

Investor expectations of companies' physical climate risk management and resilience (pilot version)

Background

The recent Intergovernmental Panel on Climate Change synthesis finds climate change has already led to devastating impacts as a result of extreme weather events, leading to widespread losses and damages with a staggering 3.3-3.6 billion people living in contexts highly vulnerable to climate change¹. This level of disruption to communities and the global economy represents significant financial risk to investors, and their beneficiaries, unless managed effectively.

However, investor engagement with companies to date has largely focused on reducing emissions to manage transition risks and opportunities.

The introduction of mandatory climate disclosures based on the ISSB global standards will require companies in many jurisdictions, including Australia, to disclose information about physical risks, opportunities, and responses (see **Appendix 1**). These disclosures will enable investors to have a better understanding of how climate change physical risks are managed and mitigated by companies, thereby enabling better investment decision making. However, companies need to also take action to improve their resilience to the physical impacts of climate change.

Objectives

These expectations have been developed to support investors to advance their engagement with companies with the goal that companies improve their resilience to physical climate risk. This is critical to protect revenue, jobs, and economic productivity for long term system-wide prosperity - all of which we anticipate will protect long-term investment returns.

For companies, responding to these expectations will help them understand and enact best practices for improving resilience. Responses to these expectations will provide investors with the information they need to more effectively manage their portfolios and allocate capital to companies that are resilient to a range of climate scenarios.

Development of the expectations

The expectations were developed primarily for listed companies but may have broader applicability to unlisted companies.

The expectations are designed to complement the mandatory disclosure requirements introduced in Australia. See Appendix 1 where these expectations have been mapped to *Australian Sustainability Reporting Standard - Climate-related Disclosures (AASB S2)*.²

In developing these expectations, a range of industry and academic literature were reviewed and drawn upon, including the work of investor networks in other jurisdictions, such as the IIGCC (2021) *Investor Expectations of Companies on Physical Risks and Opportunities* and Principles for Responsible Banking (2023) *Climate Adaptation Target Setting*. The Climate Action 100+ Benchmark was used as a model for categorising the investor expectations. See Appendix 2 for a full list of documents reviewed.

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¹ The AR6 Synthesis Report of the Intergovernmental Panel on Climate Change highlights that approximately 3.3-3.6 billion people live in context highly vulnerable to climate change and that current global financial flows for adaptation are insufficient: http://ipcc.ch/report/sixth-assessment-report-cycle

² https://standards.aasb.gov.au/aasb-s2-sep-2024



Feedback

These expectations are currently in the pilot phase. The expectations have been made publicly available so that investors and companies can use them and provide feedback.

A final version incorporating feedback and case studies will be published in 2025.

If you have any feedback, examples of these expectations, or are an investor who has used any of these expectations and are willing to share your experience, please contact: dani.siew@igcc.org.au



Section 1: Investor expectations of companies

Adaptation and	resilience objectives					
Investor	The company has a publicly disclosed resilience objective to assess and manage the					
expectation 1	physical impacts of climate change on its business.					
Climate governance and risk management processes						
Investor expectation 2	The company's Board has the appropriate skills and competencies to oversee the company's management of physical climate risks and resilience or can demonstrate how it is developing those skills.					
Investor expectation 3	The company's senior management has the appropriate skills, competencies and accountability systems, including a specific person at the leadership level who is accountable, to manage physical climate risks and resilience or can demonstrate how it is developing those skills.					
Physical risk and	resilience assessment					
Investor expectation 4	The company includes a warming scenario of either current policies scenario (well above 2°C) or high warming (3°C+) scenario as part of its assessment ³ .					
Adaptation and	resilience plan					
Investor expectation 5	The company has an adaptation and resilience plan setting out key actions to be taken, by when, who is responsible, and to what extent the actions taken will improve resilience.					
Capital allocatio	n					
Investor expectation 6	The company discloses total investment allocated in the last financial year to implement its adaptation and resilience plan, as well as a forward-looking multi-year budget allocation.					
Policy engageme	ent					
Investor expectation 7	The company discloses how it engages with government or government agencies, at relevant levels, to address physical risks and opportunities and avoid maladaptation, particularly where the company is reliant on government intervention to meet their resilience objective.					
Just adaptation						
Investor expectation 8	The company discloses how it considers and manages the potential impacts of its adaptation/resilience actions on workers, communities and First Nations People and nature to ensure an equitable outcome.					

³ The Australian Senate has passed the enabling legislation for mandatory climate disclosures which will require entities to use a scenario where the increase in global average temperature "well exceeds" the increase in mentioned in subparagraph 3(a)(i) of the *Climate Change Act* (well below 2°C).



