

1 September 2023

Victorian Climate Resilient Councils Program

Summary report –
Desktop review of
climate change risk
assessment approaches

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Document title

Summary report – Desktop review of climate change risk assessment approaches

Version

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Date

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Executive summary

The Victorian Climate Resilient Councils (VCRC) program engaged Nation Partners to undertake a desktop review of selected guidance on climate change risk assessment, to identify the documents' comparative strengths and weaknesses and recommend fit-for purpose climate risk assessment approaches for Victorian local governments' consideration and use. This report outlines the review's findings and provides recommendations, important considerations and options for the VCRC program on the suitability and potential communication of the reviewed guidance for Victorian councils' climate change risk assessments.

Twelve shortlisted guidance documents were assessed against defined evaluation criteria, with each document allocated a relative rating of 'High', 'Medium' or 'Low' reflecting this review's conclusions on each document's comparative immediate relevance and usability for Victorian councils¹.

Notable strengths and weaknesses of the reviewed guidance documents

The review identified some key common themes and gaps in the reviewed documents from a Victorian council perspective, as follows.

- A 'likelihood and consequence' risk framework was the most common framework among the reviewed documents. However, the Intergovernmental Panel on Climate Change (IPCC) three-part risk framework (comprising hazard, exposure and vulnerability) has emerged over the past decade as an option for organisations seeking to undertake climate-specific risk assessments. While these and other frameworks are not mutually exclusive and may be combined, the reviewed documents do not provide explicit guidance on how to do this, leaving users to determine for themselves how to adopt, adjust or reconcile frameworks to align with their own needs and existing risk management frameworks.
- Noting that the assessment and management of climate-related transition risks and opportunities has emerged as a priority over the last decade (particularly with the increasing global adoption of the recommendations of the Task Force on Climate-Related Financial Disclosures [TCFD]), all of the reviewed documents recommended assessment of climate-related physical risks, while transition risks and opportunities were commonly recommended only as part of "second pass" or more complex assessments. The first National Climate Risk Assessment that is underway as of mid-2023 is one current example of an approach that is not including transition risk in its first assessment.
- Among the guidance, there are some notable gaps – for example, limited or no guidance was provided on how to account for interdependencies and interactions between sectors/systems in the context of climate change impacts, or on how to connect climate risk assessment and management with effective adaptation planning and action. At the time of the review, there was also no Victorian local government-specific guidance available. Furthermore, none of the reviewed documents provided explicit or detailed guidance on how the approaches could be adapted to accommodate new or emerging information/evidence and/or methodologies in the future, despite the fact that climate science, climate risk assessment, and adaptation will continue to evolve over the coming years with the continued advancement and deepening of adaptation practice and knowledge.
- Most of the reviewed documents require dedicated resources and expertise for implementation, including an ability to navigate complex climate change information such as emissions scenarios or different climate futures. This is a key challenge for many councils with limited funding and capacity to support consistent and sustainable approaches to assessing and managing climate-related risks and opportunities.

¹ Note: The shortlisted documents were rated in relation to one another; the ratings should not be considered applicable in the context of other documents that were not reviewed as part of this assessment.

Recommendations

The following table summarises recommendations on the relative suitability of the reviewed guidance for the Victorian local government context. As the reviewed documents offer a range of approaches that could cater to the varied needs, expertise and capacity of Victorian councils, this report presents options for the VCRC program to present the publicly available documents that were rated as ‘High’ and ‘Medium’ on a dedicated webpage, with accompanying advice to guide councils on the selection and use of the different documents. It also highlights key considerations for the VCRC program and councils as climate risk assessment guidance in Victoria, Australia and globally continues to evolve and guidance continues to be elaborated and refined over the coming years.

Relative rating for immediate relevance and usability for Victorian councils	Documents with this rating	Rationale for this relative rating
High	<ul style="list-style-type: none"> • <i>Climate Change Risk Management Guide – Topic 2: Using risk management to help you address climate change</i> (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action) • <i>Climate Change Risk Management Guide – Topic 3: Exploring Victoria’s climate change risks</i> (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action) • <i>Victoria’s Future Climate Tool</i> • <i>C40 Cities: Rapid Climate Change Risk Assessment Module</i> (C40 Cities Climate Leadership Group, 2021) • <i>Guide to Climate Change Risk Assessment for NSW Local Government</i> (NSW Department of Planning, Industry and Environment, 2019) • <i>Guidance on undertaking a first-pass risk screening</i> (CoastAdapt, National Climate Change Adaptation Research Facility, 2016) • <i>Guidance on undertaking a second-pass risk assessment</i> (CoastAdapt, National Climate Change Adaptation Research Facility, 2016) • <i>Guidance on undertaking a third-pass (detailed) risk assessment</i> (CoastAdapt, National Climate Change Adaptation Research Facility, 2016) 	<p>These documents were rated ‘High’ because they are specifically intended for the use of councils/local governments, and/or are Australia- or Victoria-specific resources that are likely to be relevant and useful for Victorian councils that have varied levels of resourcing and existing expertise in climate risk assessment.</p> <p>Of the 12 documents reviewed, it is considered that most of the ‘High’ rated documents could be reviewed and potentially used by councils with comparatively limited resources and expertise, noting that some documents are accompanied by additional materials and tools that could support councils to understand and use the guidance.</p> <p>Some of the documents also provide a more detailed approach to climate change risk assessment that would cater to councils that have more resources or established expertise and are seeking to undertake more detailed climate risk assessments.</p>
Medium	<ul style="list-style-type: none"> • <i>Climate Compass – A climate risk management framework for Commonwealth agencies</i> (CSIRO, 2018) • <i>AS5334 – Climate change adaptation for settlements and infrastructure – A risk-based approach</i> (2013) • <i>National Climate Risk Assessment DRAFT Methodology – Consultation Version</i> (Department of Climate Change, Energy, the Environment and Water, 2023) • <i>Climate Change Risk Management Guide – Topic 1: Understanding Victorian climate change risk management expectations</i> (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action) • <i>ISO/TS 14092:2020 – Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities</i> (International Organization for Standardization, 2020) • <i>C40 Cities: Climate Change Risk Assessment Guidance</i> (C40 Cities Climate Leadership Group, 2018) • <i>Final of Revised Sections – QCRC Climate Risk Management Framework</i> (Local Government Association of Queensland, 2023) 	<p>Depending on their specific needs, councils may wish to use the ‘Medium’ rated documents as reference points for aligning their climate change risk assessments with commonly used approaches (such as nationally endorsed and/or globally recognised frameworks). They may also refer to these documents if they have specific interest in: increasing their technical knowledge and capability in climate change risk assessment; increasing climate risk awareness of senior management; understanding the climate change risk assessment approach to be adopted at the Australian national level; and/or to undertake climate risk assessments focused specifically on their assets.</p> <p>It is recommended for the documents within this grouping to be introduced and made available for councils to use as additional reference documents.</p>

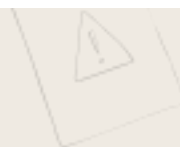


Table of contents

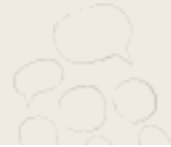
Executive summary	iii
Table of contents	v
1 Introduction	1
2 Desktop review methodology	3
2.1 Preparation of a shortlist of guidance for review.....	3
2.2 Definition of criteria to evaluate the shortlisted guidance	3
2.3 Assessment of guidance against the criteria	4
3 Findings	6
3.1 Overview of findings	6
3.2 Key themes	10
3.3 Expertise and capacity requirements	11
3.4 Comparative strengths and weaknesses	12
3.5 Council outreach	16
4 Recommendations	18
4.1 Suitability of current guidance for the Victorian local government context	18
4.2 Future considerations for Victorian councils.....	20
5 References	23
6 Statement of limitations and disclaimer	24
Appendix 25	

1 Introduction

The VCRC program was established to support Victorian local governments (councils) through a guided process to manage climate change risks and implement sustained actions to manage impacts on their operations, assets and local communities. The VCRC program engaged Nation Partners to undertake a desktop review to analyse selected current guidance on climate change risk assessment, identify the selected documents' strengths and weaknesses, and recommend fit-for-purpose climate risk assessment tools and standards for the Victorian local government context.

This report outlines findings of the desktop review of 12 shortlisted guidance documents, including recommendations and considerations on the suitability of the documents for use by the VCRC program:

- Document No.1: Recommendations of the Task Force on Climate-related Financial Disclosures – Final report (Task Force on Climate-related Financial Disclosures (TCFD), 2017)
- Document No. 2: International Financial Reporting Standards (IFRS) S2 – Climate-related Disclosures (International Sustainability Standards Board (ISSB), 2023)
- Document No. 3: Climate Compass - A climate risk management framework for Commonwealth agencies (CSIRO, 2018)
- Document No. 4: AS5334 – Climate change adaptation for settlements and infrastructure – A risk-based approach (Standards Australia, 2013)
- Document No. 5.i: Guidance on undertaking a first-pass risk screening (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)
- Document No. 5.ii: Guidance on undertaking a second-pass risk assessment (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)
- Document No. 5.iii: Guidance on undertaking a third-pass (detailed) risk assessment (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)
- Document No. 6: National Climate Risk Assessment DRAFT Methodology – Consultation Version (Department of Climate Change, Energy, the Environment and Water (DCCEEW), 2023)
- Document No. 7.i: Climate Change Risk Management Guide – Topic 1: Understanding Victorian climate change risk management expectations (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)
- Document No. 7.ii: Climate Change Risk Management Guide – Topic 2: Using risk management to help you address climate change (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)
- Document No. 7.iii: Climate Change Risk Management Guide – Topic 3: Exploring Victoria's climate change risks (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)
- Document No. 7.iv: Victoria's Future Climate Tool (Victorian Government Department of Energy, Environment and Climate Action)
- Document No. 8: ISO/TS 14092:2020 - Adaptation to climate change — Requirements and guidance on adaptation planning for local governments and communities (International Organization for Standardization, 2020)
- Document No. 9: C40 Cities: Rapid Climate Change Risk Assessment Module (C40 Cities Climate Leadership Group, 2021)
- Document No. 10: C40 Cities: Climate Change Risk Assessment Guidance (C40 Cities Climate Leadership Group, 2018)
- Document No. 11.i: Final of Revised Sections – QCRC Climate Risk Management Framework (Local Government Association of Queensland, 2023)
- Document No. 11.ii: Climate Risk Management Guideline for Queensland Local Government – PILOT DRAFT (Local Government Association of Queensland, 2020)



- Document No. 12: Guide to Climate Change Risk Assessment for NSW Local Government (NSW Department of Planning, Industry and Environment, 2019)

This report presents the findings in a series of tables to provide the VCRC program team with analyses of the documents emphasising different agreed evaluation criteria and dimensions relevant to the VCRC program and Victorian councils, and to provide insights that account for and help to meet Victorian councils' varied needs and priorities in seeking to undertake climate risk assessments.

