greater detail and to build a climate change risk management plan. Case Study 8[†] illustrates how a detailed risk assessment can be used for the strategy and project scale, to understand management at the smaller scale rather than generalised across a department and wider areas of service delivery. Case Study 9[†] explores a climate change risk assessment that was undertaken for an organisation aimed specifically at the assets owned and operated by the entity to identify gaps and mitigation strategies where required. It highlights the importance of

collaboration with stakeholders.

The QFES developed a [Risk Assessment Process Handbook](#) (Case Study 10[†]) that outlines a method to apply risk ratings using matrices, to inform the prioritisation and management of risk. These case studies demonstrate how different departments have applied risk assessments in the context of their service delivery. They indicate how the process can be used to directly inform planning and resource allocation, and to promote active communication, cooperation, and coordination.

A detailed risk assessment can involve further analysis and adjustment of risk ratings, used to inform prioritisation and management of risks. Page 88 of *Climate Compass* is a useful place to start to help with determining risk ratings, and departments should also refer to their existing risk management process and how other risk types are rated (e.g., using a risk matrix). Appendix 9 provides an example of how a department could approach climate risk ratings and prioritisation. A climate risk assessment template developed by Queensland Health that assigns risk ratings is detailed on [their website](#) and is illustrated in Figure 11.

Additional considerations to the risk rating that is applied when assessing and prioritising climate risk include accounting for the tolerance of the risk, the climate variables, and trends in the industry (more information is provided in Appendices 10 and 16). It may involve assessing the following:

- The level of impact the risk would have on service delivery and whether it is deemed critical
- The pervasiveness of the risk and whether it affects multiple areas of a department
- The exposure of the risk and whether it could impact large geographical areas



Figure 11: Simple Steps to analyse and evaluate climate risk (developed under QCR Program, 2022)

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Key Action Area 3.4

Understand trigger points and decision thresholds

Guiding question:

13. Have trigger points and thresholds been considered for climate risk management?

Considerations for Key Action Area 3.4

- Are appropriate trigger points and thresholds set for CRM actions?
- Are impact chains used to document factors that influence a risk and to plan for management actions based on the uncertainty of climate change?
- Have the strategy and action plan been updated with trigger points and threshold levels?

Trigger points and thresholds

Management thresholds and triggers are the identified limits at which an unacceptable level of impact occurs.⁷ The uncertainty around climate risk and the potential impacts means that they can be challenging to predict and manage. Adaptive management using adaptation pathways provides a useful approach to adaptation planning and decision making in an environment of uncertainty.

Identifying and setting different thresholds for CRM can be helpful for guiding adaptive management. Clear responsibilities and procedures for overseeing, managing, and monitoring climate risk are required for this approach to be effective.

Thresholds help address the inherent uncertainty in planning for, and responding to, climate risk. A physical threshold could include a critical number of extreme heat days or amount of sea level rise that would trigger a response. An example of a management threshold is repairing infrastructure a certain number of times, resulting in disruption of service delivery and higher costs to the organisation which becomes inefficient, as opposed to the option of replacing the damaged infrastructure with a new more resilient design. The action from here may be to implement more resilient infrastructure rather than seeking to continually repair the damage.

Trigger points identify which further decisions or actions will need to be undertaken. They can help to remove the pressure of making all decisions at once, and create time to build strategies for funding, gain community support, and generate the necessary knowledge to implement future decisions. Importantly, it can help identify the first steps that can be taken.⁸ An adaptation pathways approach is a decision-making strategy comprising a sequence of manageable steps or decision-points over time. Trigger points and thresholds can also be used to reduce uncertainty by using events not time as decision points.

Appendix 17 provides a table of possible trigger points and management responses for a range of climate hazards that could be considered within an adaptation pathways approach.

[CoastAdapt](#) provides guidance on the pathways approach to coastal adaptation, including information on how to identify appropriate trigger points considering critical thresholds, lead times, and implementation times. CoastAdapt also outlines several relevant case studies to illustrate the approach and its benefits for certain applications.

Impact chains

Impact chains are a visual representation of a theory of change that can include important components of risk such as vulnerability, as well as indirect and interdependent risks. Impact chains can help identify and document factors that influence a risk and the planning for uncertainty of risk. They can also assist with decision making for management triggers and thresholds. The international standard for adaptation to climate change ([ISO 14091](#)) recommends using impact chains to document factors that influence a climate risk. Impact chains are an effective collaboration and communication tool that can be used to help identify actions and manage triggers or thresholds.

⁷ Department of Planning, Industry & Environment NSW, *Climate Risk Ready NSW Guide*, 2020, <https://climatechange.environment.nsw.gov.au/sites/default/files/2021-06/NSW%20Climate%20risk%20ready%20guide.pdf>.