Section 2: Guidance and illustrative examples of investor expectations

The following illustrative examples and guidance are intended to help explain what some of the investor expectations may look like in practice. This is not an exhaustive list and is a guide only.

Adaptation and resilience objectives

Investor expectation 1 - The company has a publicly disclosed resilience objective to assess and respond to the physical impacts of climate change on its business.

For companies just starting to take steps in setting resilience objectives, an objective may relate only to a target for assessing and prioritising physical climate risks to their business.

As companies progress, investors may expect more time bound and measurable resilience objectives.

Example – "We have assessed our business and its value chain for acute and chronic physical impacts that will have a material impact on the operations of our business. In the short-term, we are developing an adaptation and resilience plan to mitigate the impacts of all physical risk impacts rated as 'High'. In the medium-term, we will implement our resilience plan and allocate X% of total investment each year towards resilience with the intention of reducing previously rated "High" physical risk impacts, to 'Medium'."

Climate governance and risk management processes

Investor expectation 2 - The company's Board has the appropriate skills and competencies to oversee the company's management of physical climate risks and resilience or can demonstrate how it is developing those skills.

Under AASB S2, companies must disclose *how* their Board determines whether the appropriate skills and competencies to oversee strategies to respond to climate-related risks and opportunities are available or will be developed by the Board.

This expectation goes beyond disclosure of an assessment process and sets an expectation that the Board demonstrates that it either has the appropriate skills and competencies or, if not, how it will develop these.

Example – The Board discloses that one director has specific expertise in physical risk impacts, including recent experience in identifying physical risks in a business, and had oversight over the development and implementation of a physical risk and resilience plan.

Investor expectation 3 - The company's senior management has the appropriate skills, competencies and accountability systems, including a specific person at the leadership level who is accountable, to manage physical climate risks and resilience or can demonstrate how it is developing those skills.

The AASB Standard does not deal with the skills and competencies of management.

Example - In the absence of specific physical risk and resilience expertise, the company discloses that in the last year, a suitable expert has been brought in to educate the executive team on material physical risk and resilience. The company explains the rationale for why this expert was selected, what training or advice was provided, and the outcomes of that independent training or advice.

A relevant individual at the senior management level should be clearly designated responsibility and accountability for assessing and managing physical climate risks and building resilience.

Investor expectation 4 - The company includes a warming scenario of either current policies scenario (well above 2°C) or high warming (3°C+) scenario as part of its assessment.



Acceptable scenarios are independent and based on the latest climate research. If companies are using their own bespoke scenarios, they should disclose the similarities and differences to an acceptable independent scenario. Acceptable scenarios should specify pathways across the short, medium and long-term.

Example – Some acceptable high-warming scenarios include: NGFS NDCs, NGFS Current Policies, NGFS Fragmented World, IPCC SSP5-8.5, IPCC SSP3-7.0.

Note: Amendments to the enabling legislation for the mandatory climate disclosures that have passed the Senate will result in the AASB Standard requiring reporting entities to include a higher warming scenario as one of the scenarios used.

Adaptation and resilience plan

Investor expectation 5 - The company has an adaptation and resilience plan setting out key actions to be taken, by when, who is responsible, and to what extent the actions taken improve resilience.

It is sufficient for the company to align physical risk and resilience plan disclosures with AASB S2 and additionally provide investors with the necessary information (e.g., details of how the company has improved resilience) so that investors can have confidence that the actions planned will build resilience and company progress can be tracked.

As with the expectation 1, companies starting out may initially set out actions to assess and prioritise risks. Future plans should then set out quantified and timebound actions to manage and respond to the risks assessed and vulnerabilities identified with clear milestones.

Capital allocation

Investor expectation 6 - The company discloses total investment allocated in the last financial year to implement its adaptation and resilience plan, as well as a forward-looking multi-year budget allocation.

Given the variability of capex requirements across industries and companies, this expectation focuses on testing the alignment of the company's investment with its own physical risk and resilience objectives. Companies should disclose the amount of capital spent on physical risk and resilience actions and a forward-looking budget, ideally 3 years ahead. It should be distinct from other types of investment, including decarbonisation investment. The investment should be linked to its adaptation and resilience plan so that investors can identify the expected resilience outcomes that will result from the allocated capital.

Policy engagement

Investor expectation 7 - The company discloses how it engages with government or government agencies, at relevant levels, to address physical risks and opportunities and avoid maladaptation, particularly where the company is reliant on government intervention to meet their resilience objective.