2 Desktop review methodology

2.1 Preparation of a shortlist of guidance for review

An initial longlist of 20 relevant guidance documents from a range of international, national (Australian), state, industry and local government organisations was identified, agreed with the VCRC program team, and reviewed to shortlist 12 guidance documents for a more detailed review. The final shortlist of documents for review was agreed with the VCRC program team, prioritising guidance documents that are:

- tailored to the Victorian context,
- aimed at local government use² and/or
- currently, or soon will be, an internationally or nationally influential document in determining good practice for climate-related risk and opportunity assessment.

The table in Appendix B provides the tabulated longlist of the 20 relevant documents, its initial review findings (including author, year of publication, resource type, source jurisdiction, targeted audience, purpose, risk types covered, intended scope of assessment and accompanying or relevant materials of note, and whether the longlisted document was proposed by the VCRC program team or by Nation Partners) and a brief rationale for the shortlisting of the 12 selected documents for the review.

2.2 Definition of criteria to evaluate the shortlisted guidance

The shortlist of 12 guidance documents was assessed against an agreed set of evaluation criteria. Table 1 outlines these criteria, including a set of defined options for assessing and responding to each criterion.

Table 1 Evaluation criteria for analysis of shortlisted guidance documents

Criterion no.	Criterion description	Assessment options
Criterion 1	Intended focus/scope for climate risk assessment	Whole of council / Council assets and infrastructure / Community / Other
Criterion 2	Types of climate-related risks proposed for assessment	Not specified / Physical risk / Transition risk, including policy, legal, technology, market / Both
Criterion 3	Facilitates consideration of climate-related opportunities	Yes / No; If yes – Physical / Transition / Both
Criterion 4	Recommended climate risk framework	None / Likelihood and consequence framework / Vulnerability framework / Intergovernmental Panel on Climate Change three-part risk framing / Other
Criterion 5	Recommended number of future timescales for assessment	None / 1 / 2 / 3+; Which timescales
Criterion 6	Recommended number of global climate models (GCMs) for assessment	None / 1-2 / 3+; Which GCMs
Criterion 7	Recommended number of future scenarios for assessment	None / 1 / 2 / 3+)
Criterion 8	Recommended future scenarios for assessment	None / Future emissions scenarios [e.g. Representative Concentration Pathways / Shared Socioeconomic Pathways / Other]; Other scenarios [e.g. Strategic foresight scenarios / Narratives / Other]
Criterion 9	Facilitates consideration of interdependencies	Yes / No; If yes – Quantitatively / Qualitatively

² At the time of this review in mid-2023, no Victorian local government-specific guidance documents were available for consideration. This informed the decision to shortlist for review other guidance that has been produced for other local government contexts (i.e., guidance by C40 Cities, the NSW Government, the Local Government Association of Queensland, and the International Organization for Standardization).

Criterion no.	Criterion description	Assessment options
Criterion 10	Guidance provided on needs/approaches for external stakeholder engagement in the assessment	Yes / No
Criterion 11	Guidance provided on needs/approaches for internal stakeholder engagement in the assessment	Yes / No
<i>Criteria set 12</i>	<i>Criteria on procedural complexity of the assessment approach</i>	
Criterion 12a	Level of technical knowledge and capability required to implement the approach	Not addressed / Low / Medium / High
Criterion 12b	Guidance provided on roles/responsibilities for different functions/teams within the organisation in completing the assessment	Yes / No; If Yes, 1-line summary of which functions/teams
Criterion 12c	Level of internal staff engagement required to implement the approach	Not addressed / Low / Medium / High
Criterion 12d	Complexity of steps/stages and procedures for implementing the approach	Low / Medium / High
Criterion 12e	Practical tools or materials provided with the guidance to assist with using technical information	Yes / No; If Yes, 1-line summary of type of guidance given e.g. tool, factsheet, other
<i>Criteria set 13</i>	<i>Criteria on resource intensity of the assessment approach</i>	
Criterion 13a	Financial resource intensity of the assessment approach	Not addressed / Low / Medium / High
Criterion 13b	Human resource intensity of the assessment approach	Not addressed / Low / Medium / High
Criterion 13c	Time resource intensity of the assessment approach	Not addressed / Low / Medium / High
Criterion 14	Extent of guidance on how to connect risk assessment results with adaptation goals and/or planning	None / Limited / Moderate / Detailed
Criterion 15	Adaptability of assessment approach to accommodate new or emerging information/evidence and methodologies	Not explicitly considered / Limited / Moderate / Detailed

2.3 Assessment of guidance against the criteria

The complete findings of the desktop review are provided in Appendix A. For each guidance document, the table provides an overall 1-2 line concluding statement that summarises the assessment, with an associated relative rating. Together, the concluding statement and relative rating provide a summary and concise rationale for the assessment findings against each of the criteria for each document.

The concluding statement assesses each document's relative value, accounting for its relevance and usability for Victorian councils, based on a holistic assessment of the collective evaluation criteria, with an emphasis on:

- Whether it is:
 - a Victoria-based or -focused resource document,
 - aimed at local government use, and/or
 - currently, or soon will be, an internationally or nationally influential document in determining good practice for climate-related risk and opportunity assessment,
- The extent of expertise, capacity and/or resources required to implement the guidance document's recommended climate change risk assessment approach, and
- The relative depth and complexity of the document's climate change risk assessment approach.

Each document's assigned rating (Low, Medium or High) indicates its associated immediate relevance and usability for Victorian councils and their staff. These ratings are relative to one another, meaning that each document has been reviewed in the context of the shortlist and the overall project objectives (as noted in

Section 1), with the aim of providing concise guidance to the VCRC program and Victorian councils on the reviewed documents' immediate relevance and usability³.

A 'high' rating for a guidance document indicates that it is highly relevant to and readily implementable by Victorian councils, while 'low' rating indicates that the document is not tailored to the Victorian context and/or would require a relatively higher level of expertise, capacity and/or resources for effective implementation.

The analysis, conclusions and relative ratings aim to account for the generalised and amalgamated needs of many councils seeking to undertake climate risk assessments. Individual councils may rate these documents differently based on their individual circumstances, needs and capacity.

³ As the shortlisted documents have been rated in relation to one another, the ratings are not applicable in the context of other documents that were not reviewed as part of this assessment. As noted in earlier stages of the project, there are many different guidance documents on climate risk assessment currently available from Australian and international sources that were not included in the scope of this project, which necessarily focused this review on an initial agreed longlist and shortlist of prioritised documents.

3 Findings

3.1 Overview of findings

For each of the reviewed documents, Table 2 outlines the intended focus/scope for climate risk assessment, an overall concluding statement and the associated relative rating resulting from this review (ordered according to High, Medium and Low ratings).

Table 2 Concluding statements and relative ratings for shortlisted documents

Document title and Document No. (per list in Section 1 of this report)	Intended focus/scope for climate risk assessment	Concluding statement	Relative rating for immediate relevance and usability for Victorian councils (Low, Medium, High)
CoastAdapt: <i>Guidance on undertaking a first-pass risk screening</i> (Document No. 5.i)	Other; Coastal regions	This resource is useful to councils geographically located near/within coastal regions as it focusses on Australian coastal regions, and many of its web-based resources are suitable for organisations that have limited expertise/capacity/resources ⁴ . While this resource was developed for the use of coastal actors (councils or others), it outlines a series of steps and considerations and provides a risk assessment template that is generic enough to support robust first-pass risk assessments by non-coastal actors, and is therefore considered relevant and accessible for non-coastal as well as coastal councils.	High
CoastAdapt: <i>Guidance on undertaking a second-pass risk assessment</i> (Document No. 5.ii)		This resource is useful to councils geographically located near/within coastal regions as it focusses on Australian coastal regions, and its resources are suitable for organisations that have limited expertise/capacity/resources ³ .	High
CoastAdapt: <i>Guidance on undertaking a third-pass (detailed) risk assessment</i> (Document No. 5.iii)		This resource is useful to councils with higher than average expertise/capacity/resources that are interested in doing an in-depth climate change risk assessment; however, it may be difficult to use for those with more limited resources as detailed site-specific data and studies are recommended as part of the assessment. This would require existing in-depth knowledge of climate data and modelling. It is likely to be particularly suitable for councils that have already taken earlier first/second-pass assessments and that use likelihood and consequence frameworks ³ .	High
VMIA: <i>Climate Change Risk Management Guide – Topic 2: Using risk management to help you address climate change</i> (Document No. 7.ii)	Other; Whole of organisation and/or assets and infrastructure	While this resource is developed for VMIA clients in the Victorian state government context and is not tailored to local governments, it is useful for councils with lower expertise/capacity/resources as it takes a high-level approach to climate change risk assessments and is supported by the Victoria's Future Climate Tool which is readily accessible.	High

⁴ While the CoastAdapt resources were developed for the use of coastal actors (councils or others), they each provide a series of steps, critical considerations, and definitions of key concepts that are essential to climate risk assessment, and provide risk assessment templates that would be generic enough to support robust first-pass risk assessments by non-coastal actors as well as coastal actors. They are therefore considered relevant and accessible for non-coastal as well as coastal councils.