⁸ CoastAdapt, "What Is a Pathways Approach to Adaptation?", 2017, accessed 11 November 2022, <https://coastadapt.com.au/pathways-approach>.



3.4 STEP 4: MONITOR, REPORT, AND EVALUATE

This step is about establishing a monitoring and evaluation plan to track the implementation and effectiveness of a department's CRM actions. It looks at integrating climate risk into existing risk monitoring, evaluation, and reporting.

Overarching objective:	To enhance departmental performance to manage and integrate climate risks into existing corporate systems
Guiding questions:	<ul style="list-style-type: none"> • Is there periodic and annual departmental monitoring and reporting of climate change activities and climate risk? • Is climate risk being monitored and reported through the corporate risk management process? • Are there regular reviews and updates to the CRM processes within a department?
Key action areas:	<p>4.1 Monitor and report progress</p> <ul style="list-style-type: none"> • Finding out if climate risk management is part of existing departmental monitoring, reviewing, and reporting mechanisms (if not, determining a plan or framework to develop periodic monitoring and reporting on climate risk, integrating into existing mechanisms where practicable) • Reviewing the department's climate risk management maturity (every 2–3 years, preferably) <p>4.2 Review departmental progress on managing climate risk</p> <ul style="list-style-type: none"> • Keeping abreast of emerging CRM obligations and expectations (internally and externally), updates to climate change projections and new research into sector-specific impacts relevant to a department
Desired outcomes:	<ul style="list-style-type: none"> • The department has established monitoring, reporting and evaluation mechanisms to manage climate risk, which are aligned or incorporated into existing operational procedures. • The department uses CRM performance measures and indicators to monitor climate risk over time. • The department has established regular monitoring and reporting cycles for CRM. • The department has identified a relevant group or governance to oversee the implementation process of CRM.
Case studies:	<ul style="list-style-type: none"> • Case Study 11[†]
Supplementary resources:	<p>Tools and templates:</p> <ul style="list-style-type: none"> • AdaptME Toolkit is, developed by UKCIP, responds to a growing demand for practical support in evaluating adaptation progress and performance. It can be used as an example for departments to draw ideas and information using a UK-based approach. • The Queensland Government's Department of Foreign Affairs and Trade offers the resource <i>Better Evaluation – An overview of monitoring and evaluation for adaptive management</i>. <p>Resources</p> <ul style="list-style-type: none"> • The Queensland Treasury's <i>A Guide to Risk Management</i> (2020) can be used to refer to provide key concepts of risk management for monitoring and reporting. • The Queensland Treasury's <i>Queensland Government Program Evaluation Guidelines</i> (2022) outline a set of principles to assist departments to plan, commission, manage and conduct consistent, transparent, and high-quality evaluations. • Queensland Audit Office's Risk Management Maturity Model can be used to help a department assess their current climate risk maturity status, which ranges from basic to optimised.

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Key Action Area 4.1

Monitor and report progress

Guiding questions:

14. Is there periodic and annual departmental monitoring and reporting of climate?

15. Is climate risk being monitored and reported through the corporate risk management process?

Considerations for Key Action Area 4.1

- Has the department established how to incorporate climate risk into existing monitoring and reporting mechanisms?
- Is the management of climate risks included in the department's monitoring and reporting plan?
- What is the reporting and review frequency?
- Has the department's climate risk maturity been assessed to identify how far advanced it is and what is needed to reach optimum level?

Integrating climate risk into existing monitoring and reporting mechanisms

Where a department has a risk management plan in place, monitoring and reporting will be required as part of usual risk reporting and monitoring. It is normal practice for the enterprise risk management function of the department to lead this. The monitoring and evaluation of climate risk should therefore be embedded into the corporate risk management process of a department (this process is outlined in Step 3, Key Action Area 3.1). The risk owner should be responsible for maintaining focus on assessing the risk and where attention is needed over time.

A monitoring and reporting plan should consider the following:

- Alignment or integration with existing monitoring and reporting mechanisms
- Resources and responsibilities that are allocated for data collection and other components of monitoring, reporting and evaluations
- Risk reviews and reporting
- Reporting and review frequencies
- Identification of treatments to reduce the consequence and impacts of the risks, how the effectiveness of these treatments will be measured and monitored for any improvements from a baseline (see Step 2 of this Guideline)

A department should also consider tracking their CRM maturity status to assist in reviewing their overall position in relation to climate risk management. This can help illustrate where greater development and progress is needed on elements of CRM such as assessment, treatment, and monitoring. Case Study 11[†] provides an example of how DES has undertaken a risk maturity status check.



Resilience is the ability to anticipate, prepare for, respond, and adapt to acute and chronic climate change, to continue delivery of services and manage assets, to meet community expectations.

[†] The case studies have been developed for internal Queensland Government reference only. These case studies are not available publicly. Queensland Government officers may obtain a copy from the Department of Energy and Climate.

