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# Mandatory Sustainability Reporting

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# Today's presenter

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View profile

# Acknowledgement of Country

We begin by acknowledging the Traditional Owners of the land on which we meet today and pay our respects to Elders past and present

We extend that respect to Aboriginal and Torres Strait Islander peoples here today

# Agenda for today

| Description |
| --- |
| • Setting the scene |
| • Unpacking pillar 1: Governance |
| • Unpacking pillar 2: Strategy |
| • Unpacking pillar 3: Risk management |
| • Unpacking pillar 4: Metrics and targets |
| • Pulling it all together in a mandatory sustainability report |
| • How BDO can help |

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# Setting the scene

# What is sustainability?


## ENVIRONMENTAL

- Climate change (e.g. carbon emissions)
- Land use/ecological sensitivity
- Air/water pollution
- Biodiversity/deforestation
- Waste recycling & re-use
- Energy efficiency
- Water management
- Fresh water availability

## SOCIAL

- Diversity, equity & inclusion
- Employee engagement
- Human rights & modern slavery
- Customer satisfaction
- First Nations engagement
- Health and safety
- Community engagement
- Wealth creation & employment

## GOVERNANCE

- Governing purpose
- Board composition
- Ethical behaviour
- Data protection & privacy
- Stakeholder engagement
- Bribery & corruption
- Risk and opportunity oversight
- Remuneration & executive compensation

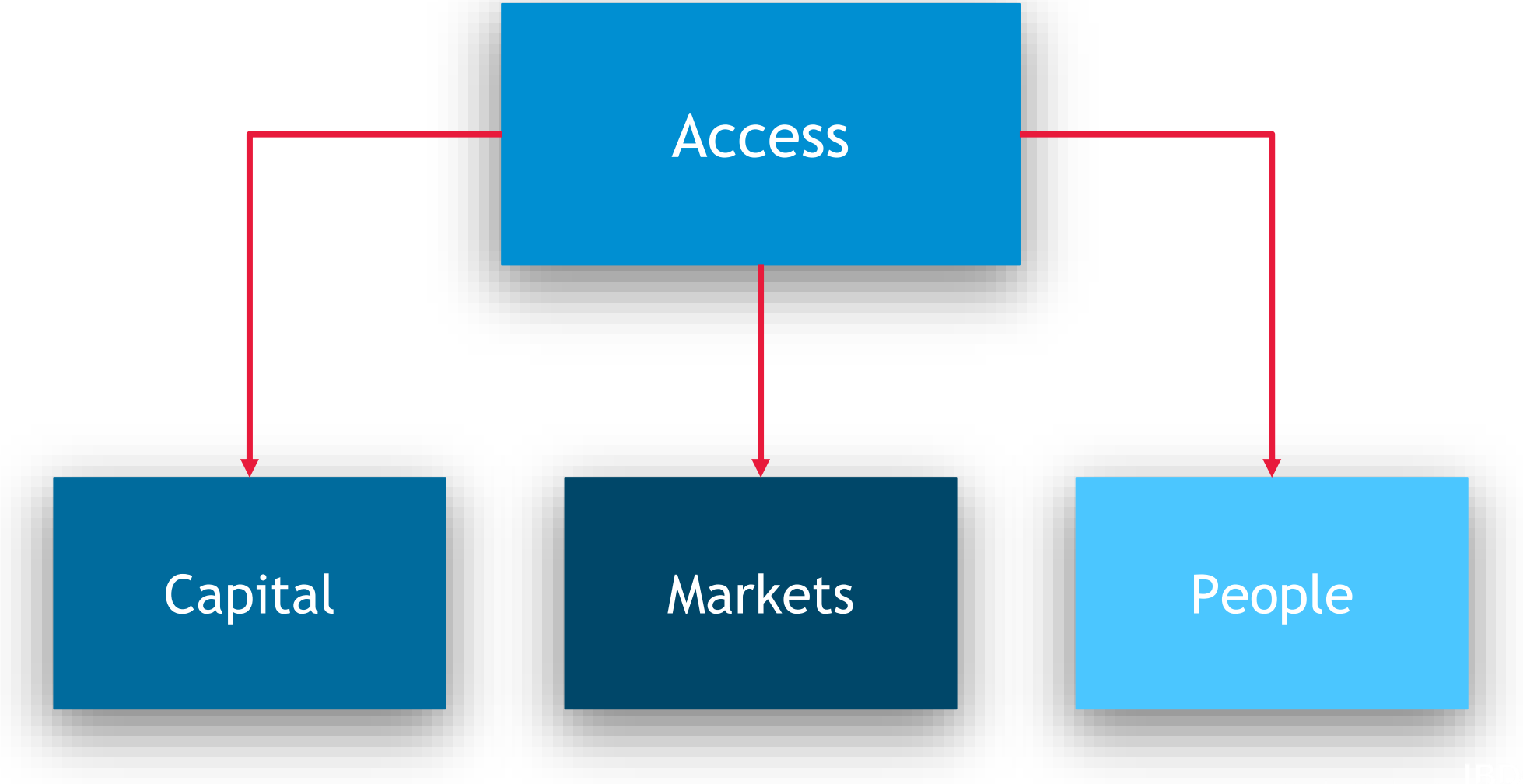
# Why is sustainability important NOW?

## Strategic imperative
(Voluntary Sustainability Reporting)

## Compliance imperative
(Mandatory Sustainability Reporting)

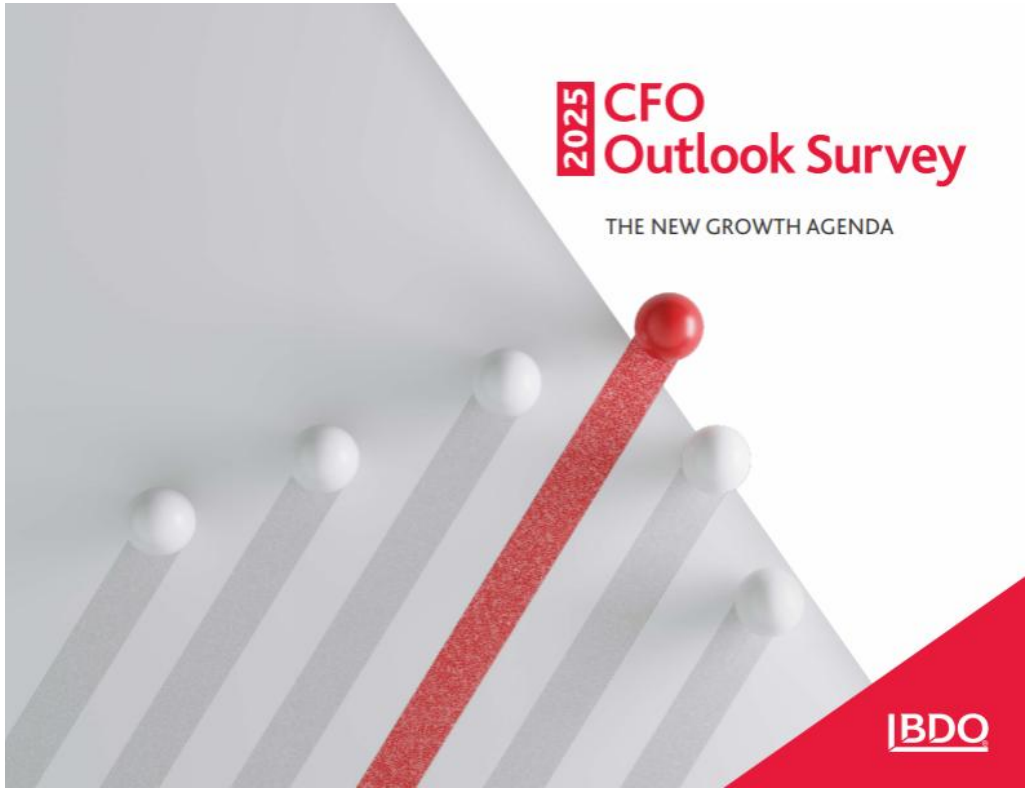
# Strategic Imperative

# What is the strategic imperative?



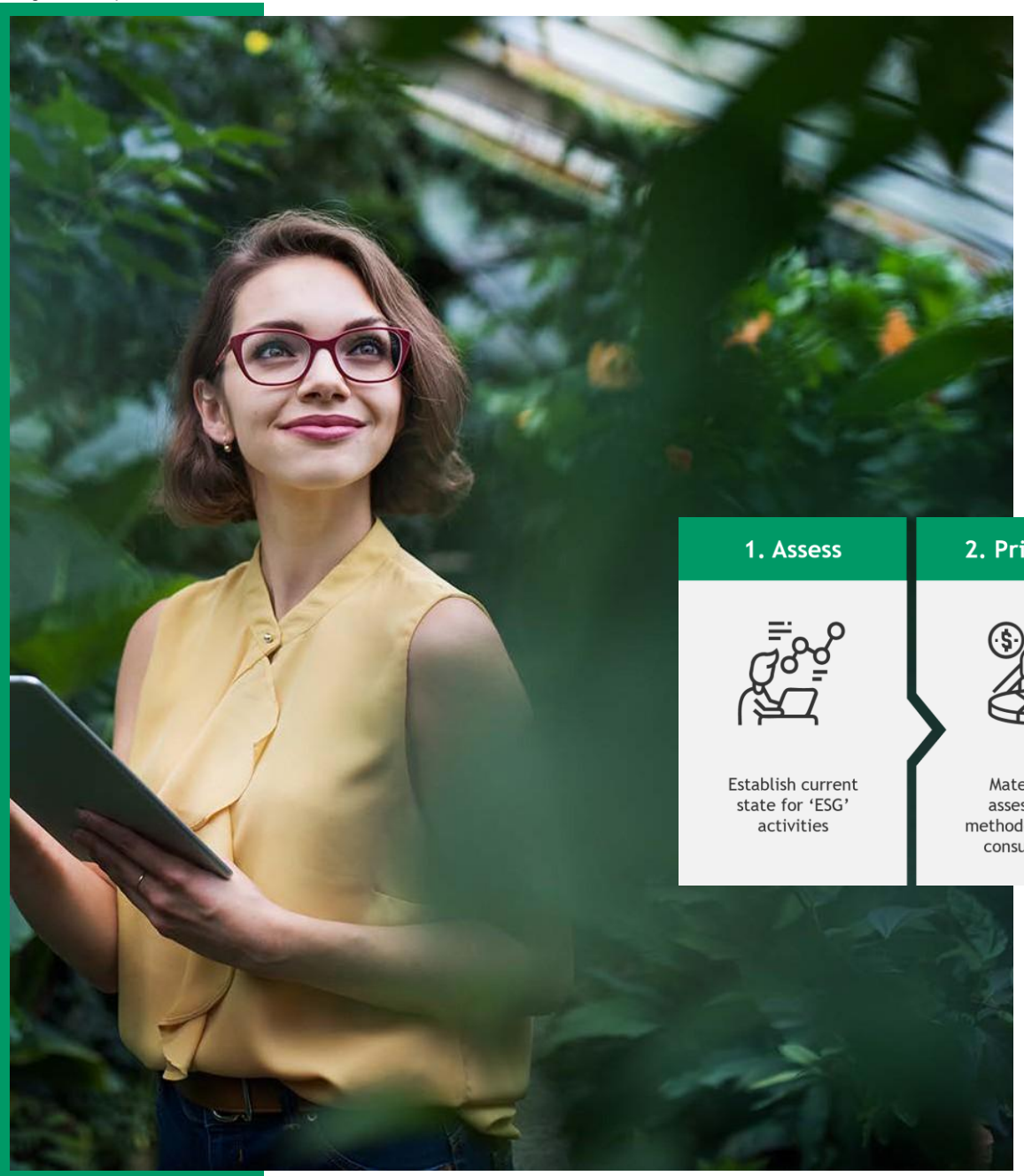
# 2025 CFO Outlook Survey

https://insights.bdo.com/rs/116-EDP-270/images/IND-2025-Agnostic-CFO-Outlook-Survey.pdf




## Benefits from Sustainability Initiatives Over the Last Five Years

| | |
|---|---|
| Increased Innovation and New Business Opportunities | 37% |
| Increase in Revenue | 36% |
| Access to Favorable Financing or Investment Opportunities | 34% |
| Improved Risk Management (e.g., Supply Chain Resilience) | 32% |
| Broader Risk Considerations Inform Decision-Making | 31% |
| Cost Savings (e.g., Increase Operational Efficiency, Reduced Energy Usage, Waste Reduction) | 30% |
| Enhanced Customer Loyalty | 30% |
| Attraction and Retention of Talent | 28% |
| Access to New Markets | 27% |
| Reduced Environmental Impact/Carbon Footprint | 23% |



# A checklist for developing your sustainability roadmap

If your organisation hasn't started its sustainability journey, you're certainly not alone - but there's no better time to start. Keep in mind that sustainability is a journey, a process of continuous improvement which you can't tick off in one step.

Demands for transparency on sustainability and climate-related risks and opportunities have been increasing for businesses around the world.
Stakeholders are calling out for information that is accessible, informative, comparable, and – of course – not misleading.

This six-step sustainability roadmap will help to guide you to establish which sustainability activities are a priority to your organisation, based on the importance and value to your stakeholders.

| 1. Assess | 2. Prioritise | 3. Commit | 4. Measure | 5. Report | 6. Improve |
|---|---|---|---|---|---|
| Establish current state for 'ESG' activities | Materiality assessment methodology and consultation | Leverage current initiatives to develop ESG strategy | Calculate ESG maturity and conduct gap analysis | Prepare and finalise Sustainability Report | ESG monitoring and performance improvement |

# Here to help

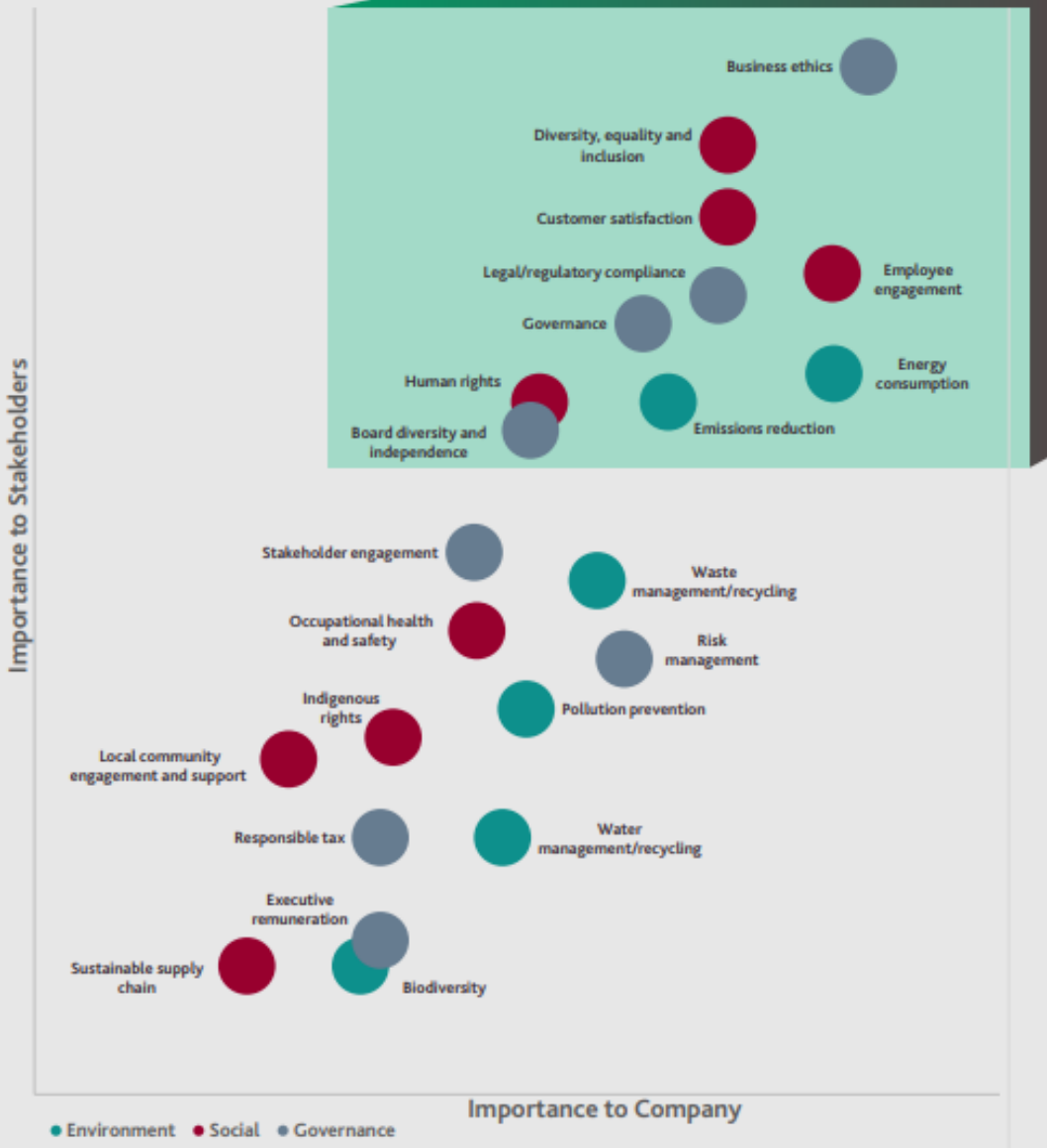
If you need a hand to step you through this roadmap to activate sustainability within your organisation, BDO's national team of sustainability experts can help.

Get in contact

# Linking stakeholder issues to business importance

## Materiality Assessment 2022

**Our objective in conducting the materiality assessment was to identify what matters to our business performance in the medium and long term, and what matters most to our stakeholders and BDO.**




From this, we developed a matrix demonstrating the relative importance of sustainability matters to our stakeholders and BDO.

Throughout this process, we also learned:

**>70%**

of clients surveyed and **>96%** of our people surveyed feel **sustainability should be a priority** within BDO's overall strategy

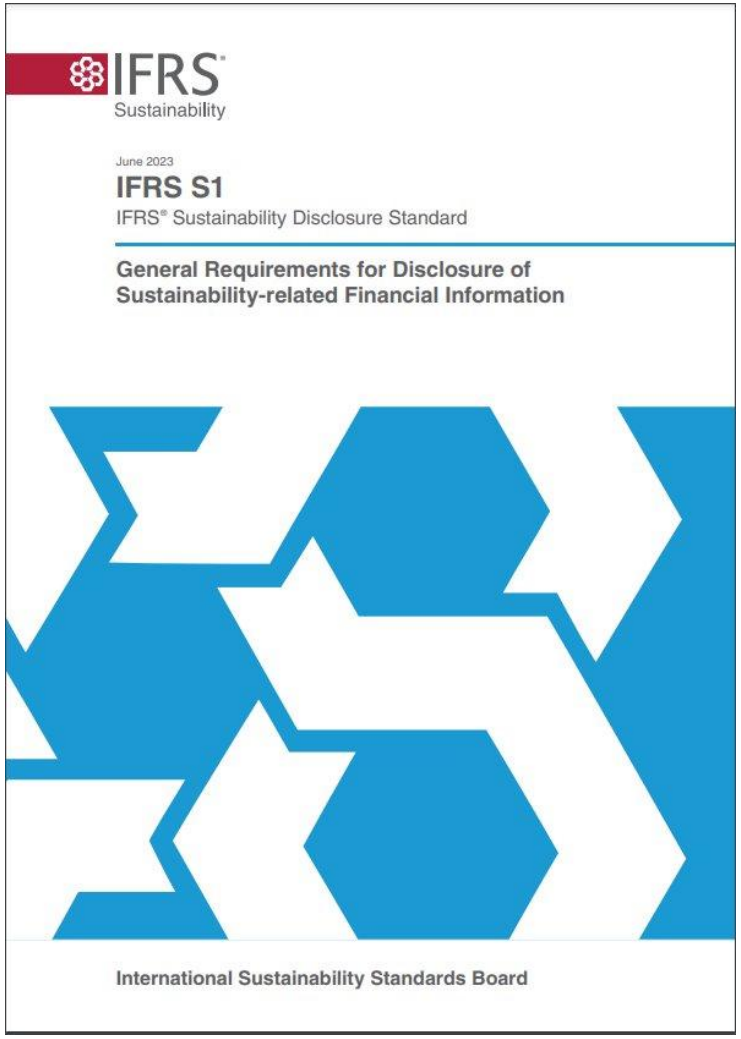
**>73%**

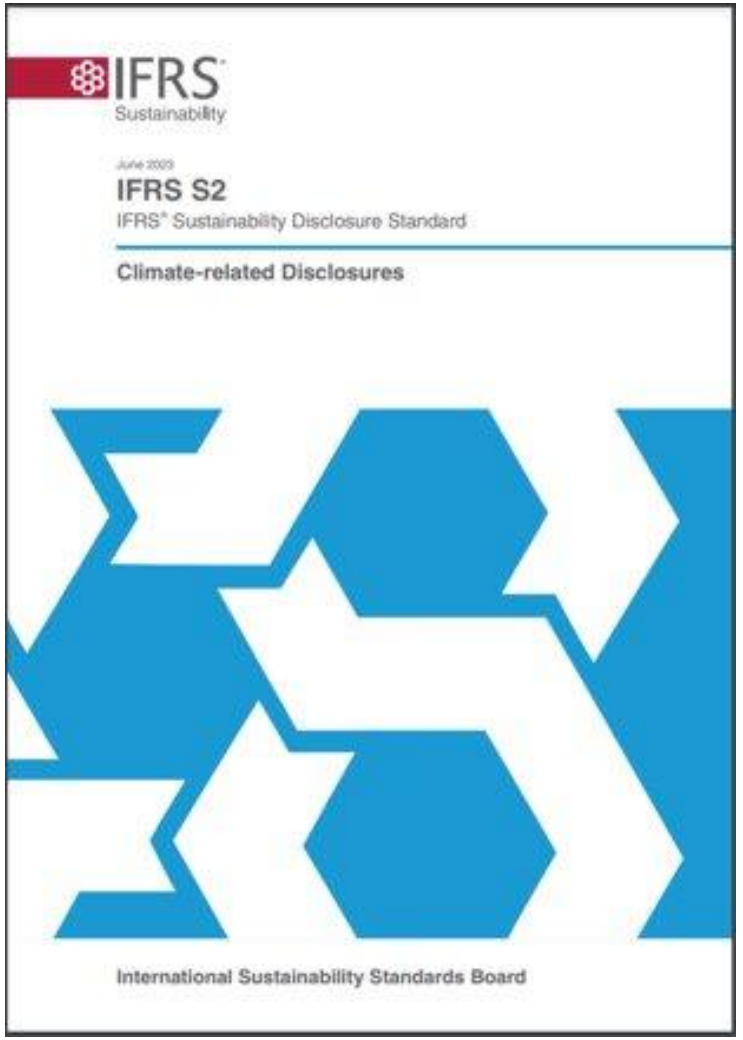
of clients surveyed and **>90%** of our people surveyed feel **that integrating sustainability commitments** and **ESG reporting** into BDO's overall strategy is essential to our future success.

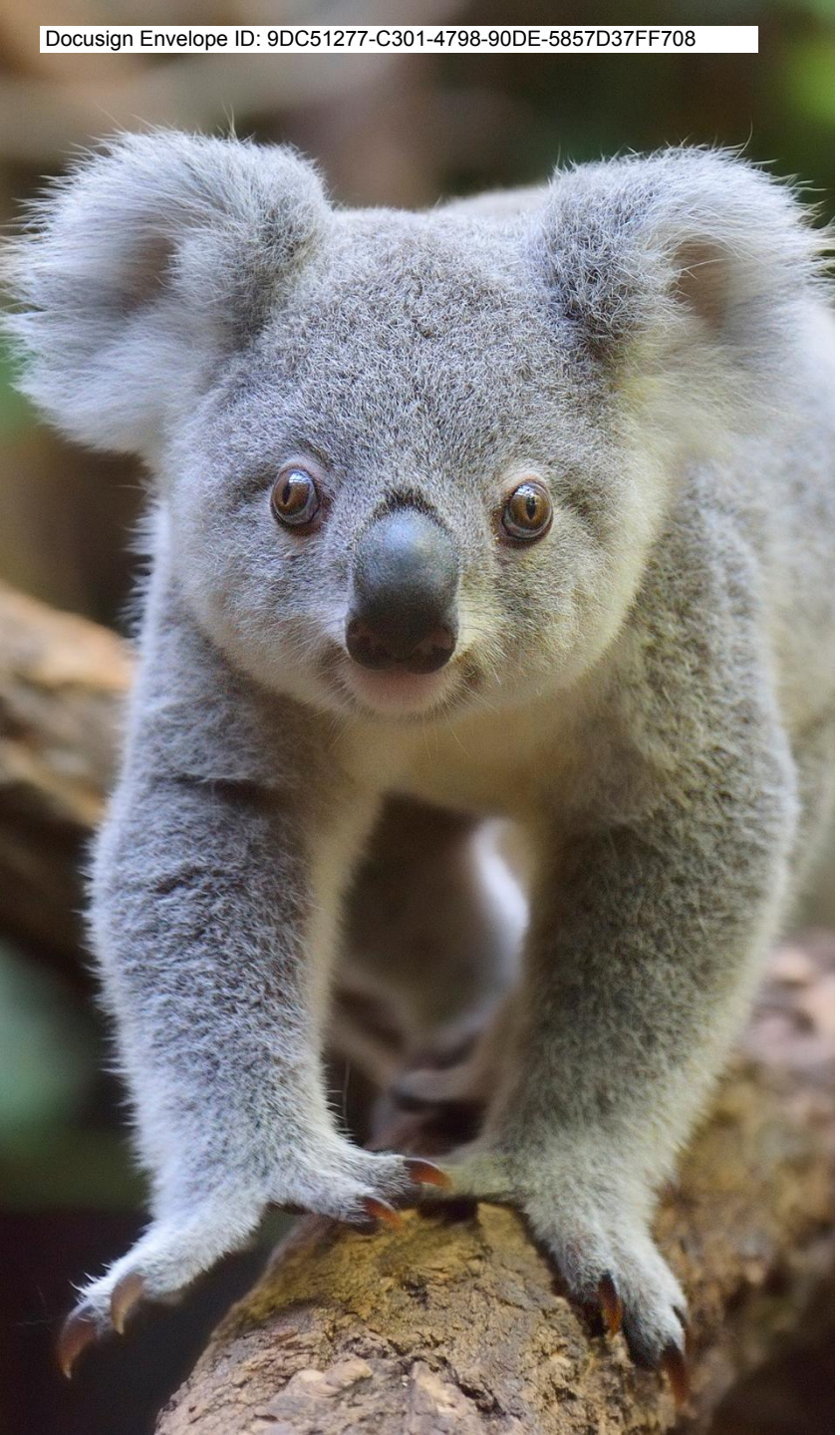
# Compliance imperative

# International Sustainability Standards Board (ISSB)

## Publication on Monday, 26 June 2023





# Key features of the Australian regulatory approach

1. Mandated climate-related financial disclosures in a **separate sustainability report** as part of the entity's **annual report**

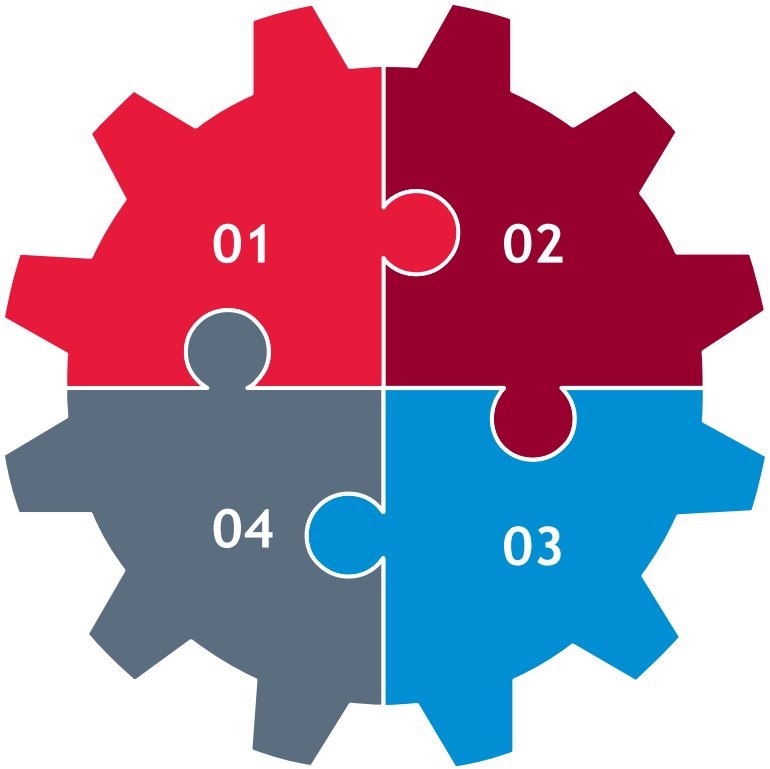
2. Entities will also be required to obtain an **assurance report** over the sustainability report from **their or other financial report auditors**

3. The *Corporations Act 2001* mandates the use of **two specific scenarios** (1.5°C and 2.5°C) for scenario analysis

# NEW composition of the annual report

Annual financial report

Directors' report



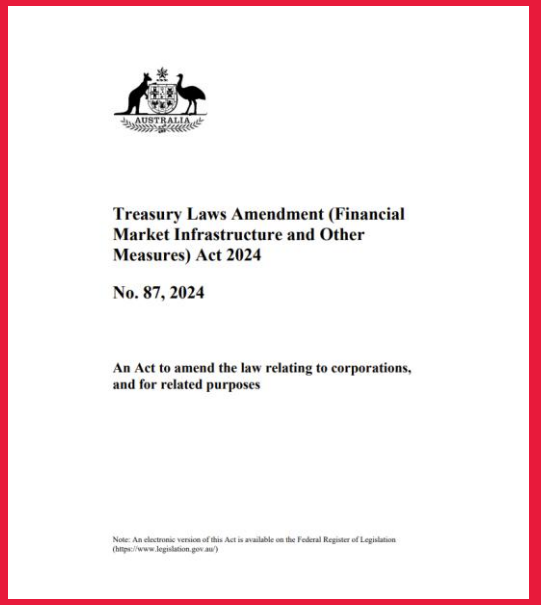

Annual sustainability report

Auditor's report

## Legislation

**17 September 2024**

Legislation received Royal Assent



AUSTRALIA

**Treasury Laws Amendment (Financial Market Infrastructure and Other Measures) Act 2024**

**No. 87, 2024**

**An Act to amend the law relating to corporations, and for related purposes**

Note: An electronic version of this Act is available on the Federal Register of Legislation (https://www.legislation.gov.au/)

## Reporting Standard

**20 September 2024**

AASB approved AASB S1 (voluntary) and AASB S2 (mandatory)

## Assurance Standards

**28 January 2025**

ASSA 5000 *General Requirements for Sustainability Assurance Engagements*

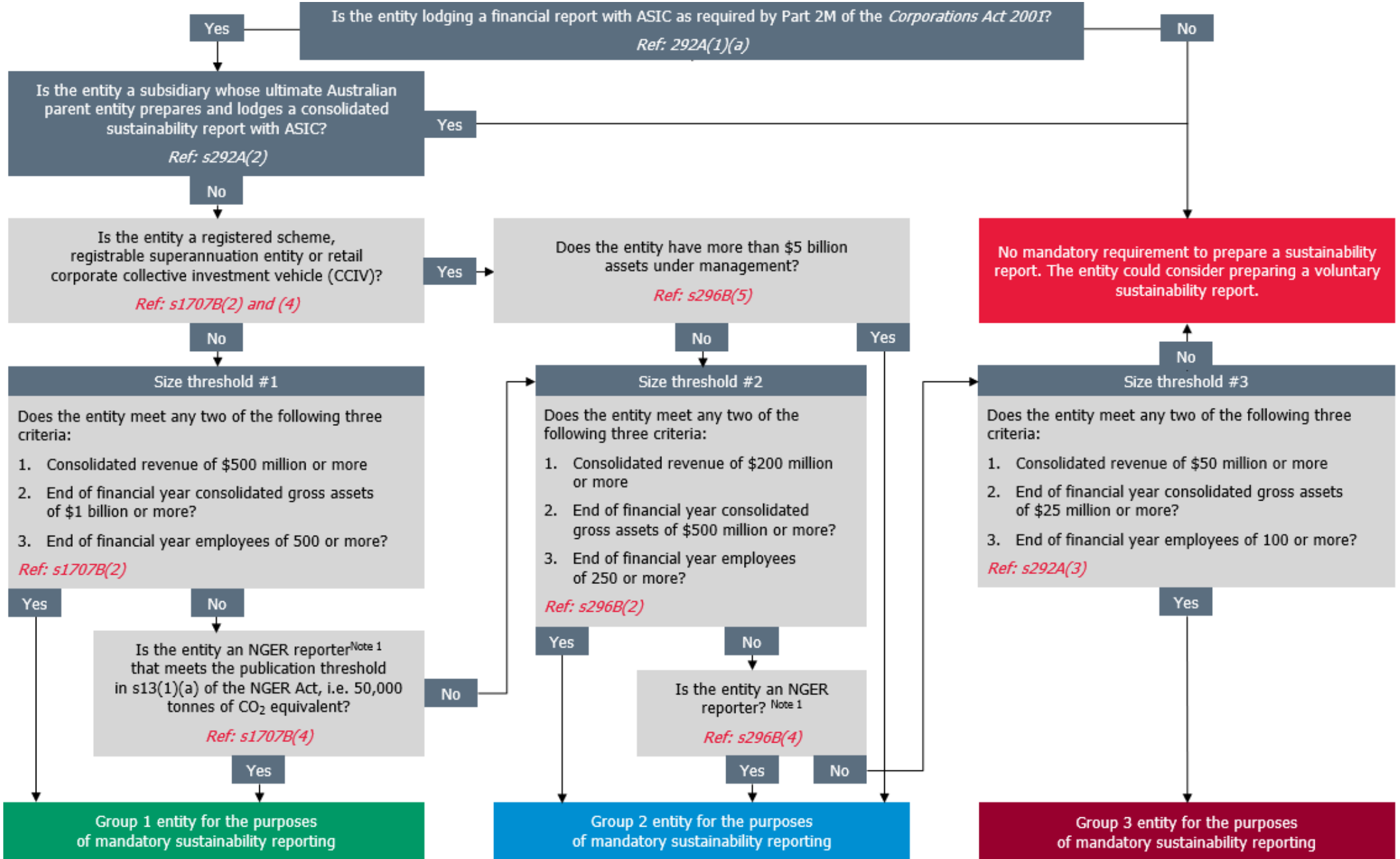
&

ASSA 5010 *Timeline for Audits and Reviews of Information in Sustainability Reports under the Corporations Act 2001*

# Final legislation – Who will be required to begin climate-related reporting?

| | Criteria 1 - Size thresholds | | | Criteria 2 NGER reporters | Criteria 3 Asset owners |
|---|---|---|---|---|---|
| | Consolidated revenue | Consolidated gross assets | Number of employees | | |
| Group 1 | $500 million or more | $1 billion or more | 500 or more | Above NGER publication threshold | N/A |
| Group 2 | $200 million or more | $500 million or more | 250 or more | All other NGER reporters | $5 billion assets under management or more |
| Group 3 | $50 million or more | $25 million or more | 100 or more | N/A | N/A |

# Decision tree – Who will be required to begin climate-related reporting?



# Climate reporting timeline

https://www.bdo.com.au/en-au/insights/esg-sustainability/mandatory-climate-reporting-in-australia-starts-on-1-january-2025

The table below shows the effect of applying these transitional periods to entities with different year-ends.

| | Climate reports required for the first year ending on dates shown below | | |
|---|---|---|---|
| Year-end | Group 1 entities | Group 2 entities | Group 3 entities |
| 31 December year-end | 31 December 2025 | 31 December 2027 | 31 December 2028 |
| 31 March year-end | 31 March 2026 | 31 March 2028 | 31 March 2029 |
| 30 June year-end | 30 June 2026 | 30 June 2027 | 30 June 2028 |
| 30 September year-end | 30 September 2026 | 30 September 2027 | 30 September 2028 |

# What does this mean for Group 1 entities with entities with years commencing from 1 July to 31 December?

| | 30 June 2026 year-end | | 30 June 2027 year-end | | 30 June 2028 year-end | | 30 June 2029 year-end | |
|---|---|---|---|---|---|---|---|---|
| | Reporting AASB S2 | Limited Assurance | Reporting AASB S2 | Limited Assurance | Reporting AASB S2 | Limited Assurance | Reporting AASB S2 | Reasonable Assurance |
| Governance | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Strategy – Risks and Opportunities | Yes | Yes (Only para 9(a), 10(a) & 10(b)) | Yes | Yes | Yes | Yes | Yes | Yes |
| Climate Resilience Assessments/Scenario Analysis | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Transition Plans | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Risk Management | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Scope 1 and 2 Emissions | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Scope 3 Emissions | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Climate-related Metrics and Targets | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes |

# Directors' duties re mandatory sustainability reporting

https://www.bdo.com.au/en-au/insights/esg-sustainability/asic-provides-guidance-on-the-modified-liability-settings-for-mandatory-sustainability-reporting

- Subject to existing directors' obligations and liability framework under the Corporations Act
  - Directors' duties, including care and diligence to consider material climate risks
  - Misleading and deceptive conduct
  - General disclosure obligations, maintenance of documents and information provided to others
  - Contraventions of the provisions can attract maximum civil penalty, for an individual, of $1,565,000

# Directors' duties re mandatory sustainability reporting

https://www.bdo.com.au/en-au/insights/esg-sustainability/asic-provides-guidance-on-the-modified-liability-settings-for-mandatory-sustainability-reporting