Example – The company has disclosed the number and nature of engagements with all relevant levels of government related to physical risk and resilience or maladaptation. Engagement may be public or private, directly with government or collaboratively, for example through an industry association or via a multi-stakeholder collaborative initiative. Investors are looking for companies to engage on topics that support building resilience, particularly where companies are reliant on government intervention to meet their resilience objective. Companies should not advocate, lobby or take policy positions, publicly, privately or indirectly, on topics that will undermine efforts to adapt or build resilience to climate impacts. If a company does advocate against supportive climate policies, it should clearly explain why, so investors understand the rationale.



Just adaptation

Investor expectation 8 - The company discloses how it considers and manages the potential impacts of its adaptation/resilience actions on workers, communities and First Nations People and nature to ensure an equitable outcome.

Example – The company should implement its physical risk and resilience plan in line with acceptable just transition principles, for example the International Labor Organisation's guidelines for a just transition⁴. A separate just transition plan is not required, however disclosures should be sufficiently clear so that investors can understand the just transition principles guiding the company and how it has incorporated those principles in its governance structures, physical risk and resilience plan and implementation processes.

⁴ ILO (2015) Guidelines for a just transition towards environmentally sustainable economies and societies for all https://www.ilo.org/media/435091/download



Appendix 1: Investor expectations mapped to Australia's mandatory climate-related disclosure standards (AASB S2)

Australia's mandatory climate-related disclosure standard – Australian Sustainability Reporting Standard, **AASB S2** *Climate-related Disclosures*, is based on the international standards IFRS S1 and S2 released by the International Sustainability Standards Board (ISSB).⁵

Key

AASB S2
Additional investor expectations

Adaptation a	nd resilience objectives					
AASB S2 Para 27	The objective of climate-related financial disclosures on metrics and targets is to enable users of general purpose financial reports to understand an entity's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation.					
AASB S2 Para 33	An entity shall disclose the quantitative and qualitative climate-related targets it has set to monitor progress towards achieving its strategic goals, and any targets it is required to meet by law or regulation, including any greenhouse gas emissions targets.					
Para 35	An entity shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the entity's performance.					
Investor expectation 1	The company has a publicly disclosed resilience objective to assess and manage the physical impacts of climate change on its business.					
Climate gove	rnance and risk management processes					
AASB S2 Para 6	To achieve this [governance] objective, an entity shall disclose information about: a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. Specifically, the entity shall identify that body(s) or individual(s) and disclose information about: i. how responsibilities for climate-related risks and opportunities are reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s); ii. how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities;					

⁵ https://standards.aasb.gov.au/aasb-s2-sep-2024 Note that AASB S1 *General Requirements for Disclosure of Sustainability-related Financial Information* will be voluntary and applies to 'sustainability-related' disclosures, including but not limited to climate.



	iii. how and how often the body(s) or individual(s) is informed about climate-related risks					
	and opportunities;					
	iv. how the body(s) or individual(s) takes into account climate-related risks and					
	opportunities when overseeing the entity's strategy, its decisions on major transactions					
	and its risk management processes and related policies, including whether the body(s)					
	or individual(s) has considered trade-offs associated with those risks and opportunities; and					
	v. how the body(s) or individual(s) oversees the setting of targets related to climate-					
	related risks and opportunities, and monitors progress towards those targets (see					
	paragraph 51), including whether and how related performance metrics are included in remuneration policies; and					
	b) management's role in the governance processes, controls and procedures used to monitor,					
	manage and oversee climate-related risks and opportunities, including information about:					
	i. whether the role is delegated to a specific management-level position or management					
	level committee and how oversight is exercised over that position or committee; and					
	ii. whether management uses controls and procedures to support the oversight of climate-					
	related risks and opportunities and, if so, how these controls and procedures are					
	integrated with other internal functions.					
Investor	The company's Board has the appropriate skills and competencies to oversee the company's					
expectation	management of physical climate risks and resilience or can demonstrate how it is developing those					
2	skills.					
Investor	The company's senior management has the appropriate skills, competencies and accountability					
expectation	systems, including a specific person at the leadership level who is accountable, to manage physical					
3	climate risks and resilience or can demonstrate how it is developing those skills.					
AASB S2	To achieve this [risk management] objective, an entity shall disclose information about:					
Para 25	a) the processes and related policies the entity uses to identify, assess, prioritise and monitor					
	climate-related risks, including information about:					
	i. the inputs and parameters the entity uses (for example, information about data sources					
	and the scope of operations covered in the processes);					
	ii. whether and how the entity uses scenario analysis to inform its identification of climate-					
	related risks;					
	iii. how the entity assesses the nature, likelihood and magnitude of the effects of those					
	risks (for example, whether the entity considers qualitative factors, quantitative					
	thresholds or other criteria);					
	iv. whether and how the entity prioritises climate-related risks relative to other types of					
	risk;					
	v. how the entity monitors climate-related risks; and					
	vi. whether and how the entity has changed the processes it uses compared with the					
	previous reporting period;					
	b) the processes the entity uses to identify, assess, prioritise and monitor climate-related					
	opportunities; and					



c) the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.