Table 7: Examples of how CRM can be integrated into strategic corporate documents and be used to support a department to monitor and report on their CRM status

Monitoring and reporting mechanism	How climate risk could be integrated
Department public reports or website	Departments could include information on climate risks or climate risk management in their reports produced by the department or on their websites
Operational plan	A key monitoring and reporting mechanism that could incorporate climate risk sits within the operational plan for the department.
Internal audit	Departments are required to establish an internal audit function, according to Section 24(1) of the Financial Performance Management Standards (2019) (FPMS). It is suggested this would be a key monitoring and reporting mechanism that departments can utilise to incorporate climate risk.
Risk register	Inclusion of climate risks on the risk register can be used to help standardise the procedure for identifying risks and considering them in the decision-making process.
Asset management plan	A department can include assets which are/will be affected by climate risks to increase adaptative capacity, resilience and maximise resource efficiency, as well as products and services for different climate risks that could arise. The asset management plan can be used to monitor and report changes to the status and level of assets that are exposed climate risk and how effectively the risk is being managed.
Business continuity planning	These are normally prepared in the context of disaster management. Climate risk has the potential to be included in these documents to account for the acute, chronic, short-, medium- and long-term risks. This can be used to assist with strengthening organisational resilience to physical and transitional climate risks. The plan could outline how climate risks are being monitored, reported on, the plan for how climate risks (physical and transition) could alter a department's service delivery, and how the department intends to respond and manage the risk given the uncertainty.
Disaster recovery and management plan	This documents how a department proposes to prepare for, respond to and recover from disasters. Significant climate risks may be identified here which increases climate resilience.

Audit and Financial reporting on climate risk

The [Queensland Audit Office](#) undertakes performance audits which may include environment and climate change and therefore departments could expect climate risk to be a consideration by auditors.

The *Financial Accountability Act 2009* and the FPMS, which are both administered by Queensland Treasury, detail the obligations accountable officers within departments have in the management of risk, particularly as they relate to a department's financial statements and annual reports.

The [Financial Accountability Handbook](#) provides that as per Part 3 of the FPMS:

Agencies must prepare their financial statements in accordance with Australian Accounting Standards (unless a statutory body has an approval from the Treasurer not to prepare general purpose financial statements) and must comply with the minimum reporting requirements contained in the [Financial Reporting Requirements for Queensland Government Agencies](#) (Financial Reporting Requirements, FRRs).

Departments should refer to the FRRs guidance (published annually) on disclosing material accounting estimates and judgements relating to climate-related risk, as well as referencing the QCAP and the [Queensland Sustainability Report](#) in their financial statements.

Key Action Area 4.2

Review departmental progress on managing climate risk

Considerations for Key Action Area 4.2

- Is the approach and management of climate risk reviewed in line with a department's enterprise risk framework reviews?
- Do any elements of the CRM strategy and action plan need amending?

It is important to periodically review CRM practices, including the strategy and action plan (Step 2, Key Action Area 2.2). This can be aligned with the organisation's enterprise risk framework reviews which includes alignment with risk management governance cycles (annually and quarterly). This may include a review of how a department is using climate change scenarios, datasets, or assumptions, or how more recent information about climate impacts is being captured.⁹ Users of this Guideline may liaise with those who are responsible for the department's enterprise risk management function to work out when updates and reviews of risks may be required.

This Guideline will be updated by DEC in line with changes in science and policy.

⁹ As recommended in the Department of Planning, Industry & Environment NSW, *Climate Risk Ready NSW Guide*.

Guiding question:

15. Are there regular reviews and updates to the CRM processes within a department?



It is important to regularly monitor, report, and evaluate departmental progress to manage climate risk. This includes reviewing and updating strategies and action plans.

This Guideline should be used in conjunction with the two accompanying appendix documents: The Guideline Appendices document, and the Excel spreadsheet titled “Climate Risk Management Guideline Appendices 6-9”. A list of the appendices found in the accompanying documents are listed below.

Templates developed under the QCR Program

1. Template: Baseline Assessment
2. Template: Terms of Reference for a Working Group
3. Template: Detailed Workplan for a Working Group
4. Baseline Assessment Flow Diagram
5. Checklist Tool for CRM Progress
6. Template: Baseline Assessment Envisioning Scenarios and Timeframes
7. Template: Baseline Assessment Risk Identification
8. Template: Baseline Assessment Capacity Assessment
9. Template: Climate Risk Assessment and Prioritisation Example

Supplementary resources

10. Climate change in Queensland
11. Formation of this Guideline
12. Climate Compass Risk Assessment Methodology
13. What are Climate Impacts?
14. Additional Information on Benefits of Managing Climate Risk
15. Coordinating Climate Risk Management
16. Further Information to Assist with Interpreting Climate Projections and Impacts
17. Examples of Trigger Points, Thresholds, and Management