- Directors' declaration
  - For the first three years of the sustainability reporting regime (i.e. from 1 January 2025 to 1 January 2028), this obligation is modified such that directors must provide an opinion only as to whether the entity has taken reasonable steps to ensure the contents of the sustainability report are in accordance with the Corporations Act
  - A sustainability report must include a directors' declaration which is a declaration by the directors of their opinion on whether the contents of the sustainability report are in accordance with the Corporations Act, including that the sustainability report complies with the sustainability standards (once made)

# Directors' duties re mandatory sustainability reporting

https://www.bdo.com.au/en-au/insights/esg-sustainability/asic-provides-guidance-on-the-modified-liability-settings-for-mandatory-sustainability-reporting

- Under the modified liability settings, no legal action may be brought in relation to certain types of statements ('protected statements') made within a sustainability report or accompanying auditor's report
- The modified liability settings do not apply to action taken by ASIC
- Protected statements
  - Scope 3 greenhouse gas emissions (including financed emissions)
  - Scenario analysis
  - Transition plan

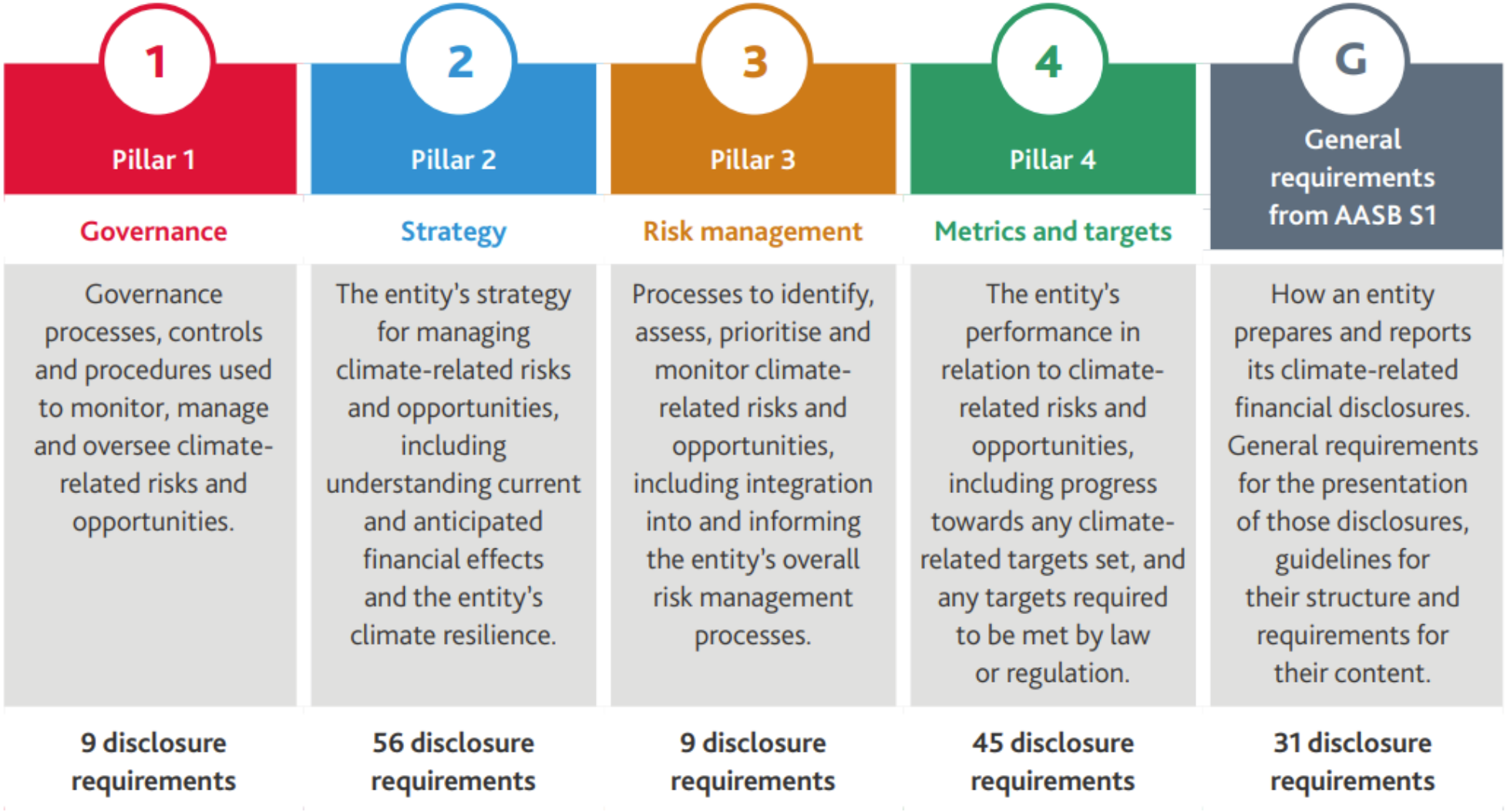
  for reports prepared for financial years commencing between **1 January 2025 and 31 December 2027**
- Also includes forward looking statements under continuous disclosure for reports prepared for the financial year commencing between **1 January 2025 and 31 December 2025**

# The directors' expectation gap for Group 1 directors at 30 June 2026

| | 30 June 2026 year-end | | | |
|---|---|---|---|---|
| | Reporting AASB S2 | Limited Assurance | Directors' personal liability | Directors' expectation gap |
| Governance | Yes | Yes | Yes | NO |
| Strategy – Risks and Opportunities | Yes | Yes (Only para 9(a), 10(a) & 10(b)) | Yes | NO |
| Strategy:<br>• Risks and Opportunities<br>• Business model and value chain<br>• Strategy and decision-making<br>• Financial position, financial position and cash flows | Yes | No (Para 10(c) to 21) | Yes | YES |
| Climate Resilience Assessments/Scenario Analysis | Yes | No | Modified liability - Protected statement | NO |
| Transition Plans | Yes | No | Modified liability - Protected statement | NO |
| Risk Management | Yes | No | Yes | YES |
| Scope 1 and 2 Emissions | Yes | Yes | Yes | NO |
| Scope 3 Emissions | No | No | Modified liability - Protected statement | NO |
| Climate-related Metrics and Targets | Yes | No | Yes | YES |

# BDO's AASB S2 *Climate-related Disclosures* Checklist

https://bdoaustralia.bdo.com.au/acton/media/18110/climate-related-disclosures-aasb-s2-checklist



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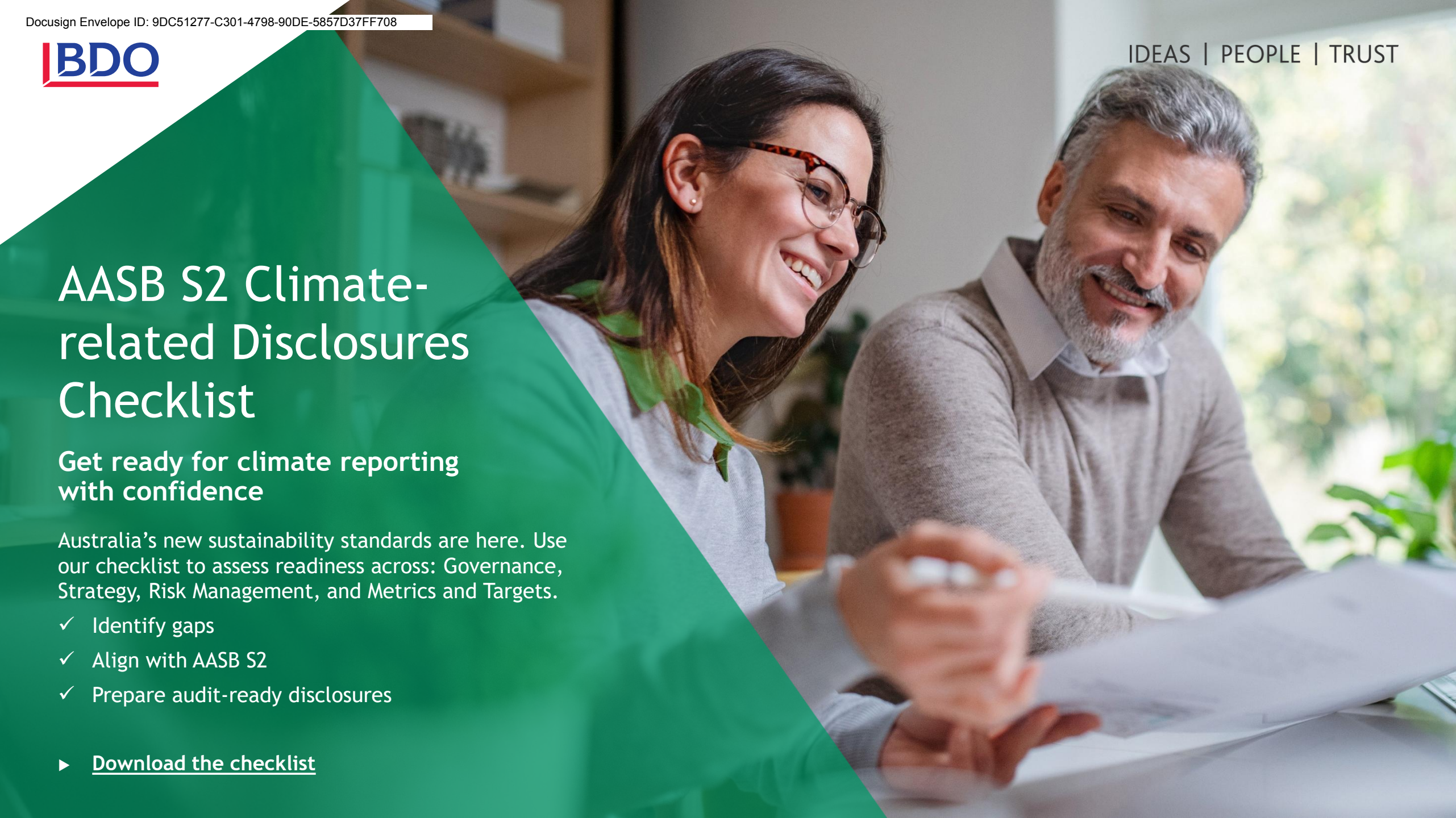
# AASB S2 Climate-related Disclosures Checklist

## Get ready for climate reporting with confidence

Australia's new sustainability standards are here. Use our checklist to assess readiness across: Governance, Strategy, Risk Management, and Metrics and Targets.

- ✓ Identify gaps
- ✓ Align with AASB S2
- ✓ Prepare audit-ready disclosures

▸ **Download the checklist**



# Illustrative sustainability report in accordance with IFRS Sustainability Disclosure Standards

Illustrative-Sustainability-Report-2025.pdf

- BDO Global, together with our Australian team, launched the Illustrative Sustainability Report. It covers the new IFRS S1 and S2 standards (and AASB S2 for Australia)
- Real-world examples showing exactly how these standards work in practice
- It's a practical tool for our clients, helping them get ready for mandatory sustainability disclosures—especially Group 1 entities in Australia
- It brings governance, strategy, risk management, and metrics to life, making the link between sustainability and financial reporting clear and actionable

# ASIC Regulatory Guide 280
# *Sustainability reporting*

https://download.asic.gov.au/media/j4rhwyiz/rg280-published-31-march-2025.pdf


REGULATORY GUIDE 280

## Sustainability reporting

March 2025

### About this guide

This guide is for entities required to prepare a sustainability report under Ch 2M of the Corporations Act (reporting entities). This may include companies (including registered corporations under the *National Greenhouse and Energy Reporting Act 2007*), registered schemes, registrable superannuation entities and retail corporate collective investment vehicles.

It explains how ASIC will exercise specific powers under legislation (primarily the Corporations Act), how ASIC interprets the law and the principles underlying ASIC's approach. It also provides practical guidance to entities about complying with their sustainability reporting obligations.

Reporting entities may ask for information from entities within their value chain, including small businesses and farmers. These entities should refer to ASIC's website about sustainability reporting and what it means for them.

# ASIC announces financial reporting and audit focus areas for FY 2025-26

https://asic.gov.au/about-asic/news-centre/find-a-media-release/2025-releases/25-079mr-asic-announces-financial-reporting-and-audit-focus-areas-for-fy-2025-26/

## Sustainability reporting standards

Sustainability reporting in accordance with AASB S2 *Climate-related disclosures* will be mandatory for Group 1 entities with financial years commencing on or after 1 January 2025 who:

- are required to prepare an annual financial report under Chapter 2M of the Corporations Act,
- meet certain sustainability reporting thresholds, and
- have not obtained sustainability reporting relief from ASIC.

Impacted entities should begin work as soon as possible if they have not already implemented plans and procedures to meet the mandatory reporting requirements.

We will review 31 December 2025 sustainability reports as part of our 2025-26 program and will share our observations with the market to assist preparers. We will take a proportionate and pragmatic approach to supervision and enforcement as the sustainability requirements are being phased in.

Preparers of sustainability disclosures should refer to Regulatory Guide 280 *Sustainability reporting* (RG 280) for more information.

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# Next steps … develop a practical roadmap

# Best practice roadmap – Group 1 entities

<table>
<tr><th colspan="3">PROJECT STREAMS</th><th>Financial year ending on 31 December 2025 or 30 June 2026</th><th>Financial year ending on 31 December 2026 or 30 June 2027</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">COMPLIANCE FOCUS: Carbon Footprint Measurement</td><td>Scope 1 and 2 emissions</td><td colspan="2">Mandatory calculation and reporting of Scope 1 and 2 GHG emissions, subject to assurance:<br>1. Set carbon inventory boundary<br>2. Develop a Basis of Preparation (carbon accounting methodology)<br>3. Measure and report Scope 1 and Scope 2 GHG emissions</td></tr>
<tr><td>Scope 3 emissions</td><td>4. Initial measurement (significant estimation) and report internally Scope 3 GHG emissions<br>5. Set targets in relation to scope 1, 2 and 3</td><td>Mandatory calculation and external reporting of Scope 3 GHG emissions</td></tr>
<tr><td>2</td><td>COMPLIANCE FOCUS: Climate-related disclosures</td><td>AASB S2 (Mandatory)</td><td>Mandatory reporting of all AASB S2 disclosures:<br>6. Establish or improve appropriate governance and risk management structure<br>7. Conduct a climate risk and opportunity assessment<br>8. Prepare a scenario analysis<br>9. Financial modelling of impact on financial statements<br>10. Prepare first mandatory sustainability report, including a materiality assessment</td><td>Ongoing mandatory reporting of all AASB S2 disclosures</td></tr>
<tr><td>3</td><td>STRATEGIC FOCUS: General sustainability-related disclosures</td><td>AASB S1 (Voluntary)</td><td colspan="2"><u>Activate sustainability strategy</u><br>• Step 1 – Current state assessment<br>• Step 2 - Materiality assessment (stakeholder engagement)<br>• Step 3 – Identify gaps<br>• Step 4 – Commit and measure to address gap identified<br>• Step 5 – Prepare separate voluntary sustainability report</td></tr>
</table>

# Best practice roadmap – Group 2 entities

<table>
<tr><th colspan="3">PROJECT STREAMS</th><th>Financial year ending on 30 June 2026 and 31 December 2026</th><th>Financial year ending on 30 June 2027 or 31 December 2027</th><th>Financial year ending on 30 June 2028 and 31 December 2028</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">COMPLIANCE FOCUS:<br>Carbon Footprint Measurement</td><td>Scope 1 and 2 emissions</td><td>1. Set carbon inventory boundary (i.e. Boundary Setting Policy)<br>2. Develop a Basis of Preparation (carbon accounting methodology)<br>3. Initial measurement (significant estimation) and report internally Scope 1 and Scope 2 emissions</td><td colspan="2">Mandatory calculation and reporting of Scope 1 and 2 GHG emissions, subject to assurance:<br>• Measure and report Scope 1 and Scope 2 GHG emissions</td></tr>
<tr><td>Scope 3 emissions</td><td></td><td>4. Initial measurement (significant estimation) and report internally Scope 3 emissions<br>5. Set targets in relation to scope 1, 2 and 3</td><td>Mandatory calculation and external reporting of Scope 3 GHG emissions, subject to assurance</td></tr>
<tr><td>2</td><td>COMPLIANCE FOCUS:<br>Climate-related disclosures</td><td>AASB S2 (Mandatory)</td><td>6. Establish or improve appropriate governance and risk management structure<br>7. Conduct a climate risk and opportunity assessment<br>8. Prepare a scenario analysis<br>9. Financial modelling of impact on financial statements<br>10. Prepare a dry-run sustainability report, including a materiality assessment</td><td>Mandatory reporting of all AASB S2 disclosures</td><td>Ongoing mandatory reporting of all AASB S2 disclosures</td></tr>
<tr><td>3</td><td>STRATEGIC FOCUS:<br>General sustainability -related disclosures</td><td>AASB S1 (Voluntary)</td><td colspan="3"><u>Activate sustainability strategy</u><br>• Step 1 – Current state assessment<br>• Step 2 - Materiality assessment (stakeholder engagement)<br>• Step 3 – Identify gaps<br>• Step 4 – Commit and measure to address gap identified<br>• Step 5 – Prepare separate voluntary sustainability report</td></tr>
</table>

# Best practice roadmap – Group 3 entities

<table>
<tr><th colspan="3">PROJECT STREAMS</th><th>Financial year ending on 30 June 2026 and 31 December 2026</th><th>Financial year ending on 30 June 2027 and 31 December 2027</th><th>Financial year ending on 30 June 2028 or 31 December 2028</th><th>Financial year ending on 30 June 2029 and 31 December 2029</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">COMPLIANCE FOCUS:<br>Carbon Footprint Measurement</td><td>Scope 1 and 2 emissions</td><td>1. Set carbon inventory boundary (i.e. Boundary Setting Policy)<br>2. Develop a Basis of Preparation (carbon accounting methodology)</td><td>3. Initial measurement (significant estimation) and report internally Scope 1 and Scope 2 emissions</td><td colspan="2">Mandatory calculation and reporting of Scope 1 and 2 emissions, subject to assurance:<br>• Measure and report Scope 1 and Scope 2 emissions</td></tr>
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<tr><td>2</td><td>COMPLIANCE FOCUS:<br>Climate-related disclosures</td><td>AASB S2 (Mandatory)</td><td>6. Establish or improve appropriate governance and risk management structure<br>7. Conduct a climate risk and opportunity assessment</td><td>8. Prepare a scenario analysis<br>9. Financial modelling of impact on financial statements<br>10. Prepare a dry-run sustainability report, including a materiality assessment</td><td>Mandatory reporting of all AASB S2 disclosures</td><td>Ongoing mandatory reporting of all AASB S2 disclosures</td></tr>
<tr><td>3</td><td>STRATEGIC FOCUS:<br>General sustainability -related disclosures</td><td>AASB S1 (Voluntary)</td><td colspan="4"><u>Activate sustainability strategy</u><br>• Step 1 – Current state assessment<br>• Step 2 - Materiality assessment (stakeholder engagement)<br>• Step 3 – Identify gaps<br>• Step 4 – Commit and measure to address gap identified<br>• Step 5 – Prepare separate voluntary sustainability report</td></tr>
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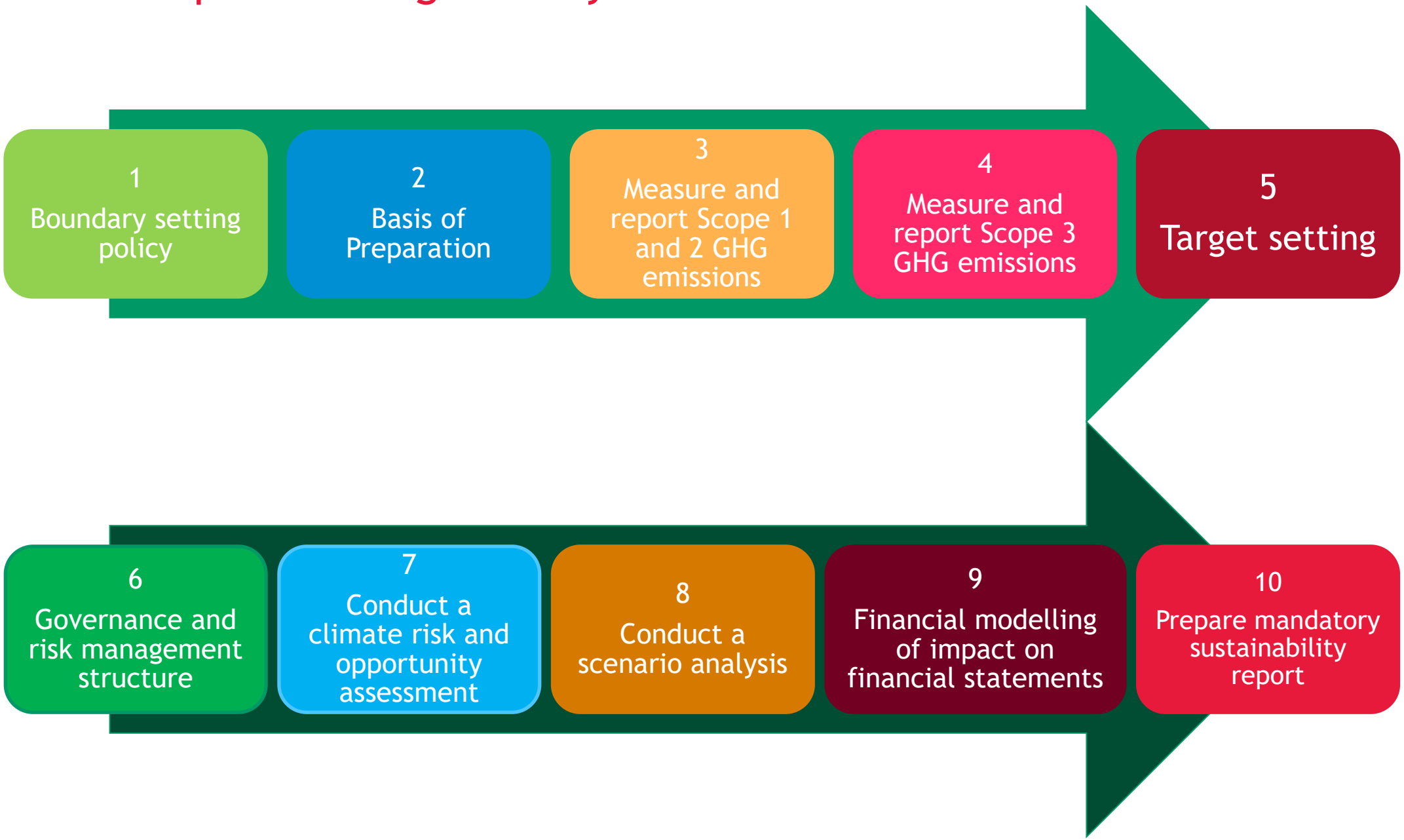
# Iterative process to get ready for AASB S2



# Auditor expectations regarding mandatory sustainability reporting




## Climate-related risks and opportunities

Audit implications

Not documented, not done!

- Have you conducted a physical risk assessment?
- Have you conducted a transition risk assessment?
- Do you have a documented climate risk and opportunity assessment report
- Do you have a documented methodology to perform your climate risk and opportunity assessment?
- Do you have a risk management framework
- Have you prepared and/or updated your risk register, including controls
- Do your findings align with the latest climate science, e.g. IPCC AR6 report, etc
- Have you considered industry views and competitors?
- Have you considered the whole value chain?
- Have you considered all the risks and opportunities per the TCFD?

## Audit expectations

1. Do you have a documented Boundary Setting Policy?
   - How does the carbon accounting boundary compare to the consolidated reporting group for the purpose of the financial report and the mandatory sustainability report?
   - Understand and document reasons for any differences
2. Do you have a documented comprehensive Basis of Preparation?
   - Does the Basis of Preparation agree with the measurement principles in AASB S2?
   - Does the Basis of Preparation agree with the measurement principles in the GHG Protocol, to the extend that it does not conflict with AASB S2?
   - Does the Basis of Preparation agree with the measurement principles in NGER, to the extend that it does not conflict with AASB S2?
3. Have you reconciled the activity date (e.g. petrol and electricity usage) to the general ledger
4. Have you used and documented appropriate emission factors?
5. Have you checked and documented the mathematical accuracy and completeness of the calculation?

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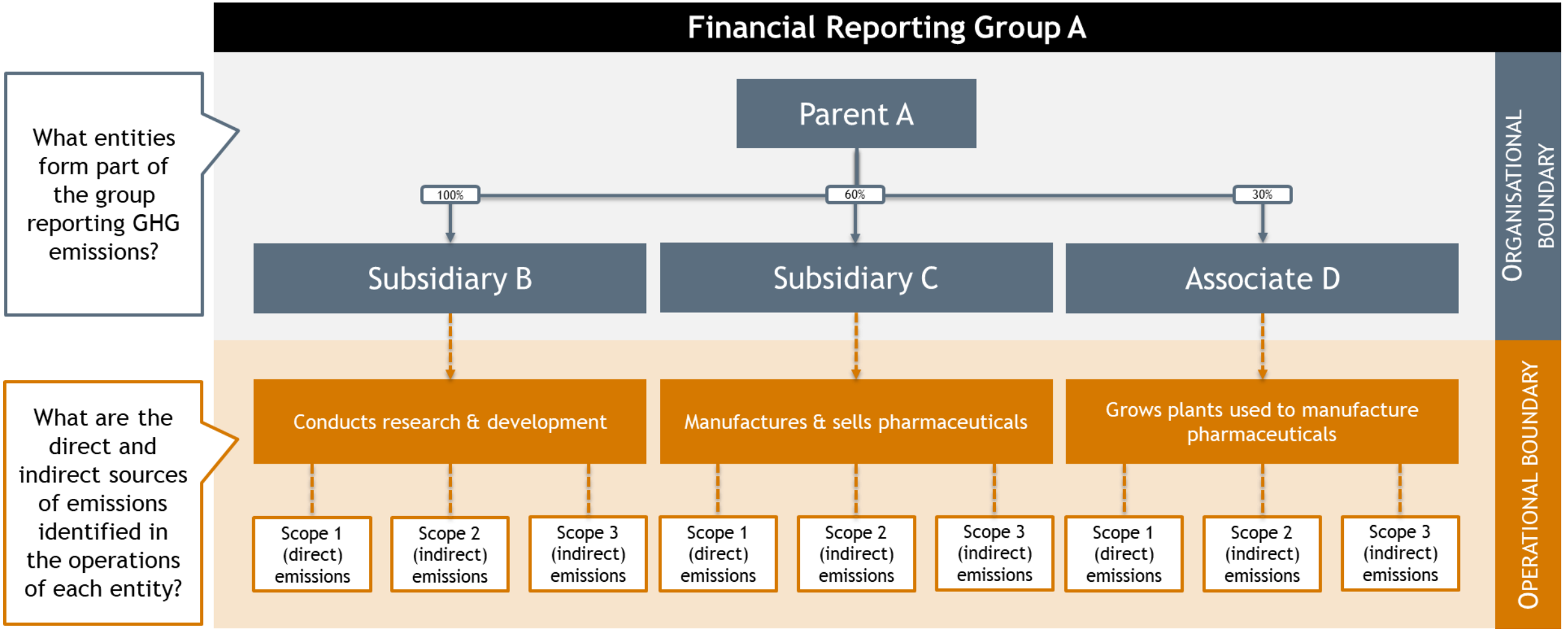
# Project Stream 1 - Carbon accounting

# Elements that form the carbon inventory boundary



# Emission sources

## DIRECT EMISSIONS

*Emissions from sources that are owned or controlled by the reporting company*

*Example: Entity G owns a manufacturing plant which is powered by a diesel generator. GHG emissions from combusting diesel in the generator form part of Entity G's direct emissions*

## INDIRECT EMISSIONS

*Emissions that are a consequence of the operations of the reporting company, but occur at sources owned or controlled by another company.*

*Example: Entity H purchases electricity to power its manufacturing plant from the local power company. Emissions from purchased electricity forms part of Entity H's indirect emissions.*

# Emission categories

## DIRECT EMISSIONS

### SCOPE 1

A reporting organisations direct greenhouse gas emissions

## INDIRECT EMISSIONS

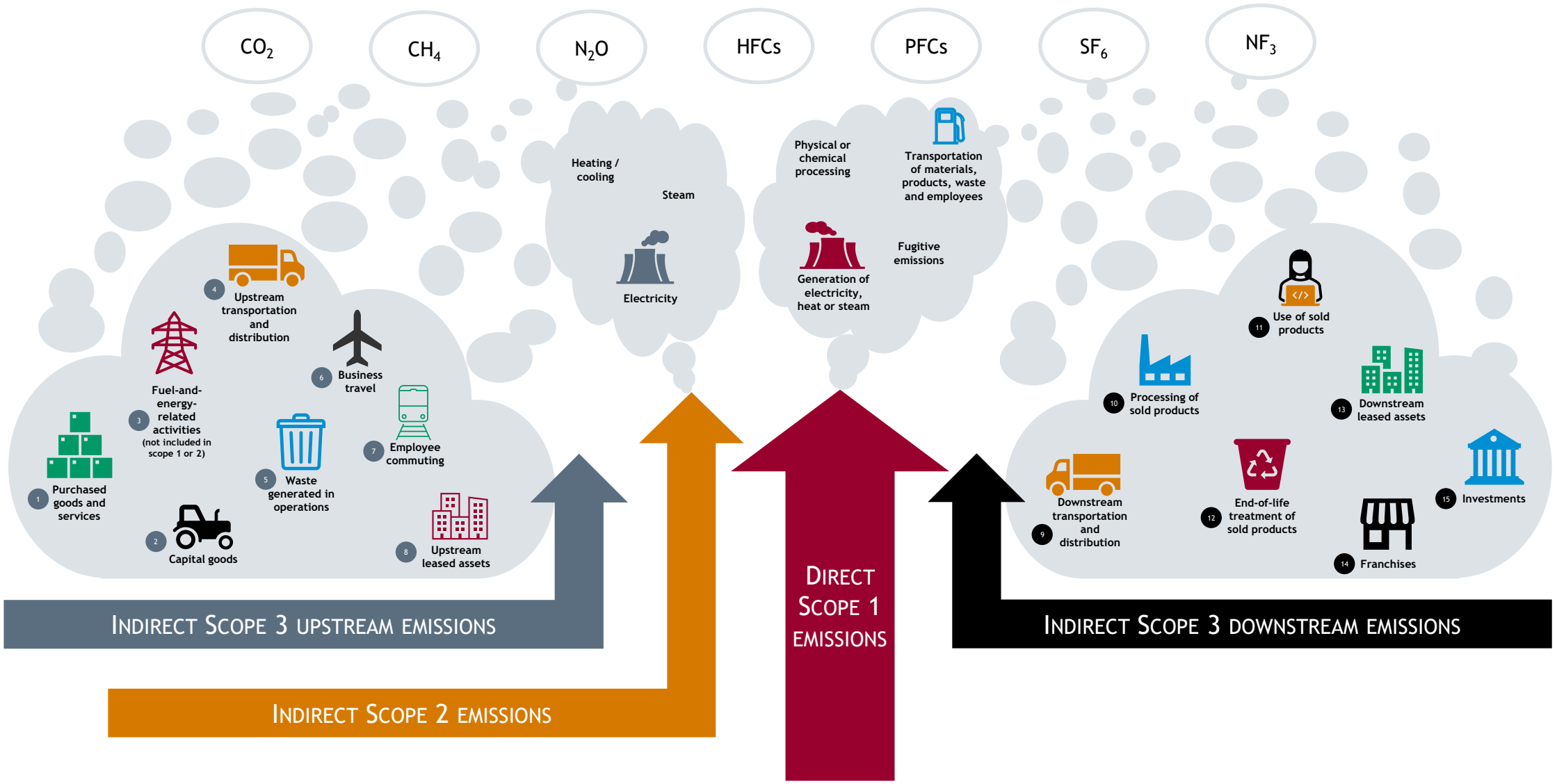
### SCOPE 2

A reporting organisations indirect emissions associated with the generation of electricity, heating/ cooling, or steam purchased for own consumption

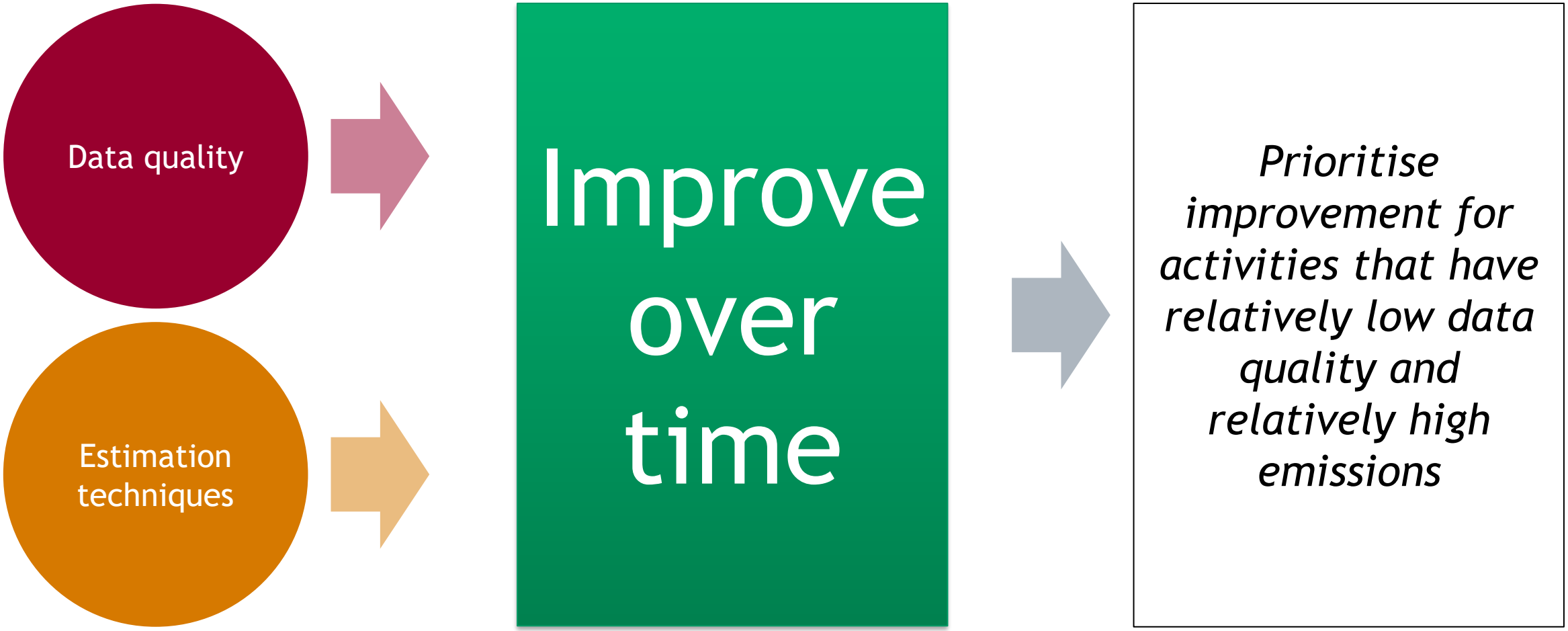
### SCOPE 3

A reporting organisations indirect emissions other than those covered in scope 2. These are identified as upstream or downstream emissions

# Operational boundary – cradle to grave



# Data quality and estimation techniques



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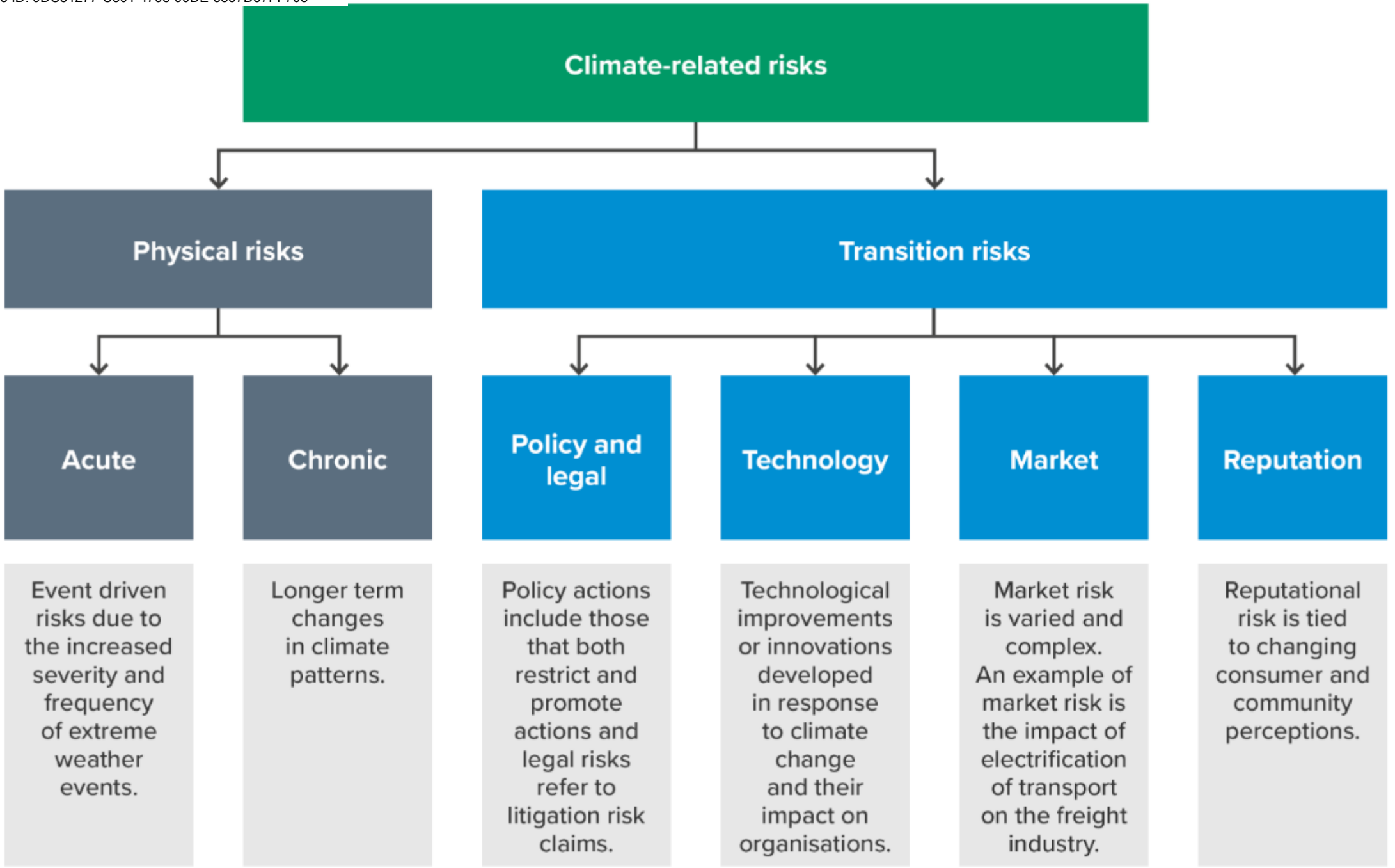
# Project Stream 2 - AASB S2