Document title and Document No. (per list in Section 1 of this report)	Intended focus/scope for climate risk assessment	Concluding statement	Relative rating for immediate relevance and usability for Victorian councils (Low, Medium, High)
VMIA: <i>Climate Change Risk Management Guide – Topic 3: Exploring Victoria’s climate change risks</i> (Document No. 7.iii)		While this resource is developed for VMIA clients in the Victorian state government context and is not tailored to local governments, it is useful for councils with lower expertise/capacity/resources as it takes a high-level approach to guiding climate change risk assessments and is supported by the Victoria’s Future Climate Tool which is easily accessible.	High
VMIA and Victorian Government: <i>Victoria’s Future Climate Tool</i> (Document No. 7.iv)		While this resource is developed for VMIA clients in the Victorian state government context and is not tailored to local governments, it is useful for councils with lower expertise/capacity/resources as it outlines the methods for use and important limitations of Victoria’s Future Climate Tool as a user-friendly platform to analyse future climate projections. ⁵ It is noted that use of the Tool itself does require some level of existing knowledge of climate change, an ability to navigate and interpret spatial data, and a sound grasp of the instructions, concepts and caveats outlined in the Tool’s User Guide, provided as part of these VMIA resources on the VMIA website.	High
C40 Cities: <i>Rapid Climate Change Risk Assessment Module</i> (Document No. 9)	Whole of council	This resource is useful for councils with constrained expertise but higher than average resources interested in doing an in-depth climate risk assessment. The approach could support councils to align with those of local (city-level) government approaches internationally and to apply the IPCC climate risk framework. However, it is not tailored to the Australian local government context.	High
NSW Government: <i>Guide to Climate Change Risk Assessment for NSW Local Government</i> (Document No. 12)	Whole of council	This resource is useful for councils as it is targeted at local governments (accounting for their capacity/resourcing constraints) and provides useful resources to undertake the climate change risk assessment; however, is not tailored to the Victorian context.	High
VMIA: <i>Climate Change Risk Management Guide – Topic 1: Understanding Victorian climate change risk management expectations</i> (Document No. 7.i)	Other; Whole of organisation and/or assets and infrastructure	While this resource is developed for VMIA clients in the Victorian state government context and is not tailored to local governments, it is useful for Victorian councils with limited expertise that would like to increase their understanding and the state-based relevance of climate risk assessments.	Medium
CSIRO: <i>Climate Compass - A climate risk management framework for Commonwealth agencies</i> (Document No. 3)	Other; Whole of organisation and/or assets and infrastructure	This resource is useful for councils as it is the current Australian Government approach to climate change risk assessment for Commonwealth agencies. While this resource is not tailored to local governments, it offers a logical framework endorsed at national level and requires moderate capacity/resources/expertise to implement.	Medium

⁵ Notably, Victoria’s Future Climate Tool is currently a unique spatial tool in the Australian context; no other jurisdictions have yet produced a comparable resource that presents user-friendly, downscaled projections in a comparably interactive format, and the tool’s layers are also available for download and integration into organisations’ geographic information systems (GIS).

Document title and Document No. (per list in Section 1 of this report)	Intended focus/scope for climate risk assessment	Concluding statement	Relative rating for immediate relevance and usability for Victorian councils (Low, Medium, High)
Standards Australia: AS5334 – <i>Climate change adaptation for settlements and infrastructure – A risk-based approach</i> (Document No. 4)	Other; Settlements and infrastructure	This resource is useful to councils with higher than average expertise/capacity/resources and that want to focus on assessing climate-related risks to council assets and infrastructure. However, the usability of this resource is considered low relative to other shortlisted documents which have clear step-by-step guidance.	Medium
Australian Government (DCCEEW): <i>National Climate Risk Assessment DRAFT Methodology – Consultation Version</i> (Document No. 6)	Other; National (Australia)	This resource ⁶ is useful as a reference point for councils to understand current/emerging nationally-endorsed approaches to climate risk assessment, as it will be the central national framework for assessing physical climate risk and will therefore influence all Australian jurisdictions at the state/territory and local levels. It also supports use of the IPCC climate risk framework. However, as an approach, this resource has lower direct usability for councils in their local context; it is pertinent to all Australian Government organisations but is not tailored to councils with low expertise/capacity/resources.	Medium
International Organization for Standardization: <i>ISO/TS 14092:2020 - Adaptation to climate change — Requirements and guidance on adaptation planning for local governments and communities</i> (Document No. 8)	Whole of council	This resource is useful for councils with higher than average expertise/capacity/resources interested in doing an in-depth climate change risk assessment and adaptation plan that aligns with global standards. This resource is highly relevant to councils but its usability is low relative to other shortlisted documents which have clear step-by-step guidance.	Medium
C40 Cities: <i>Climate Change Risk Assessment Guidance</i> (Document No. 10)	Whole of council	This resource is useful for councils with higher than average expertise, capacity and resources interested in doing an in-depth climate change risk assessment that could align with local (city-level) government approaches internationally and to apply the IPCC climate risk framework. However, it is not tailored to the Australian local government context.	Medium
Local Government Association of Queensland: <i>Final of Revised Sections – QCRC Climate Risk Management Framework</i> (Document No. 11.i)	Whole of council	This resource ⁶ is useful for councils as it is targeted at local governments (accounting for their capacity/resourcing constraints) and supports use of the IPCC climate risk framework, but may be difficult to use for those with limited resources. This resource is highly relevant to councils, however is tailored to the Queensland context. Its current usability is limited given that it is not a final version and is subject to updates (Refer to section 1.1 of Document 11.i)	Medium

⁶ The National Climate Risk Assessment DRAFT Methodology (Document No. 6) and the DRAFT Climate Risk Management Guideline for Queensland Local Government documents (Document No 11.i and 11.ii) were provided for review by the VCRC program project team. Note that these draft versions were the subject of this review and the final versions were subsequently released as of August 2023.

Document title and Document No. (per list in Section 1 of this report)	Intended focus/scope for climate risk assessment	Concluding statement	Relative rating for immediate relevance and usability for Victorian councils (Low, Medium, High)
Local Government Association of Queensland: <i>Climate Risk Management Guideline for Queensland Local Government – PILOT DRAFT</i> (Document No. 11.ii)		<p>This resource (see footnote 6, above) is useful for councils with higher than average expertise/capacity/resources interested in doing in-depth climate change risk assessment and adaptation planning, and supports use of the IPCC climate risk framework. It may be inaccessible/difficult to use for those with more limited resources.</p> <p>This resource is highly relevant to councils, however is tailored to the Queensland context.</p> <p>Its current usability is limited given that it is not a final version and is subject to updates (refer to section 1.1 of Document 11.i)</p>	Low
TCFD: <i>Recommendations of the Task Force on Climate-related Financial Disclosures – Final report</i> (Document No. 1)	Other; Economic and financial sector	<p>This resource is useful for councils as it is an increasingly influential global resource that provides good practice guidance on climate-related risk and opportunity assessment, however there are other guides that are more tailored to the needs of local governments. This resource is nonetheless a useful reference point for councils seeking to align with global frameworks for climate risk assessment and disclosure.</p>	Low
ISSB: <i>IFRS S2 – Climate-related Disclosures</i> (Document No. 2)	Other; Economic and financial sector	<p>This resource is useful for councils as it is an increasingly influential global resource that provides good practice guidance on climate-related risk and opportunity assessment, however there are other guides that are more tailored to the needs of local governments. This resource is nonetheless a useful reference point for councils seeking to align with global frameworks for climate risk assessment and disclosure.</p>	Low

3.2 Key themes

Table 3 groups each guidance document according to its relative rating of High, Medium or Low and summarises notable themes across each of the three relative ratings.

Table 3 Key themes

Relative rating for immediate relevance and usability for Victorian councils:	High	Medium	Low
Documents allocated this relative rating:	Documents by CoastAdapt, VMIA, C40 Cities and NSW Government (Document No. 5.i, 5.ii, 5.iii, 7.ii, 7.iii, 7.iv, 9 and 12)	Documents by CSIRO, Australian Standards, Australia's DCCEEW, VMIA, International Organization for Standardization, C40 Cities and Local Government Association of Queensland (Document No. 3, 4, 6, 7.i, 8, 10 and 11.i)	Documents by TCFD, IFRS and Local Government Association of Queensland (Document No. 1, 2 and 11.ii)
Suitability for local government use	The documents by CoastAdapt are suitable for organisations that have a focus on Australian coastal regions. The VMIA, C40 Cities and NSW documents are tailored to local government organisations as a whole. The C40 Cities and NSW Government documents are both suitable for use by local governments, though are not tailored to the Victorian context.	The documents by CSIRO, Australian Standards and VMIA are tailored for organisations as a whole or assets and infrastructure, however are still suitable for local government use. The document by Australian Standards is often referenced by councils in Australia interested in climate risk assessments. The document by Australia's DCCEEW has an Australian-wide focus on climate risk but is still relevant in informing council staff on their understanding of Australia's climate risks. The documents by the International Organization for Standardization, C40 Cities and Local Government Association of Queensland are suitable and tailored to local government use.	The documents by TCFD and IFRS are global resources for good practice guidance on climate-related risk and opportunity assessments, however are not tailored for local government use. The document by Local Government Association of Queensland is tailored for local government use.
Tailored to the Victorian context	The documents rated 'High' comprise of a mix of climate risk assessments with a Victorian and non-Victorian focus. The resources that are not Victorian-focussed may still be considered suitable and applicable to some councils depending on their needs and resourcing. However, it is noted that at the time of this review in mid-2023, there was no Victorian local government-specific guidance available for councils.	One out of the seven documents rated 'Medium' is tailored to the Victorian context.	None of the documents rated 'Low' are tailored to the Victorian context.
Commonalities between approaches (Type of framework)	All documents rated 'High' that explicitly provide recommendations on framework suggest the adoption of the 'Likelihood and consequence' framework or Intergovernmental Panel on Climate Change (IPCC) three-part risk framework.	Five out of the seven documents rated 'Medium' recommend the adoption of the likelihood and consequence framework or the IPCC three-part risk framework.	One out of the three documents rated 'Low' recommends the adoption of the IPCC three-part risk framework.

Relative rating for immediate relevance and usability for Victorian councils:	High	Medium	Low
Documents allocated this relative rating:	Documents by CoastAdapt, VMIA, C40 Cities and NSW Government (Document No. 5.i, 5.ii, 5.iii, 7.ii, 7.iii, 7.iv, 9 and 12)	Documents by CSIRO, Australian Standards, Australia's DCCEEW, VMIA, International Organization for Standardization, C40 Cities and Local Government Association of Queensland (Document No. 3, 4, 6, 7.i, 8, 10 and 11.i)	Documents by TCFD, IFRS and Local Government Association of Queensland (Document No. 1, 2 and 11.ii)
Level of technical knowledge and capability required	The documents rated 'High' may be considered mostly readily implementable as they require a low to moderate level of technical knowledge and capability.	The documents rated 'Medium' require a moderate to high level of technical knowledge and capability.	All documents rated 'Low' require a high level of technical knowledge and capability.
Extent of guidance on internal and/or external stakeholder engagement	Half of the documents rated 'High' provide guidance on approaches for internal and/or external stakeholder engagement for climate risk assessments.	Four out of the seven documents rated 'Medium' provide guidance on approaches for internal and/or external stakeholder engagement for climate risk assessments.	One of the three documents rated 'Low' provides guidance on approaches for internal and/or external stakeholder engagement for climate risk assessments.