Physical risk and resilience assessment

AASB S2 Para 10

An entity shall disclose information that enables users of general purpose financial reports to understand the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects. Specifically, the entity shall:

- a) **describe climate-related risks and opportunities** that could reasonably be expected to affect the entity's prospects;
- b) explain, for each climate-related risk the entity has identified, whether the entity considers the risk to be a climate-related physical risk or climate-related transition risk;
- c) specify, for each climate-related risk and opportunity the entity has identified, over which time horizons—short, medium or long term—the effects of each climate-related risk and opportunity could reasonably be expected to occur; and
- d) explain how the entity defines 'short term', 'medium term' and 'long term' and how these definitions are linked to the planning horizons used by the entity for strategic decisionmaking.

AASB S2

Para 13

An entity shall disclose information that enables users of general purpose financial reports to understand the **current and anticipated effects** of climate-related risks and opportunities on the entity's business model and value chain. Specifically, the entity shall disclose:

- a) a description of the current and anticipated effects of climate-related risks and opportunities on the entity's **business model and value chain**; and
- a description of where in the entity's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).

AASB S2

Para 15

An entity shall disclose information that enables users of general purpose financial reports to understand:

- a) the **effects** of climate-related risks and opportunities on the entity's **financial position**, **financial performance and cash flows** for the reporting period (current financial effects); and
- b) the **anticipated effects** of climate-related risks and opportunities on the entity's **financial position**, **financial performance and cash flows over the short**, **medium and long term**, taking into consideration how climate-related risks and opportunities are included in the entity's financial planning (anticipated financial effects).

AASB S2

Specifically, an entity shall disclose quantitative and qualitative information about:

Para 16

- a) how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period;
- b) the climate-related risks and opportunities identified in paragraph 16(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements;
- d) how the entity expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities



	(for example, increased revenue from products and services aligned with a lower-carbon economy; costs arising from physical damage to assets from climate events; and expenses						
	associated with climate adaptation or mitigation).						
A A C D C C C	· · · · · · · · · · · · · · · · · · ·						
AASB S2	An entity shall disclose information that enables users of general purpose financial reports to understand the resilience of the entity's strategy and business model to climate-related changes,						
Para 22							
	developments and uncertainties , taking into consideration the entity's identified climate-related risks						
	and opportunities.						
	The entity shall use climate-related scenario analysis to assess its climate resilience using an						
	approach that is commensurate with the entity's circumstances.						
AASB S2	Specifically, the entity shall disclose:						
Para 22	a) the entity's assessment of its climate resilience as at the reporting date, which shall enable						
	users of general purpose financial reports to understand:						
	i. the implications, if any, of the entity's assessment for its strategy and business model,						
	including how the entity would need to respond to the effects identified in the climate-						
	related scenario analysis;						
	ii. the significant areas of uncertainty considered in the entity's assessment of its climate						
	resilience;						
	iii. the entity's capacity to adjust or adapt its strategy and business model to climate change over the short, medium and long term, including;						
	 the availability of, and flexibility in, the entity's existing financial resources to respond to the effects identified in the climate-related scenario analysis, including to 						
	address climate-related risks and to take advantage of climate-related opportunities;						
	2. the entity's ability to redeploy, repurpose, upgrade or decommission existing						
	assets; and						
	3. the effect of the entity's current and planned investments in climate-related						
	mitigation, adaptation and opportunities for climate resilience; and						
	b) how and when the climate-related scenario analysis was carried out, including:						
	i. information about the inputs the entity used, including:						
	which climate-related scenarios the entity used for the analysis and the sources of						
	those scenarios;						
	whether the analysis included a diverse range of climate-related scenarios;						
	3. whether the climate-related scenarios used for the analysis are associated with						
	climate-related transition risks or climate-related physical risks;						
	4. whether the entity used, among its scenarios, a climate-related scenario aligned with						
	the latest international agreement on climate change;						
	5. why the entity decided that its chosen climate-related scenarios are relevant to						
	assessing its resilience to climate-related changes, developments or uncertainties;						
	6. the time horizons the entity used in the analysis; and						
	7. what scope of operations the entity used in the analysis (for example, the operating						
	locations and business units used in the analysis);						
	ii. the key assumptions the entity made in the analysis, including assumptions about:						
	 climate-related policies in the jurisdictions in which the entity operates; 						
	2. macroeconomic trends;						



ii.