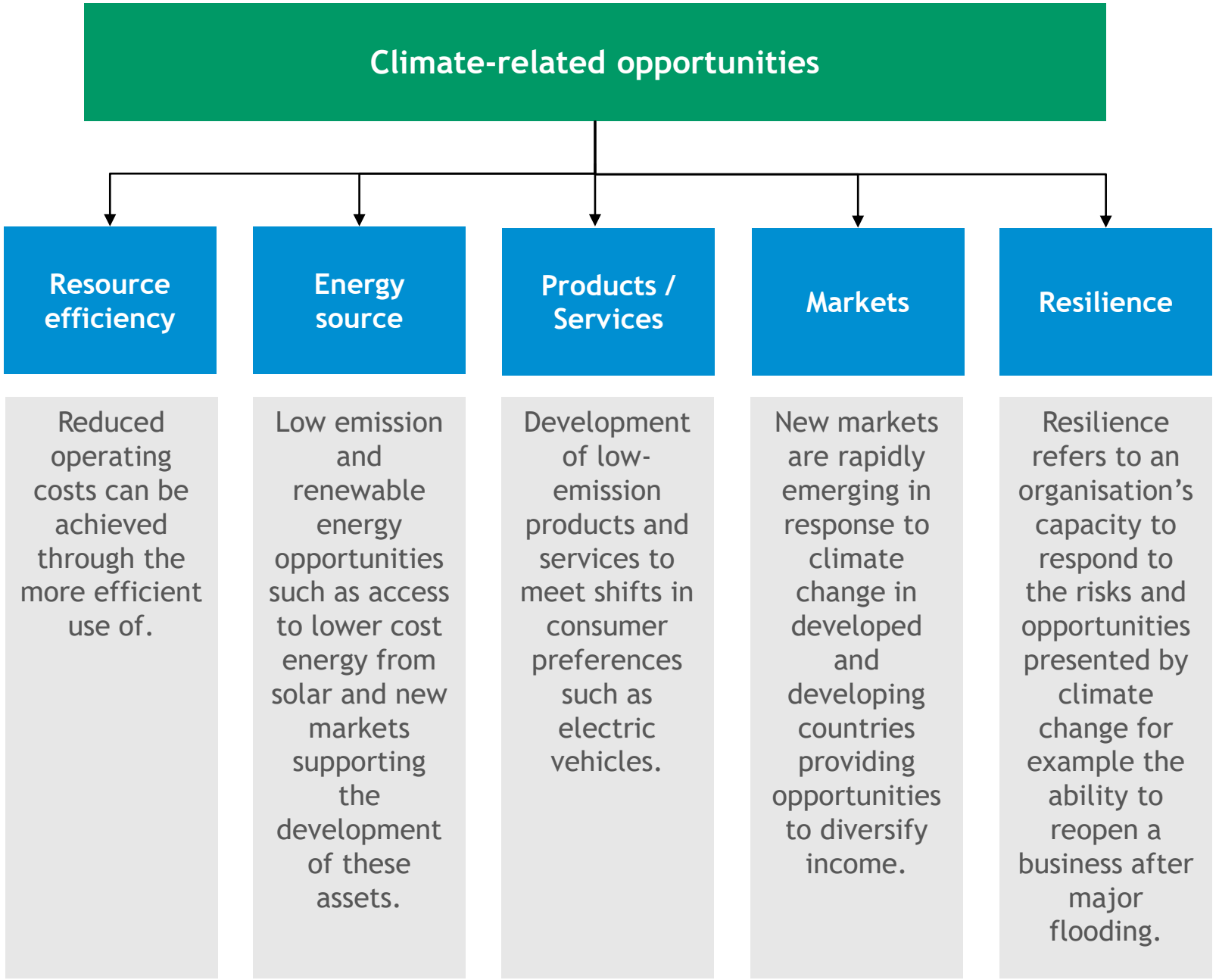
# Project 6

# Governance and risk management

# Project 7

# Climate risk and opportunity assessment

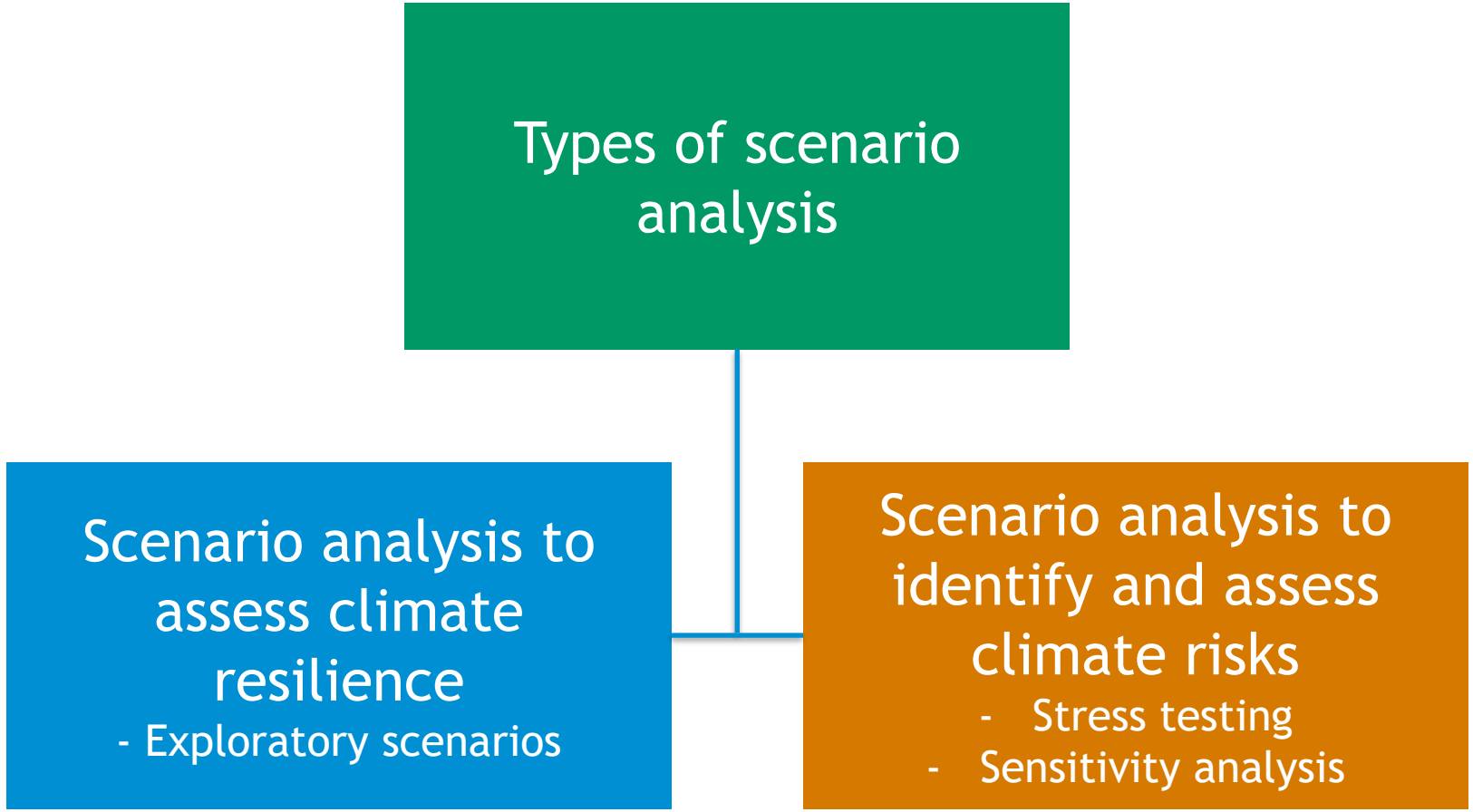




# Project 8

# Scenario analysis

# Scenario analysis




Clarifying climate-related scenario analysis: A guide to AASB S2 compliance - BDO

# Disclosure requirements of AASB S2

Strategy

**8** **The objective of climate-related financial disclosures on strategy is to enable users of general purpose financial reports to understand an entity's strategy for managing climate-related risks and opportunities.**

9 Specifically, an entity shall disclose information to enable users of general purpose financial reports to understand:

(a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 10–12);

(b) the current and anticipated effects of those climate-related risks and opportunities on the entity's *business model* and *value chain* (see paragraph 13);

(c) the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its *climate-related transition plan* (see paragraph 14);

(d) the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning (see paragraphs 15–21); and

(e) the *climate resilience* of the entity's strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities (see paragraph 22).

# Corporations Act 2001

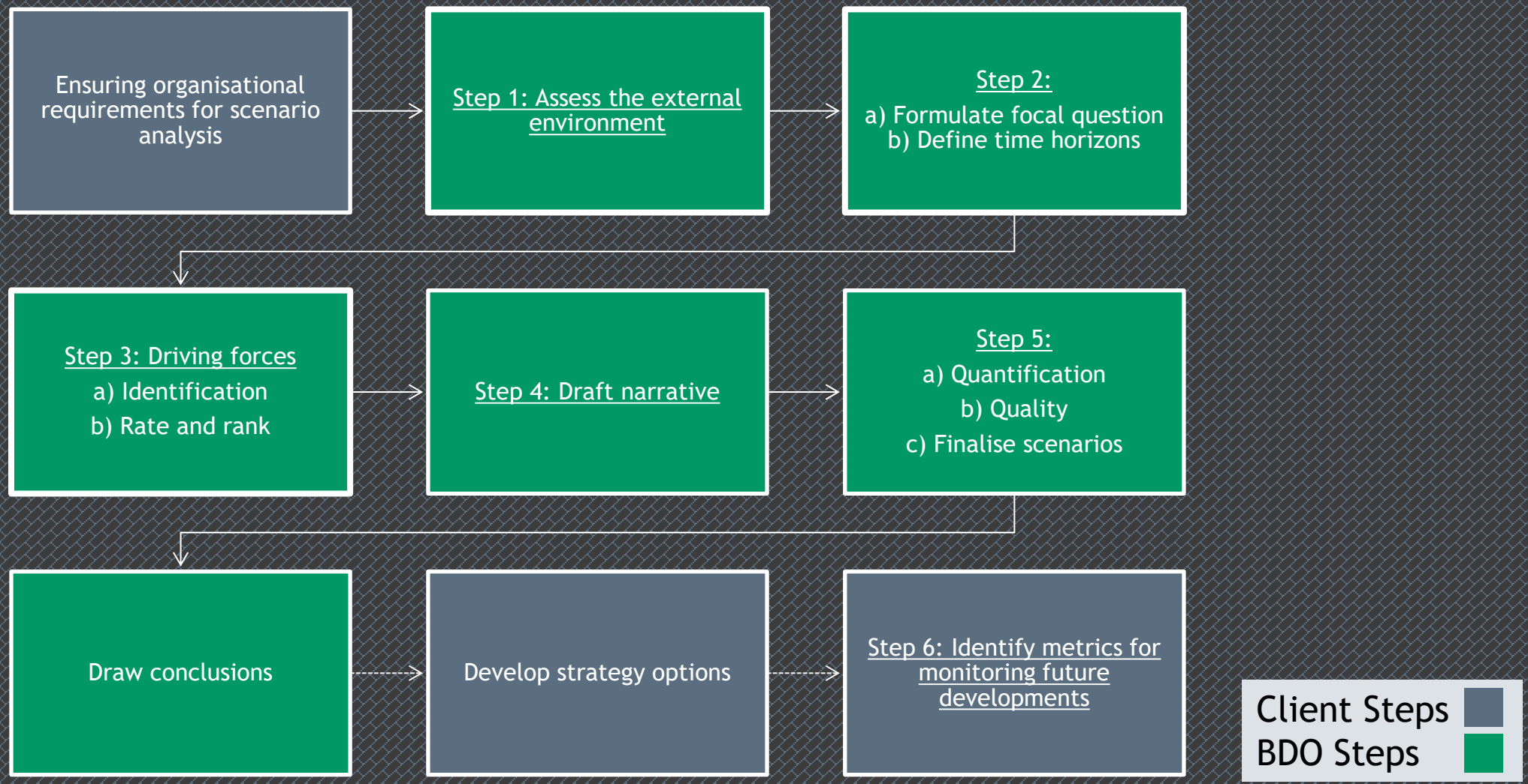
- Amended by Treasury Laws Amendment (Financial Market Infrastructure and Other Measures) Bill 2024
- Section 296D Climate statement disclosures (and explanatory memorandum) requires scenario analysis to be carried out using at least:

a) high global warming scenario - the increase in the global average temperature of 2.5°C or higher

AND

b) low global warming scenario - the increase in the global average temperature is limited to 1.5°C

# SCENARIO DEVELOPMENT PROCESS



# Public scenarios aligned to the Corporations Act

| External source | Description | High warming >2.5$^0$C | Low warming <1.5$^0$C |
|---|---|---|---|
| IPCC | Pathways based on socioeconomic and emissions trajectories | SSP2-4.5 | SSP1-1.9 |
| NGFS | Transition risk-focused scenarios | Current Policies | Net Zero 2050 |
| IEA | Models energy system responses under different policy settings | Current Policies Scenario (CPS) | Net Zero Emissions by 2050 (NZE) |

Aligning scenario analysis with Corporations Act obligations - BDO

# Project 9

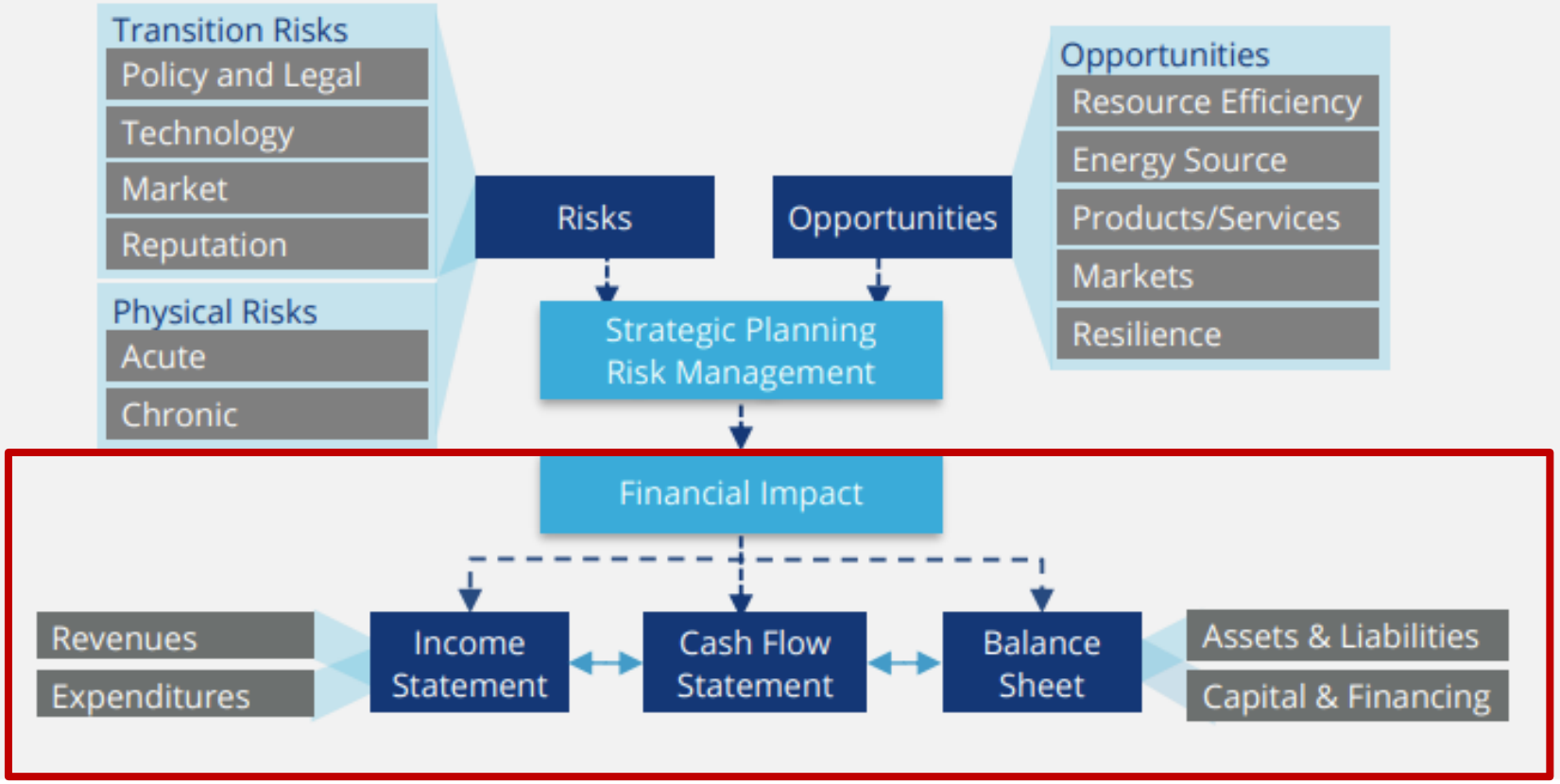
# Financial modelling

# Scope of AASB S2

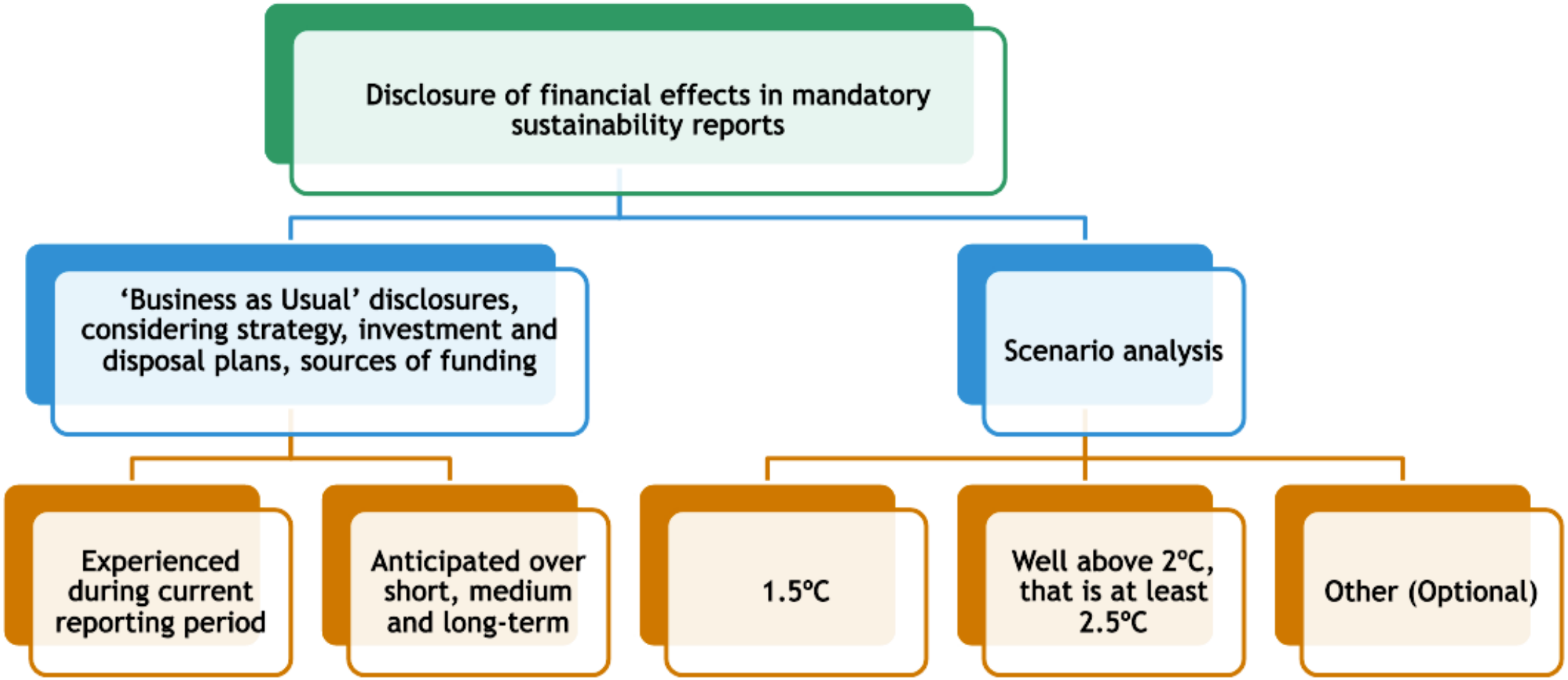
https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

Figure 1

**Climate-Related Risks, Opportunities, and Financial Impact**



# Financial modelling



# Project 10

# Draft mandatory sustainability report

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# Unpacking pillar 1: Governance

# Importance of governance

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# Importance of governance

https://assets.bbhub.io/company/sites/60/2022/02/TCFD-Governance-Workshop.pdf

- Disclosing governance practices provides important context for investors and other users of disclosure
- Investors and other users of climate-related financial disclosures are interested in understanding:
  - the role a company's board plays in overseeing climate-related issues as well as
  - management's role in assessing and managing those issues.

  Such information supports evaluations of whether climate-related issues receive appropriate board and management attention

**Providing decision useful information to investors and other users**

# Importance of governance

https://assets.bbhub.io/company/sites/60/2022/02/TCFD-Governance-Workshop.pdf

- For its 2020 status report, the Task Force conducted a survey to identify specific climate-related information users find the most useful when making financial decisions
- Based on a survey to understand the most useful climate-related information for making financial decisions, users identified the following types of governance information as the most useful:
  - How the board considers climate-related issues when overseeing major capital expenditures, acquisitions, and divestitures
  - How the board considers climate-related issues when reviewing and guiding strategy
  - Description of management's role

# Overview of the TCFD recommendations



# Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

Figure 2

## Core Elements of Recommended Climate-Related Financial Disclosures


**Governance**
The organization's governance around climate-related risks and opportunities

**Strategy**
The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

**Risk Management**
The processes used by the organization to identify, assess, and manage climate-related risks

**Metrics and Targets**
The metrics and targets used to assess and manage relevant climate-related risks and opportunities

# Recommendations of the TCFD

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

Figure 4

**Recommendations and Supporting Recommended Disclosures**

| Governance | Strategy | Risk Management | Metrics and Targets |
|---|---|---|---|
| Disclose the organization's governance around climate-related risks and opportunities. | Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. | Disclose how the organization identifies, assesses, and manages climate-related risks. | Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material. |
| **Recommended Disclosures** | **Recommended Disclosures** | **Recommended Disclosures** | **Recommended Disclosures** |
| a) Describe the board's oversight of climate-related risks and opportunities. | a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. | a) Describe the organization's processes for identifying and assessing climate-related risks. | a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. |
| b) Describe management's role in assessing and managing climate-related risks and opportunities. | b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. | b) Describe the organization's processes for managing climate-related risks. | b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. |
| | c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. | c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management. | c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. |

# Overview of AASB S2

# Objective of AASB S2

- The objective of AASB S2 is to require an entity to disclose information about its **climate-related risks and opportunities** that is useful to **primary users** of general purpose financial reports in **making decisions** relating to providing resources to the entity

- AASB S2 requires an entity to disclose information about climate-related risks and opportunities that could reasonably be expected to affect the entity'
  - cash flows,
  - its access to finance or
  - cost of capital

  over the short, medium or long term

# Scope of AASB S2

- AASB S2 applies to:
  - climate-related **risks** to which the entity is exposed, which are:
    - climate-related physical risks; and
    - climate-related transition risks; and
  - climate-related **opportunities** available to the entity

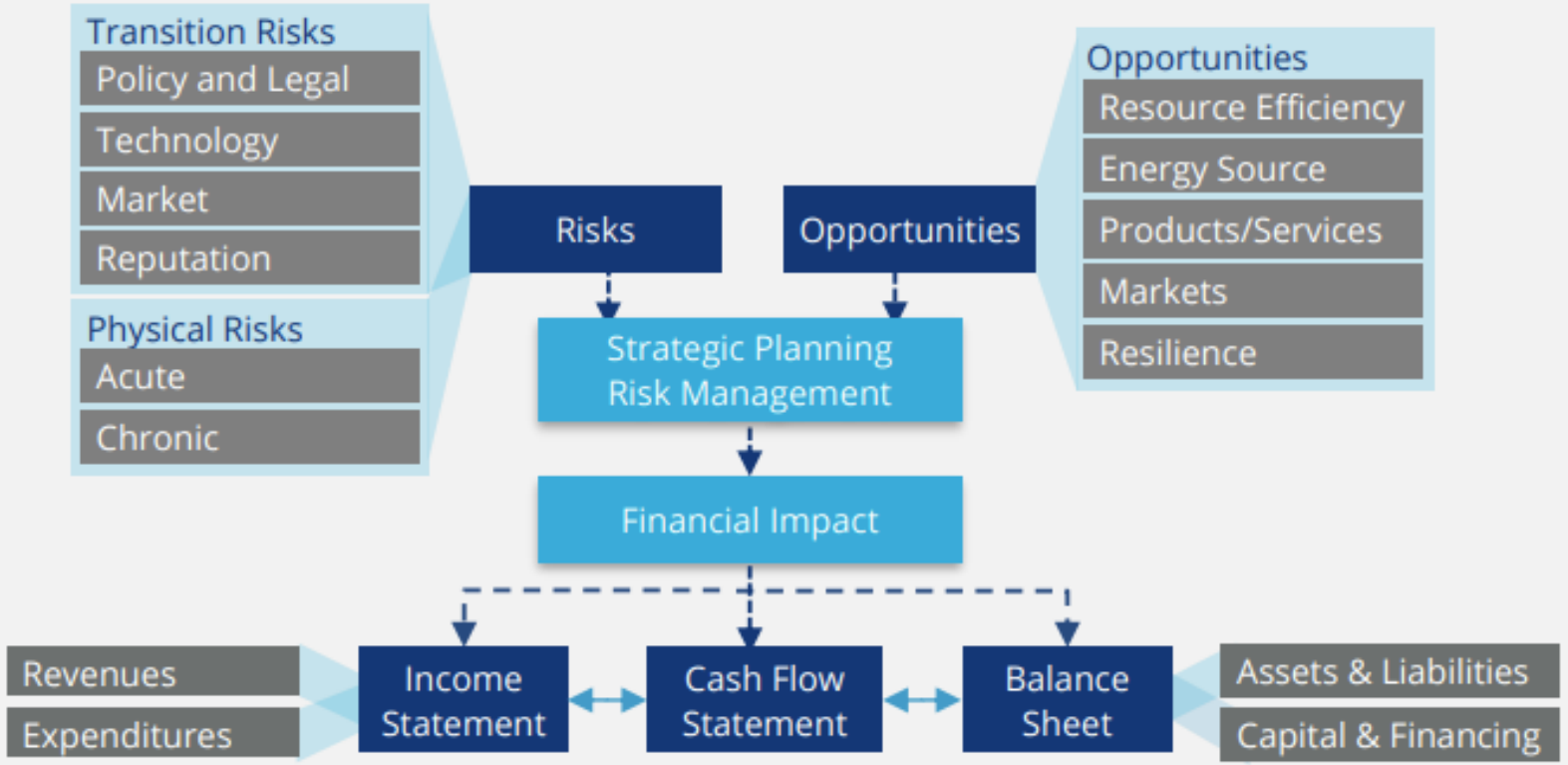
- Climate-related risks and opportunities that could **not** reasonably be expected to affect an entity's prospects are outside the scope of this Standard

# Scope of AASB S2

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

Figure 1

**Climate-Related Risks, Opportunities, and Financial Impact**



# Scope of AASB S2

https://assets.bbhub.io/company/sites/60/2022/12/tcfd-2022-overview-booklet.pdf

## Climate-Related Risks and Opportunities

The Task Force identified several categories of climate-related risks and opportunities. These include potential financial impact to assist investors, and companies consider longer-term strategies and most efficient allocation of capital in light of the potential economic impacts of climate change.

*"Climate change presents global markets with risks and opportunities that cannot be ignored, which is why a framework around climate-related disclosures is so important. The Task Force brings that framework to the table, helping investors evaluate the potential risks and rewards of a transition to a lower carbon economy."*

– **Michael R. Bloomberg, TCFD Chair and Founder of Bloomberg LP and Bloomberg Philanthropies,** June 2017

### Risks

**Transition**

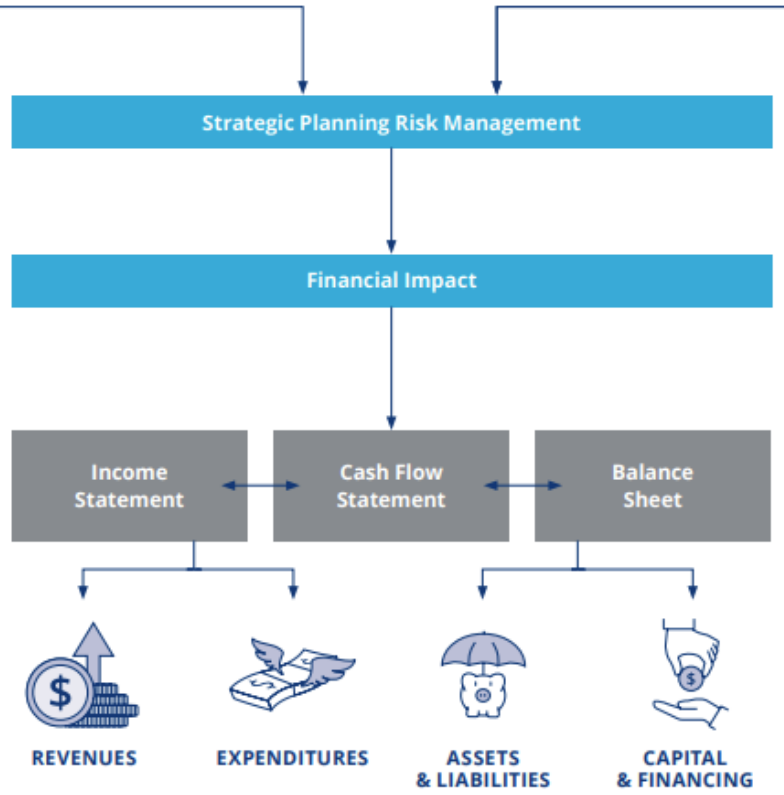
**Policy and Legal**
- Carbon pricing and reporting obligations
- Mandates on and regulation of existing products and services
- Exposure to litigation

**Technology**
- Substitution of existing products and services with lower emissions options
- Unsuccessful investment in new technologies

**Market**
- Changing customer behavior
- Uncertainty in market signals
- Increased cost of raw materials

**Reputation**
- Shift in consumer preferences
- Increased stakeholder concern/negative feedback
- Stigmatization of sector

**Physical**
- Acute: extreme weather events
- Chronic: changing weather patterns and rising mean temperature and sea levels




### Opportunities

**Resource Efficiency**
- Use of more efficient modes of transport and production and distribution processes
- Use of recycling
- Move to more efficient buildings
- Reduced water usage and consumption

**Energy Source**
- Use of lower-emission sources of energy
- Use of supportive policy incentives
- Use of new technologies
- Participation in carbon market

**Products & Services**
- Development and/or expansion of low emissions goods and services
- Development of climate adaption and insurance risk solutions
- Development of new products or services through R&D and innovation

**Markets**
- Access to new markets
- Use of public-sector incentives
- Access to new assets and locations needing insurance coverage

**Resilience**
- Participation in renewable energy programs and adoption of energy-efficiency measures
- Resource substitutes/diversification

# Composition of the sustainability report in compliance with AASB S2

| Governance | Strategy | Risk Management | Metrics and Targets |
|---|---|---|---|
| Those charge with governance | Climate-related risks and opportunities (physical risks and transition risks) | Processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks | Carbon footprint (scope 1, 2 & 3 emissions) |
| Management | Climate resilience of strategy and business model | Climate-related scenario analysis | How targets have been set and progress towards meeting targets |
| | Effects of the above on financial statements | Integrated into overall risk management process and risk register | Will carbon credits be used? |

# AASB S2
# Pillar 1: Governance

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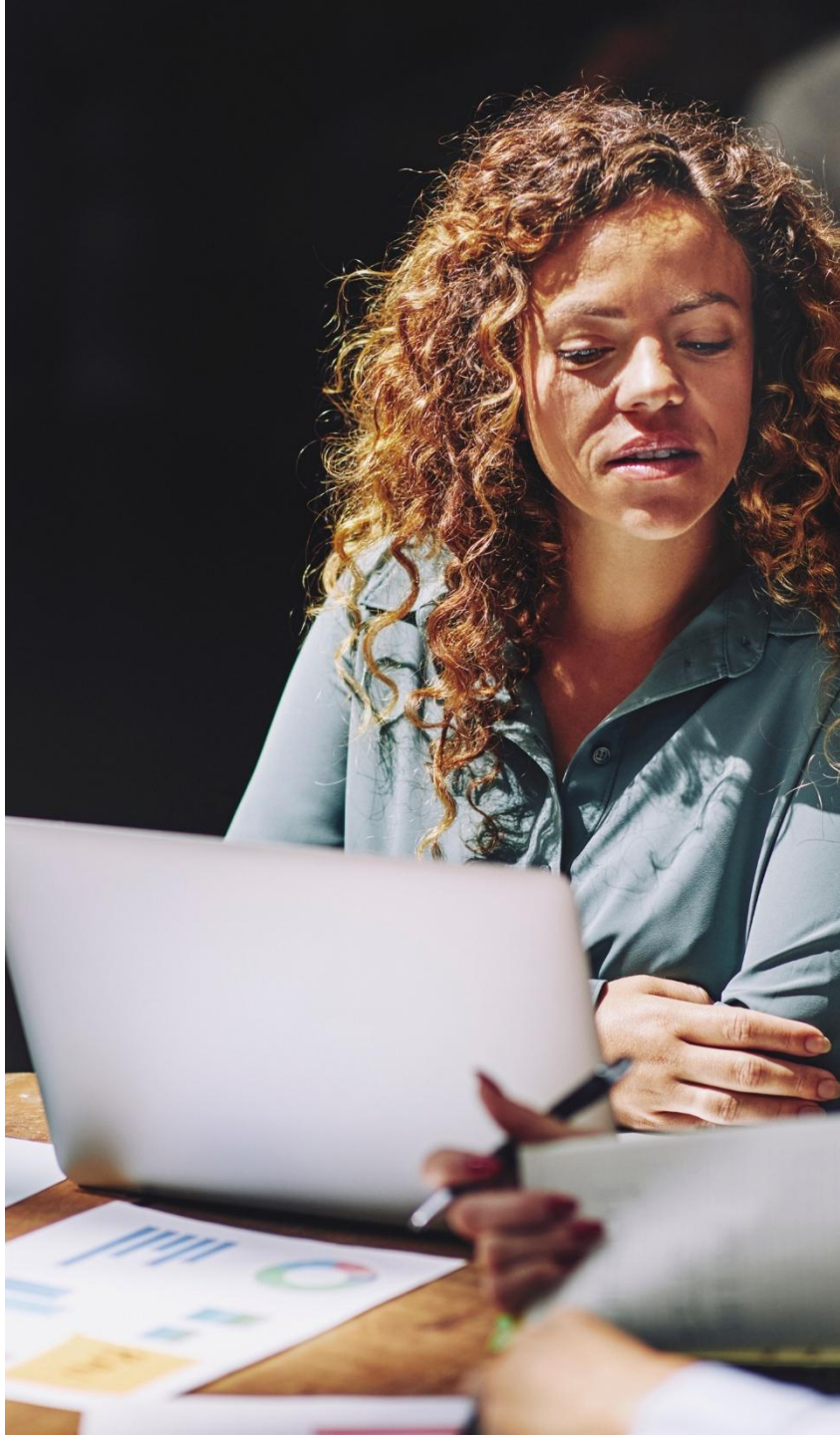
# Pillar 1: Governance

## Objective

- The objective of climate-related financial disclosures on governance is to enable users of general purpose financial reports to understand the
  - governance processes,
  - controls and
  - procedures
- An entity uses to
  - monitor,
  - manage and
  - oversee
- Climate-related risks and opportunities



# Pillar 1: Governance

# Pillar 1: Governance

Disclosure requirements


- An entity shall disclose information about the governance body(s) or individual(s) responsible for oversight of climate-related risks and opportunities
  - The entity shall identify that body(s) or individual(s)

- The governance body(s) or individual(s) can include:
  - a board,
  - committee or
  - equivalent body charged with governance

# Pillar 1: Governance

Disclosure requirements


- The entity shall disclose information about 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)

2

# Pillar 1: Governance

Disclosure requirements


- The entity shall disclose information about 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

# Pillar 1: Governance

Disclosure requirements

- The entity shall disclose information about
  - how and
  - how often

  the body(s) or individual(s) is informed about climate-related risks and opportunities


4

# Pillar 1: Governance

Disclosure requirements


- The entity shall disclose information about 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

# Pillar 1: Governance

Disclosure requirements

- The entity shall disclose information about 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 (paragraphs 33-36),
  - including whether and how related performance metrics are included in remuneration policies (paragraph 29(g))


6

# Pillar 1: Governance

Disclosure requirements

- An entity shall disclose information about management's role in
  - the governance processes,
  - controls and
  - procedures
- Used to
  - monitor,
  - manage and
  - oversee climate-related risks and opportunities


# Pillar 1: Governance

Disclosure requirements


- An entity shall disclose information about
  - 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

# Pillar 1: Governance

Disclosure requirements

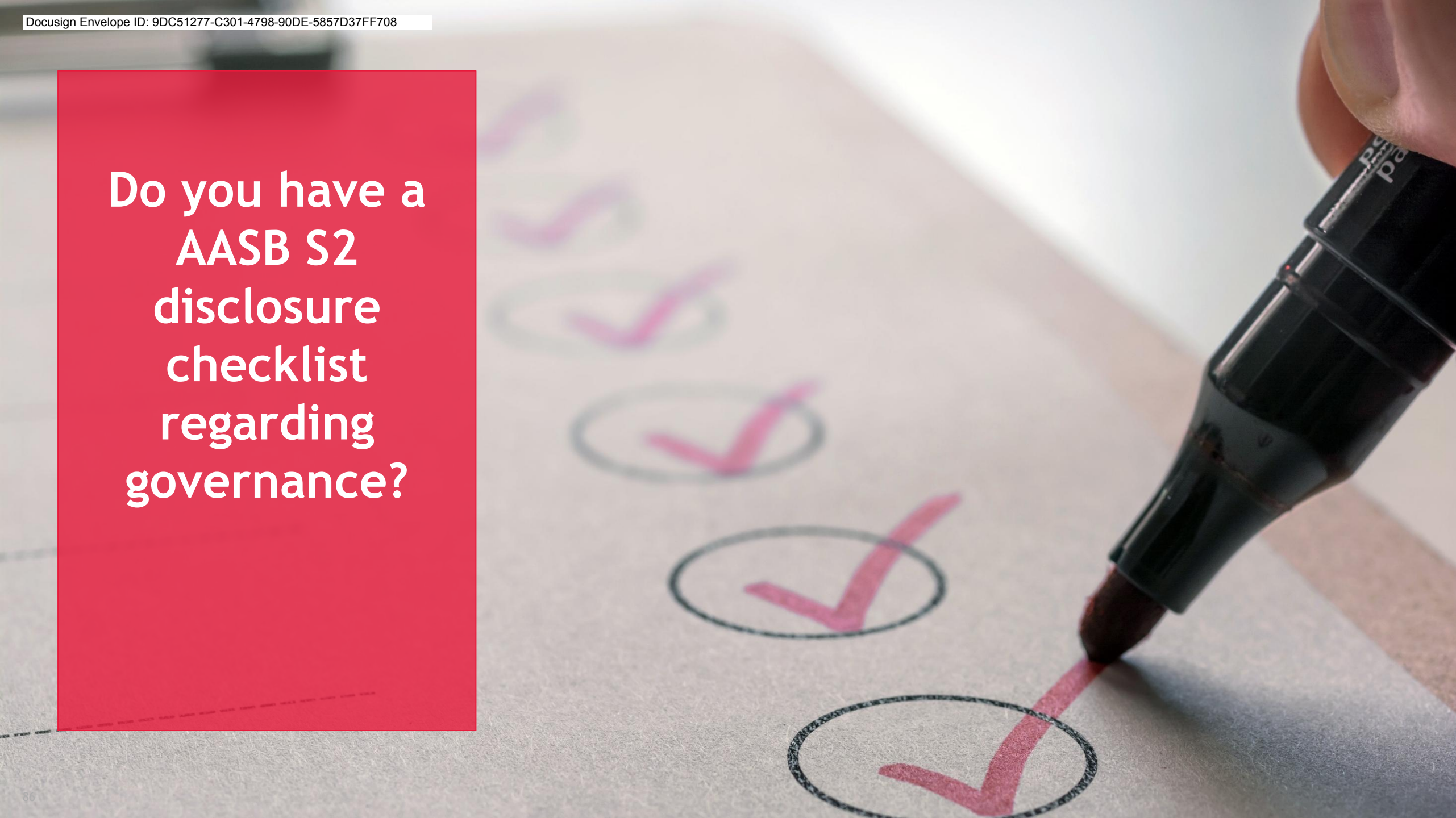
- An entity shall disclose information about
  - whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and,
  - if so, how these controls and procedures are integrated with other internal functions


# Are the responsibilities of the board and management clearly defined?

# Does your company already have governance processes and bodies in place that explicitly address climate-related issues?