3.3 Expertise and capacity requirements

The extent of expertise and capacity needed to implement the guidance approaches reviewed for this project varies and – noting the wide potential audience and users for each of the reviewed documents – none of the guidance documents provide explicit or definitive guidance on the extent of financial, human or time resources needed for implementation. To draw meaningful conclusions regarding the financial, human and time resource intensity of each guidance approach, this review considered several different criteria as follows, including the extent of internal and external stakeholder engagement required and proposed, the level of technical knowledge and capability required to implement, and the complexity of the proposed steps, stages or procedures in each guidance document. The findings for the financial resource intensity (Criterion 13a), human resource intensity (Criterion 13b) and time resource intensity (Criterion 13c) criteria reflect the findings on other more detailed criteria that were assessed for this review, to provide an overall indication of the extent of engagement, existing knowledge and total effort needed to implement the approach. The five criteria that informed the financial intensity (Criterion 13a), human resource intensity (Criterion 13b), and time resource intensity (Criterion 13c) include:

- Guidance provided on needs/approaches for external stakeholder engagement in the assessment (Criterion 10)
- Guidance provided on needs/approaches for internal stakeholder engagement in the assessment (Criterion 11)
- Level of technical knowledge and capability required to implement the approach (Criterion 12a)
- Level of internal staff engagement required to implement the approach (Criterion 12c)
- Complexity of steps/stages and procedures for implementing the approach (Criterion 12d).

Further detail on the evaluation criteria are in Appendix A.

The financial resource, human resource and time resource intensity of the shortlisted documents are categorised in Table 4 as *low*, *low to moderate*, *moderate*, *moderate to high* and *high*.

Table 4 Financial, human resource and time resource intensity requirements

Financial, human resource and time resource intensity of the assessment approach	Documents	Commentary
Low	CoastAdapt (Document No. 5.i) VMIA (Document No. 7.i)	These resources require relatively lower expertise and capacity, and it is anticipated that they could be implemented by internal staff with no to minimal existing technical knowledge of climate change.
Low to moderate	CoastAdapt (Document No. 5.ii) VMIA (Documents No. 7.ii, 7.iii and 7.iv) C40 Cities (Document No. 9) Local Government Association of Queensland (Document No. 11.i)	These resources require some expertise and capacity, and it is anticipated that a low to moderate level of staff involvement and technical climate knowledge would be required.
Moderate	CSIRO (Document No. 3) Australian Standards (Document No. 4) NSW Government (Document No. 12)	These resources require a moderate amount of expertise and capacity, and it is anticipated that a moderate level of staff involvement and technical climate knowledge would be required.
Moderate to high	TCFD (Document No. 1) IFRS (Document No. 2) CoastAdapt (Document No. 5.iii) C40 Cities (Document No. 10)	These resources require a moderate to high level of expertise, capacity and staff involvement as it is anticipated that existing technical climate knowledge would be required.
High	Australian Government (DCCEEW) (Document No. 6) International Organization for Standardization (Document No. 8) Local Government Association of Queensland (Document No. 11.ii)	These resources required a high level of expertise and capacity for councils that aim to undertake a detailed and vigorous climate change risk assessment.

3.4 Comparative strengths and weaknesses

This review of shortlisted guidance documents provides several instructive findings on the relative strengths and weaknesses of different approaches for Victorian councils. This section outlines some notable findings on common themes and gaps across the reviewed documents and reflections on their relevance and significance for councils' reference, consideration and use.

Intended focus of assessment

Half of the 12 reviewed documents are tailored for the use of local governments, having been developed for local governments in general, city governments, or local governments in jurisdictions other than Victoria⁷. This reflects a relative limited availability of local government-specific guidance on climate risk assessment. The remaining documents reviewed had a varied intended focus – from very broad-ranging (e.g., whole-of-organisation and/or assets and infrastructure) to a region-specific (e.g., coastal regions) or sector-specific

⁷ The documents reviewed that are tailored for local government use include those by C40 Cities, the Queensland Climate Resilient Councils program, the NSW Government, and *ISO/TS 14092:2020 - Adaptation to climate change — Requirements and guidance on adaptation planning for local governments and communities* (International Organization for Standardization, 2020). Refer to Appendix A for further detail.

(e.g. economic and financial sector) focus. This review also specifically considered whether resources were tailored to the Victorian context (supporting, for example, use of Victoria-specific climate projections or adherence to Victorian State legislation). However, as currently available Victoria-specific guidance is limited and as local governments in other States may face similar needs and challenges, it is considered that the other local government-tailored guidance may be useful to some councils that face similar jurisdiction and similar levels of resourcing and capacity.

Climate risk frameworks

Five of the 12 shortlisted guidance documents recommend the use of a likelihood and consequence risk framework (sometimes in combination with others), while only four of the twelve documents recommend use of the IPCC three-part risk framework (hazard, exposure and vulnerability). Noting that these frameworks are not mutually exclusive, in each case, the different approaches will offer both pros and cons to councils depending on their existing circumstances, frameworks and needs. As councils and other organisations often use likelihood and consequence frameworks for their broader enterprise risk assessment and management processes, some councils may consider that guidance that aligns with these frameworks is more readily adaptable for their purposes. However, the IPCC three-part risk framework has emerged over the past decade as a rigorous and more specific basis for analysing climate risk and responses and is therefore a useful reference point for organisations seeking to target their approach to climate risk and opportunity assessment to inform robust adaptation responses. The two frameworks may be combined, though it is notable that the documents reviewed for this study do not provide explicit guidance on how to do this.

While it is beyond the scope of this review to compare and analyse the strengths and weaknesses of these different risk frameworks, it is worth noting that traditional likelihood and consequence frameworks do not readily accommodate or reflect the uncertainty and range of possible futures associated with projected climate change impacts and risks, for which future likelihood can typically not be easily or concretely estimated. The IPCC's latest findings and the three-part risk framework recognise this complexity, and may be considered to better accommodate the assessment of climate risks through methods such as foresight or scenario analysis or storyline approaches that explicitly consider a range of plausible (yet uncertain) futures.

Physical and transition risks and opportunities

Half of the guidance documents recommend and facilitate consideration of both physical risks and transition risks, while the remaining half focuses only on physical risks. The documents that propose consideration of transition risks have been published more recently (since 2017, potentially reflecting the influence of the TCFD recommendations), relative to those that focus only on physical risks. This finding reflects that transition risks and opportunities continue to be considered in guidance as a “second pass” or more complex part of the assessment process – this is demonstrated, for example, in the draft methodology for the first National Climate Risk Assessment which is currently underway as of mid-2023 and will not consider transition risk.

Interdependencies

Most of the reviewed documents do not explicitly facilitate consideration of interdependencies between the activities, services or operations under assessment and the wider systems (e.g., infrastructure and services across different sectors, communities, systems and landscapes) on which they rely in order to function effectively. This suggests a notable gap in the reviewed guidance on how to consider complex interactions between systems and sectors under climate change.

External stakeholder engagement guidance

Half of the twelve documents provide guidance on needs and approaches for external stakeholder engagement in the assessment. This suggests that councils may need to carefully consider and adopt their approaches to ensuring appropriate external stakeholder engagement through their climate risk

assessments, and that clear or commonly agreed guidance on good practice for this aspect of assessments may be a gap in the guidance generally.

Connecting climate risk assessment and management with adaptation planning and action

The majority of documents reviewed (eight out of the twelve documents) provide either limited or no guidance on how to connect risk assessment results with adaptation goals and/or planning. This suggests a persistent gap in the available guidance on how to make these connections and situate risk assessment results within the broader context of climate change adaptation decision-making. The outreach undertaken by the VCRC program yielded similar reflections and findings from the respondent councils, which suggests that this gap and the disconnect between climate risk and opportunity assessment and adaptation planning and action is recognised by many councils and is an issue they are already grappling with. This finding suggests that future guidance documents could aim to address this gap and provide clearer direction on how to connect the two activities.

Adaptability of approaches to accommodate new and emerging information and practice

Only five out of the twelve documents were found to provide at least a “moderate” level of adaptability in their assessment approach to accommodate new or emerging information/evidence and methodologies, and no reviewed documents were considered to provide “high” adaptability. This may indicate that guidance to date has lacked a specific focus on the need to continually incorporate and adapt to accommodate new and emerging information and approaches (for example, recognising that frameworks on climate risk will continue to evolve in tandem with growing knowledge and experience on climate science, climate risk and opportunity assessment and management, and adaptation).

Complexity of climate risk assessment approaches

In terms of the relative procedural complexity of the steps/stages and/or procedures⁸ for implementing the approaches outlined in the reviewed documents: Seven of the twelve documents were rated as having high complexity, while three of the twelve were rated as having medium complexity and two were rated as having low complexity. This reflects that most existing approaches to climate risk assessment require dedicated resources and capacity for implementation – a key consideration for many councils for which both resources and capacity are limited.

Summary of relative strengths and weaknesses

Further findings on the strengths and weaknesses of each shortlist document are summarised in Table 5.

Table 5 Strengths and weaknesses of shortlist documents

Shortlist document title	Strengths	Weaknesses
TCFD: <i>Recommendations of the Task Force on Climate-related Financial Disclosures – Final report</i>	<ul style="list-style-type: none"> Increasingly influential global resource Provides good practice guidance on climate-related risk and opportunity assessment 	<ul style="list-style-type: none"> Not tailored to local government use or to the Victorian context Requires high technical knowledge and resourcing capacity
ISSB: <i>IFRS S2 – Climate-related Disclosures</i>	<ul style="list-style-type: none"> Increasingly influential global resource Provides good practice guidance on climate-related risk and opportunity assessment 	<ul style="list-style-type: none"> Not tailored to local government use or to the Victorian context Requires high technical knowledge and resourcing capacity

⁸ The complexity of steps/stages and procedures was defined for the purposes of this review as the level of detail and the number of steps involved in the guidance. Refer to Appendix A for further detail on the components of this analysis.