iii.

iv.

	 national- or regional-level variables (for example, local weather patterns, demographics, land use, infrastructure and availability of natural resources); energy usage and mix; and developments in technology; and the reporting period in which the climate-related scenario analysis was carried out (see paragraph B18).
AASB S2	An entity shall disclose information relevant to the cross-industry metric categories of:
Paras 29(c), (d)	 c) climate-related physical risks—the amount and percentage of assets or business activities vulnerable to climate-related physical risks; d) climate-related opportunities—the amount and percentage of assets or business activities aligned with climate-related opportunities;
Investor expectation 4	The company includes a warming scenario of either current policies scenario (well above 2°C) or high warming (3°C+) scenario as part of its assessment ⁶ .
Adaptation a	nd resilience plan
AASB S2 Para 14	An entity shall disclose information that enables users of general purpose financial reports to
	understand the effects of climate-related risks and opportunities on its strategy and decision-making. Specifically, the entity shall disclose:

current and anticipated direct mitigation and adaptation efforts (for example, through

current and anticipated indirect mitigation and adaptation efforts (for example, through

changes in production processes or equipment, relocation of facilities, workforce

any climate-related transition plan the entity has, including information about key

assumptions used in developing its transition plan, and dependencies on which the

adjustments, and changes in product specifications);

working with customers and supply chains);

entity's transition plan relies; and

⁶ The Australian Senate has passed the enabling legislation which requires entities to use a scenario where the increase in global average temperature "well exceeds" the increase in mentioned in subparagraph 3(a)(i) of the *Climate Change Act* (well below 2°C).



	v. how the entity plans to achieve any climate-related targets , including any greenhouse gas emissions targets, described in accordance with paragraphs 33–36;
	b) information about how the entity is resourcing, and plans to resource , the activities disclosed in accordance with paragraph 14(a).
	 c) quantitative and qualitative information about the progress of plans disclosed in previous reporting periods in accordance with paragraph 14(a).
Investor expectation 5	The company has an adaptation and resilience plan setting out how it will make progress across the business, who is responsible, quantified and timebound milestones, and to what extent the actions taken improve resilience.
Capital alloca	tion
AASB S2	Specifically, an entity shall disclose quantitative and qualitative information about:
Para 16	c) how the entity expects its financial position to change over the short, medium and long term , given its strategy to manage climate-related risks and opportunities, taking into consideration:
	 its investment and disposal plans (for example, plans for capital expenditure, major acquisitions and divestments, joint ventures, business transformation, innovation, new business areas, and asset retirements), including plans the entity is not contractually committed to; and
	ii. its planned sources of funding to implement its strategy;
AASB S2	An entity shall disclose information relevant to the cross-industry metric categories of:
Para 29e	e) capital deployment—the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities;
Investor expectation 6	The company discloses total investment allocated in the last financial year to implement its adaptation and resilience plan, as well as a forward-looking multi-year budget allocation.
Policy engage	ement
Investor expectation 7	The company discloses how it is publicly and/or privately engaging with governments, at relevant levels, to address physical risks and opportunities and avoid maladaptation, particularly where the company is reliant on government intervention to meet their resilience objective.
Just adaptation	on
Investor expectation 8	The company discloses how it considers and manages the potential impacts of its adaptation/resilience actions on workers, communities and First Nations People and nature to ensure an equitable outcome.



Appendix 2: Industry and academic literature consulted

Title	Year	Author	Publication
Climate Action 100+ Net Zero Company Benchmark 1.0 summary (as a model for equivalent physical risk criteria)	2023	Climate Action 100)+
Climate adaptation target setting	2023	UNEP FI Principles	for Responsible Banking
Investor Expectations of Companies on Physical Risks and Opportunities	2021	Institutional Invest	ors Group on Climate Change
From risk to reward: the business imperative to finance climate adaptation and resilience	2023	BCG	
Linking corporate climate adaptation strategies with resilience thinking	2011	Marina Beerman	Journal of Cleaner Production
The climate resilience cycle: Using scenario analysis t inform climate-resilient business strategies	<u>o</u> 2021	Udeke Huiskamp	Business, strategy and the environment
Beyond adaptation: resilience for business in light of climate change and extreme weather extremes	2010	Martina Linnenleucke	Business and Society

About this guide

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