# Do we have the data available to meet the disclosure requirements relating to governance?

# Do you have a AASB S2 disclosure checklist regarding governance?



# AASB S2 disclosure checklist for pillar 1 regarding governance (Page 1 of 2)

| No | Disclosure requirement | AASB S2 reference | Comments |
|---|---|---|---|
| 1 | Has the entity identified the body(s) or individual(s) responsible for oversight of climate-related risks and opportunities? | Paragraph 6(a) | |
| 2 | Has the entity disclosed information about how responsibilities for climate-related risks and opportunities are reflected in<br>• the terms of reference,<br>• mandates,<br>• role descriptions and<br>• other related policies applicable to that body(s) or individual(s)? | Paragraph 6(a)(i) | |
| 3 | Has the entity disclosed information about how the body(s) or individual(s) determines whether appropriate skills and competencies<br>• are available or<br>• will be developed<br>to oversee strategies designed to respond to climate-related risks and opportunities? | Paragraph 6(a)(ii) | |
| 4 | Has the entity disclosed information about<br>• how and<br>• how often<br>the body(s) or individual(s) is informed about climate-related risks and opportunities? | Paragraph 6(a)(iii) | |
| 5 | Has the entity disclosed information about how the body(s) or individual(s) takes into account climate-related risks and opportunities when<br>• overseeing the entity's strategy,<br>• its decisions on major transactions and<br>• its risk management processes and related policies,<br>• including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities? | Paragraph 6(a)(iv) | |

# AASB S2 disclosure checklist for pillar 1 regarding governance (Page 2 of 2)

| No | Disclosure requirement | AASB S2 reference | Comments |
|---|---|---|---|
| 6 | Has the entity disclosed information about how the body(s) or individual(s) oversees<br>• the setting of targets related to climate-related risks and opportunities, and<br>• monitors progress towards those targets,<br>• including whether and how related performance metrics are included in remuneration policies? | Paragraph 6(a)(v) | |
| 7 | Has the entity disclosed information about management's role in<br>• the governance processes,<br>• controls and<br>• procedures<br>Used to<br>• monitor,<br>• manage and<br>• oversee climate-related risks and opportunities? | Paragraph 6(b) | |
| 8 | Has the entity disclosed information about<br>• whether the role is delegated to a specific management-level position or management-level committee and<br>• how oversight is exercised over that position or committee? | Paragraph 6(b)(i) | |
| 9 | Has the entity disclosed information about<br>• whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and,<br>• if so, how these controls and procedures are integrated with other internal functions? | Paragraph 6(b)(ii) | |

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# Unpacking pillar 2: Strategy

# Pillar 2: Strategy

| 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|
| Climate-related risk and opportunities | Business model and value chain | Strategy and decision-making | Financial position, financial performance and cash flows | Climate resilience |

# 01
# Climate-related risks and opportunities

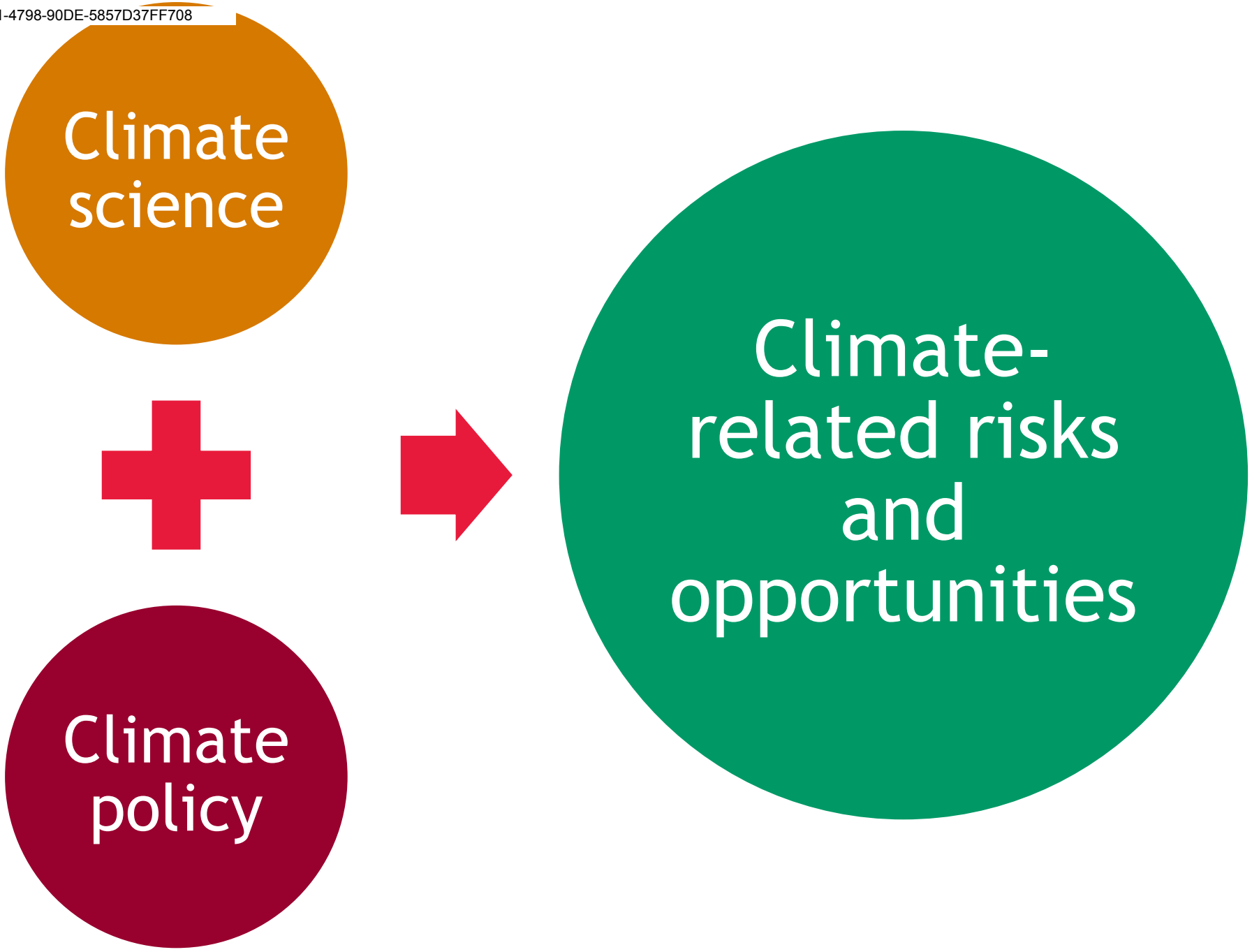
30 April 2025

BDO

# What is climate change and how does it lead to risks and opportunities for a business?

The Intergovernmental Panel of Climate Change (IPCC)

**Climate change** Climate change refers to a change in the state of the *climate* that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external *forcings* such as modulations of the solar cycles, volcanic eruptions and persistent *anthropogenic* changes in the composition of the *atmosphere* or in *land use*. Note that the *Framework Convention on Climate Change (UNFCCC)*, in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.' The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes. See also *Climate variability*, *Global warming*, *Ocean acidification (OA)* and *Detection and attribution*.



# Climate Science

# The Intergovernmental Panel of Climate Change (IPCC)

https://www.ipcc.ch/

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.

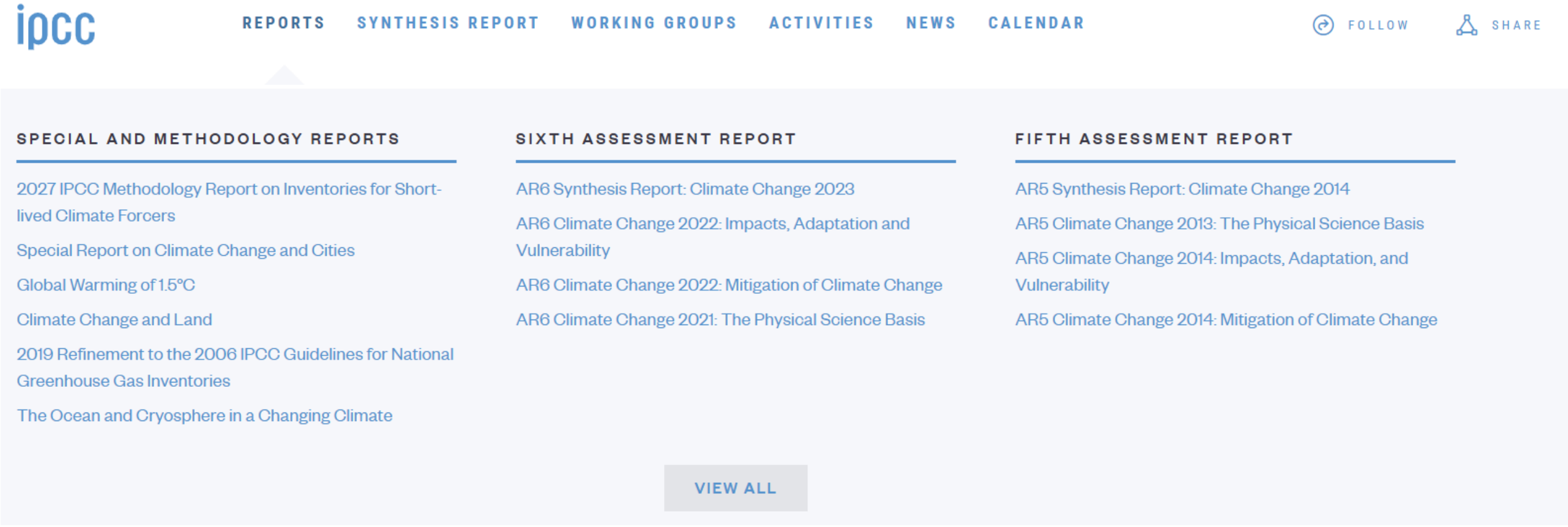
WMO UN environment programme Nobel 2007 PEACE PRIZE © THE NOBEL FOUNDATION

**The IPCC was created to provide policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options.**

Through its assessments, the IPCC determines the state of knowledge on climate change. It identifies where there is agreement in the scientific community on topics related to climate change, and where further research is needed. The reports are drafted and reviewed in several stages, thus guaranteeing objectivity and transparency. The IPCC does not conduct its own research. IPCC reports are neutral, policy-relevant but not policy-prescriptive. The assessment reports are a key input into the international negotiations to tackle climate change. Created by the United Nations Environment Programme (UN Environment) and the World Meteorological Organization (WMO) in 1988, the IPCC has 195 Member countries. In the same year, the UN General Assembly endorsed the action by WMO and UNEP in jointly establishing the IPCC.

# The Intergovernmental Panel of Climate Change (IPCC)

https://www.ipcc.ch/



# The Intergovernmental Panel of Climate Change (IPCC)

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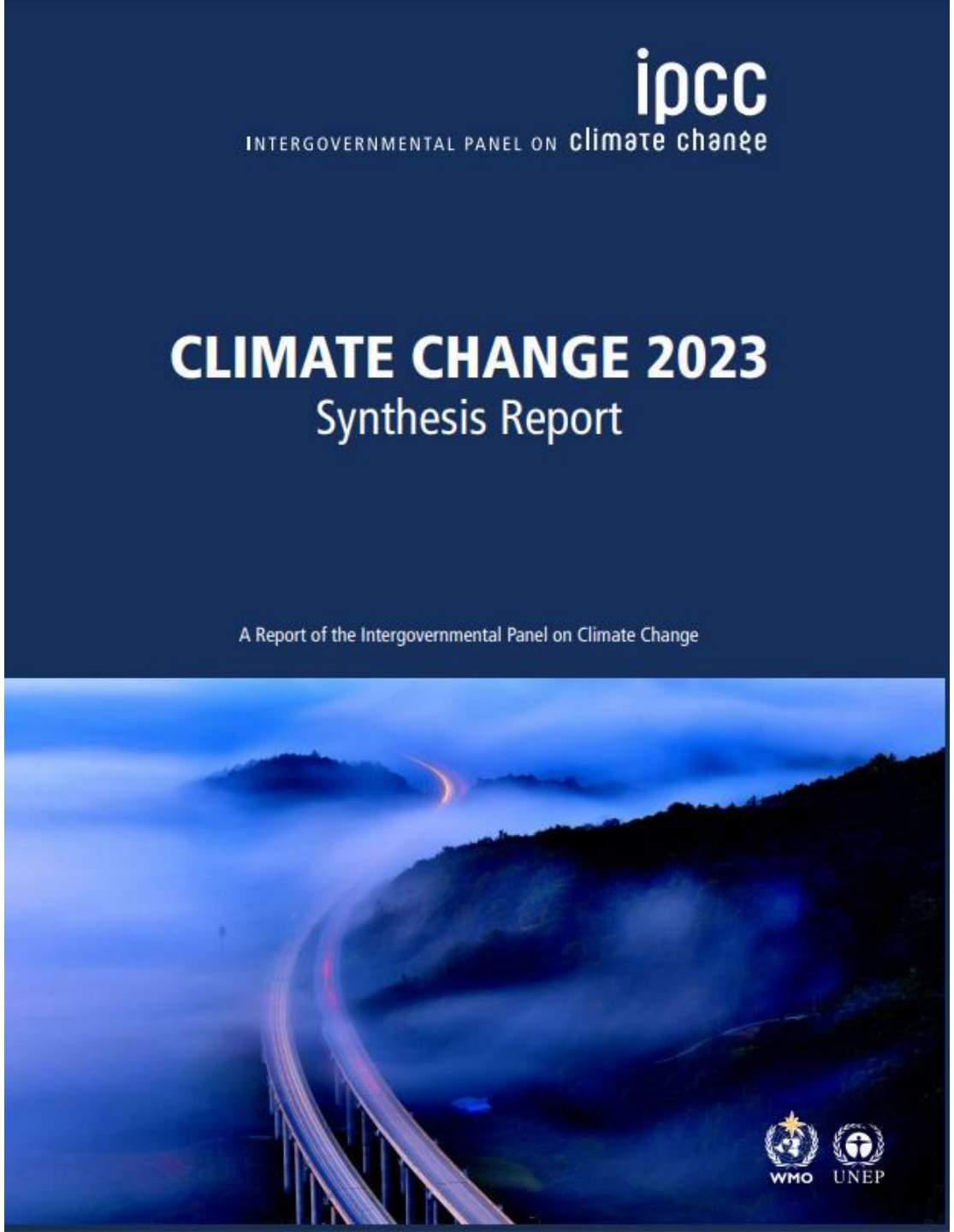
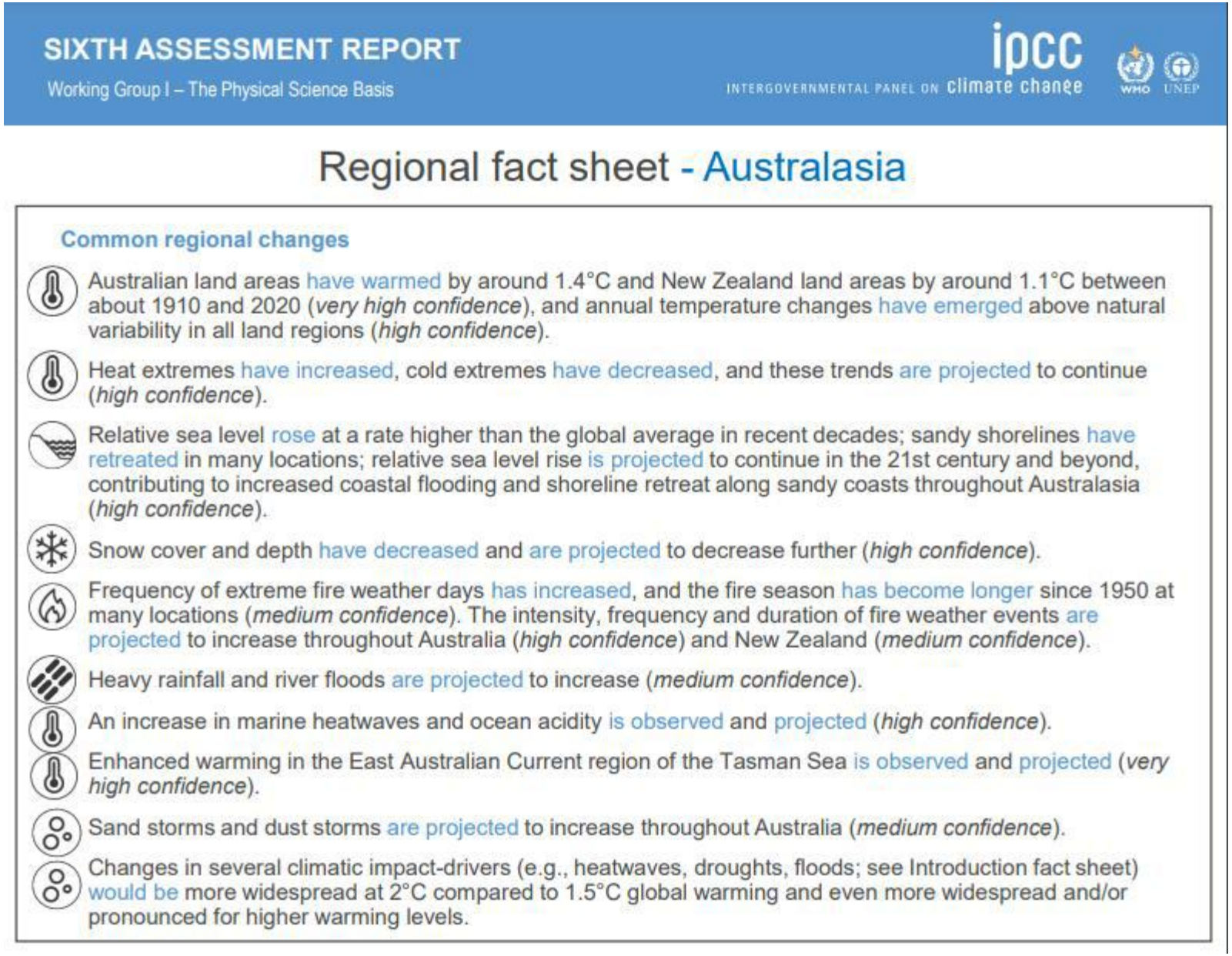


# 6th Assessment Report

https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Australasia.pdf



SIXTH ASSESSMENT REPORT

Working Group I – The Physical Science Basis

ipcc INTERGOVERNMENTAL PANEL ON climate change

WMO UNEP

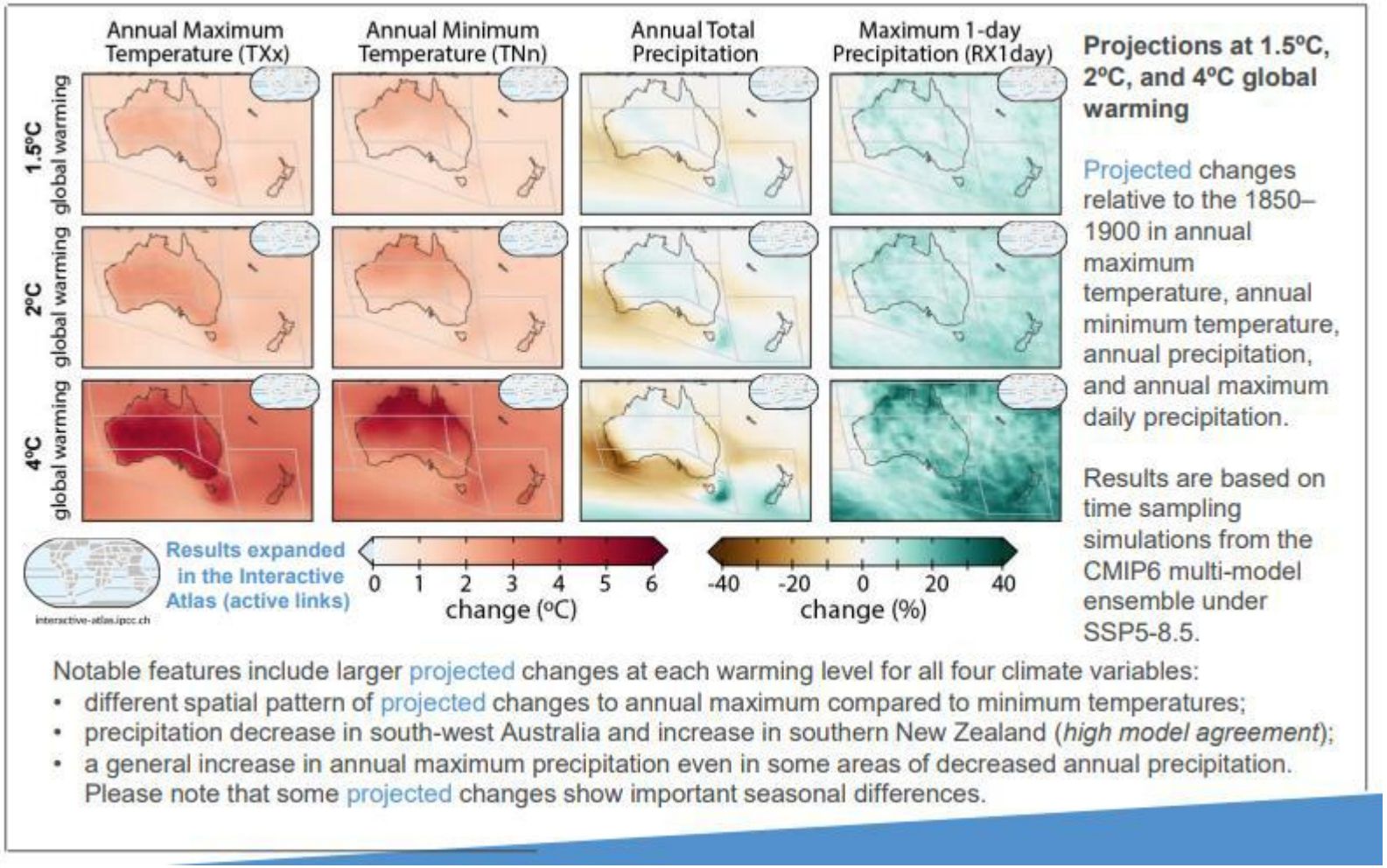
## Regional fact sheet - Australasia

### Common regional changes

- Australian land areas have warmed by around 1.4°C and New Zealand land areas by around 1.1°C between about 1910 and 2020 (*very high confidence*), and annual temperature changes have emerged above natural variability in all land regions (*high confidence*).
- Heat extremes have increased, cold extremes have decreased, and these trends are projected to continue (*high confidence*).
- Relative sea level rose at a rate higher than the global average in recent decades; sandy shorelines have retreated in many locations; relative sea level rise is projected to continue in the 21st century and beyond, contributing to increased coastal flooding and shoreline retreat along sandy coasts throughout Australasia (*high confidence*).
- Snow cover and depth have decreased and are projected to decrease further (*high confidence*).
- Frequency of extreme fire weather days has increased, and the fire season has become longer since 1950 at many locations (*medium confidence*). The intensity, frequency and duration of fire weather events are projected to increase throughout Australia (*high confidence*) and New Zealand (*medium confidence*).
- Heavy rainfall and river floods are projected to increase (*medium confidence*).
- An increase in marine heatwaves and ocean acidity is observed and projected (*high confidence*).
- Enhanced warming in the East Australian Current region of the Tasman Sea is observed and projected (*very high confidence*).
- Sand storms and dust storms are projected to increase throughout Australia (*medium confidence*).
- Changes in several climatic impact-drivers (e.g., heatwaves, droughts, floods; see Introduction fact sheet) would be more widespread at 2°C compared to 1.5°C global warming and even more widespread and/or pronounced for higher warming levels.

# 6th Assessment Report

https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Australasia.pdf



# 6th Assessment Report

https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Australasia.pdf

**Northern Australia (NAU)**
- Observed increase in annual mean and heavy rainfall and decrease in droughts and tropical cyclones (*medium confidence*).
- Projected mean rainfall changes are uncertain. An increase in heavy rainfall and river flooding projected by mid-century (*medium confidence*).
- Projected decrease in cyclone frequency but increase in the proportion of severe cyclones (*medium confidence*).

**Central Australia (CAU)**
- Greater observed and projected warming than coastal regions under all future scenarios (*high confidence*).
- A projected increase in heavy rainfall and river flooding (*medium confidence*).

**Southern Australia (SAU)**
- Observed rainfall decrease and an increase in agricultural and ecological droughts (*medium confidence*).
- Projected reduction in mean rainfall, particularly in the cool season, increase in aridity, and increase in meteorological and agricultural and ecological droughts (*medium confidence*).
- South-west area in SAU: Significant rainfall decrease in 1910-2019, attributable to human influence, increase in agricultural and ecological drought (*high confidence*), rainfall *very likely* to continue decreasing under all future scenarios.

**Eastern Australia (EAU)**
- Projected decrease in mean cool season rainfall, but more extreme rainfall events (*medium confidence*).
- Agricultural and ecological droughts are projected to increase at 2°C global warming and greater (*medium confidence*).

# Climate science

## Observed impacts

- 2024 hottest year on record - increase of 1.55$^0$C
- Increasing impacts on:
  - water availability
  - food production
  - health and well-being
  - cities, settlements and infrastructure
- Sectors
  - Agriculture
  - Health
  - Infrastructure

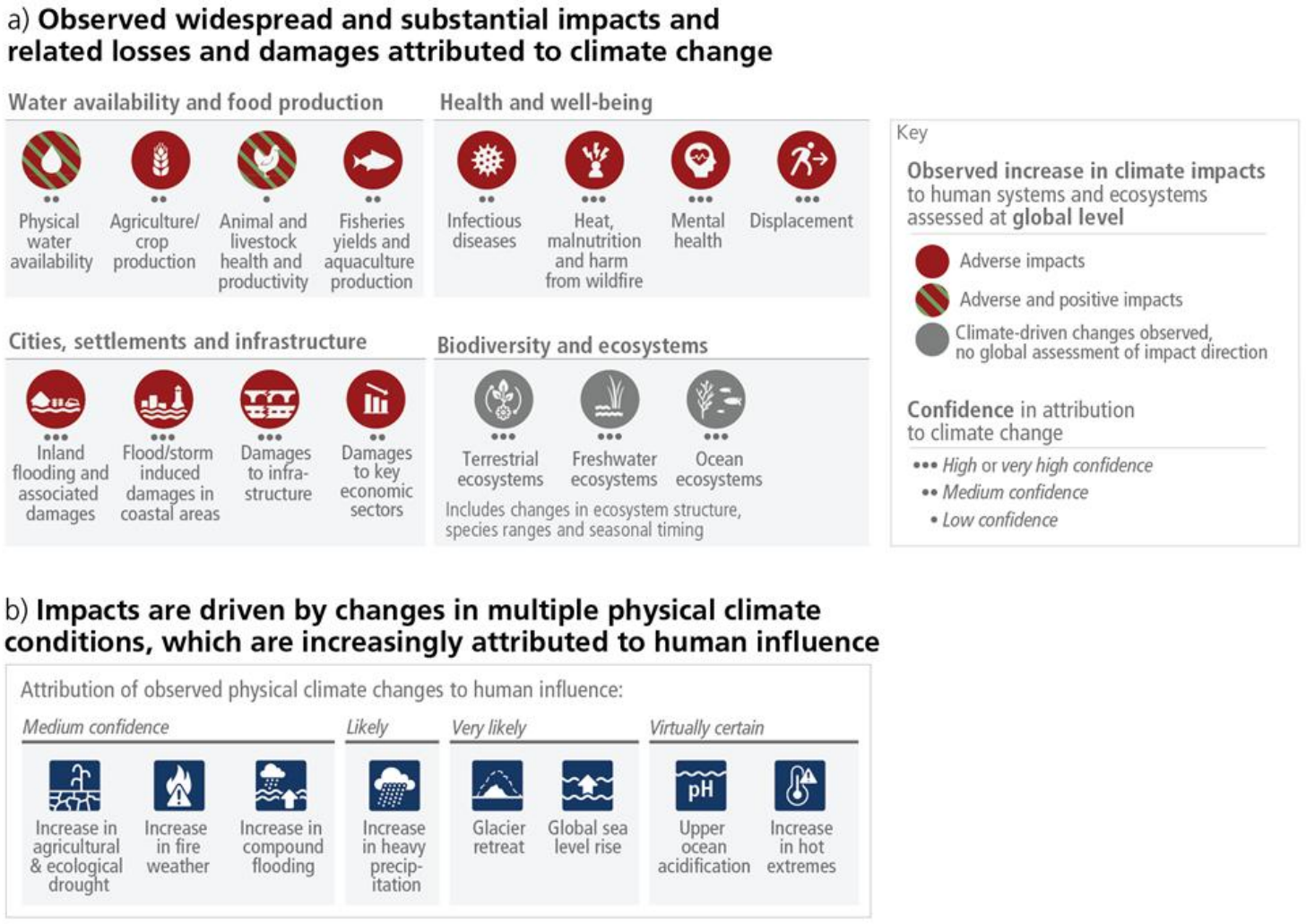



Figure: Adverse impacts from human-cause climate change will continue to intensify (SPM.1 in (IPCC, 2023))

# Climate science

## Future scenarios

- 1.5$^0$C target unlikely
- 2$^0$C target hard to meet
- Increase in severity and frequency of extreme weather events:
  - Heat waves (including marine)
  - Droughts
  - Floods
  - Bush fires
- Long term changes
  - Sea-level rise
  - Rainfall patterns