Shortlist document title	Strengths	Weaknesses
CSIRO: <i>Climate Compass – A climate risk management framework for Commonwealth agencies</i>	<ul style="list-style-type: none"> Provides current Australian Government approach to climate change risk assessment Offers a logical framework endorsed at national level Requires moderate expertise and capacity to implement 	<ul style="list-style-type: none"> Not tailored to local government use or to the Victorian context
Standards Australia: <i>AS5334 – Climate change adaptation for settlements and infrastructure – A risk-based approach</i>	<ul style="list-style-type: none"> Tailored to assessing climate related risks to assets and infrastructure 	<ul style="list-style-type: none"> Not tailored to the Victorian context Requires higher than average expertise and capacity to implement
CoastAdapt: <i>Guidance on undertaking a first-pass risk screening</i>	<ul style="list-style-type: none"> Tailored to organisations located near/within Australian coastal regions Requires low expertise and capacity to implement 	<ul style="list-style-type: none"> Not suitable for councils that aim to undertake a detailed climate change risk assessment Not tailored to local governments located inland, though as noted above in Section 3.1, the guidance is considered relevant and accessible for non-coastal as well as coastal councils.
CoastAdapt: <i>Guidance on undertaking a second-pass risk assessment</i>	<ul style="list-style-type: none"> Tailored to organisations located near/within Australian coastal regions Requires low expertise and capacity to implement 	<ul style="list-style-type: none"> Not suitable for councils that aim to undertake a detailed climate change risk assessment Not tailored to local governments located inland, though as noted above in Section 3.1, the guidance is considered relevant and accessible for non-coastal as well as coastal councils.
CoastAdapt: <i>Guidance on undertaking a third-pass (detailed) risk assessment</i>	<ul style="list-style-type: none"> Tailored to organisations located near/within Australian coastal regions Suitable for councils that aim to undertake a detailed climate change risk assessment 	<ul style="list-style-type: none"> Requires higher than average expertise and capacity to implement, though as noted above in Section 3.1, the guidance is considered relevant and accessible for non-coastal as well as coastal councils
Australian Government (DCCEEW): <i>National Climate Risk Assessment DRAFT Methodology – Consultation Version</i>	<ul style="list-style-type: none"> Highly relevant to all Australian government organisations as it provides the national framework used to assess climate risks 	<ul style="list-style-type: none"> Not tailored to local government use Not suitable for councils that aim to undertake a high-level climate change risk assessment Requires a high level of expertise and capacity to implement
VMIA: <i>Climate Change Risk Management Guide – Topic 1: Understanding Victorian climate change risk management expectations</i>	<ul style="list-style-type: none"> Tailored to the Victorian context Requires low expertise and capacity to implement Provides information to increase understanding and relevance of climate change risk assessments. 	<ul style="list-style-type: none"> Not tailored to local government use Not suitable for councils that aim to undertake a detailed climate change risk assessment
VMIA: <i>Climate Change Risk Management Guide – Topic 2: Using risk management to help you address climate change</i>	<ul style="list-style-type: none"> Tailored to the Victorian context Requires low expertise and capacity to implement Supported by Victoria’s Future Climate Tool 	<ul style="list-style-type: none"> Not tailored to local government use
VMIA: <i>Climate Change Risk Management Guide – Topic 3: Exploring Victoria’s climate change risks</i>	<ul style="list-style-type: none"> Tailored to the Victorian context Requires low expertise and capacity to implement Supported by Victoria’s Future Climate Tool 	<ul style="list-style-type: none"> Not tailored to local government use

Shortlist document title	Strengths	Weaknesses
VMIA: <i>Victoria's Future Climate Tool</i>	<ul style="list-style-type: none"> Tailored to the Victorian context Requires low expertise and capacity to implement A user-friendly platform to analyse future climate projections 	<ul style="list-style-type: none"> Not tailored to local government use
International Organization for Standardization: <i>ISO/TS 14092:2020 – Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities</i>	<ul style="list-style-type: none"> Tailored to local government use A recognised global framework Suitable for councils that aim to undertake an in-depth climate change risk assessment 	<ul style="list-style-type: none"> Not tailored to the Victorian context Requires higher than average expertise and capacity to implement
C40 Cities: <i>Rapid Climate Change Risk Assessment Module</i>	<ul style="list-style-type: none"> Tailored to local government use Requires low to moderate expertise and capacity to implement Suitable to councils that aim to undertake an in-depth climate change risk assessment Provides working examples of how to implement 	<ul style="list-style-type: none"> Not tailored to the Victorian context
C40 Cities: <i>Climate Change Risk Assessment Guidance</i>	<ul style="list-style-type: none"> Suitable to councils that aim to undertake an in-depth climate change risk assessment 	<ul style="list-style-type: none"> Not tailored to the Victorian context Requires higher than average expertise and capacity to implement
Local Government Association of Queensland: <i>Final of Revised Sections – QCRC Climate Risk Management Framework</i>	<ul style="list-style-type: none"> Tailored to local government use 	<ul style="list-style-type: none"> Not tailored to the Victorian context Limited usability as it is not in its final version and is subject to updates
Local Government Association of Queensland: <i>Climate Risk Management Guideline for Queensland Local Government – PILOT DRAFT</i>	<ul style="list-style-type: none"> Tailored to local government use Requires moderate to high expertise and capacity to implement 	<ul style="list-style-type: none"> Not tailored to the Victorian context Limited usability as it is not in its final version and is subject to updates
NSW Government: <i>Guide to Climate Change Risk Assessment for NSW Local Government</i>	<ul style="list-style-type: none"> Tailored to local government use Suitable for councils with moderate expertise and capacity that aim to do an in-depth climate change risk assessment 	<ul style="list-style-type: none"> Not tailored to the Victorian context

3.5 Council outreach

In July 2023 the VCRC program project team conducted a targeted outreach program to Victorian councils to gain an understanding of climate change frameworks used for their climate risk assessments, the extent and level of detail of those assessments and how their adopted approach integrated with their existing risk assessment approach.

Through the outreach program, five responses were received from the following metropolitan local governments:

- Hume City Council (Northern Metropolitan),
- Merri-bek City Council (Northern Metropolitan),
- City of Whittlesea (Northern Metropolitan),
- Wyndham City Council (Western Metropolitan), and
- City of Greater Dandenong (Eastern Metropolitan).

The outreach yielded the following observations, findings and lessons:

- All five respondents implemented the likelihood and consequence framework to assess climate change risks and impacts. Merri-bek Council indicated it also used the IPCC three-part risk framework, having used an approach similar to the NSW Government's Climate Risk Ready NSW Guide.
- Councils tend to take a pragmatic approach that emphasises in-house collaboration between the relevant sustainability and risk teams.
- The scope for undertaking in-depth climate change risk assessments is often limited by constrained council funding availability. As such, councils opt for more usable frameworks that can be implemented by internal staff, and/or are reliant on the commitment of adequate funding to engage external consultants to undertake the work.
- The Australian Standard AS5334 – *Climate change adaptation for settlements and infrastructure – A risk-based approach* is often used by council asset managers, noting that it has been available and in use for around a decade and provides a practical approach for assessing assets (settlements and infrastructure) but does not reflect the latest developments in climate risk guidance over recent years.
- The level of detail in climate change risk assessment is often limited by information and data gaps.

These insights suggest that the documents rated as highly relevant through this review could help to meet the varied needs of Victorian councils, including by providing support on the interpretation and application of the IPCC three-part risk framework which is increasingly a key reference for good practice climate risk assessments.

4 Recommendations

4.1 Suitability of current guidance for the Victorian local government context

Table 6 provides key recommendations from this review on how Victorian councils may wish to use the guidance documents rated as “High” and “Medium”, with accompanying important considerations and/or limitations for their use (noting that the documents were rated in relation to one another). Documents that were rated as “Low” in this review are not included in the table.

Table 6 Key recommendations for the relative suitability of guidance documents

Relative rating	Document title	Recommendation for use	Notable considerations/limitations for use
High	<i>Climate Change Risk Management Guide – Topic 2: Using risk management to help you address climate change</i> (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)	It is recommended for this resource to be used by councils that have no to limited technical knowledge and capacity as it takes a high-level approach to climate change risk assessment.	This resource provides recommendations for short-term climate projections only (up to 2 – 5 years), hence may not be considered to be a best practice approach to climate change risk assessment.
	<i>Climate Change Risk Management Guide – Topic 3: Exploring Victoria’s climate change risks</i> (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)	It is recommended for this resource to be used by councils that are fairly progressed in their climate change risk assessment and would like to undertake a more detailed approach.	This resource does not provide guidance on internal and external stakeholder engagement nor on adaptation planning.
	<i>Victoria’s Future Climate Tool</i>	It is recommended for this resource to be used by councils interested in understanding future climate projections within Victoria, noting that its use does require some level of existing knowledge of climate change, an ability to navigate and interpret spatial data, and a sound grasp of the instructions, concepts and caveats outlined in the Tool’s User Guide (available on the VMIA website).	This is a supplementary resource that can be used to inform climate change risk assessment and cannot be used as a standalone resource.
	<i>C40 Cities: Rapid Climate Change Risk Assessment Module</i> (C40 Cities Climate Leadership Group, 2021)	It is recommended for this resource to be used by councils that are interested in implementing a comprehensive climate change risk assessment, but have limited existing technical knowledge.	This resource is not tailored to the Australian government or Victorian government context, as such does not provide climate data tools specific to Australia or Victoria.
	<i>Guide to Climate Change Risk Assessment for NSW Local Government</i> (NSW Department of Planning, Industry and Environment, 2019)	It is recommended for this resource to be used by councils that are interested in implementing a comprehensive climate change risk assessment, but have limited existing technical knowledge.	This resource is tailored to the New South Wales government context.