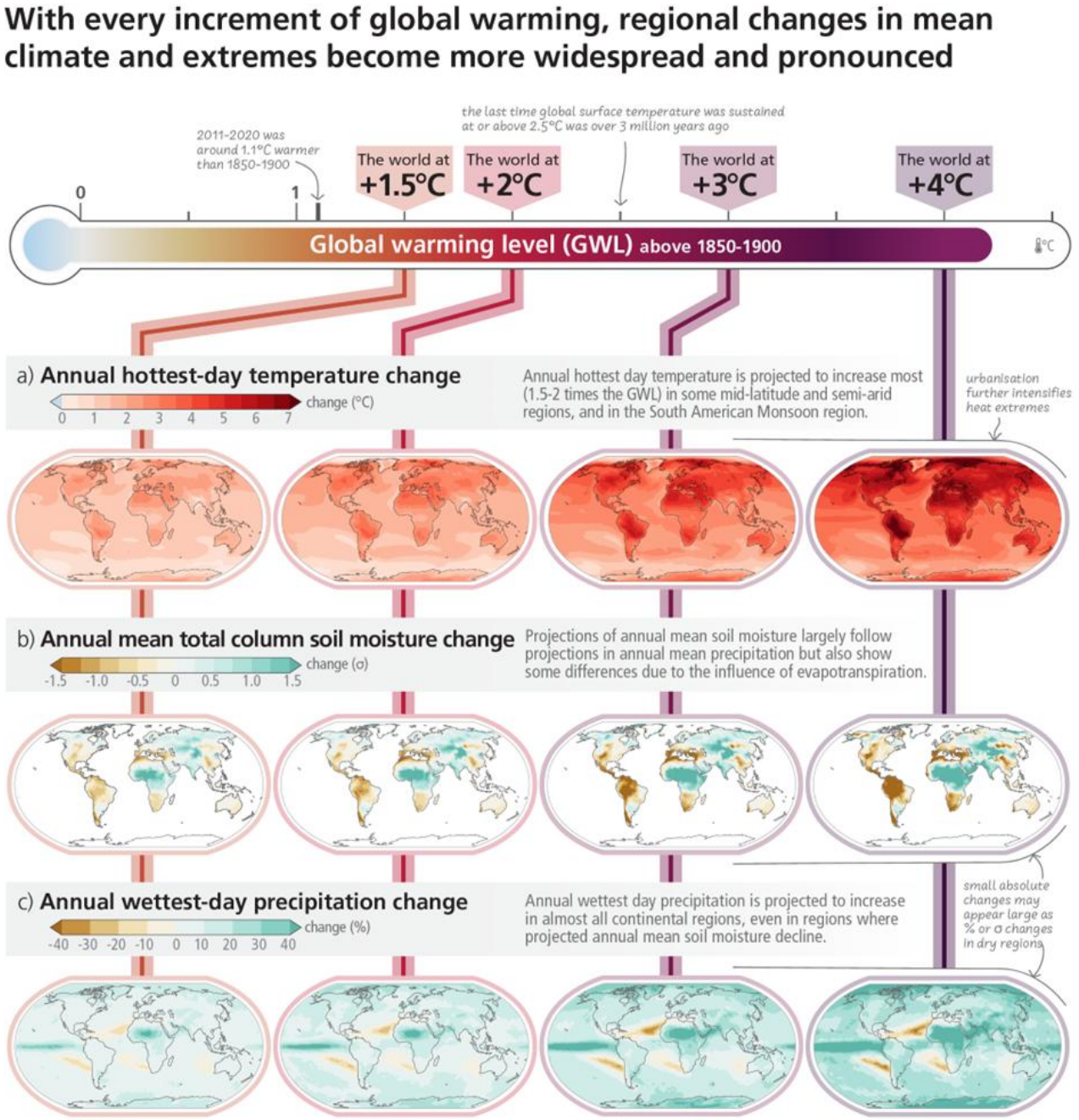
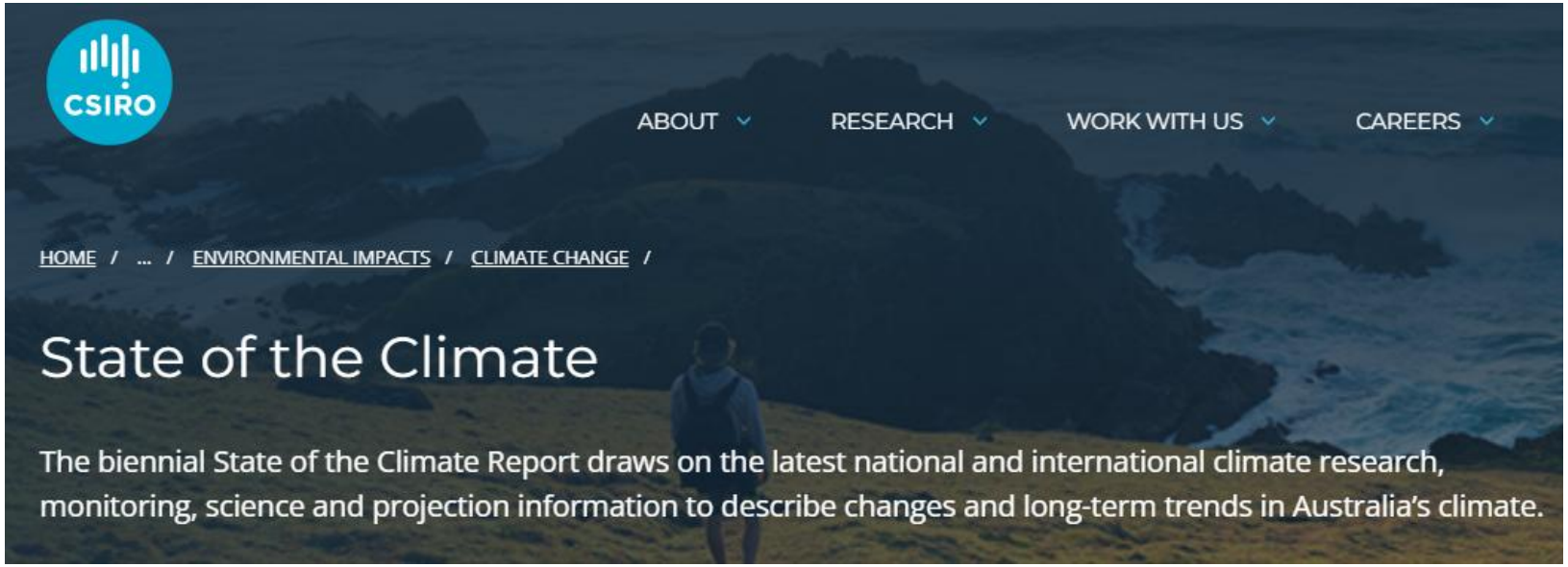
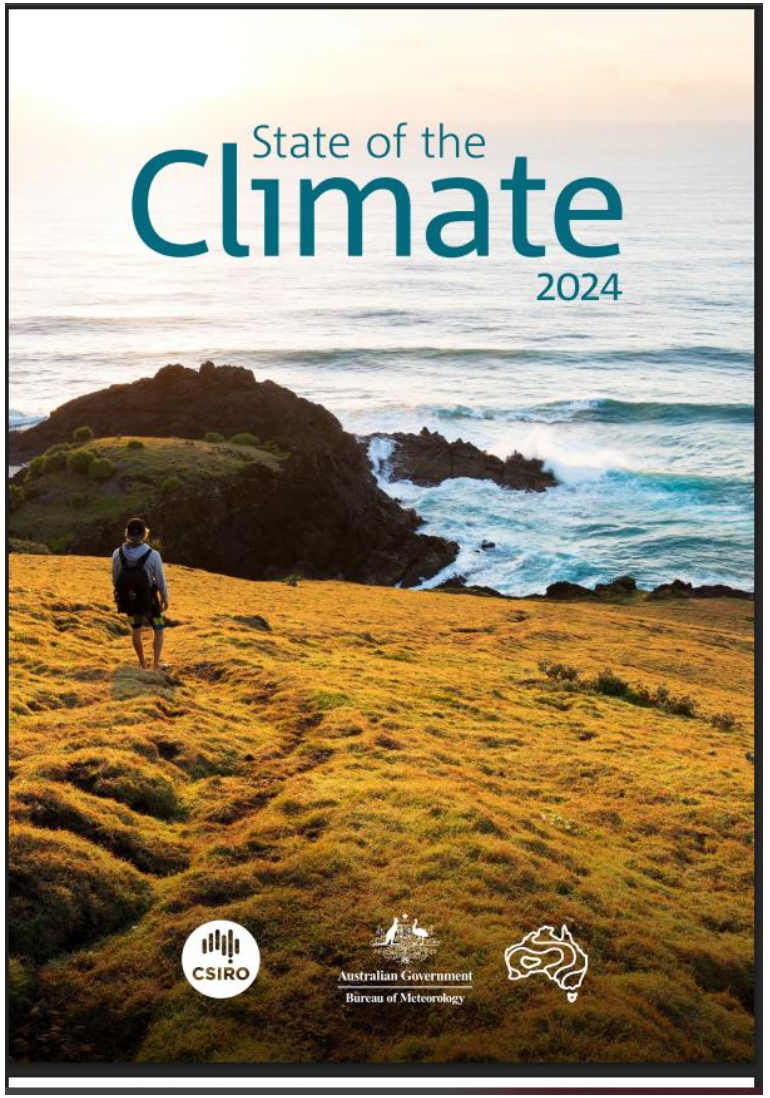



Figure 4: Projected changes at global warming levels of 1.5°C, 2°C, 3°C, and 4°C relative to 1850-1900 (IPCC, 2023)

# CSIRO

https://www.csiro.au/en/research/environmental-impacts/climate-change/State-of-the-Climate



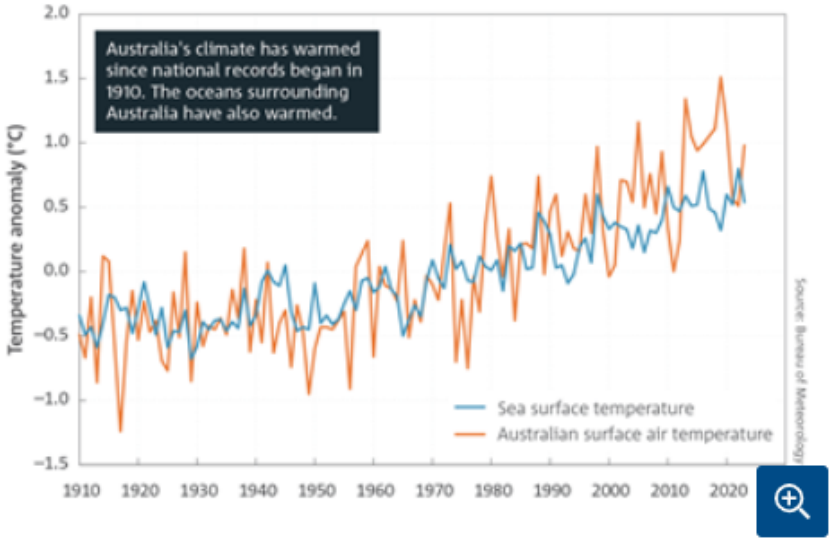
CSIRO

https://www.csiro.au/en/research/environmental-impacts/climate-change/State-of-the-Climate

# Key points

## Australia

- Australia's climate has warmed by an average of 1.51 ± 0.23 °C since national records began in 1910.
- Sea surface temperatures have increased by an average of 1.08 °C since 1900.
- The warming has led to an increase in the frequency of extreme heat events over land and in the oceans.
- In the south-west of Australia there has been a decrease of around 16% in April to October rainfall since 1970. Across the same region, May to July rainfall has seen the largest reduction, by around 20% since 1970.
- In the south-east of Australia, there has been a decrease of around 9% in April to October rainfall since 1994.
- Heavy short-term rainfall events are becoming more intense.
- There has been a decrease in streamflow at most gauges across Australia since 1970.
- There has been an increase in rainfall and streamflow across parts of northern Australia since the 1970s.



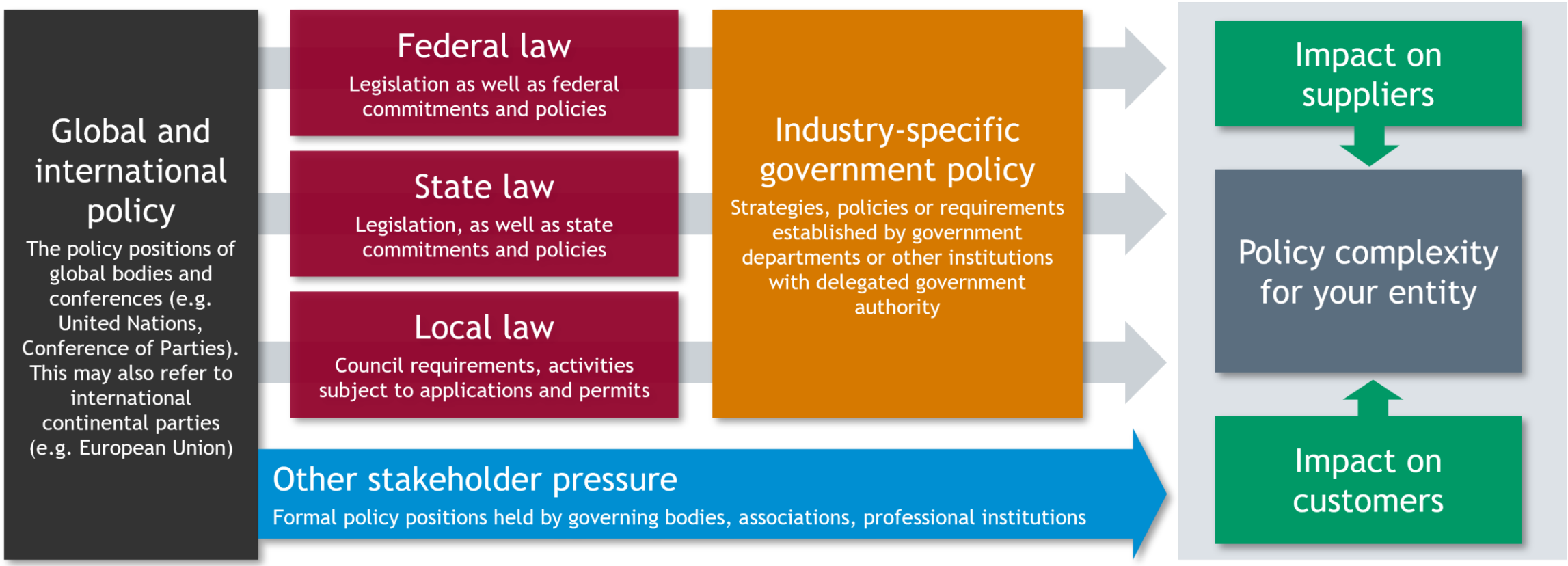

Anomalies (departures from the mean for the 1961–1990 standard averaging period) in annual mean sea surface temperature, and temperature over land, in the Australian region. Sea surface temperature values (data source: ERSST v5, www.esrl.noaa.gov/psd/) are provided for a region around Australia (4–46 °S and 94–174 °E). © Bureau of Meteorology

- There has been an increase in extreme fire weather, and a longer fire season, across large parts of the country since the 1950s.
- There has been a decrease in the number of tropical cyclones observed in the Australian region since at least 1982.
- Snow depth, snow cover and number of snow days have decreased in alpine regions since the late 1950s.
- Oceans around Australia are becoming more acidic, with changes happening faster in recent decades.
- Sea levels are rising around Australia, including more frequent extreme high levels that increase the risk of inundation and damage to coastal infrastructure and communities.

# Climate Policy

# Climate policy

## From global to local throughout your value chain

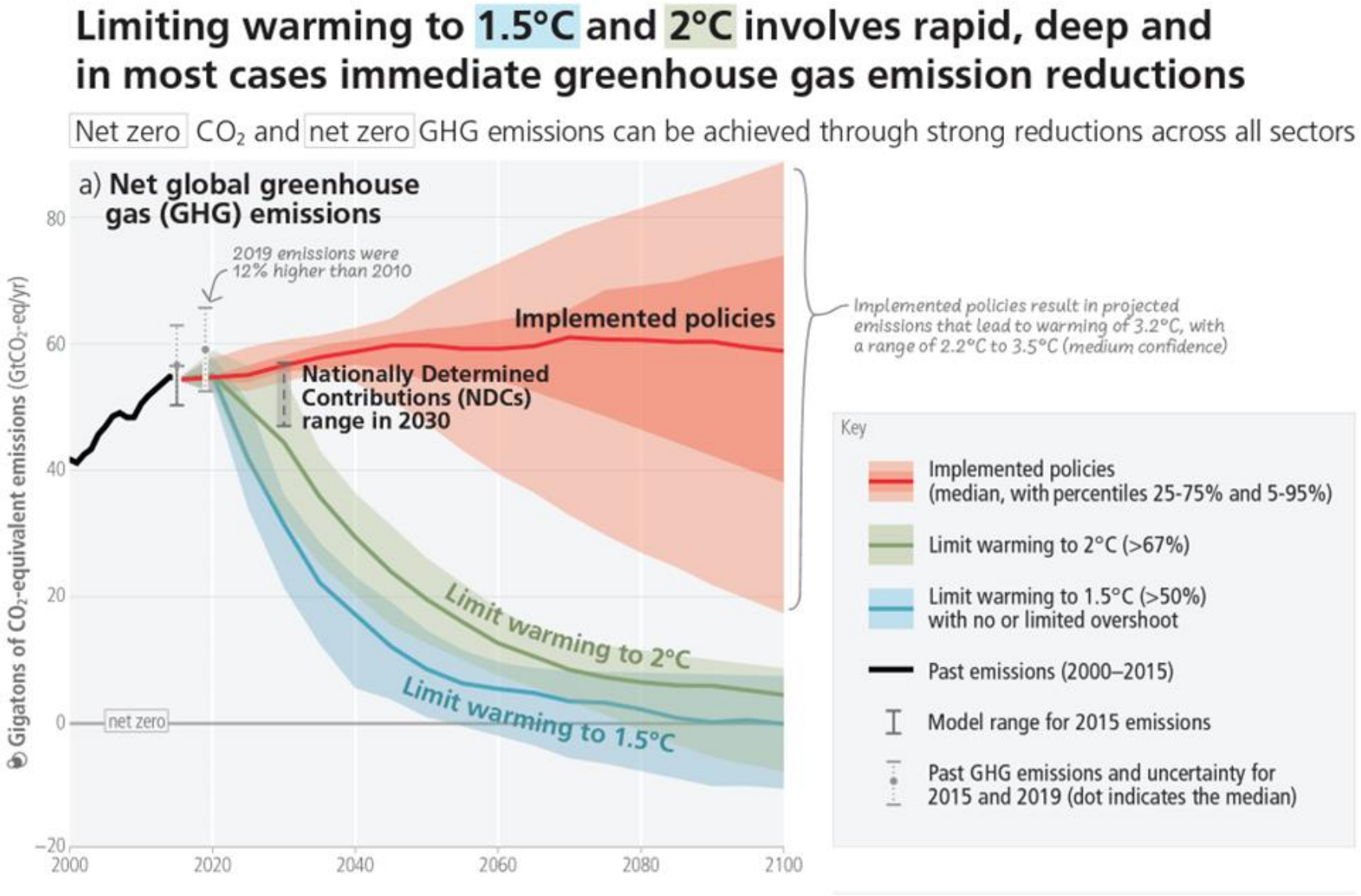


# Climate policy

## United Nations Framework Convention of Climate Change (UNFCCC)

| Paris Agreement (2015) | UAE Consensus (2023) |
|---|---|
| International treaty to reduce GHG emissions to limit global temperature increases to 'well below 2°C' | Response to first global stocktake of emissions under Paris Agreement. |
| European Union (EU) and 194 countries and have joined the Paris Agreement. | 'Recognises the need for deep, rapid and sustained reductions in greenhouse gas emissions in line with 1.5°C pathways' |
| Requires countries to report emissions and targets (referred to as Nationally Determined Contributions (NDCs) every 5 years. | 'Tripling renewable energy capacity … and doubling … energy efficiency improvements by 2030' |
| Established technology framework to support technology development and transfer to improve resilience to climate change and to reduce GHG emissions. | 'Transitioning away from fossil fuels in energy systems … so as to achieve net zero by 2050' |
| **Global Methane Pledge (2021)** | **Loss and Damage Fund (2023)** |
| To reduce methane emissions by at least 30 percent below 2020 levels by 2030. | Fund established to assist developing countries particularly vulnerable to effects of climate change with minimum percentage to be allocated to least developed countries. |
| Launched by EU and United States and currently signed by 155 countries. | US$661 million committed |

# Implemented policy and target pathways



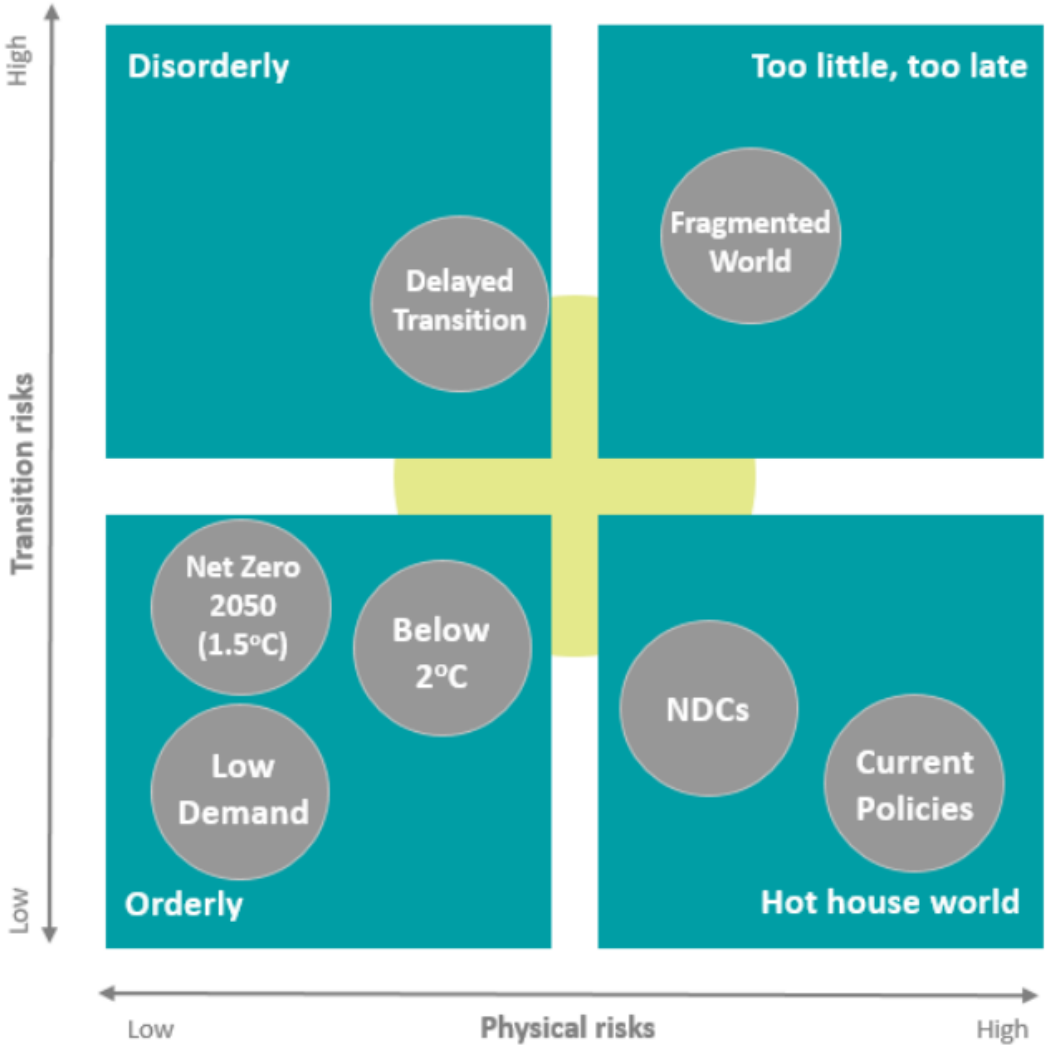

Global emissions pathways consistent with implemented policies and mitigation strategies (SPM.5 in (IPCC, 2023))

# Relationship between climate change and climate policy

Network for Greening the Financial System (NGFS) scenario framework

https://www.ngfs.net/en

- Orderly scenarios assume climate policies are introduced early and become gradually more stringent. Both physical and transition risks are relatively subdued.
- Disorderly scenarios explore higher transition risks due to policies being delayed or divergent across countries and sectors. Carbon prices are typically higher for a given temperature outcome.
- Hot house world scenarios assume that some climate policies are implemented in some jurisdictions, but globally efforts are insufficient to halt significant global warming. The scenarios result in severe physical risk including irreversible impacts like sea-level rise.
- Too-little-too-late scenarios assume that a late and uncoordinated transition fails to limit physical risks.

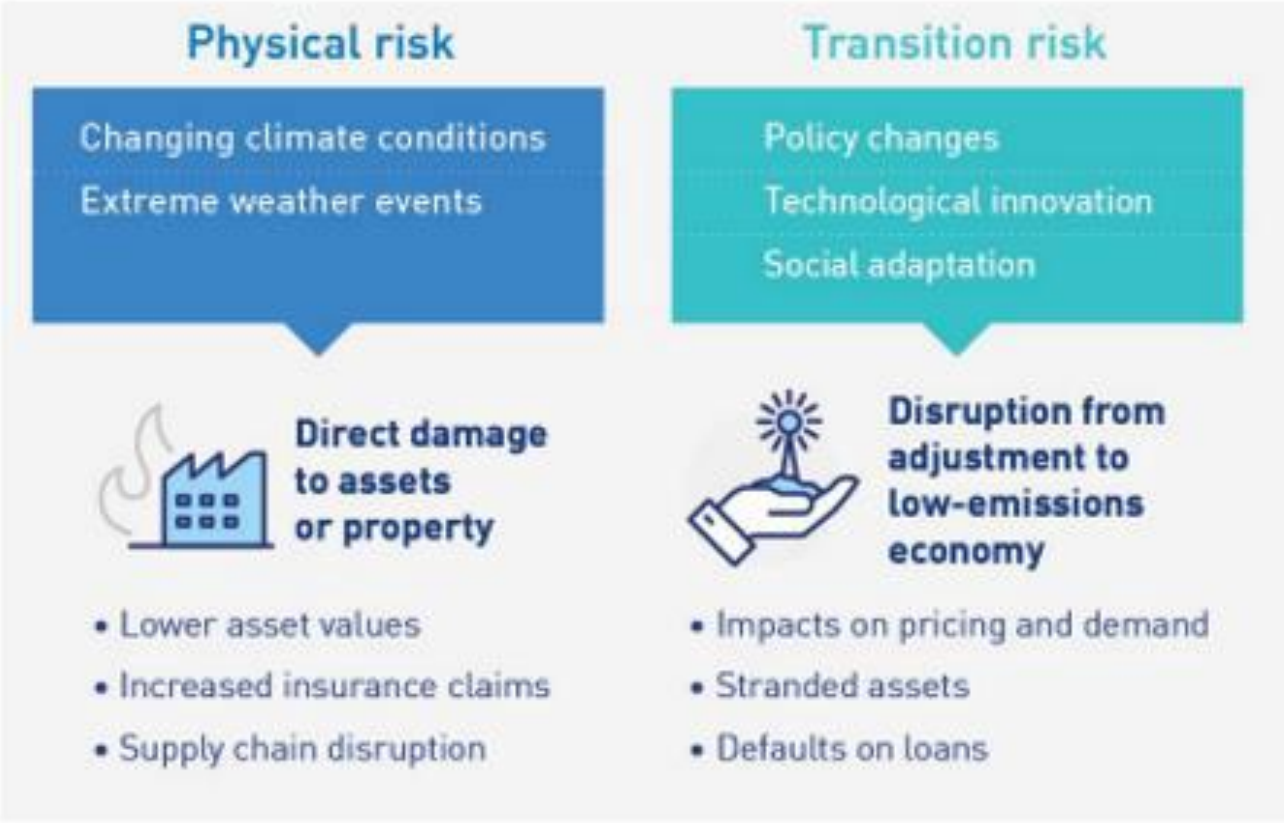


# What are climate-related risks and opportunities?

# What are climate-related risks?

There are two main categorisations of climate-related risk for organisations transitioning to a low-carbon economy within these frameworks:

- Physical risk – climactic events and chronic issues such as water security, natural disasters and increased exposure to locational hazards
- Transition risk – includes policy & legal, technology, regulatory, market and reputation risk

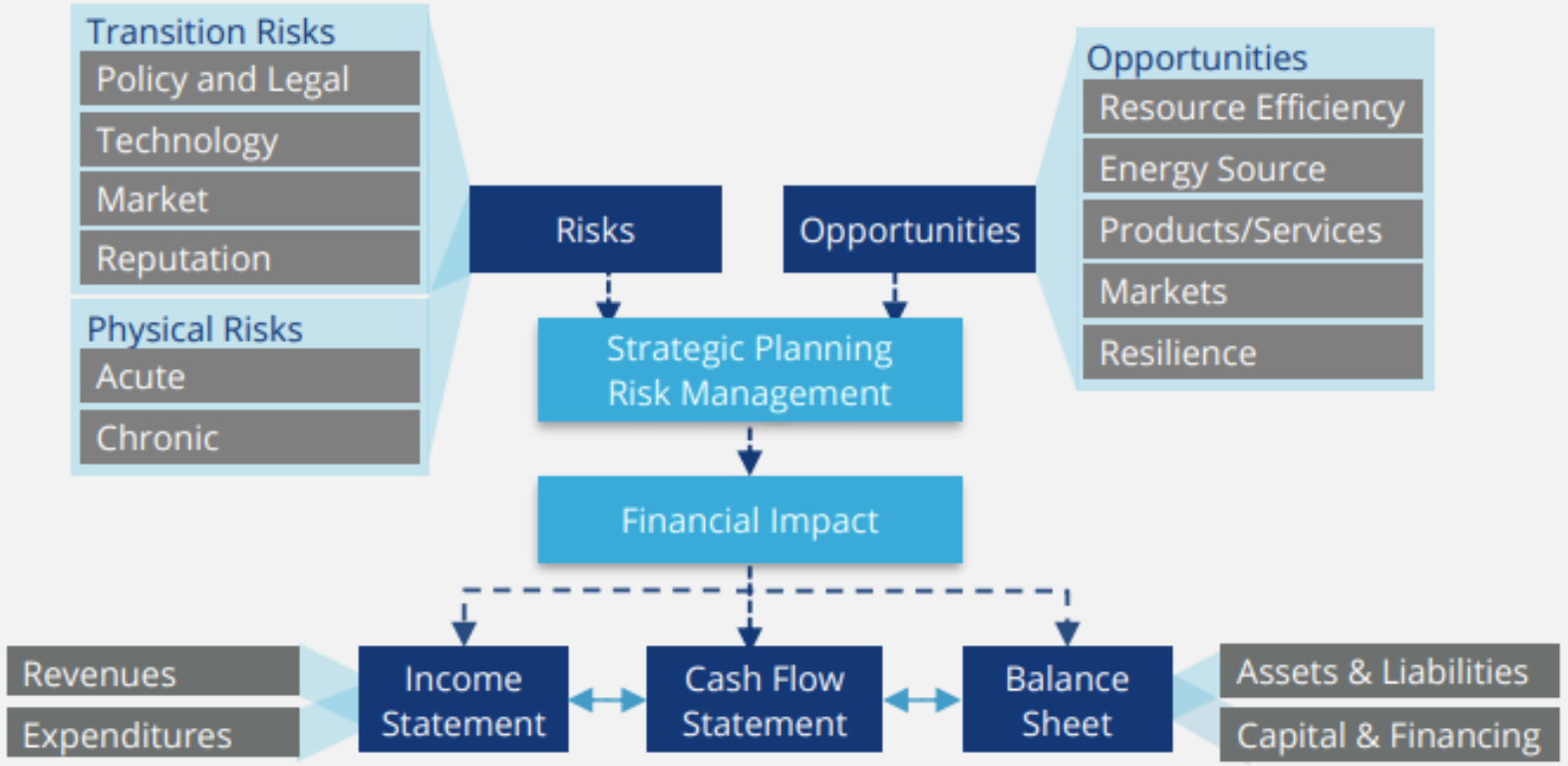


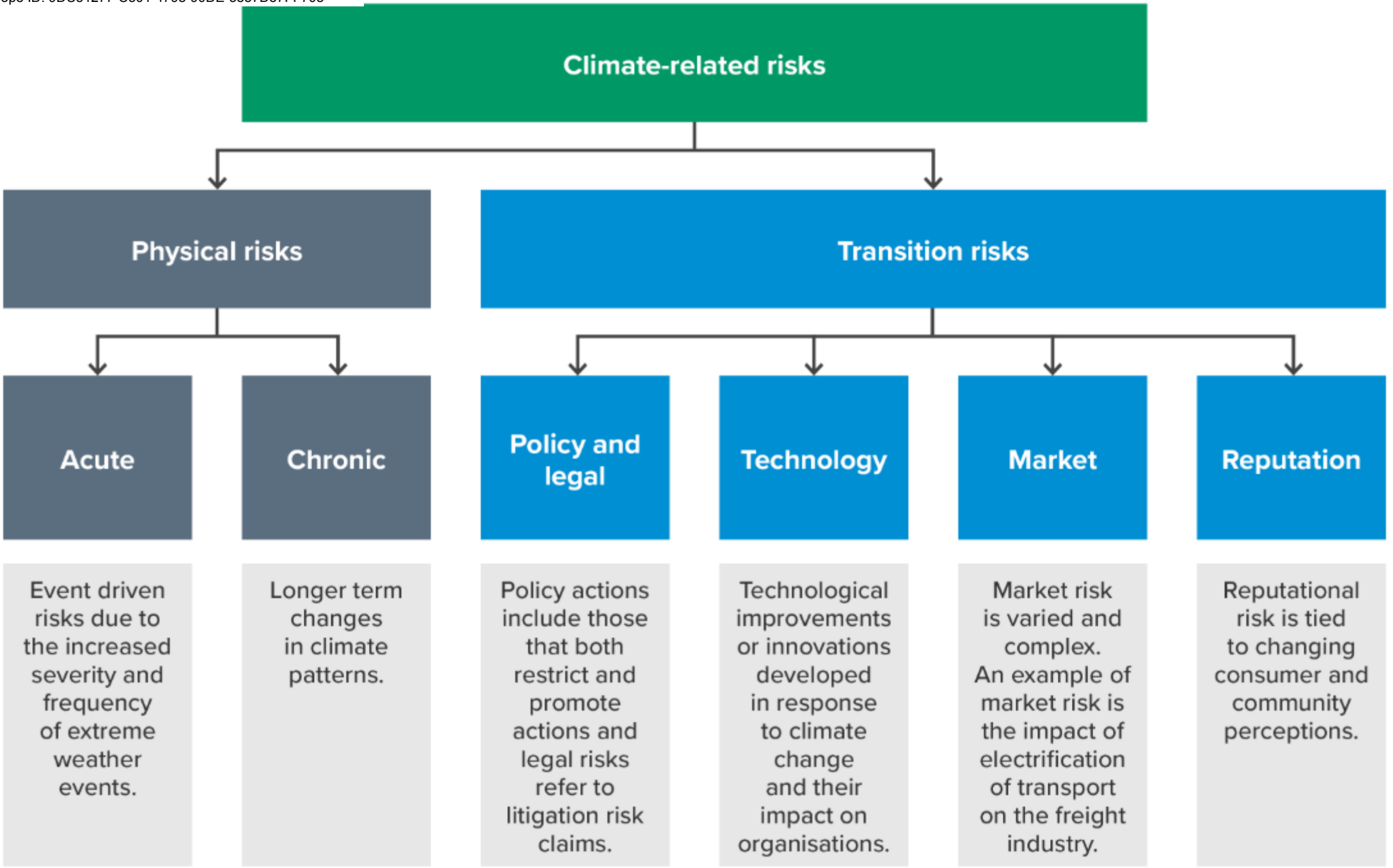
# Taskforce for climate-related disclosures (TCFD)

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

Figure 1

**Climate-Related Risks, Opportunities, and Financial Impact**





# Overview of climate risks

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

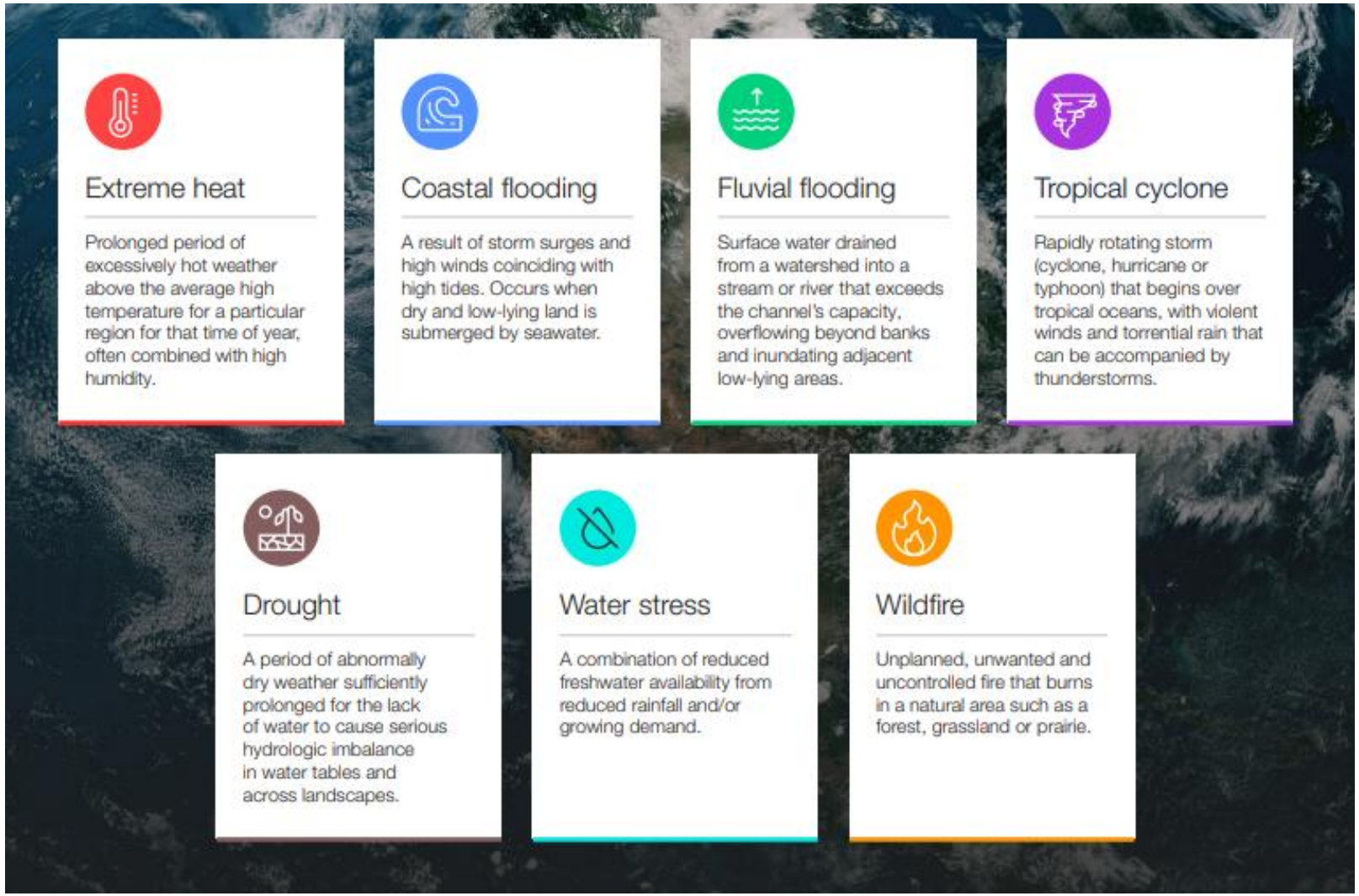
# Physical risks

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| | Climate-related risk | Potential financial impacts |
|---|---|---|
| Physical Risks | **Acute**<br>– Increased severity of extreme weather events such as cyclones and floods<br>**Chronic**<br>– Changes in precipitation patterns and extreme variability in weather patterns<br>– Rising mean temperatures<br>– Rising sea levels | – Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)<br>– Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism)<br>– Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations)<br>– Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)<br>– Increased capital costs (e.g., damage to facilities)<br>– Reduced revenues from lower sales/output<br>– Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations |

# Physical risks

## Business on the Edge: Building Industry Resilience to Climate Hazards | World Economic Forum



# Physical risks

## Acute

- Due to the effects of climate change on weather patterns and environment.
- Event driven risks due to the increased severity and frequency of extreme weather events such as floods.

## Chronic

- Risks associated longer-term changes in climate patterns such as consistently higher temperatures and sea level rise.

## Indirect

- The change to the climate, already being experienced and predicted to intensify in the future, result in physical risks for organisations both directly and indirectly through disruption throughout the value chain.

# Transition risks

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| Climate-related risk | Potential financial impacts |
|---|---|
| **Policy and Legal** | |
| – Increased pricing of GHG emissions | – Increased operating costs (e.g., higher compliance costs, increased insurance premiums) |
| – Enhanced emissions-reporting obligations | – Write-offs, asset impairment, and early retirement of existing assets due to policy changes |
| – Mandates on and regulation of existing products and services | – Increased costs and/or reduced demand for products and services resulting from fines and judgments |
| – Exposure to litigation | |

# Policy risks

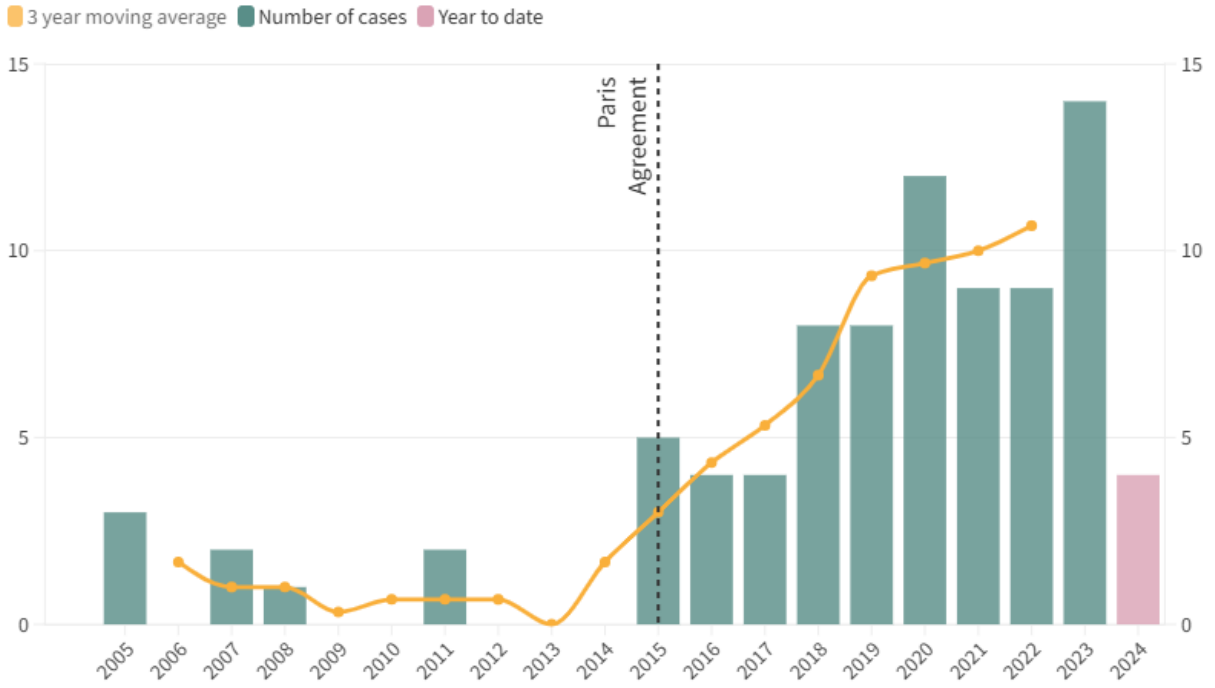
Policy actions include those that both restrict and promote actions such as the introduction of carbon-pricing mechanisms or subsidies.

- National Greenhouse and Energy Reporting (NGER)
- Safeguard Mechanism
- Methane Pledge
  - Technology risk
- Other climate-related policy
  - Renewable energy targets
  - Vehicle emission standards
  - Development approvals
  - Coal royalty rates - indirectly
- Impact on costs for client and/or value chain
  - Electricity prices, steel prices, logistic operators, etc
- Mandatory climate-related reporting (IFRS S2/AASB S2)
- GHG Protocol
  - NGER Gap
  - Land Sector and Removals Guidance

# Legal risks

Legal risks refer to litigation risk claims such as for failure to address the organisations contribution to climate change or failure to disclose sufficient information of material financial risk.

- Greenwashing – review client's publicly available climate statements
- Customer commitments
- Litigation - Number of climate litigation cases filed by year against fossil fuel companies (Zero Carbon Analytics, 2024)




## GREENWASHING ENFORCEMENT

### ASIC

$11.3 million penalty for Mercer Superannuation (Australia) Ltd

-

$270,000 in infringement notices issued to companies to August 2024

### ACCC

Monetary penalties of up to $1.1 million for companies

-

First court proceeding commenced April 2024 against Clorox Australia Pty Ltd for representations that some GLAD bags were made from "50% ocean plastic"

-

2023 internet sweep reviewing 247 business found potential greenwashing by 57%

Source: (ASIC, 2024); (ACCC, 2011); (ACCC, 2024); (ACCC, 2023)

# Transition risks

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| Climate-related risk | Potential financial impacts |
|---|---|
| **Technology** | |
| – Substitution of existing products and services with lower emissions options<br>– Unsuccessful investment in new technologies<br>– Costs to transition to lower emissions technology | – Write-offs and early retirement of existing assets<br>– Reduced demand for products and services<br>– Research and development (R&D) expenditures in new and alternative technologies<br>– Capital investments in technology development<br>– Costs to adopt/deploy new practices and processes |

# Technology risks

Technological improvements or innovations developed in response to climate change and their impact on organisations. New products and services can impact both the competitiveness and demand from customers.

- Supplier review (technology or market)
  - Climate-related disclosures
  - Emissions Reduction Targets
  - Resilience (transition plan, scenario analysis, etc)
- Green steel
- Energy production – phase out of fossil fuels
- Machinery, equipment, vehicles
  - EV alternatives
    - Asset impairment
- Energy supply
  - Disruptions to supply and increased costs

# Transition risks

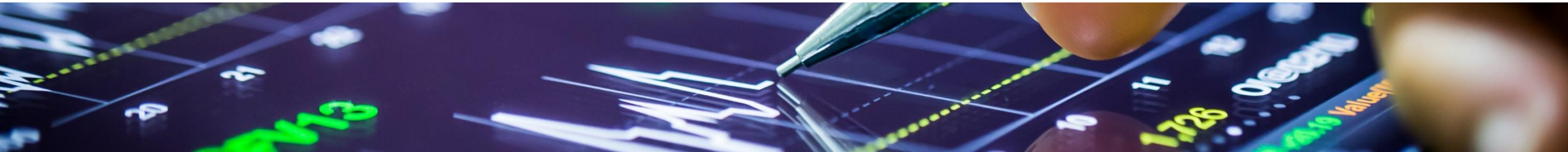
https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| Climate-related risk | Potential financial impacts |
|---|---|
| **Market** | |
| – Changing customer behavior<br>– Uncertainty in market signals<br>– Increased cost of raw materials | – Reduced demand for goods and services due to shift in consumer preferences<br>– Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)<br>– Abrupt and unexpected shifts in energy costs<br>– Change in revenue mix and sources, resulting in decreased revenues<br>– Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations) |

# Market risks

Market risk is varied and complex. An examples of market risk is the impact of electrification of transport on the freight industry.

- Customer review
  - Climate-related disclosures, emissions reduction targets, decarbonisation
  - Consider policy in relevant jurisdictions if applicable
- Peer review
  - Climate-related disclosures, emissions reduction targets, scenario analysis
  - Competitive disadvantage
  - Is there a market opportunity? Competitive advantage
- Access to finance, capital and staff
  - Do they have debt?  Who is the provider? What are their climate-related targets/policies?
  - Expectations from providers of capital?
- Access to insurance
- Consider analysis at country and industry level



# Transition risks

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| Climate-related risk | Potential financial impacts |
|---|---|
| **Reputation** | |
| – Shifts in consumer preferences<br>– Stigmatization of sector<br>– Increased stakeholder concern or negative stakeholder feedback | – Reduced revenue from decreased demand for goods/services<br>– Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)<br>– Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention)<br>– Reduction in capital availability |

# Reputation risks

Reputational risk is tied to changing consumer and community perceptions.

- Extension of other climate-related risks (see table)
  - Do any need to be separately identified and managed?
- Protest action
- Consider vulnerable stakeholders
  - Developing countries
  - Pacific Islands

| Risk | Reputational risk |
|---|---|
| Policy<br>• NGER requirements<br>• Safeguard Mechanism<br>• Methane emissions<br>• Mandatory disclosure requirements<br>• GHG Protocol | Adverse media attention due to:<br>• Failure to comply with NGER requirements<br>• Reliance on and/or quality of ACCUs seen as inappropriate<br>• Understatement of methane emissions<br>• Disclosures do not meet stakeholder expectations, for example emissions targets viewed as insufficient<br>• Failure to meet previously stated targets due to NGER/GHG protocol gap. |
| Legal – greenwashing | Adverse media attention due to action taken by ASIC or ACCC. |
| Legal – customer commitments | Public disclosure of XX's failure to meet agreed climate-related commitments or provision of inaccurate information (particularly when supplying to customers in developing countries). |
| Legal - litigation | Adverse media attention due to litigation action. |
| Market – peers | XX perceived as failing to act on climate change and/or lagging behind peer performance. |

# Climate-related risks

https://www.ifrs.org/content/dam/ifrs/supporting-implementation/ifrs-s2/issb-naturesocialaspectsofclimate-relatedrisks-dec2023.pdf


December 2023

## Educational material

## Nature and social aspects of climate-related risks and opportunities

# Climate-related risks

https://www.ifrs.org/content/dam/ifrs/supporting-implementation/ifrs-s2/issb-naturesocialaspectsofclimate-relatedrisks-dec2023.pdf

## Example 1

The entity operates in the agricultural products industry. It grows wheat itself in two regions: Region 1 and Region 2. The entity also buys wheat from a supplier who grows the crop in Region 1. The entity mills the wheat and sells it to customers.

The entity's business model depends on water because growing wheat relies on rainfall and on irrigation from other water sources. Region 1 currently has high baseline water stress and the entity expects the water stress to become worse over the medium term.

The entity identifies water scarcity as a climate-related risk to which it is exposed. Climate change drives water scarcity in Region 1 through increasing temperatures and changing precipitation patterns. As a result, there is likely to be a significant reduction in the water available in this region. Water scarcity can affect the entity's prospects because, for example, reduced water availability can disrupt its own wheat production and can increase the price it pays to purchase the crop from its supplier.

# Climate-related risks

https://www.ifrs.org/content/dam/ifrs/supporting-implementation/ifrs-s2/issb-naturesocialaspectsofclimate-relatedrisks-dec2023.pdf

## Example 3

An entity operates in the electric utilities and power generators industry. It generates electricity from both renewable and fossil fuel sources and sells that electricity to customers in its jurisdiction.

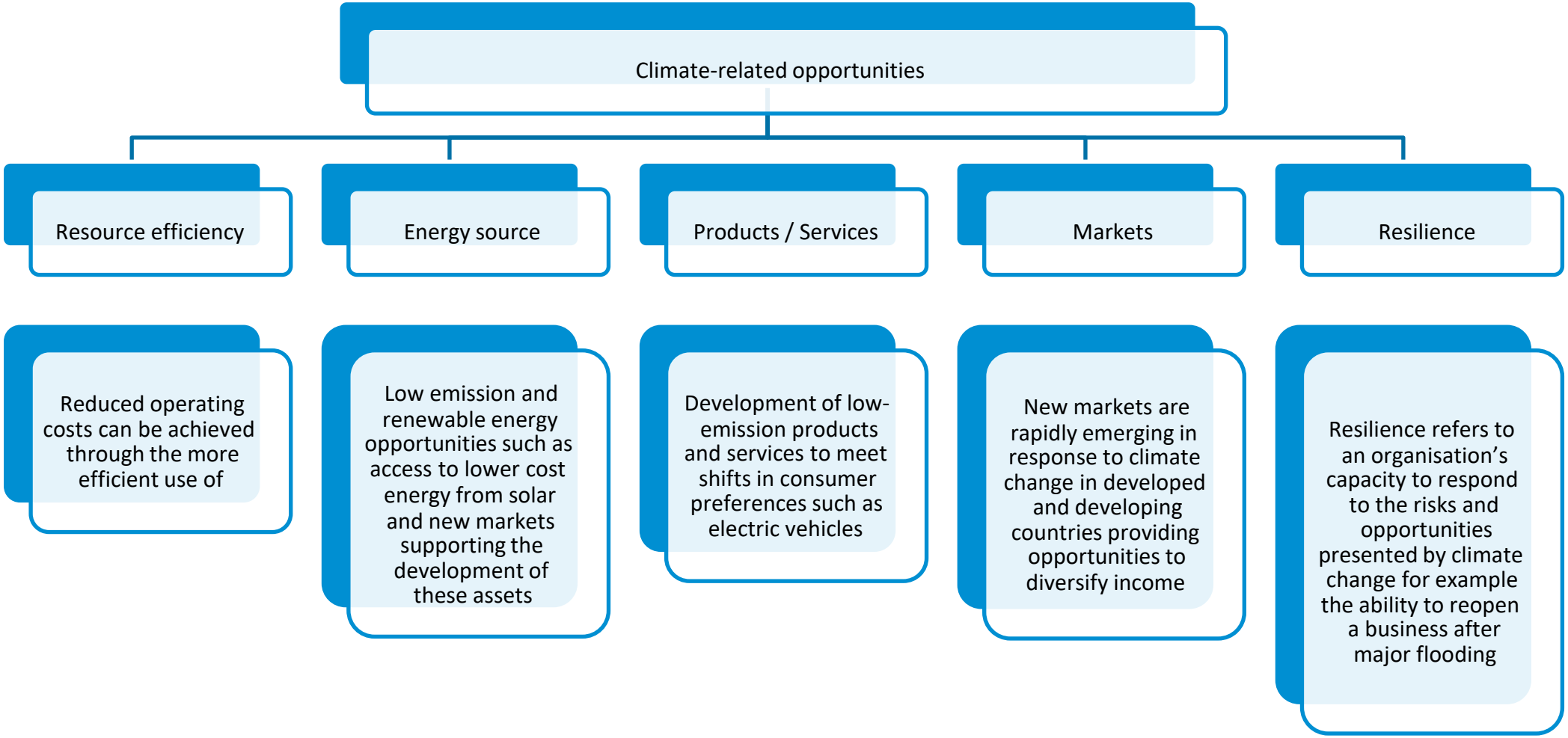
The entity operates in a jurisdiction with a nationally determined contribution (NDC) arising from the latest international agreement on climate change (as defined in Appendix A of IFRS S2). To align with that NDC, the entity has set a greenhouse gas (GHG) emissions reduction target for 20XY.

To achieve its GHG emissions reduction target, the entity plans to phase out its coal-based plants by 20X0 and increase its renewable energy production by X%. The entity currently has X00 employees working in its coal-based plants. Those plants operate next to the only remaining coal mining site in the jurisdiction, which currently employs more than X,000 people.

Considering the NDC in the entity's jurisdiction, the entity is pursuing a 'just transition' to a lower-carbon economy. That is, the entity is transitioning to a lower-carbon economy in a way that is as fair and inclusive as possible to everyone concerned and maximises opportunities for decent work among all communities, workers and social groups. The entity anticipates that its jurisdiction will introduce regulation requiring entities to undertake their transition to a lower-carbon economy in this manner.

Consequently, the entity identifies regulatory risk associated with the NDC in its jurisdiction as a climate-related risk to which it is exposed. The latest international agreement on climate change, and the NDC arising from it, were developed to combat climate change. If the entity is not able to comply with the 'just transition' requirements associated with the NDC, there can be regulatory, reputational and legal consequences, which can affect the entity's prospects.

# Overview of climate-related opportunities



# Overview of climate oppportunities

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| Opportunities | |
|---|---|
| **Resource Efficiency** | • Use of more efficient modes of transport and production and distribution processes<br>• Use of recycling<br>• Move to more efficient buildings<br>• Reduced water usage and consumption |
| **Energy Source** | • Use of lower-emission sources of energy<br>• Use of supportive policy incentives<br>• Use of new technologies<br>• Participation in carbon market |
| **Products & Services** | • Development and/or expansion of low emissions goods and services<br>• Development of climate adaption and insurance risk solutions<br>• Development of new products or services through R&D and innovation |
| **Markets** | • Access to new markets<br>• Use of public-sector incentives<br>• Access to new assets and locations needing insurance coverage |
| **Resilience** | • Participation in renewable energy programs and adoption of energy-efficiency measures<br>• Resource substitutes/diversification |

# Climate-related opportunities

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| | Climate-related opportunities | Potential financial impacts |
|---|---|---|
| Resource Efficiency | – Use of more efficient modes of transport<br>– Use of more efficient production and distribution processes<br>– Use of recycling<br>– Move to more efficient buildings<br>– Reduced water usage and consumption | – Reduced operating costs (e.g., through efficiency gains and cost reductions)<br>– Increased production capacity, resulting in increased revenues<br>– Increased value of fixed assets (e.g., highly rated energy-efficient buildings)<br>– Benefits to workforce management and planning (e.g., improved health and safety, employee satisfaction) resulting in lower costs |

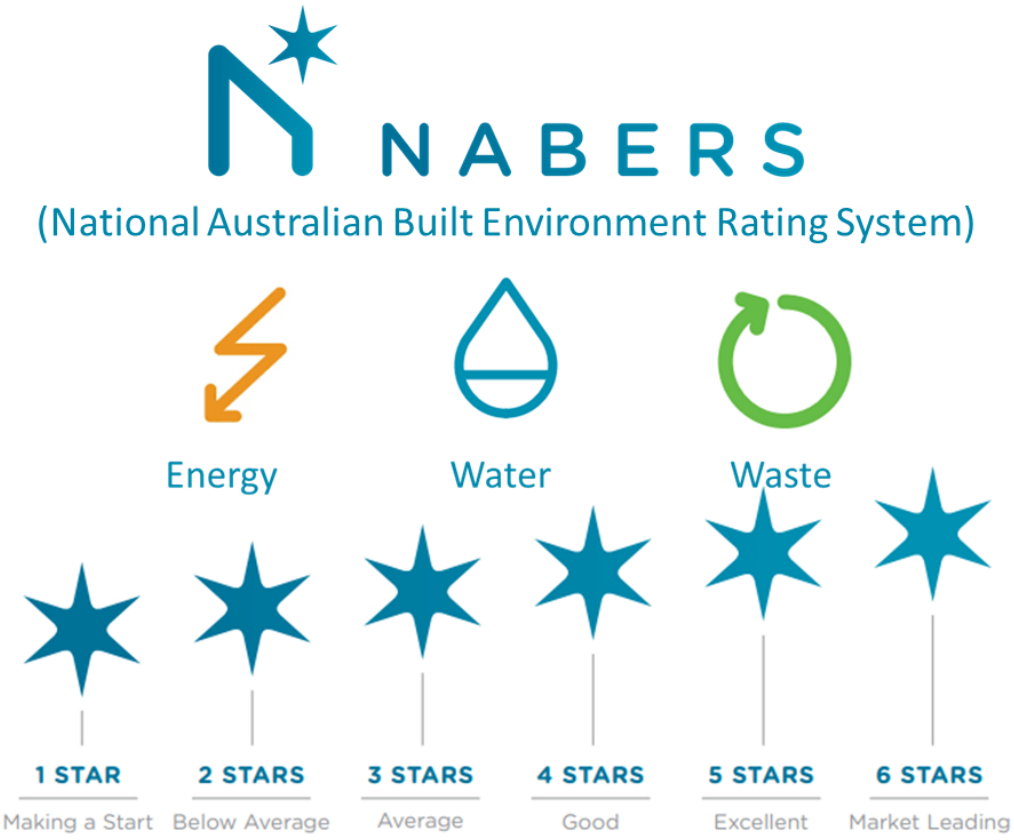
# Resource efficiency

Reduced operating costs can be achieved through the more efficient use of resources such as installation of energy efficient lighting and the reduction of waste.

- Energy and fuel efficiency
- Waste
- Water consumption

- Staff training
- Travel policies
- Review scope 3
  - Upstream and downstream emissions
  - Engagement with suppliers, customers, other stakeholders

- Leased premises
  - Consider control, relationship with landlord, lease term/relocation opportunities



# Climate-related opportunities

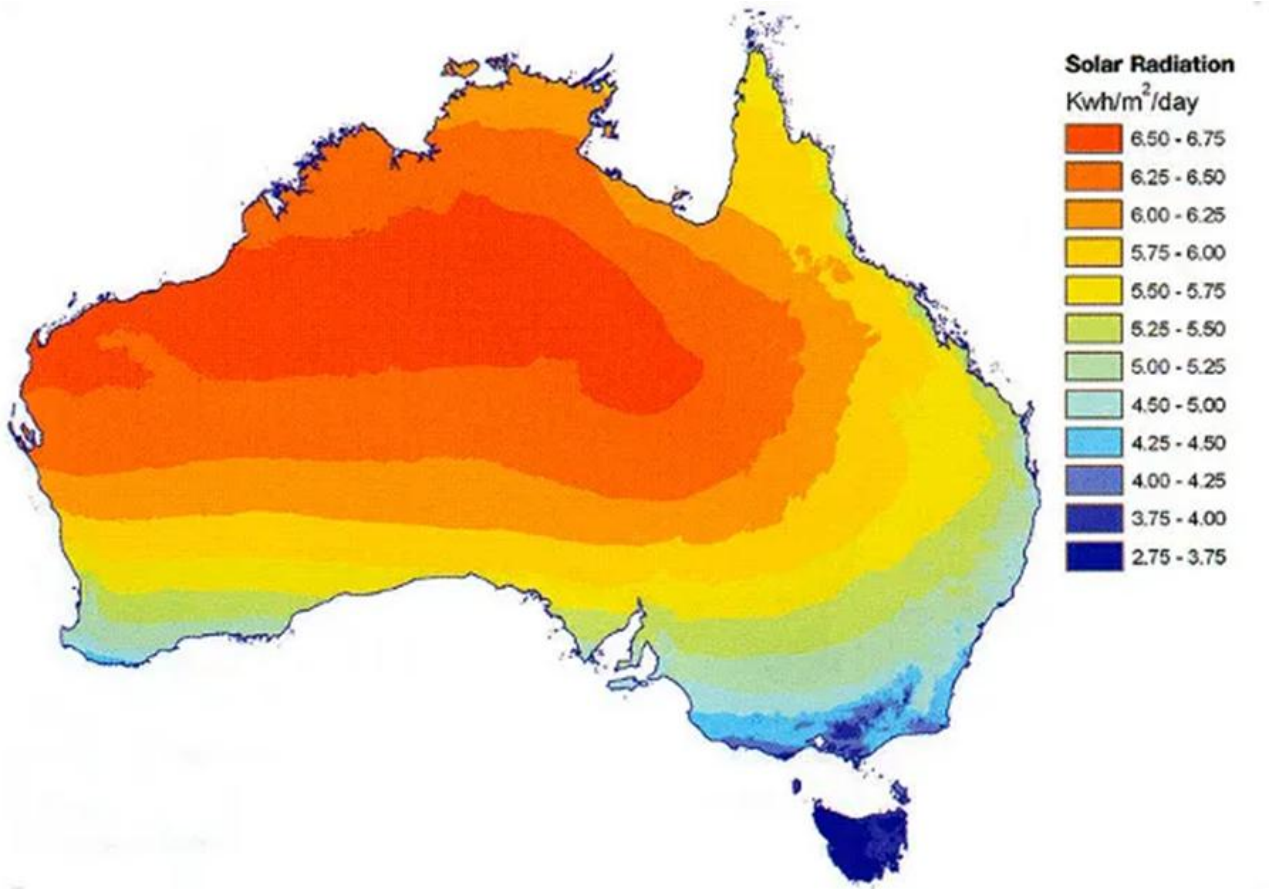
https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| | Climate-related opportunities | Potential financial impacts |
|---|---|---|
| Energy Source | – Use of lower-emission sources of energy<br>– Use of supportive policy incentives<br>– Use of new technologies<br>– Participation in carbon market<br>– Shift toward decentralized energy generation | – Reduced operational costs (e.g., through use of lowest cost abatement)<br>– Reduced exposure to future fossil fuel price increases<br>– Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon<br>– Returns on investment in low-emission technology<br>– Increased capital availability (e.g., as more investors favor lower-emissions producers)<br>– Reputational benefits resulting in increased demand for goods/services |

# Energy source

The transition to low emission and renewable energy presents organisations with opportunities such as access to lower cost energy from roof top solar and new markets supporting the development of these assets.

**Australia has some of the best solar resources in the world. (ANU Fenner School in Australian Academy of Science, 2016).**




- Solar and storage
- Power purchasing agreements
- Green energy retailers
- Bio-fuels
- Ethanol blends

# Climate-related opportunities

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| | Climate-related opportunities | Potential financial impacts |
|---|---|---|
| Products and Services | – Development and/or expansion of low emission goods and services<br>– Development of climate adaptation and insurance risk solutions<br>– Development of new products or services through R&D and innovation<br>– Ability to diversify business activities<br>– Shift in consumer preferences | – Increased revenue through demand for lower emissions products and services<br>– Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)<br>– Better competitive position to reflect shifting consumer preferences, resulting in increased revenues |

# Products and services

Development of low-emission products and services to meet shifts in consumer preferences such as electric vehicles

- Alternate products or services
- Supplier-Specific Emissions Factors (SSEFs)
- Product-Specific Emissions Factors (PSEFs)
- Consider relationship with market risks
  - Scope 3 calculation requirements for AASB S2 provide opportunity compared to international competitors

# Climate-related opportunities

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| | Climate-related opportunities | Potential financial impacts |
|---|---|---|
| Markets | – Access to new markets<br>– Use of public-sector incentives<br>– Access to new assets and locations needing insurance coverage | – Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)<br>– Increased diversification of financial assets (e.g., green bonds and infrastructure) |

# Markets

New markets are rapidly emerging in response to climate change in developed and developing countries providing opportunities to diversify income such as the opportunity for primary producers to generate carbon credits.

- Consider relationship with market risks
  - Industry leader/competitive advantage
  - AASB S2 requirements provide opportunity compared to international competitors
- Emerging industries
  - New customers?
  - Opportunities for service organisations
  - Complementary products
- Target countries based on policy review
- Carbon credit generation and diversification of income source

# Climate-related opportunities

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

| | Climate-related opportunities | Potential financial impacts |
|---|---|---|
| Resilience | – Participation in renewable energy programs and adoption of energy-efficiency measures<br>– Resource substitutes/diversification | – Increased market valuation through resilience planning (e.g., infrastructure, land, buildings)<br>– Increased reliability of supply chain and ability to operate under various conditions<br>– Increased revenue through new products and services related to ensuring resiliency |

# Resilience

Resilience refers to an organisation's capacity to respond to the risks and opportunities presented by climate change for example the ability to reopen a business after major flooding

Opportunity to build climate resilience and consequently gain competitive advantage and increased access to staff in the industry through continued proactive management of climate-related risks and opportunities.

# Climate-related risks

https://www.ifrs.org/content/dam/ifrs/supporting-implementation/ifrs-s2/issb-naturesocialaspectsofclimate-relatedrisks-dec2023.pdf

## Example 2

The entity operates in the forestry management industry. It grows and harvests trees and sells the timber to companies that manufacture wood-based products for the building sector.

The building sector generates significant greenhouse gas (GHG) emissions, which are the primary driver of climate change. In recent years, a number of new regulations, building codes and other industry standards have been developed with an aim to reduce such emissions in the sector. As a result, the market demand for timber is growing because using wood instead of other building materials (such as steel and concrete) can help to meet the new regulations, building codes and other industry standards and achieve decarbonisation goals in the sector. That is because trees absorb and store carbon and manufacturing wood-based products produces lower GHG emissions compared to other materials.

The entity identifies the growing market demand for timber in the building sector as a climate-related opportunity to which it is exposed. The entity determines that it can increase its revenue by responding to that demand, which can affect the entity's prospects.

# Time horizons (Short, medium or long term)

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Scenario-Analysis-Guidance.pdf

### 1.3.2 Time Horizon

Scenarios describe a future outcome at a particular time horizon. Choosing a time horizon involves a trade-off between too short — where developments may not be sufficiently differentiated — and too long — where uncertainties may overwhelm useful analysis. "The time horizon for scenarios should be short enough so that they are plausible but long enough for us to imagine that important changes with an impact on the future business can take place."[26]

**In setting climate-related scenario time horizons, companies should challenge their thinking about traditional planning horizons, which are often too short.** Scenario time horizons are typically longer than many corporate planning horizons. Scenario time horizons that are too short may result in simple extrapolations of current thinking and trends, and therefore not reveal the information needed to assess the resilience of the company's climate-related strategy.

Page 17

In setting time horizons for its scenario analysis, a company should consider:

- time horizons that are compatible with the company's (1) capital planning and investment horizons and (2) the useful life of major company assets and
- time horizons that are harmonized or anchored with those of national and international climate policy communities (e.g., 2030 and 2050). Harmonizing company scenario time horizons to key years and the cycle of the climate policy community can provide an important anchor to, and context with, global climate scenarios, as well as enhance comparability.

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# Time horizons (Short, medium or long term)

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Scenario-Analysis-Guidance.pdf

Next, a company should determine the time horizon over which the focal question(s) will be considered. For instance, will the scenarios address the focal question out to 2040, 2050, or some other time horizon? In determining the appropriate time horizon, companies may want to consider such factors as corporate capital planning and investment horizons, and the useful life of major company assets.

In addition, a company may want to align scenario time horizons with those used in the scenarios of the climate research community. For example, a company might consider time horizons that align with the cycles for major refreshes of Nationally Determined Contributions under the Paris Agreement.

"Using a time frame that extends only a few years into the future fails to take into account important questions whose answers might depend on climate change effects that will become perceptible several years or decades down the line, but which nonetheless might be deemed material to the value of a company today."[172]

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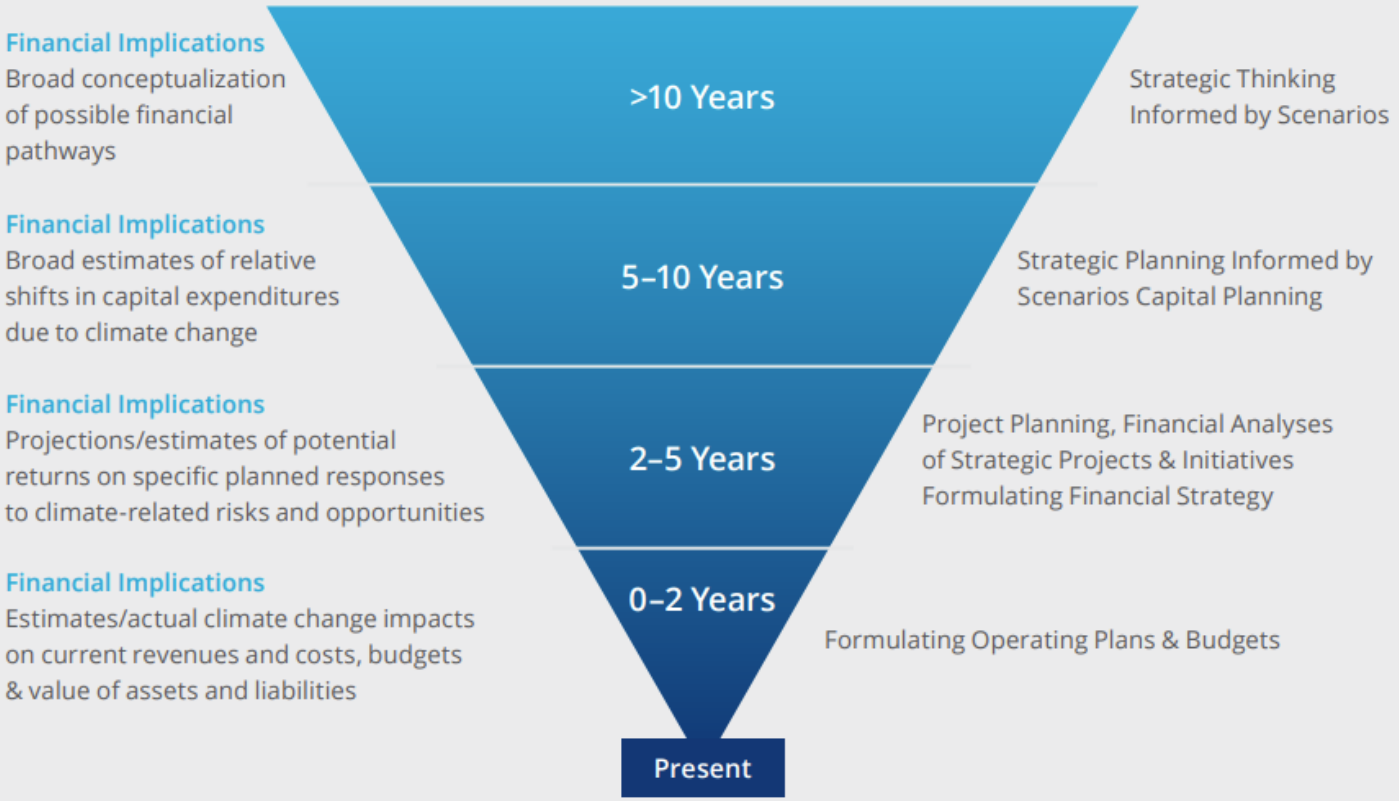
# Time horizons (Short, medium or long term)

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Scenario-Analysis-Guidance.pdf

Figure E2

## Determining Financial Implications by Time Horizon



# Pillar 2: Strategy

| 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|
| Climate-related risk and opportunities | Business model and value chain | Strategy and decision-making | Financial position, financial performance and cash flows | Climate resilience |
| Conduct a climate risk and opportunity assessment | | | | |

# 02
# Business model and value chain

30 April 2025

# Definition of business model

Appendix A of AASB S2

An entity's system of transforming inputs through its activities into outputs and outcomes that aims to fulfil the entity's strategic purposes and create value for the entity and hence generate cash flows over the short, medium and long term

# Pillar 2: Strategy

| 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|
| Climate-related risk and opportunities | Business model and value chain | Strategy and decision-making | Financial position, financial performance and cash flows | Climate resilience |

Conduct a climate risk and opportunity assessment

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# 03

# Strategy and decision-making

30 April 2025

# Definition of climate-related transition plan

Appendix A of AASB S2

- An aspect of an entity's overall strategy that lays out the entity's:
  - Targets,
  - Actions (e.g. reducing its greenhouse gas emissions), or
  - Resources

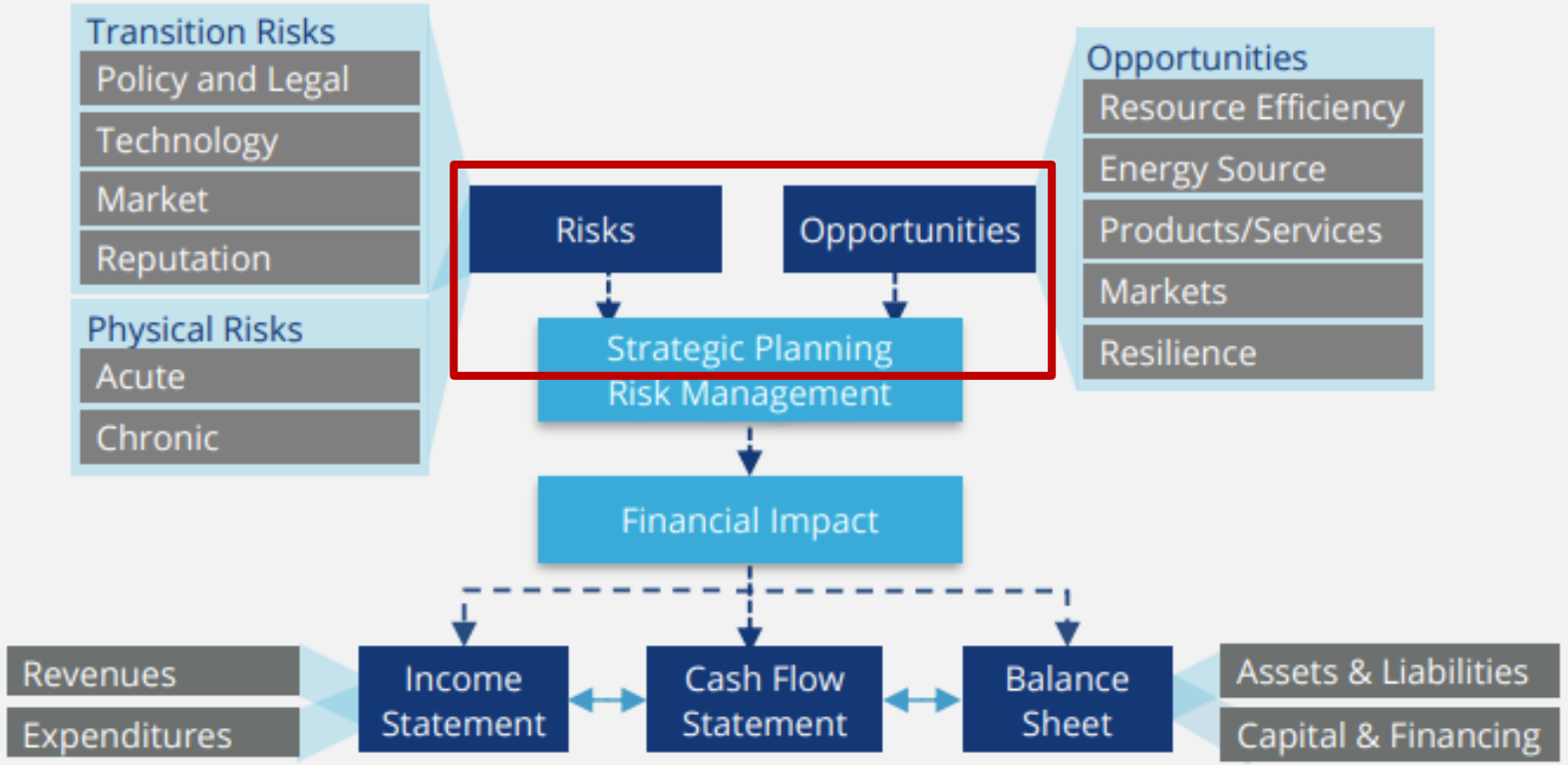
  for its transition towards a lower-carbon economy

# Scope of AASB S2

https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

Figure 1

**Climate-Related Risks, Opportunities, and Financial Impact**



# Pillar 2: Strategy

| 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|
| Climate-related risk and opportunities | Business model and value chain | Strategy and decision-making | Financial position, financial performance and cash flows | Climate resilience |

Conduct a climate risk and opportunity assessment

# 04

# Financial position, financial performance and cash flows

30 April 2025

# Pillar 2: Strategy

| 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|
| Climate-related risk and opportunities | Business model and value chain | Strategy and decision-making | Financial position, financial performance and cash flows | Climate resilience |
| Conduct a climate risk and opportunity assessment | | | Perform financial modelling | |

# 05
# Climate resilience

# Definition of climate resilience

Appendix A of AASB S2

- The capacity of an entity to adjust to climate-related changes, developments or uncertainties

- Climate resilience involves:
  - Capacity to manage climate-related risks
  - Capacity to benefit from climate-related opportunities
  - Ability to respond and adapt to climate-related transition risks
  - Ability to respond and adapt to climate-related physical risks

- An entity's climate resilience includes both its
  - Strategic resilience and
  - Its operational resilience

  to climate-related changes, developments and uncertainties

# Mandatory requirement to conduct a scenario analysis

AASB S2 paragraph 22

- The following is an extract from AASB S2 paragraph 22:

  "… The entity **shall use** climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with the entity's circumstances (see paragraphs B1–B18). In providing **quantitative information**, the entity may disclose a single amount or a range …"

# Pillar 2: Strategy

| 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|
| Climate-related risk and opportunities | Business model and value chain | Strategy and decision-making | Financial position, financial performance and cash flows | Climate resilience |
| Conduct a climate risk and opportunity assessment | | | Perform financial modelling | Conduct scenario analysis |

# Conducting a scenario analysis

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# Part 1
# What is scenario analysis?