Relative rating	Document title	Recommendation for use	Notable considerations/limitations for use
	<i>Guidance on undertaking a first-pass risk screening</i> (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)	It is recommended for this resource to be used by councils located near/within coastal regions that have had little to no experience in implementing an assessment.	This resource does not provide guidance on internal and external stakeholder engagement nor adaptation planning and is limited by its focus on coastal regions.
	<i>Guidance on undertaking a second-pass risk assessment</i> (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)	It is recommended for this resource to be used by councils located near/within coastal regions that have an understanding of climate risks relevant to their council area and are interested in undertaking a more detailed assessment of the climate risks.	This resource does not provide guidance on adaptation planning and is limited by its focus on coastal regions.
	<i>Guidance on undertaking a third-pass (detailed) risk assessment</i> (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)	It is recommended for this resource to be used by councils located near/within coastal regions that are interested in undertaking a site-specific or project-specific climate change risk assessment.	This resource provides an approach that would require a significant level of technical knowledge and resource intensity to implement.
Medium	<i>Climate Compass - A climate risk management framework for Commonwealth agencies</i> (CSIRO, 2018)	It is recommended for this resource to be used by councils that are interested in aligning its climate change risk assessment approach with a nationally endorsed framework.	This resource is not tailored for local government use and would require higher than average existing technical knowledge and capacity to implement.
	<i>AS5334 – Climate change adaptation for settlements and infrastructure – A risk-based approach</i> (2013)	It is recommended for this resource to be used by councils interested in undertaking a climate change risk assessment for its assets.	This resource does not provide recommendation on climate models and/or tools that can be used for future climate projections.
	<i>National Climate Risk Assessment DRAFT Methodology – Consultation Version</i> (Department of Climate Change, Energy, the Environment and Water, 2023)	It is recommended for this resource to be used as a reference document to increase awareness and knowledge of the climate change risk assessment adopted at the Australian national level and to understand prioritised climate change risks in the Australian context.	This resource provides an in-depth approach to climate change risk assessments and is not tailored to local government use, nor does it provide recommendations on climate models and/or tools that can be used for future climate projections.
	<i>Climate Change Risk Management Guide – Topic 1: Understanding Victorian climate change risk management expectations</i> (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)	It is recommended for this resource to be shared with higher-level management teams to increase awareness and understanding of climate change risk assessments.	This resource does not provide any guidance on climate change risk assessment approaches.
	<i>ISO/TS 14092:2020 - Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities</i> (International Organization for Standardization, 2020)	It is recommended for this resource to be used by councils that aim to align their climate change risk assessment framework with a globally recognised standard.	This resource does not provide recommendations on climate models and/or tools that can be used for future climate projections.

Relative rating	Document title	Recommendation for use	Notable considerations/limitations for use
	<i>C40 Cities: Climate Change Risk Assessment Guidance</i> (C40 Cities Climate Leadership Group, 2018)	It is recommended for this resource to be used by councils with higher than average expertise and capacity interest in doing an in-depth climate change risk assessment.	This resource is not suitable for councils with limited technical knowledge and capacity, and does not provide recommendations on climate models and/or tools that can be used for future climate projections
	<i>Final of Revised Sections – QCRC Climate Risk Management Framework</i> (Local Government Association of Queensland, 2023)	It is recommended for this resource to be used by councils once the final version has been published	This resource is tailored to the Queensland government context, as such its recommended climate data models and/or tools may be more suited to Queensland.

Options for VCRC program presentation of key guidance to councils

Noting that the reviewed guidance documents offer a range of approaches that could cater to the varied needs, expertise and capacity of Victorian councils, it is recommended that the VCRC program provide and present the publicly available documents rated as 'High' and 'Medium' on a dedicated webpage to provides council users with an overall understanding of the documents' purpose and intended focus.

The guidance documents rated as 'High' and 'Medium' may be categorised according to the level of detail, target audience, and other generalised groupings. For example, groupings could be defined according to where councils:

- have limited internal expertise that aim to undertake a high-level climate change risk assessment,
- have limited internal expertise that aim to undertake an in-depth climate change risk assessment, and/or
- are seeking useful reference materials and information that could support their alignment with national/global climate risk frameworks.

Each document could be accompanied by a statement from the VCRC program on its recommended use and links to its accompanying climate models and/or tools provided. It could also present the findings of Table 6 to concisely communicate the strengths and weaknesses of different existing approaches.

Additionally, the Victorian Managed Insurance Authority (VMIA) resources and CoastAdapt resources could be presented as a 'group' of documents for councils that are aiming to start their journeys in implementing a comprehensive climate change risk assessment approach, using resources that have been developed in the Victorian or Australian context.

4.2 Future considerations for Victorian councils

Multiple documents reviewed for this project are drafts and/or are expected to be updated soon, including:

- The Australian Government (DCCEEW) *National Climate Risk Assessment DRAFT Methodology – Consultation Version*: This document has not been finalised and was shared as a consultation version; it is not publicly accessible as of July 2023. The draft methodology outlines the assessment's scope, objectives and approach. It will be delivered in two stages: a first-pass risk assessment that will inform identification by November 2023 of a preliminary list of priority risks, for inclusion in the National Climate Adaptation Plan and/or for further assessment; and a second-pass in-depth assessment of high priority risks, to provide detailed input to the National Climate Adaptation Plan (timeline to be advised).

- The documents by Local Government Association of Queensland – The documents that were reviewed for this project were in draft form at the time of analysis; as of August 2023, the final version has been released and is available on the Queensland Climate Resilient Councils website⁹.
- The CoastAdapt website and resources – These are currently undergoing updates with new guidance expected to be published around mid-2024.

It is recommended that the VCRC program continues to monitor the emergence of new and/or updated guidance from Victorian, Australian and international sources as the landscape for climate risk and opportunity assessment continues to rapidly evolve and, as a result, to directly and indirectly influence the operating environment of local governments. For example:

- *Victorian context:* The Victorian Government is expected to release new guidance in 2023 on the consideration of climate-related risks and opportunities under its Asset Management Accountability Framework (AMAF) which will influence the management of assets in the context of climate change across Victoria.
- *Australian and international context:* While assessing, managing and reporting on risks and opportunities under the TCFD framework is not currently a general obligation in Australia, the NSW Government is one example of a jurisdiction that now requires its agencies to disclose from the current financial year onwards. The Australian Government has recently indicated that the new guidance (based on the TCFD framework) from the International Sustainability Standards Board (ISSB) will soon be required¹⁰. From the financial year 2024-25, relevant entities that report under Chapter 2M of the *Corporations Act* and meet defined threshold requirements will be required to report on climate-related opportunities (in addition to other sustainability aspects).

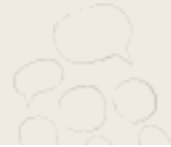
While these requirements will apply to those entities only and will not be imposed on councils, they are expected to influence and raise the standards, norms and expectations for climate risk and opportunity assessment and disclosure in Australia. As a result, the range of guidance approaches available on how to assess and disclose climate-related risks may continue to proliferate to meet the different needs of specific actors, organisations and sectors. At the same time, some jurisdictions may decide to develop guidance that refers to and/or builds on existing frameworks to facilitate more consistent and coordinated approaches to assessment and disclosure among all actors.

The outreach conducted by the VCRC program during the completion of this review also suggests that *AS5334 – Climate change adaptation for settlements and infrastructure – A risk-based approach* and the likelihood and consequence frameworks remain dominant in the council context. The documents rated with ‘High’ and ‘Medium’ relevance can support councils to identify how they can incorporate more tailored climate risk frameworks (such as the IPCC three-part risk framework) into their existing risk frameworks and systems.

Risk assessment guidance will continue to evolve and there is an opportunity for the VCRC program to continue to monitor this and to integrate and/or provide further tailored advice to councils on how to use emerging and updated approaches. Examples include changes to address likelihood in a more complex and nuanced way that accounts for the uncertainty of climate impacts (as discussed in Section 3.4), or to reflect new approaches to defining and interpreting future climate and/or global greenhouse gas emissions scenarios (such as use of the Global Warming Levels approach as selected by the new National Climate Risk Assessment). Furthermore, as noted in Section 3.4, multiple councils are grappling with a recognised disconnect between current approaches to climate risk and opportunity assessment and adaptation planning

⁹ Available at: <https://qcrclgaq.asn.au/index.html>

¹⁰ For further information on the implementation of this new standardised climate disclosure framework in Australia, please refer to the Australian Government Department of the Treasury’s *Climate-related Financial Disclosure Consultation Paper* (June 2023). Available at: <https://treasury.gov.au/sites/default/files/2023-06/c2023-402245.pdf>



and action, suggesting that further attention is needed in the development of future guidance to address this gap and provide clearer direction on how to connect the two activities.

Emergency management and disaster risk management approaches such as the *National Emergency Risk Assessment Guidelines* (Australian Institute for Disaster Resilience, 2020) are also relevant to councils but were not reviewed in this report given its central focus on climate risk assessment guidance.

5 References

- AS5334 – Climate change adaptation for settlements and infrastructure – A risk-based approach (Standards Australia, 2013)
- Climate Change Risk Management Guide – Topic 1: Understanding Victorian climate change risk management expectations (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)
- Climate Change Risk Management Guide – Topic 2: Using risk management to help you address climate change (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)
- Climate Change Risk Management Guide – Topic 3: Exploring Victoria’s climate change risks (Victorian Managed Insurance Authority and Department of Energy, Environment and Climate Action)
- Climate Compass - A climate risk management framework for Commonwealth agencies (CSIRO, 2018)
- Climate Risk Management Guideline for Queensland Local Government – PILOT DRAFT (Local Government Association of Queensland, 2020) *(note that the draft versions were the subject of this review and the final versions were subsequently released as of August 2023)*
- C40 Cities: Rapid Climate Change Risk Assessment Module (C40 Cities Climate Leadership Group, 2021)
- C40 Cities: Climate Change Risk Assessment Guidance (C40 Cities Climate Leadership Group, 2018)
- Final of Revised Sections – QCRC Climate Risk Management Framework (Local Government Association of Queensland, 2023) *(note that the draft versions were the subject of this review and the final versions were subsequently released as of August 2023)*
- Guidance on undertaking a first-pass risk screening (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)
- Guidance on undertaking a second-pass risk assessment (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)
- Guidance on undertaking a third-pass (detailed) risk assessment (CoastAdapt, National Climate Change Adaptation Research Facility, 2016)
- Guide to Climate Change Risk Assessment for NSW Local Government (NSW Government Department of Planning, Industry and Environment, 2019)
- International Financial Reporting Standards (IFRS) S2 – Climate-related Disclosures (International Sustainability Standards Board (ISSB), 2023)
- ISO/TS 14092:2020 - Adaptation to climate change — Requirements and guidance on adaptation planning for local governments and communities (International Organization for Standardization, 2020)
- National Climate Risk Assessment DRAFT Methodology – Consultation Version (Department of Climate Change, Energy, the Environment and Water (DCCEEW), 2023)
- Recommendations of the Task Force on Climate-related Financial Disclosures – Final report (Task Force on Climate-related Financial Disclosures (TCFD), 2017)
- Victoria’s Future Climate Tool (Victorian Government Department of Energy, Environment and Climate Action)

6 Statement of limitations and disclaimer

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The contents of this document and any related findings reflect industry practice based on information available to Nation Partners at the time of creation, and the scope of services to which this document relates.