# What is a scenario?

- A scenario describes a path of development leading to a particular outcome
- Scenarios are not intended to represent a full description of the future, but rather to highlight central elements of a possible future and to draw attention to the key factors that will drive future developments
- They are hypothetical constructs, not forecasts, predictions or sensitivity analyses

# What is scenario analysis?

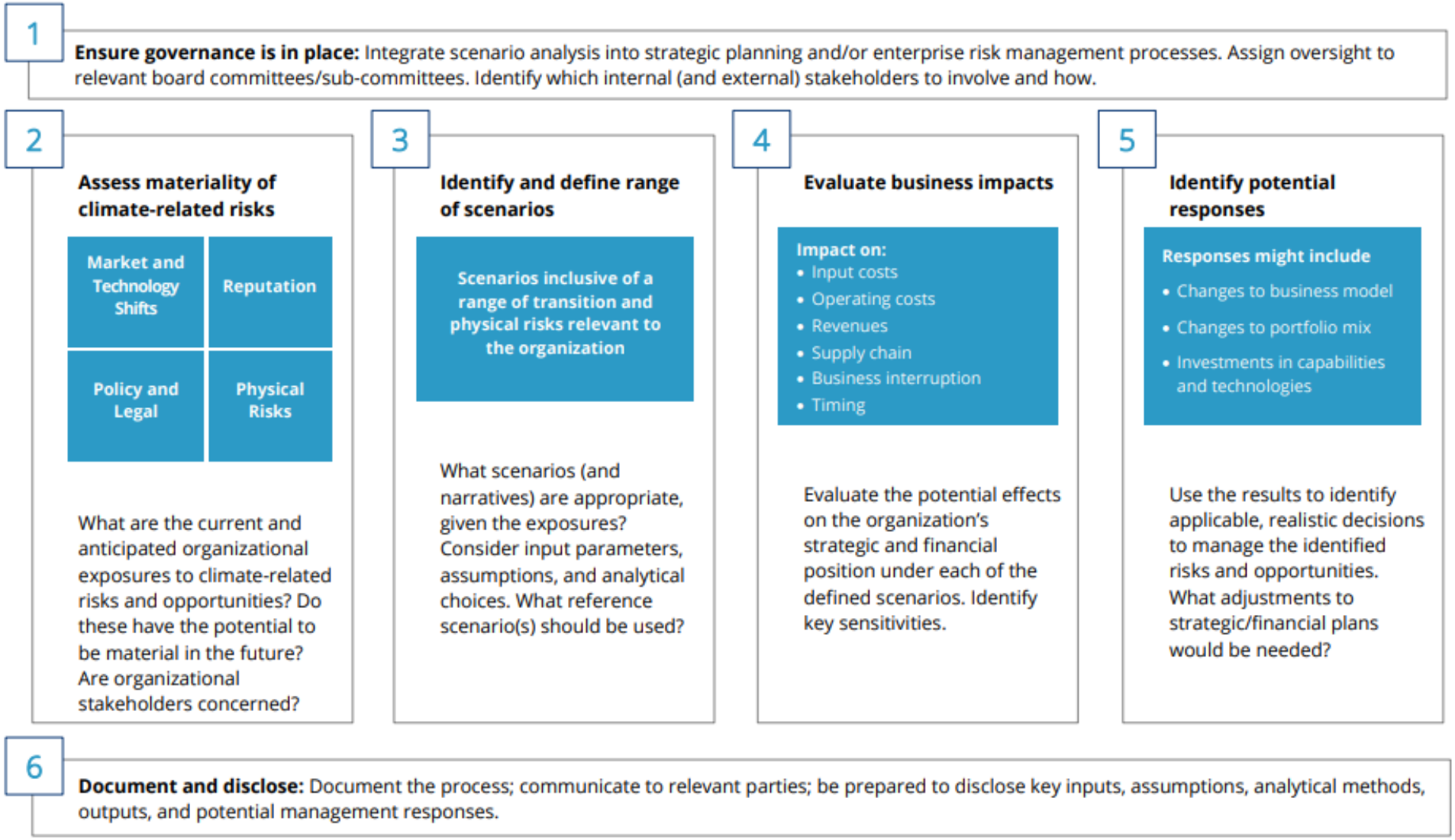
- Scenario analysis is a tool to enhance critical strategic thinking
- A key feature of scenarios is that they should challenge conventional wisdom about the future
- In a world of uncertainty, scenarios are intended to explore alternatives that may significantly alter the basis for “business-as-usual” assumptions

# Scenario analysis characteristics

| | |
|---|---|
| **Plausible** | • The events in the scenario should be possible and the narrative credible (i.e. the descriptions of what happened, and why and how it happened, should be believable) |
| **Distinctive** | • Each scenario should focus on a different combination of the key factors.<br>• Scenarios should be clearly differentiated in structure and in message, not variations on a single theme<br>• Multiple scenarios should be used to explore how different permutations and/or temporal developments of the same key factors can yield very different outcomes |
| **Consistent** | • Each scenario should have strong internal logic.<br>• The goal of scenario analysis is to explore the way that factors interact, and each action should have a reaction<br>• Neither actors nor external factors should completely overturn the evidence of current trends and positions unless logical explanations for those changes are a central part of the scenario |
| **Relevant** | • Each scenario, and the set of scenarios taken as a whole, should contribute specific insights into the future that relate to strategic and/or financial implications of climate-related risks and opportunities |
| **Challenging** | • Scenarios should challenge conventional wisdom and simplistic assumptions about the future<br>• When thinking about the major sources of uncertainty, scenarios should try to explore alternatives that will significantly alter the basis for business-as-usual assumptions |

# Part 2
# Scenario analysis and climate reslience

# Applying scenario analysis to strategic planning and management of climate-related risks and opportunities






TCFD Technical Supplement (p 7)

# Roadmap to implement AASB S2

| PROJECT STREAMS | | | Financial year ending on 31 March 2026 | Financial year ending on 31 March 2027 |
|---|---|---|---|---|
| 1 | COMPLIANCE FOCUS: Carbon Footprint Measurement | Scope 1 and 2 emissions | **Mandatory** calculation and reporting of Scope 1 and 2 emissions, subject to assurance:<br>1. Set carbon inventory boundary<br>2. Develop a Basis of Preparation (carbon accounting methodology)<br>3. Measure and report Scope 1 and Scope 2 emissions | |
| | | Scope 3 emissions | 4. Initial measurement (significant estimation) and report internally Scope 3 emissions<br>5. Set targets in relation to scope 1, 2 and 3 | **Mandatory** calculation and external reporting of Scope 3 emissions |
| 2 | COMPLIANCE FOCUS: Climate-related disclosures | AASB S2 (Mandatory) | **Mandatory** reporting of all AASB S2 disclosures:<br>6. Establish or improve appropriate governance and risk management structure<br>7. Conduct a climate risk and opportunity assessment<br>8. Prepare a scenario analysis<br>9. Financial modelling of impact on financial statements<br>10. Prepare first mandatory sustainability report, including a materiality assessment | **Ongoing mandatory** reporting of all AASB S2 disclosures |
| 3 | STRATEGIC FOCUS: General sustainability-related disclosures | AASB S1 (Voluntary) | Activate sustainability strategy<br>• Step 1 – Current state assessment<br>• Step 2 - Materiality assessment (stakeholder engagement)<br>• Step 3 – Identify gaps<br>• Step 4 – Commit and measure to address gap identified<br>• Step 5 – Prepare separate voluntary sustainability report | |

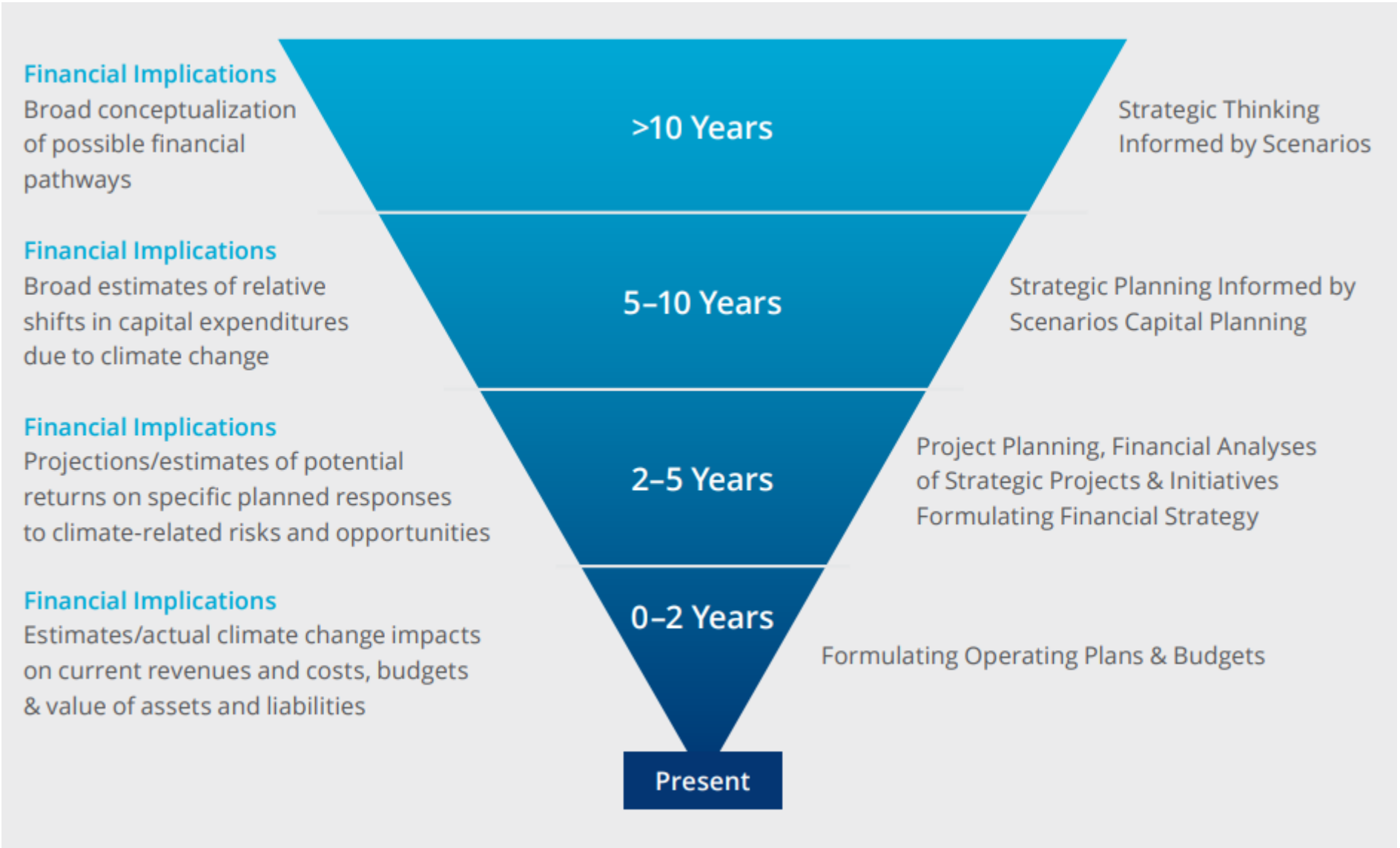
# TCFD disclosure recommendations

| Governance | Strategy | Risk Management | Metrics and Targets |
|---|---|---|---|
| Disclose the organization's governance around climate-related risks and opportunities. | Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. | Disclose how the organization identifies, assesses, and manages climate-related risks. | Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material. |
| **Recommended Disclosures** | **Recommended Disclosures** | **Recommended Disclosures** | **Recommended Disclosures** |
| a) Describe the board's oversight of climate-related risks and opportunities. | a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. | a) Describe the organization's processes for identifying and assessing climate-related risks. | a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. |
| b) Describe management's role in assessing and managing climate-related risks and opportunities. | b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. | b) Describe the organization's processes for managing climate-related risks. | b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. |
| | c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. | c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management. | c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. |



Recommendations of the TCFD (p 14)

# Scenario analysis and financial implications by time horizon

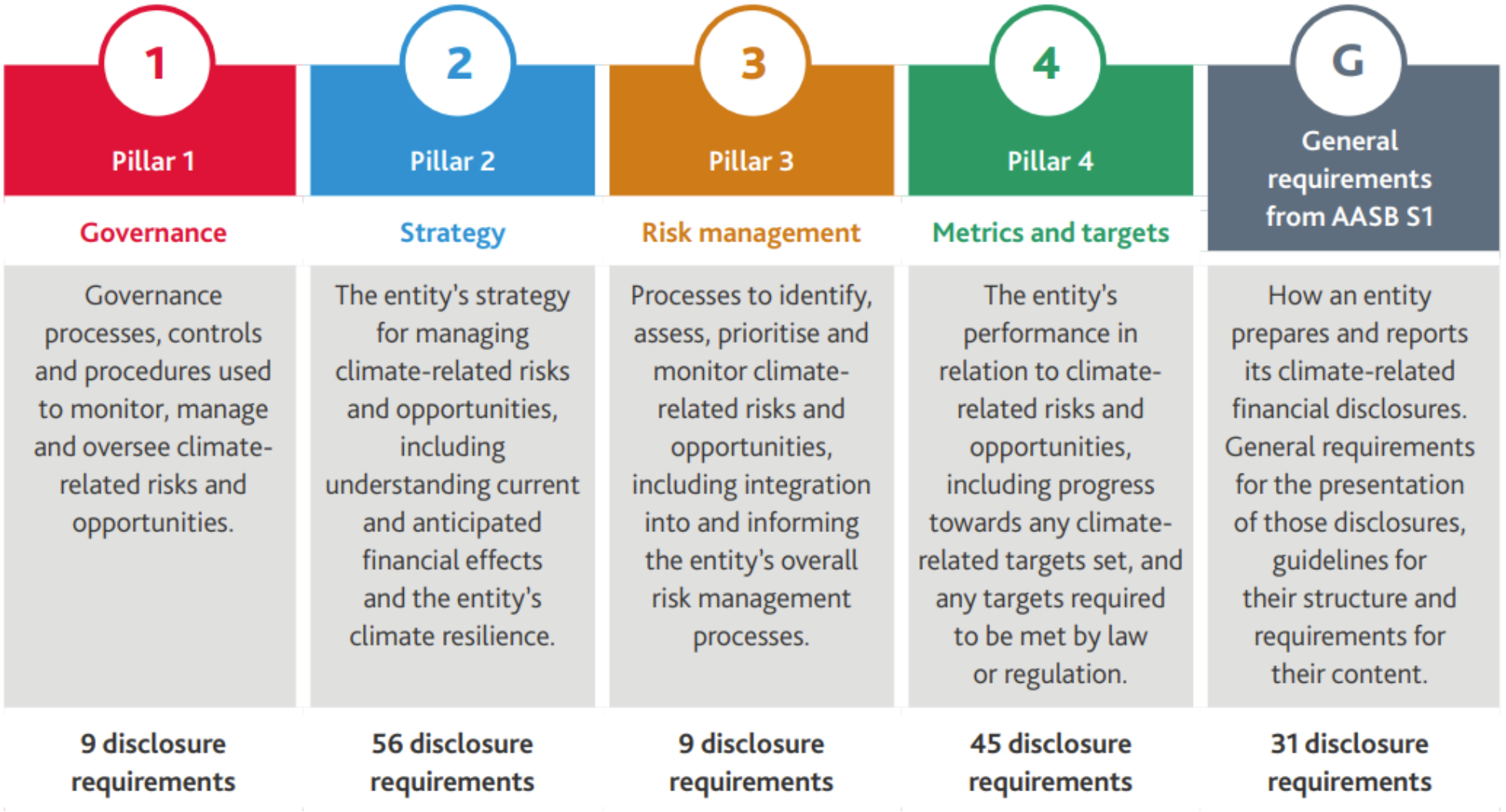





TCFD Scenario Analysis Guidance (p 49)

# Australian Sustainability Reporting Standard AASB S2 – Climate-related Disclosures

# Disclosure requirements of AASB S2



# Disclosure requirements of AASB S2


## Strategy

The entity's strategy for managing climate-related risks and opportunities, including understanding current and anticipated financial effects and the entity's climate resilience.

**56 disclosure requirements**

8 **The objective of climate-related financial disclosures on strategy is to enable users of general purpose financial reports to understand an entity's strategy for managing climate-related risks and opportunities.**

9 Specifically, an entity shall disclose information to enable users of general purpose financial reports to understand:

(a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 10–12);

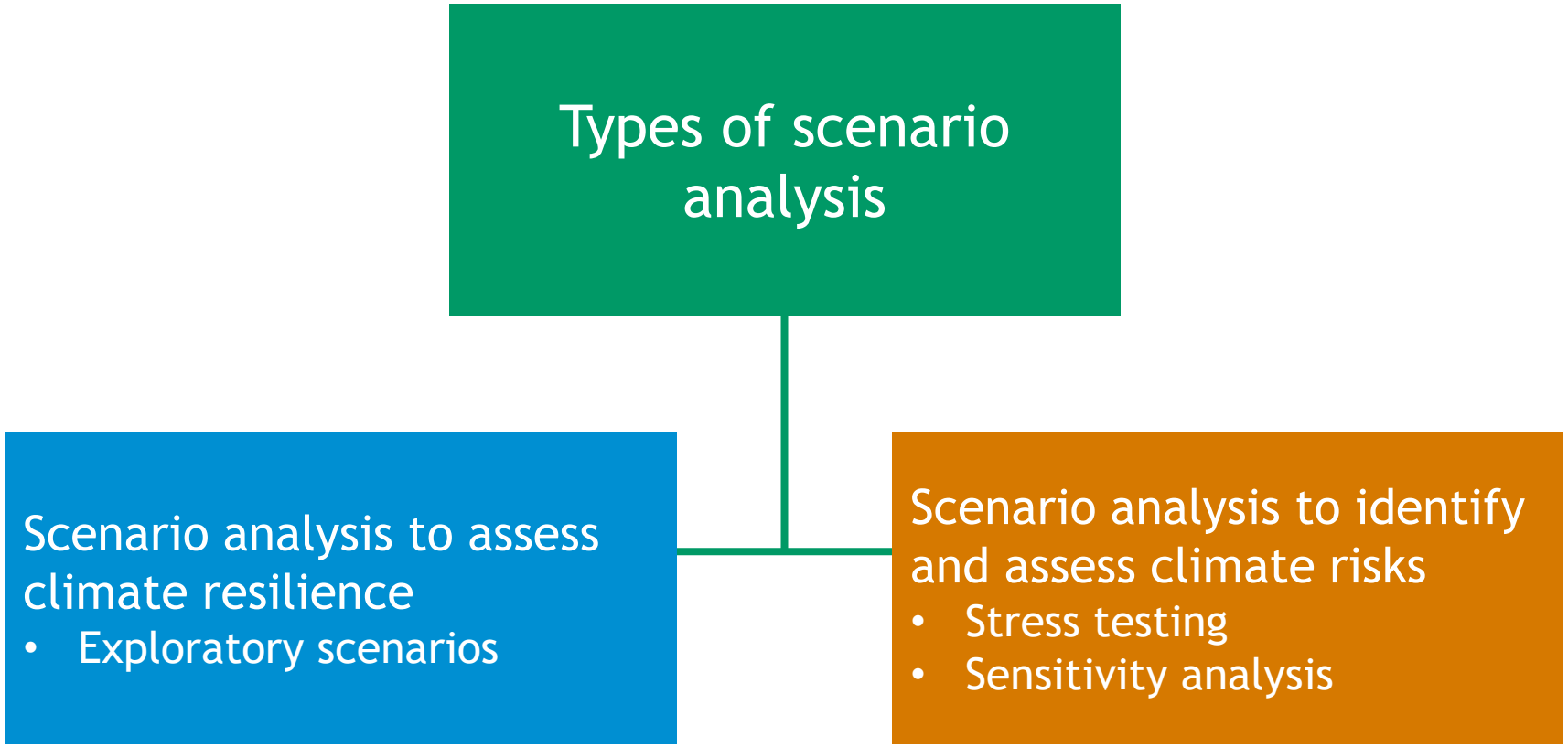
(b) the current and anticipated effects of those climate-related risks and opportunities on the entity's *business model* and *value chain* (see paragraph 13);

(c) the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its *climate-related transition plan* (see paragraph 14);

(d) the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning (see paragraphs 15–21); and

(e) the *climate resilience* of the entity's strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities (see paragraph 22).

# Types of scenario analysis




Clarifying climate-related scenario analysis: A guide to AASB S2 compliance - BDO

# Corporations Act 2001

- Amended by Treasury Laws Amendment (Financial Market Infrastructure and Other Measures) Bill 2024
- Section 296D Climate statement disclosures (and explanatory memorandum) requires scenario analysis to be carried out using at least:

a) high global warming scenario - the increase in the global average temperature of 2.5°C or higher

AND

b) low global warming scenario - the increase in the global average temperature is limited to 1.5°C

# External scenario sources

# Intergovernmental Panel of Climate Change (IPCC)

## Scenarios and pathways across AR6 Working Group reports

**High global warming scenario**

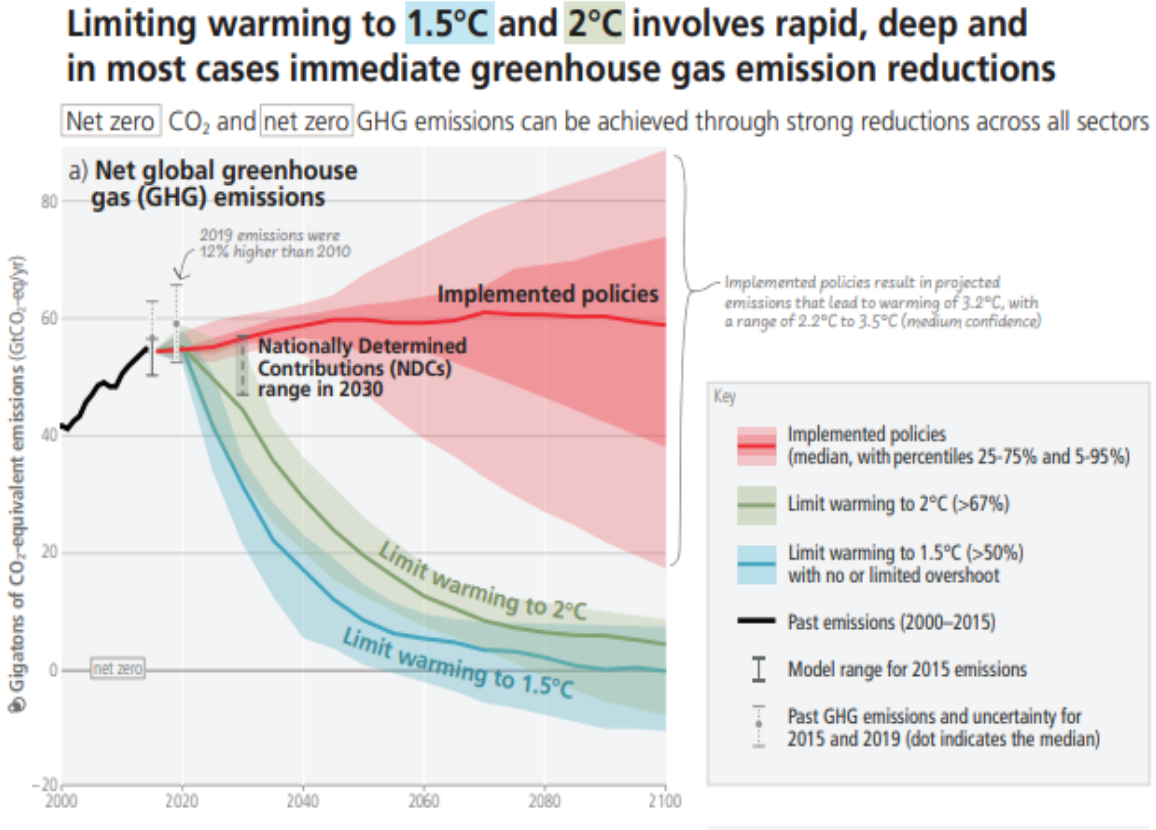
- Limit warming to 3°C
- Limited shift in the social, economic, and technological trends
- Some countries make good progress however others fall short of expectations.
- Slow progress towards SDGs and environmental degradation leading to decrease in overall resources.

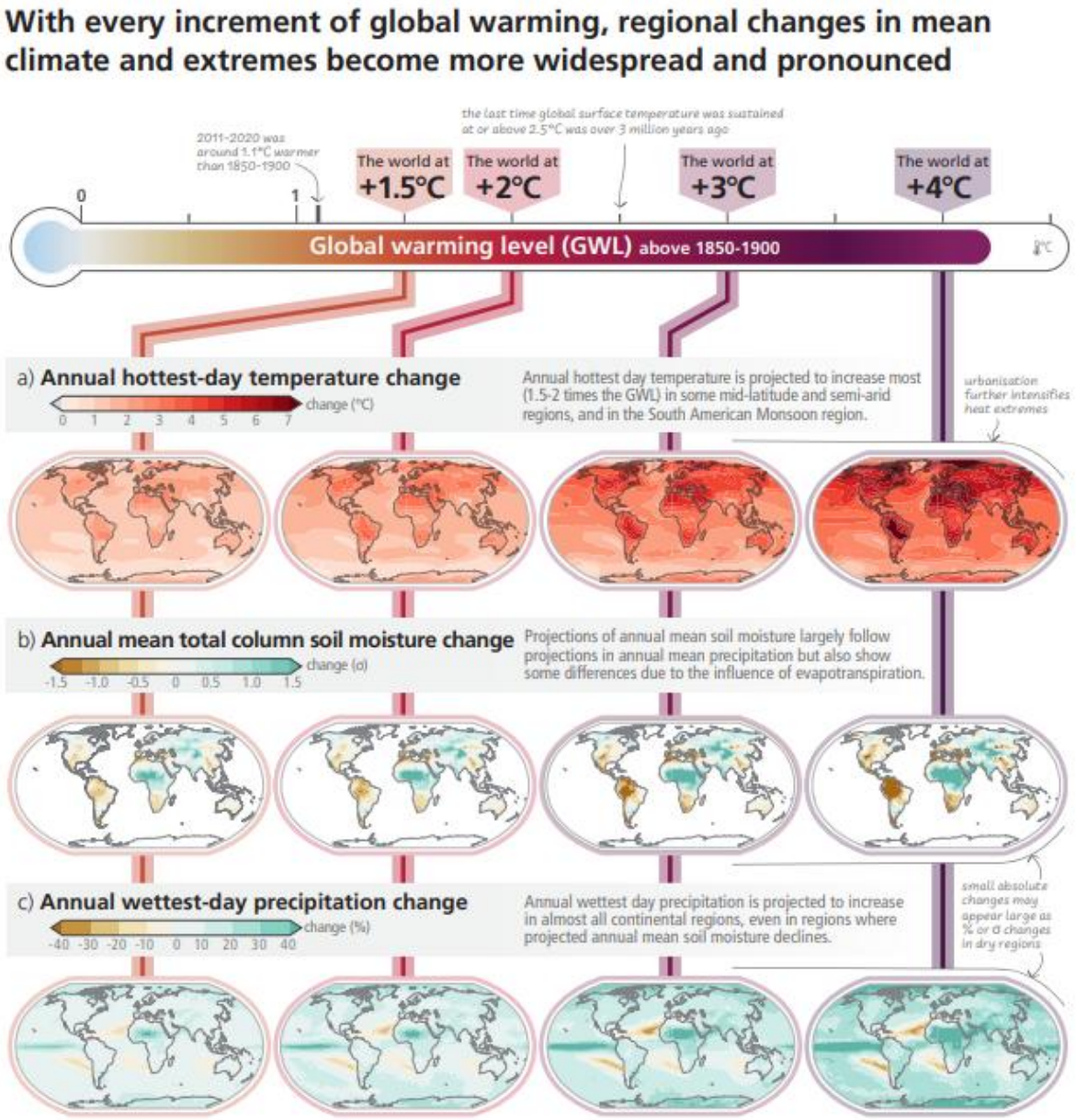
**Low global warming scenario**

- Limit warming to 1.5 °C (no overshoot)
- Gradually but consistently shift towards a more sustainable path.
- The emphasis shifts from economic growth to human well-being with a drive to achieve SDGs
- Reduced inequality across countries.

| Category description | GHG emissions scenarios (SSPx-y*) in WGI & WGII | RCPy |
|---|---|---|
| limit warming to 1.5°C (>50%) with no or limited overshoot*** | Very low (SSP1-1.9) | |
| return warming to 1.5°C (>50%) after a high overshoot*** | | |
| limit warming to 2°C (>67%) | Low (SSP1-2.6) | RCP2.6 |
| limit warming to 2°C (>50%) | | |
| limit warming to 2.5°C (>50%) | | |
| limit warming to 3°C (>50%) | Intermediate (SSP2-4.5) | RCP 4.5 |
| limit warming to 4°C (>50%) | High (SSP3-7.0) | |
| exceed warming of 4°C (>50%) | Very high (SSP5-8.5) | RCP 8.5 |

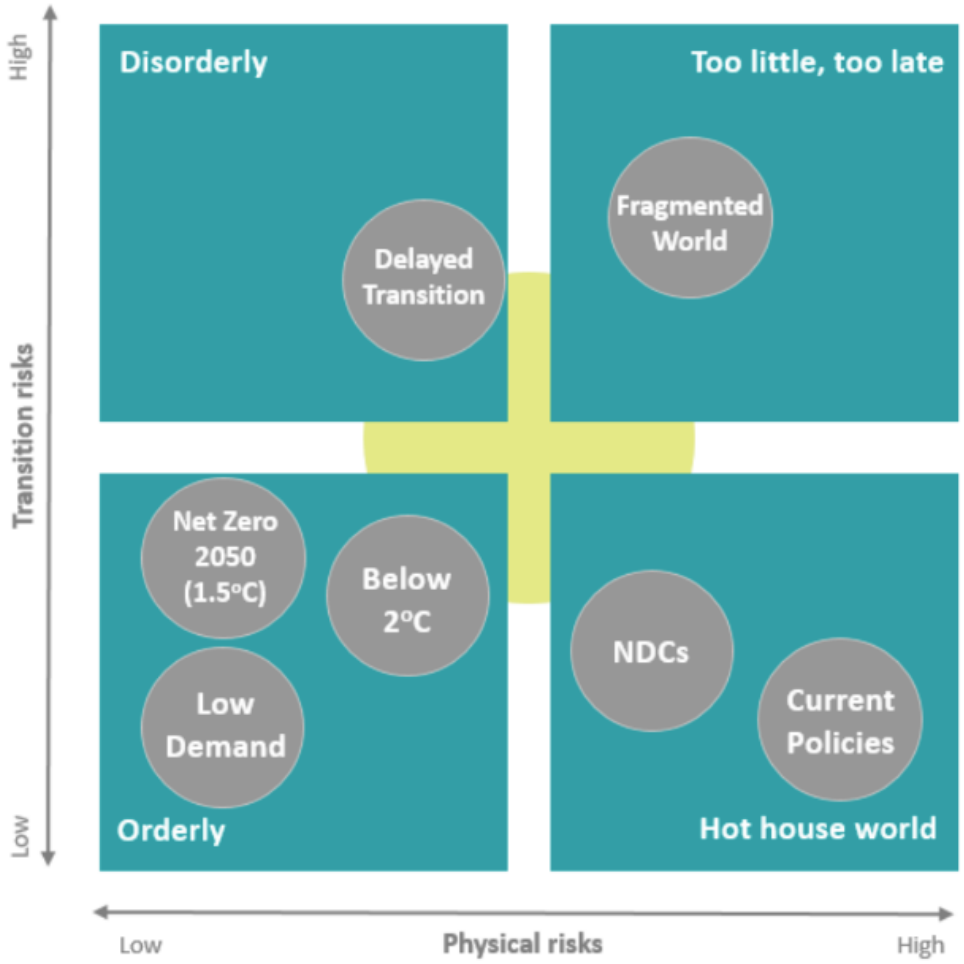
# IPCC scenarios

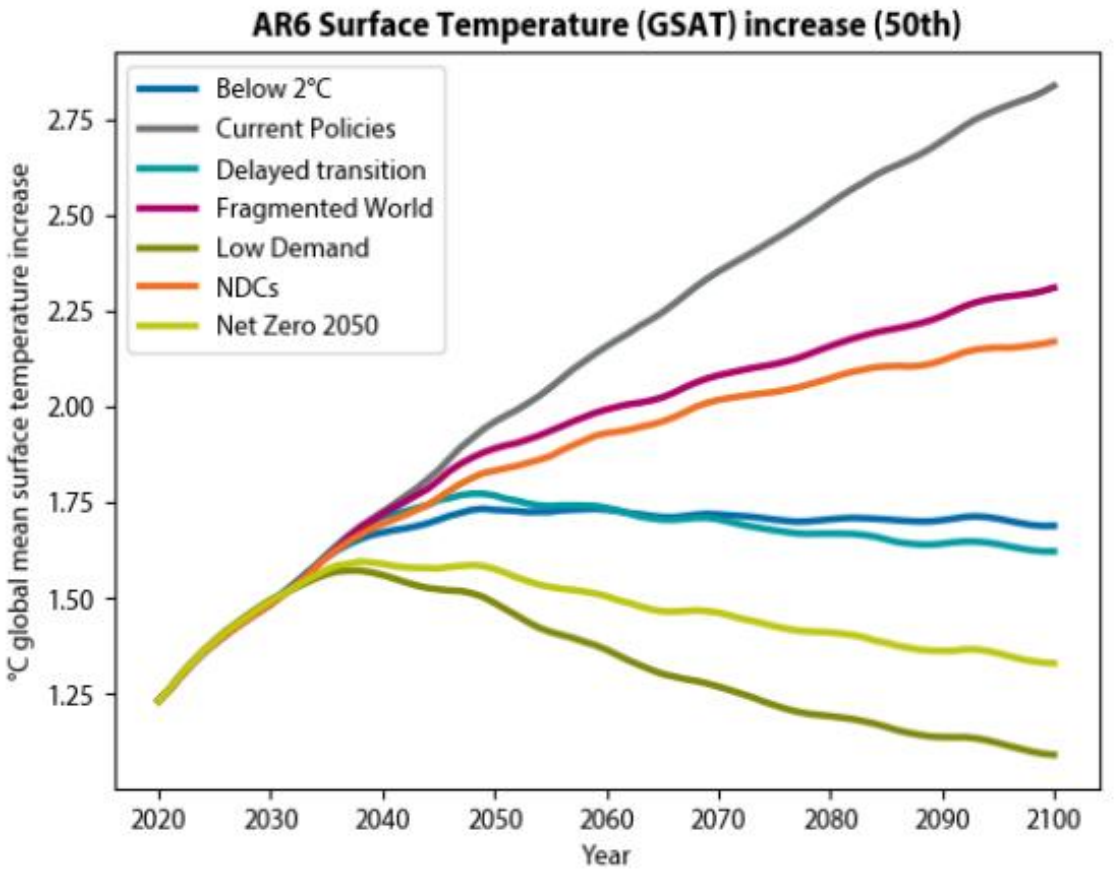


# Network for Greening the Financial System (NGFS)

## Scenarios considering physical and transition risks



# NGFS scenarios

| Scenario | Current Policies | Net Zero 2050 |
|---|---|---|
| Warming | 2.9$^0$C (high) | 1.4$^0$C (low) |
| Policy reaction | None - current policies | Immediate and Smooth |
| Technology change | Slow change | Fast change |
| Carbon dioxide removal | Low use | Medium-high use |
| Regional policy variation | Low variation | Medium variation |
| Risks | Severe physical risks | Significant transition risks |

# International Energy Agency (IEA)

Scenarios developed using Global Energy and Climate (GEC) Model

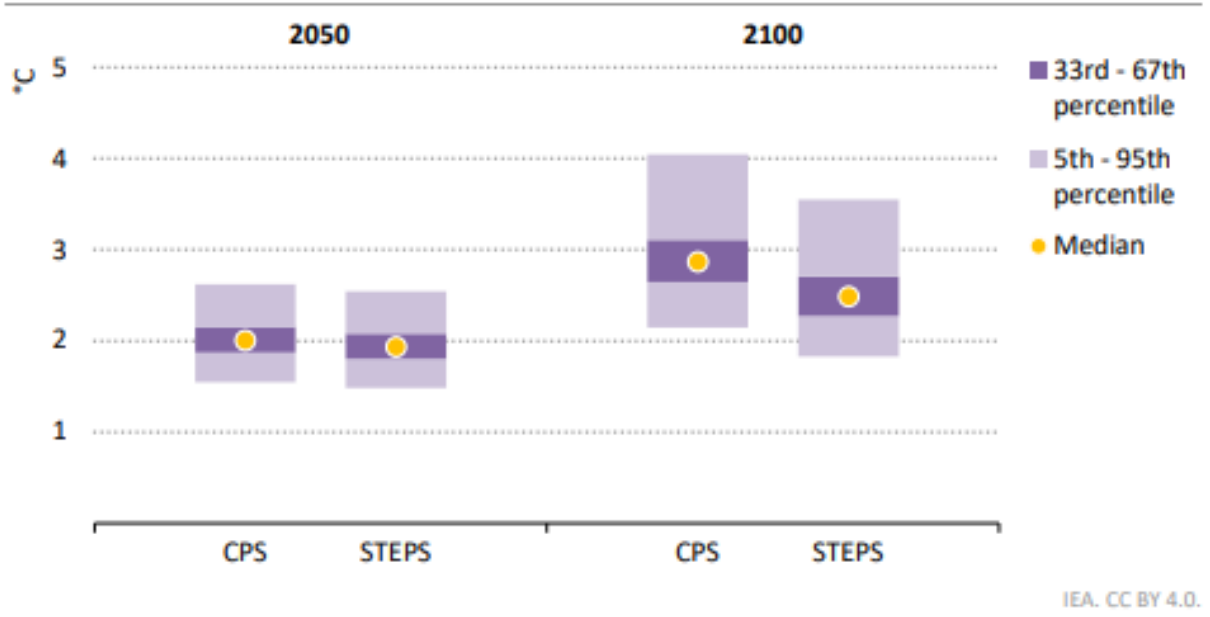
### High global warming scenario

- Current Policies Scenario (CPS)
- Warming – 2.9°C (median)
- Current policy and regulation settings
- Cautious perspective on speed of deployment and integration of new energy technologies

### Low global warming scenario

- Net Zero Emissions by 2050 (NZE)
- Warming below 1.5 °C
- Provides sector-by-sector pathways to achieve targets
- Recognises each country will have its own route

**Figure 5.29 ▷ Temperature rise by scenario in 2050 and 2100**




*Median temperature rise in 2100 is 2.9 °C in the CPS and 2.5 °C in the STEPS; in the CPS there is about an 8% chance of a temperature rise above 4 °C in 2100*

Notes: STEPS = Stated Policies Scenario; CPS = Current Policies Scenario. Figure shows the long-term global mean temperature rise equal to the mid-point of a 20-year average of the combined land and marine near-surface temperature anomaly relative to 1850-1900, corresponding to the Intergovernmental Panel on Climate Change Sixth Assessment Report definition of warming of 0.85 °C between 1995-2014 (IPCC, 2021).