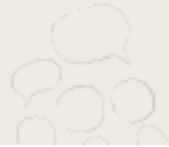
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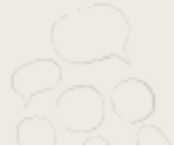
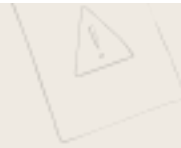
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Appendix



A Tabulated desktop review of shortlisted guidance documents

Please refer to the table on the next page. This table is the output for Task 3 of the project.



B Longlist of guidance documents

Please refer to the table on the next page. This table was provided as the output for Task 2 of the project.

Longlist and agreed shortlist of guidance documents

Document numbering convention

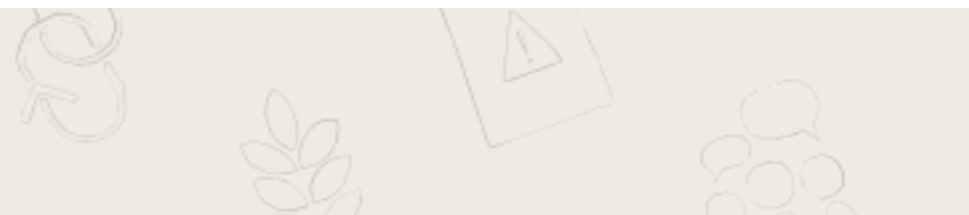
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X = Document sequence number

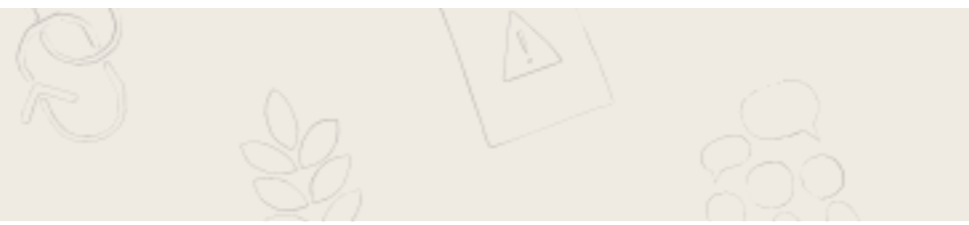
Y = Type of organisation targeted

The following keys are used in the table below to describe source jurisdiction and type of organisation targeted for each guidance document:

- I / Intl: International jurisdiction
- N / Ntl: Australian Government (national) jurisdiction
- S / State: State or territory jurisdiction
- LG: Local government or municipal/city jurisdiction
- O / Org: Organisation/institution level



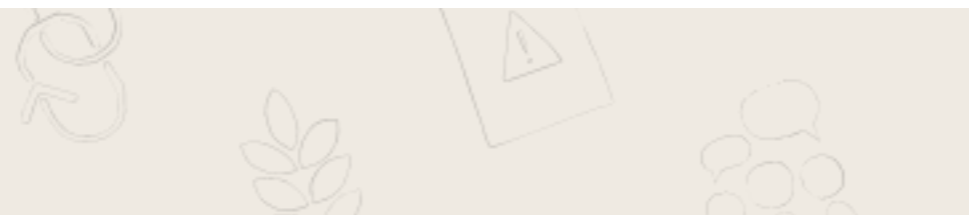
Resource Information					Resource Summary							Confirmed inclusion in shortlist? • Y: Yes • N: No	Brief rationale for including or excluding from shortlist
Document No.	Resource name (Link provided for publicly available resources)	Author (Organisation)	Year published	Proposed by • VCRC program • NP • Both	Resource type • Guideline • Standard • Tool	Source jurisdiction type	Targeted audience	Purpose	Risk types covered • Physical risks • Transition risks	Intended scope of assessment (if specified)	Accompanying or relevant materials of note		
#1-I	ISO 14090:2019 - Adaptation to climate change - Principles, requirements and guidelines Link provided here .	International Organization for Standardization	2019	Both	Standard	Intl	Non-specific - Any organisation regardless of size, type and nature (local, regional or international)	Provides guidance on overarching principles of climate change adaptation including pre-planning, assessment impacts including opportunities, adaptation planning, implementation, monitoring and evaluation and reporting.	Physical risks	Non-specific – Can be applied as needed.	ISO 14091	N	Not shortlisted as there are other resources available that are more suitable specifically for local government use.
#2-I	ISO/DIS 14091:2021 - Adaptation to climate change - Guidelines on vulnerability, impacts and risk assessment Link provided here .	International Organization for Standardization	2021	Both	Standard	Intl	Non-specific - Any organisation regardless of size, type and nature (local, regional or international)	Provides guidance on assessing risks and opportunities related to potential impacts of climate change.	Physical risks	Non-specific – Can be applied as needed	ISO 14092	N	Not shortlisted as there are other resources available that are more suitable specifically for local government use.
#3-I	Recommendations of the Task Force on Climate-related Financial Disclosures – Final report Link provided here .	Task Force on Climate-related Financial Disclosures (TCFD)	2017	NP	Guideline	Intl	Other – Developed for economic and financial sectors; now adopted by other sectors	Provides recommendations for climate-related risk and opportunity financial disclosure and includes supporting information on climate-related risks and opportunities and scenario analysis.	Physical risks and transition risks	Climate-related risks and opportunities that have financial implications	Accompanying TCFD guidance resources: Publications Task Force on Climate-Related Financial Disclosures (fsb-tcf.org) TCFD Knowledge Hub – TCFD Knowledge Hub (tcfithub.org) The Climate Measurement Standards Initiative (CSMI) has developed resources that provides methods and scenarios to support TCFD reporting in an Australian context https://www.cmsi.org.au TCFD requirements have been integrated into Victorian organisational-level documents. For example: Guidance for Board Members and Executives of Water Corporations and Catchment Management Authorities .	Y	An increasingly influential resource across many sectors that provides good practice guidance on climate-related risk and opportunity assessment approaches.
#4-I	IFRS S2 – Climate-related Disclosures Link provided here .	International Sustainability Standards Board	2023	NP	Standard	Intl	Other – Corporate sector	States an entity’s disclosure requirements on information about its climate-related risks and opportunities which could be reasonably expected to affect the entity’s prospects.	Physical risks and transition risks	Climate-related risks and opportunities that have financial implications	IFRS S1 – General Requirements for Disclosure of Sustainability-related Financial Information This document states an entity’s disclosure requirements for its sustainability-related risks and opportunities that is useful to users of general purpose financial reports in making decisions relating to providing resources to the entity.	Y	An increasingly influential resource across many sectors that provides guidance on climate-related risk and opportunity reporting.



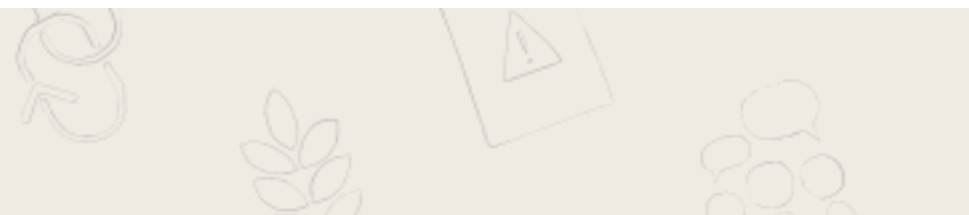
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											Australian Government's research report on Climate-related disclosures and assurance in the Annual Reports of ASX-listed companies . This document provides information of trends in climate-related disclosures and related audit approached in the context of Australian listed entities.		
#5-O	WSAA Climate Change Adaptation Guidelines Link provided here .	Water Services Association of Australia	2016	NP	Guideline	Org	Org – Australian and New Zealand water industry (water utilities)	Provides guidance on all stages of building climate resilience across the water utility including risk identification, implementation, monitoring and improvement of response actions.	Physical risks	Water utility organisations	N/A	N	Not shortlisted as there are other resources available that are more suitable specifically for local government use.
#6-N	Climate Compass - A climate risk management framework for Commonwealth agencies Link provided here .	CSIRO	2018	Both	Guideline	Ntl	Ntl – Australian Government public servants	Provides a step-by-step guideline on how an Australian Government agency can identify and assess risks and opportunities that arise from climate change and develop a plan to address the identified risks.	Physical risks and transition risks	Policies, programs and asset management	N/A	Y	A prominent resource that provides good practice climate risk assessment approaches that can be applied to Australian Government organisations and considered by other levels of government.
#7-N	AS5334 – Climate change adaptation for settlements and infrastructure – A risk based approach Link provided here .	Standards Australia	2013	Both	Standards	Ntl	Non-specific - Individuals and organisations that play a role within the lifecycle of settlements and infrastructure.	Provides a general approach on managing climate change risks and implementation plans for settlements and infrastructure and is based on the risk management process in A/NZS ISO 31000:2009.	Physical risks	Settlements and infrastructure Note: This standard is not intended for use in other areas or sectors	N/A	Y	A prominent resource that has been widely used for around a decade and may be considered as a benchmark for local government approaches to adaptation, particularly in the context of assessing the climate vulnerability of building assets.
#8-N	CoastAdapt Risk Assessment resources Link provided here .	National Climate Change Adaptation Research Facility (NCCARF)	2017	Both	Guideline	Ntl	Non-specific – Individuals, organisations or businesses interested in Australia's coast in the context of climate change	Provides information on assessing risk, impacts and necessary adaptation measures to address climate change on the coast regions. CoastAdapt provides a three-stage guidance approach to undertaking a climate change risk assessment for coastal regions.	Physical risks	Australian coastal regions	Victorian state-level information Guidance documents for the three-stage approach: First-pass screening Second-pass screening Third-pass screening Accompanying templates for three-stage approach:	Y	A well organised online Australian resource that is aimed at a range of actors interested in adaptation on Australia's coasts, with specific sections aimed at supporting local-scale adaptation. <i>We note that Griffith University is updating the CoastAdapt resources, to</i>



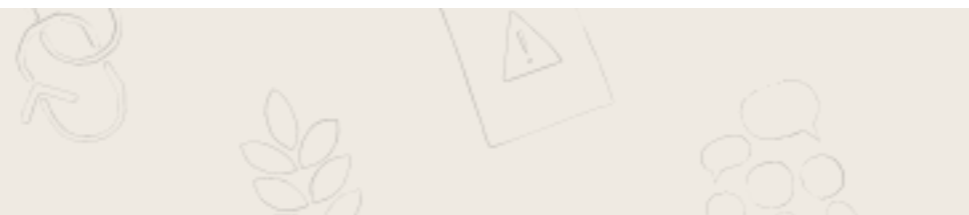
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											Template 1: First-pass risk screening : Suitable for a quick screen of climate change hazards and associated risks. Template 2: First-pass risk screening : Suited to revisit the first-pass risk screening with more information and effort. Template 3: Second-pass risk assessment : Can be used for recording information during a second-pass risk assessment workshop. Template 4: Third-pass risk assessment : Can be used for recording information during a third-pass risk assessment workshop. Additional resources: List of existing available tools		be finalised in around 12 months' time.
#9-N	National Climate Risk Assessment DRAFT Methodology – Consultation Version <i>Not publicly available but consultation draft has been provided to governments; copy provided by VCRC program for this review.</i>	Department of Climate Change, Energy, the Environment and Water	2023	VCRC program	Guideline	Ntl	Ntl, State and LG (developed for the Australian Government's National Climate Risk Assessment)	Provides a nationally coherent approach that will be used in identifying Australia's most significant climate-related physical risks. This document also includes the proposed risk assessment framework to be used in identifying and assessing the risks for the National Climate Risk Assessment.	Physical risks (The draft states that transition risk is "out of scope at this time to ensure the first Risk Assessment could be delivered in a timely way and provide a basis for future iterations".)	Four domains: Built environment, natural environment, social and economic.	N/A	Y	A prominent Australian resource that provides the methodology for the National Climate Risk Assessment to be completed in 2023-24.
#10-N	National Emergency Risk Assessment Guidelines Link provided here .	Australian Institute for Disaster Resilience	2020	NP	Guideline	Ntl	Ntl, State and LG	Provides a nationally consistent approach in assessing emergency risks to minimise harm and loss when shocks and stresses occur, and to help prioritise risk management and mitigation activities.	Physical risks	Emergency events.	N/A	N	Not shortlisted as resource does not provide an overarching approach to whole-of-organisation climate change risk assessment and is focused on emergency-related risks.
#11-S	NSW Climate Risk Ready Guide Link provided here .	NSW Department of Planning, Industry and Environment	2021	NP	Guideline	State – NSW	State – NSW government organisations	Provides guidance on identifying and analysis climate change risks, adaptation and monitoring plans to address the identified risks. The document also provides guidance to organisations in understanding its climate change risk management maturity.	Physical and transition risks.	Non-specific – Can be applied as needed	N/A	N	Not shortlisted as there are other resources available that are more suitable specifically for local government use.



Resource Information					Resource Summary							Confirmed inclusion in shortlist? • Y: Yes • N: No	Brief rationale for including or excluding from shortlist
Document No.	Resource name (Link provided for publicly available resources)	Author (Organisation)	Year published	Proposed by • VCRC program • NP • Both	Resource type • Guideline • Standard • Tool	Source jurisdiction type	Targeted audience	Purpose	Risk types covered • Physical risks • Transition risks	Intended scope of assessment (if specified)	Accompanying or relevant materials of note		
#12-S	VMIA Climate Change Risk Management Guides and (for shortlist purposes) the associated User Guide for Victoria's Future Climate Tool (interactive online spatial tool) Link provided here .	Victorian Managed Insurance Authority (the Victorian Government's insurer and risk adviser) and the Victorian Government Department of Energy, Environment and Climate Action	2019, noting relevant web pages are kept up-to-date	NP	Guideline	State – Victoria	State – Victorian public and community sectors and wider Victorian community. Victoria's Future Climate Tool is aimed at risk practitioners, environmental / sustainability officers, strategic planners, geospatial information system (GIS) users, and specialists managing programs, services and infrastructure.	The set of four documents provide guidance undertaking a climate change risk assessment and using Victoria's Future Climate Tool to visualise climate change projections.	Physical and transition risks	Non-specific – Can be applied as needed	Climate Change Risk Management Guides: Topic 1: Understanding Victorian climate change risk management expectations (This document provides minimum requirements for managing climate change risks in the context of Victorian government organisations) Topic 2: Using risk management to help you address climate change (This document provides guidance on applying an organisation's existing risk framework to identify and assess climate change risks) Topic 3: Exploring Victoria's climate change risks (This document provides information on types of climate change risks to consider and how climate change assessments can inform decision-making) User guide for use of Victoria's Future Climate Tool (This document was prepared to support the delivery of the VMIA climate change risk management guides and outlines instructions and limitations in use of the Tool)	Y	A Victorian resource developed with the relevant State climate science authority (Victorian Government department), which includes instructions for use of the interactive Victoria's Future Climate Tool to visualise the most recent Victorian climate projections.
#13-S	Victoria's Future Climate Tool (online interactive spatial tool), including the User Guide for Victoria's Future Climate Tool Link provided here .	Victorian Government Department of Energy, Environment and Climate Action	2019	Both	Tool	S	S, LG – Risk practitioners, environmental/sustainability officers, strategic planners, geospatial information system (GIS) users, and specialists managing programs, services and infrastructure.	Tool provides access to climate data for Victoria's future climate based on the Victorian Climate Projections 2019 (including temperature, rainfall and heatwaves) and indicators of climate-related hazards for high and medium emissions scenarios. The user guide for Victoria's Future Climate Tool provides the most relevant documented guidance on the approach to climate risk assessment and use of spatial data (tool data inclusions, exclusions and limitations).	Physical risks	Climate data within Victoria	User guide for use of the Future Climate Tool	Y but shortlist the user guide only, as part of the package of VMIA guidance (see document #12-S above)	See rationale above for #12-S.



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#14-LG	ISO/TS 14092:2020 – Adaptation to climate change — Requirements and guidance on adaptation planning for local governments and communities Link provided here .	International Organization for Standardization	2020	Both	Standard	Intl	LG and communities	Provides guidance for local governments in identifying and assessing climate change risks and developing an adaptation plan to address risks.	Physical risks and transition risks	Non-specific – Can be applied as needed	-	Y	A prominent resource aimed at local government use.
#15-LG	C40 Cities: Rapid Climate Change Risk Assessment Module Link provided here .	C40 Cities Climate Leadership Group	2021	VCRC program	Guideline	Intl	LG – Cities	Provides guidance to cities with constrained resources and time to conduct a qualitative and evidence-based climate change risk assessment.	Physical risks	Natural environment and built environment	Rapid Climate Risk Assessment Module tools: Step 1.1 Determine relevant hazards (This tool allows the user to identify and assess the relevance of climate hazards relevant to the city) Step 2.3 Assess the impacts of the climate hazards (This tool allows the user to identify impacts of hazards listed in Step 1.1)	Y	A prominent resource aimed at local government/cities' use.
#16-LG	C40 Cities: Climate Change Risk Assessment Guidance Link provided here .	C40 Cities Climate Leadership Group	2018	VCRC program	Guideline	Intl	LG – Cities	Provides guidance to help cities conduct a climate risk assessment in line with the approach of the Global Covenant of Mayors for Climate & Energy (GcoM) and C40 Cities.	Physical risks	Natural environment and built environment	Climate Change Risk Assessment Screening Template (This document provides a means to compare a city's climate risk assessment with the guidance)	Y	A prominent resource aimed at local government/cities' use.
#17-LG	Local climate change adaptation planning: A guide for government policy and decision makers in Victoria Link provided here .	Victorian Centre for Climate Change Adaptation Research (VCCCAR). RMIT University.	2012	NP	Guideline	LG – Victoria	State, LG	Provides guidance on applying processes and methods for assessing and responding to existing and potential climate change impacts.	Physical risks	Natural environment, built environment and communities.	N/A	N	Not shortlisted as there are more recent resources that are more suitable specifically for local government use.
#18-LG	Queensland Climate Resilient Councils – Climate Risk Management Framework – DRAFT (provided to Nation Partners as three separate documents) Link provided here .	Local Government Association of Queensland	2020	VCRC program	Guideline	LG – Queensland	LG	Provides guidance for councils to understand and assess climate risks, plan and implement risk management solutions, and monitor and improve their climate risk management in a holistic manner. Two initial pilot draft documents (a framework and accompanying guideline document) were developed and tested by multiple Queensland local governments. After completion of the pilot project, the final framework and guidance documents will be merged and part of the framework will be revised (Introduction and Phase 1). As such, the selected relevant guidance documentation for review includes:	Physical risks and transition risks	Council assets and services	N/A	Y	A state-level resource (from a program similar to the VCRC program) aimed at local government use.



Resource Information					Resource Summary							Confirmed inclusion in shortlist? • Y: Yes • N: No	Brief rationale for including or excluding from shortlist
Document No.	Resource name (Link provided for publicly available resources)	Author (Organisation)	Year published	Proposed by • VCRC program • NP • Both	Resource type • Guideline • Standard • Tool	Source jurisdiction type	Targeted audience	Purpose	Risk types covered • Physical risks • Transition risks	Intended scope of assessment (if specified)	Accompanying or relevant materials of note		
								<ul style="list-style-type: none"> Guidance on a first-pass risk assessment (Phase 1 of the framework as outlined in the <i>Final Revised Sections – QCRC Climate Risk Management Framework, 2023</i>) Guidance on a detailed hazard assessment (Phase 2 of the framework as outlined in the <i>Climate Risk Management Guideline for Queensland Local Government – PILOT DRAFT, 2020</i>). 					
#19-LG	SECCCA Climate Vulnerability Guide: A guide for councils to assess the vulnerability of assets to climate change Link provided here .	South East Councils Climate Change Alliance (SECCCA)	2021	NP	Guideline	LG – Victoria	LG – Nine local governments in the south-east of Melbourne.	Provides guidance to councils to assess the vulnerability of assets to climate change, building on the experience of SECCCA.	Physical risks	Council assets and services	N/A	N	Not shortlisted as it does not provide an overarching approach to whole-of-organisation climate change risk assessment.
#20-LG	Guide to Climate Change Risk Assessment for NSW Local Government Link provided here .	NSW Department of Planning, Industry and Environment	2019	Both	Guideline	LG – NSW	LG	Provides step-by-step guidance to councils in identifying and assessing the risks of climate change, prioritise risks that require further action, adaptation planning, budgeting and community engagement.		Council assets and services	N/A	Y	State-level resource specifically aimed at local government use.