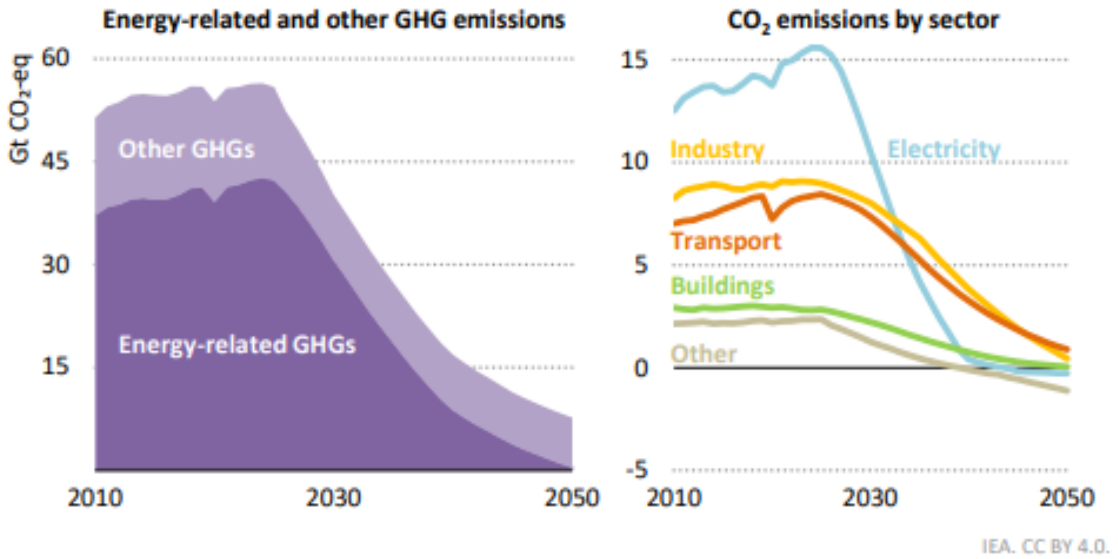
Source: IEA analysis based on the outputs of MAGICC 7.5.3.

# International Energy Agency (IEA)

## NZE and CPS scenarios

### Low global warming scenario (NZE)

**Figure 7.6** ▸ Energy-related and other GHG emissions, and energy-related $CO_2$ emissions by sector in the NZE Scenario, 2010-2050



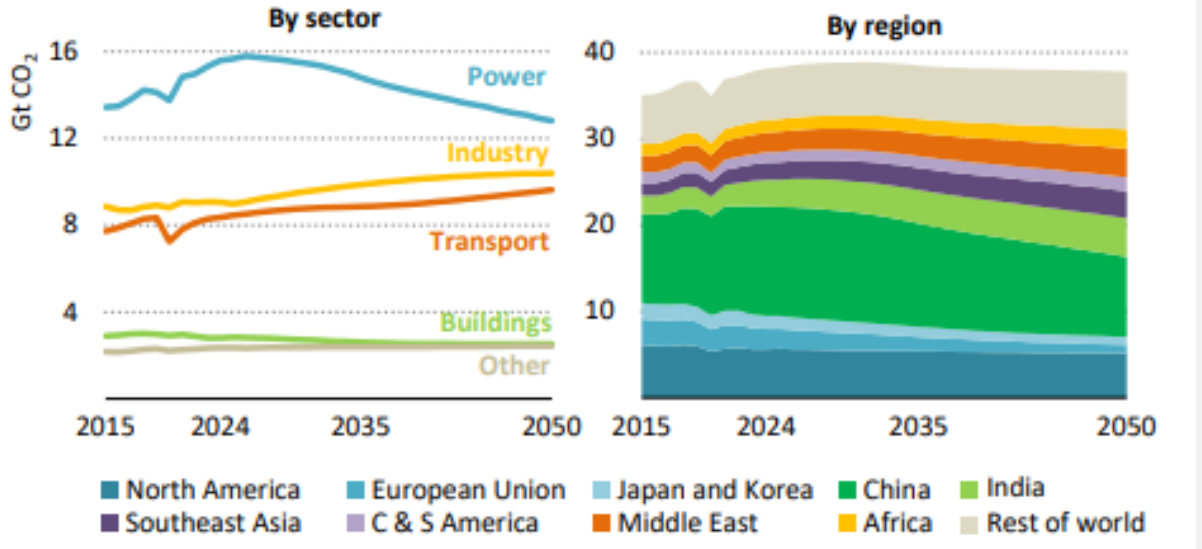

*Global energy-related GHG emissions fall by around 55% by 2035, led by rapid reductions in the electricity sector and in methane emissions*

Note: GHG = greenhouse gases; $CO_2$-eq = carbon-dioxide equivalent. Other includes agriculture, forestry and other land use (AFOLU) and waste.

Sources: AFOLU emissions based on IEA modelling and Land-Use Analytic.

### High global warming scenario (CPS)

**Figure 3.3** ▸ $CO_2$ emissions by sector and region in the CPS, 2015-2050



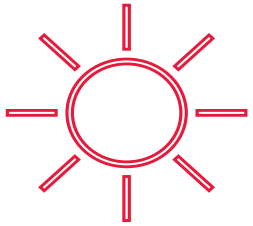

*$CO_2$ emissions increase in industry and transport but decline in power, leading to a broad plateau in emissions through to 2050*

Note: Gt $CO_2$ = gigatonnes of carbon dioxide; C & S America = Central and South America.

# External Scenarios

## Summary of IPCC, NGFS and IEA scenarios

### High warming scenarios

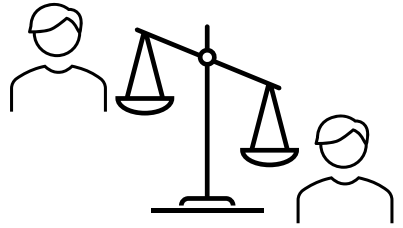


Warming between 2.4ºC - 3ºC

Slow climate action and technology change around the world

Low use of carbon dioxide removal technology

Degrading Environment



Inequality persists

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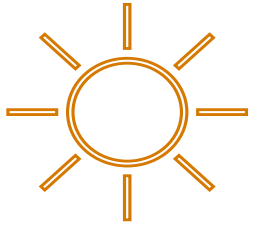
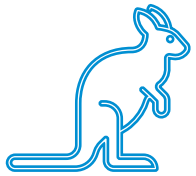
### Low warming scenarios



Warming limited to 1.5ºC



Strong climate action and technology change around the world

Accelerated use of carbon dioxide removal technology

Preserving Nature

Reduced Inequality

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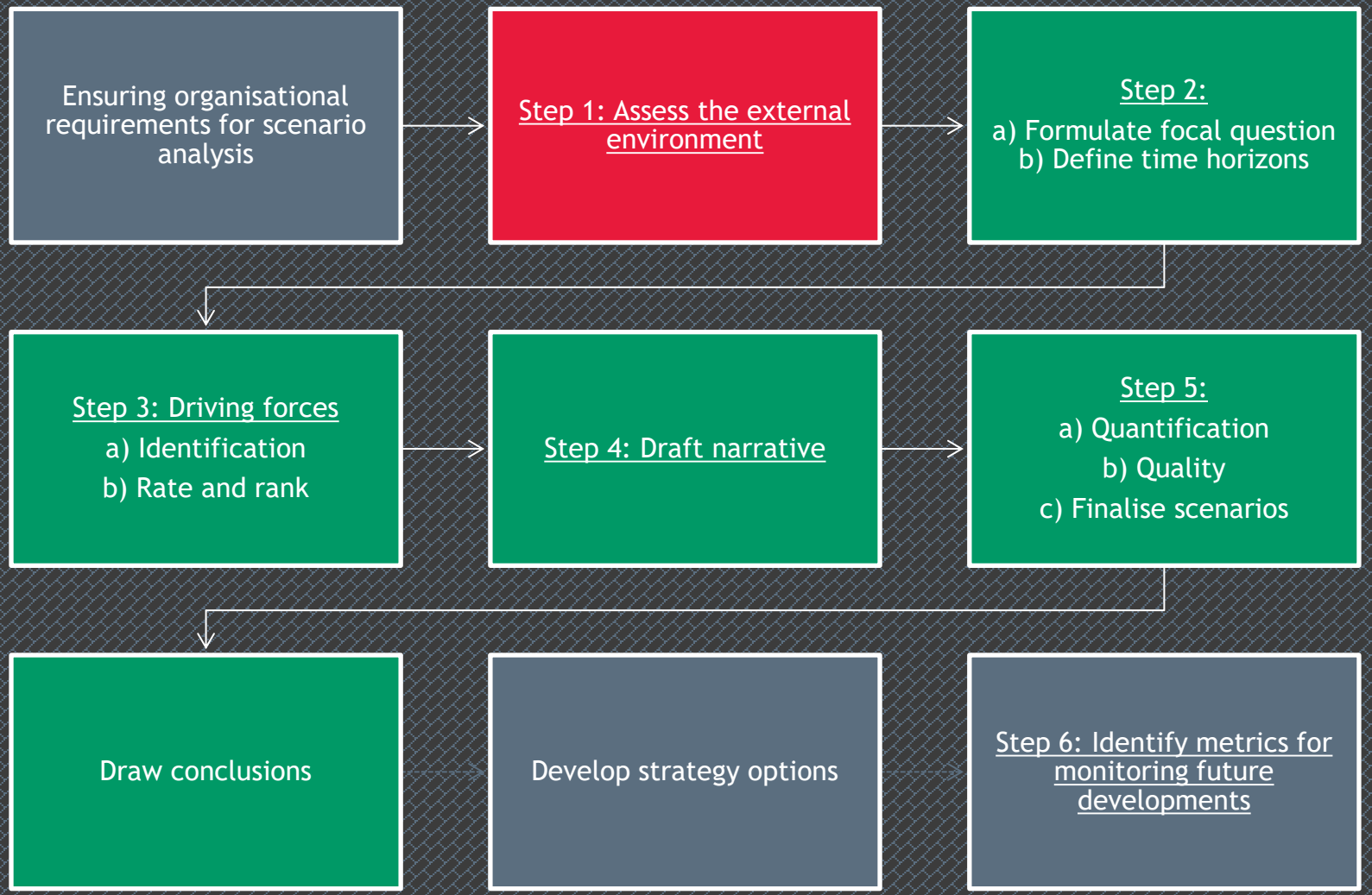
# Part 3
# Scenario development

# Questions to consider

| Looking at the Current Situation | Looking Back | Looking Forward |
|---|---|---|
| • What current climate-related risks do you think the company faces today and that could affect business strategy and ambitions?<br>• What climate-related risks do you think are being underestimated by the company in their ability to meet their business strategy and ambitions?<br>• What is your recent experience of actual climate-related impacts on your specific activity (and more broadly on the company's business)? | • What previous trends, cycles, or risks related to climate do you think might reoccur and impact business strategy and ambitions? | • In your view, which climate-related risks do you think the company needs to get right to fulfill its ambition and mission?<br>• What emerging trends or signals related to climate change concern you?<br>• What do you think could be the potential implications on your specific activity (and more broadly on the company) for climate factors — such as (1) an increase in average global temperature and (2) a low-carbon economy — and when could these occur? |

TCFD Scenario Analysis Guidance (p 21)

# SCENARIO DEVELOPMENT PROCESS



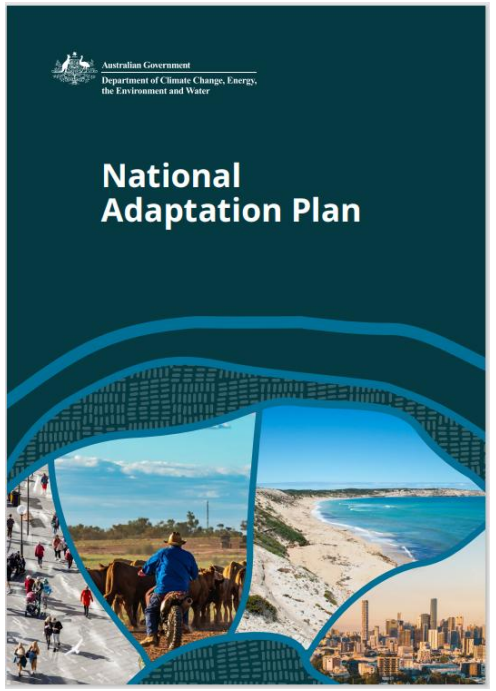
# Step 1 – Assess the external environment

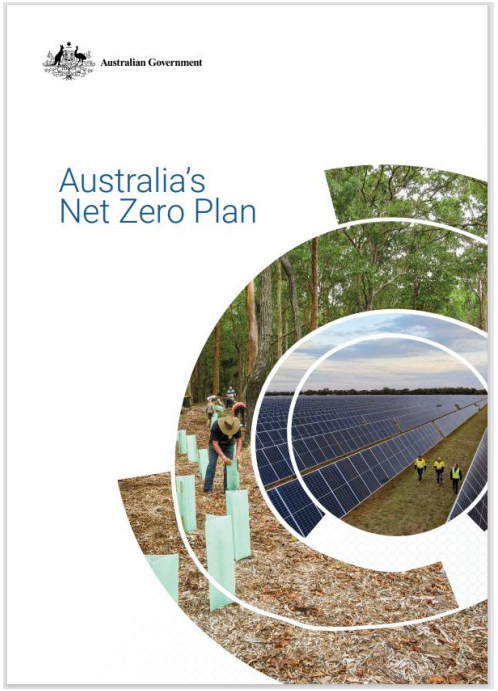
## Past and current trends

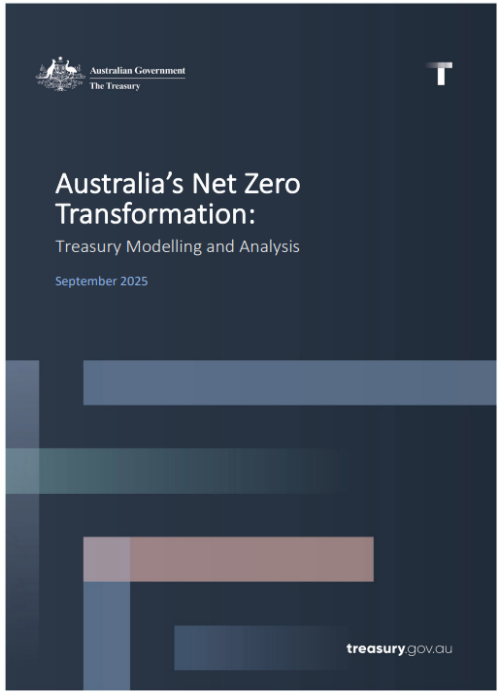
Australia's National Climate Risk Assessment - [Assessing Australia's climate risks - DCCEEW]

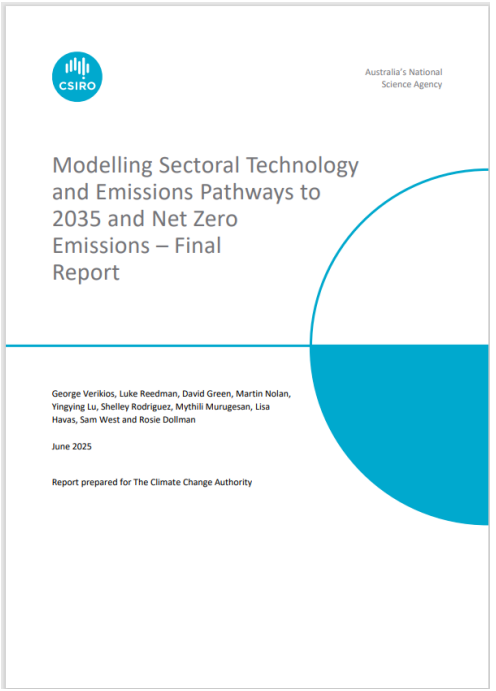

# Step 1 – Assess the external environment

## Australia's 2035 target and path to net zero

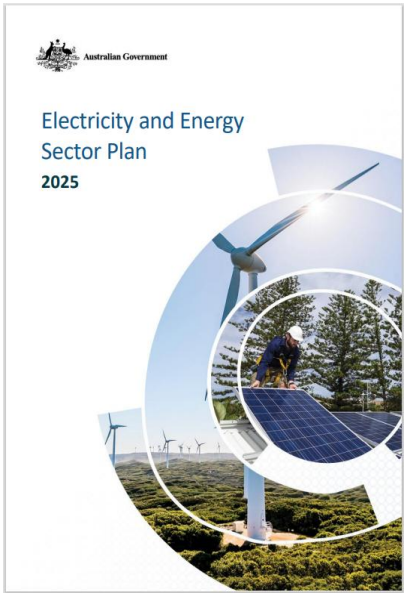



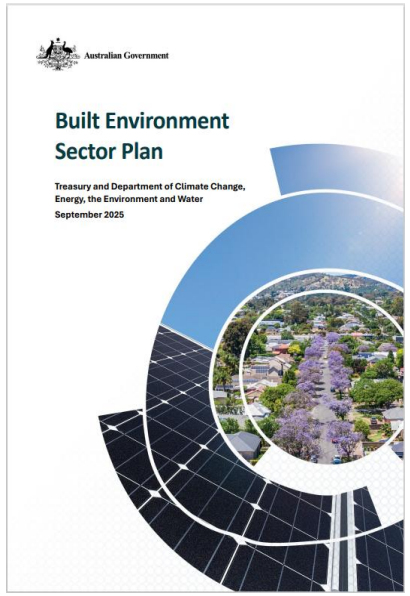

Available at: https://www.climatechangeauthority.gov.au/sites/default/files/documents/2025-09/2035%20Targets%20Advice%20Report.pdf, https://www.dcceew.gov.au/sites/default/files/documents/national-adaptation-plan.pdf, https://www.dcceew.gov.au/sites/default/files/documents/net-zero-report.pdf, https://treasury.gov.au/sites/default/files/2025-09/p2025-700922.pdf and https://www.csiro.au/-/media/Environment/25-00150_CSIRO-Modelling-and-Additional-Scenario-Summary-Report_FINAL_250903.pdf.

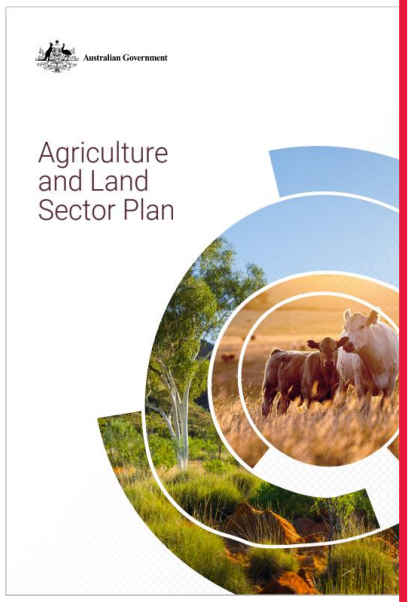
# Step 1 – Assess the external environment

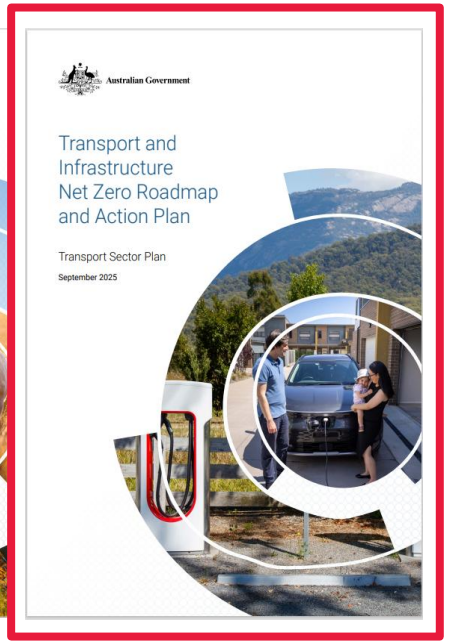
## Australia's sector plans






Available at: https://www.dcceew.gov.au/sites/default/files/documents/electricity-energy-sector-plan-2025.pdf, https://www.industry.gov.au/sites/default/files/2025-09/disr-industry-sector-plan.pdf, https://www.industry.gov.au/sites/default/files/2025-09/disr-resources-sector-plan.pdf, https://treasury.gov.au/sites/default/files/2025-09/p2025-698821.pdf, https://www.agriculture.gov.au/sites/default/files/documents/agriculture-and-land-sector-plan.pdf and https://www.infrastructure.gov.au/sites/default/files/documents/transport-and-infrastructure-net-zero-roadmap-and-action-plan.pdf.

# Step 3 – Identify, rate and rank driving forces

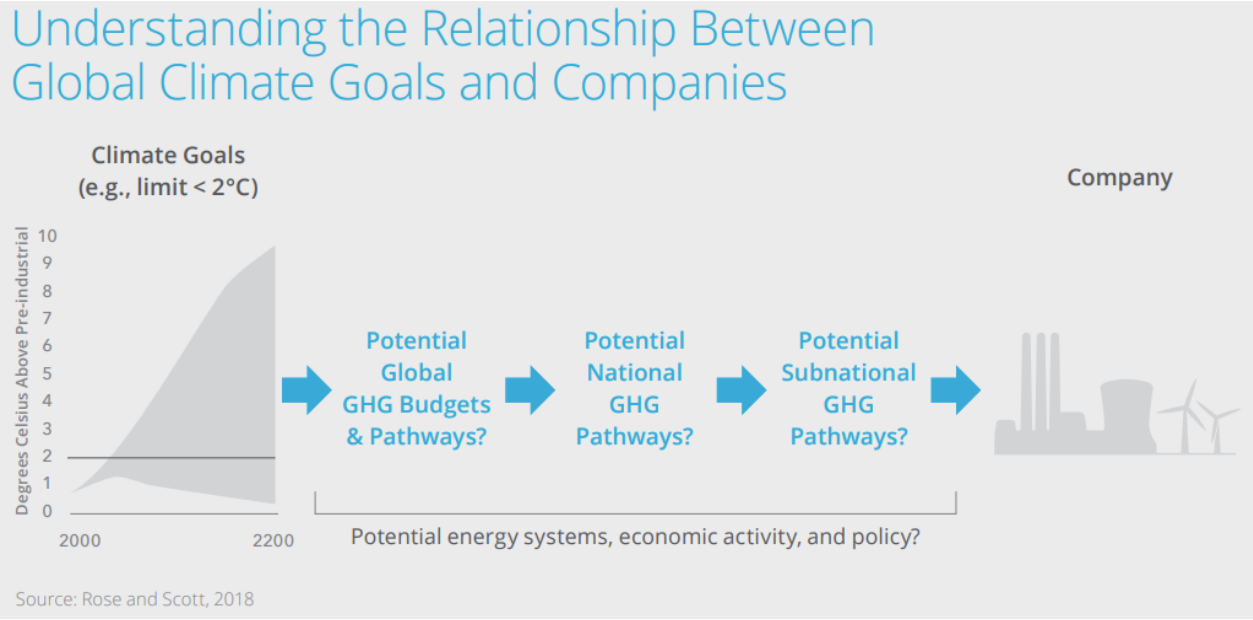
External forces relevant to focal question that directly affect company (or key stakeholder) ranked by level of uncertainty and impact.

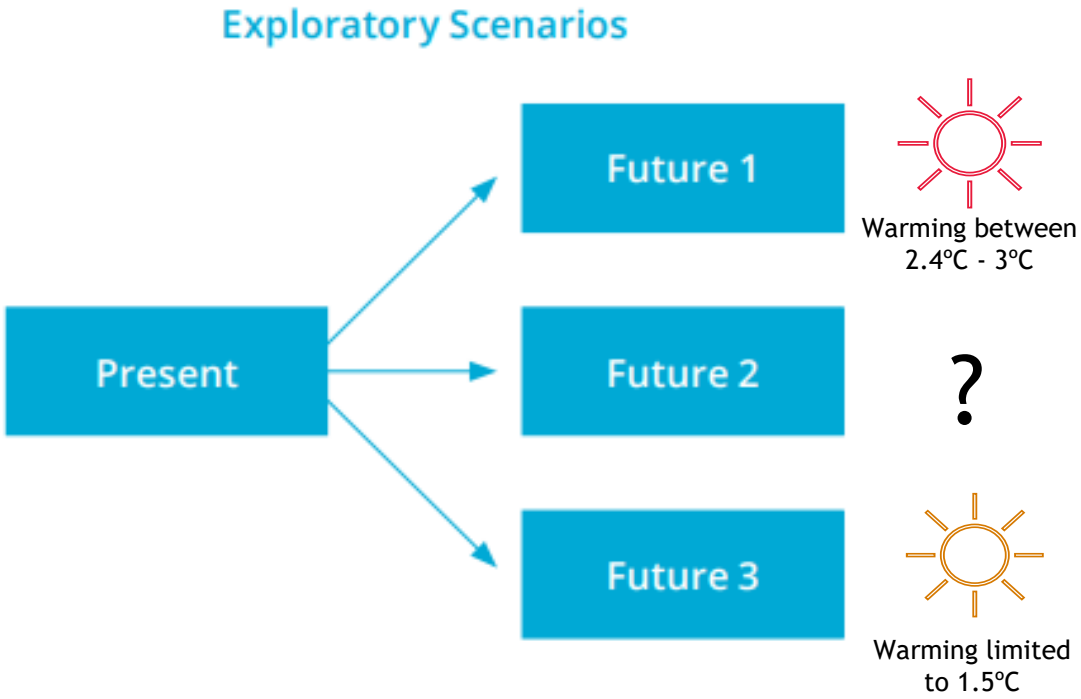



TCFD Technical supplement (p 77)

# Step 4 – Draft narrative for scenarios

- Determined by key drivers – high impact/high uncertainty
- Each scenario focuses on different combination of the driving forces
- Describe impact over the scenario time horizon
- Link global climate scenarios to a company-level scale
- Challenge conventional thinking about the future



# Step 5a – Quantification

- Key trends and drivers
- Company and industry KPIs
- Plausible impacts on markets, investments, suppliers and customers
- Impacts on revenue, costs, capital expenditure, etc.
- Financial modelling

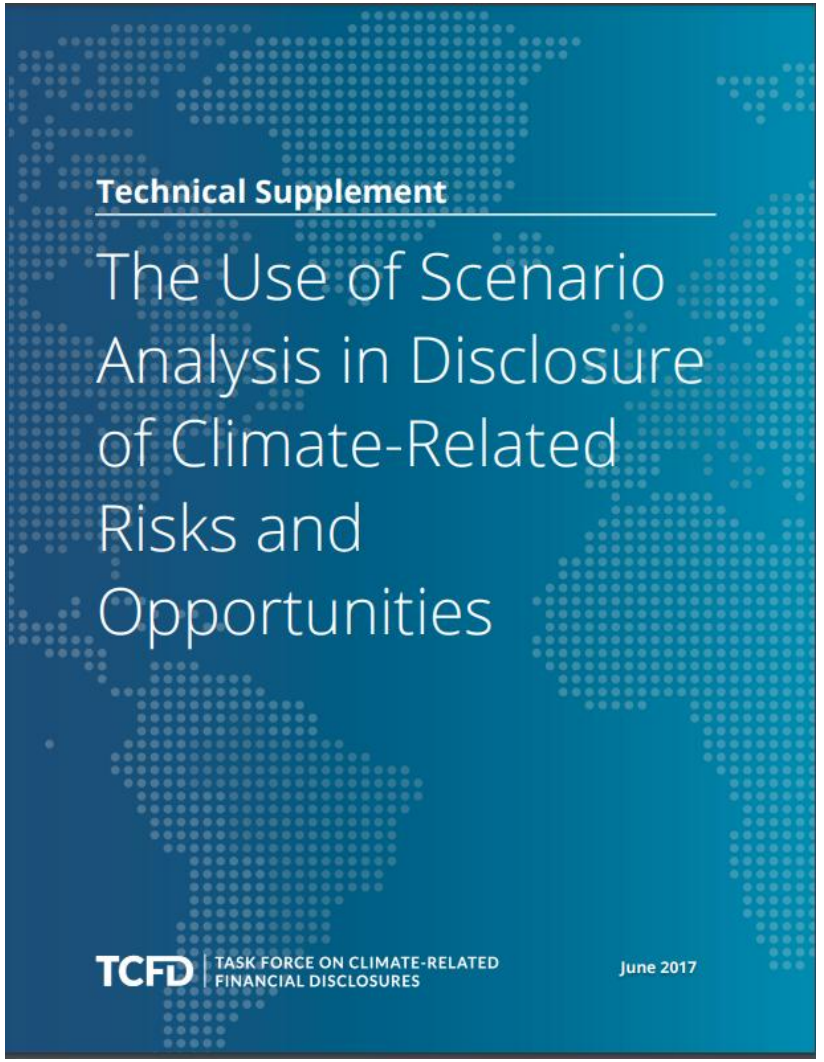
# Additional resources

# TCFD Final Report

https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf


# TCFD Technical Supplement

https://assets.bbhub.io/company/sites/60/2020/10/FINAL-TCFD-Technical-Supplement-062917.pdf

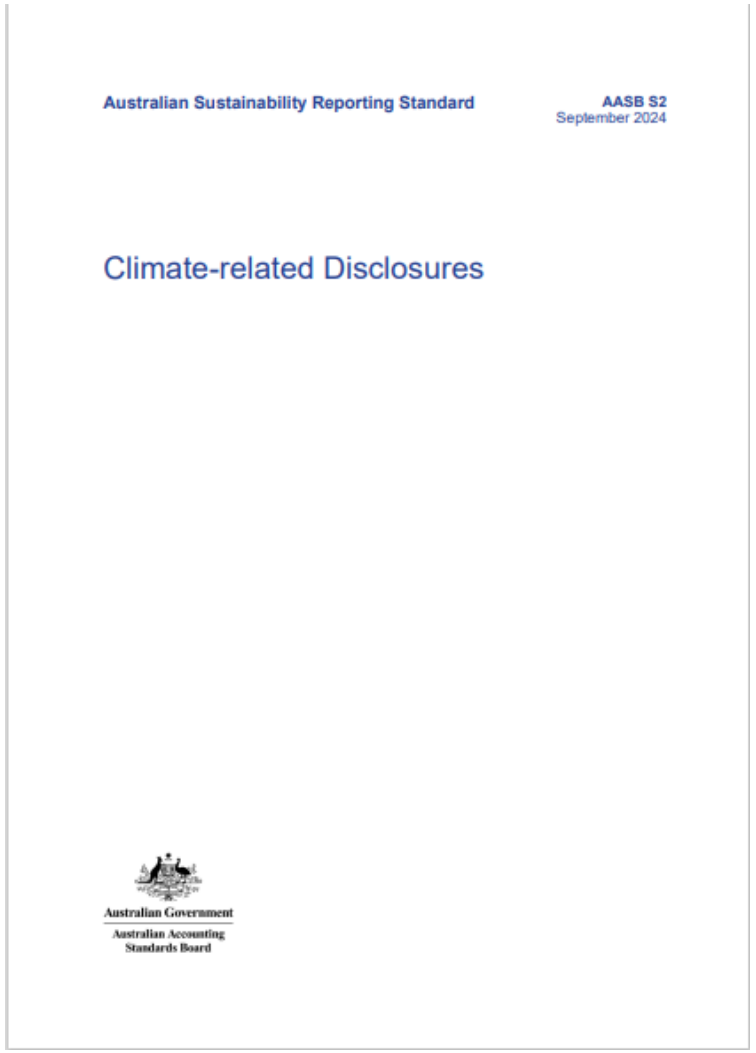


# TCFD Guidance on Scenario Analysis

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Scenario-Analysis-Guidance.pdf


# Requirements of AASB S2

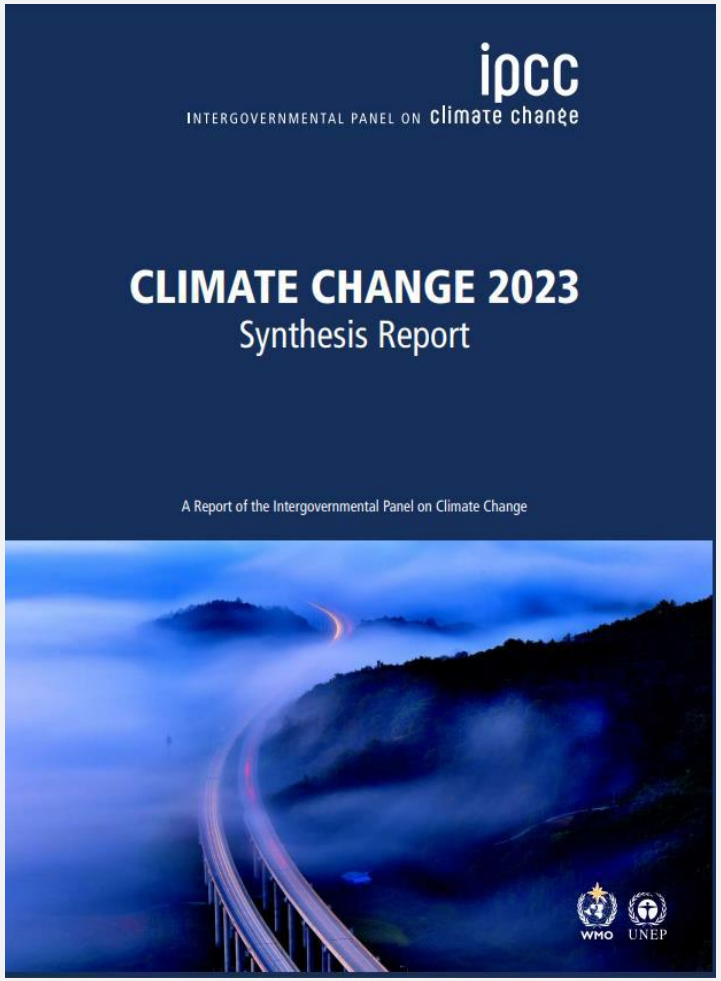
https://standards.aasb.gov.au/sites/default/files/2024-10/AASBS2_09-24.pdf



# External scenarios

**The Intergovernmental Panel of Climate Change (IPCC)**

https://www.ipcc.ch/




**Network for Greening the Financial Sector**

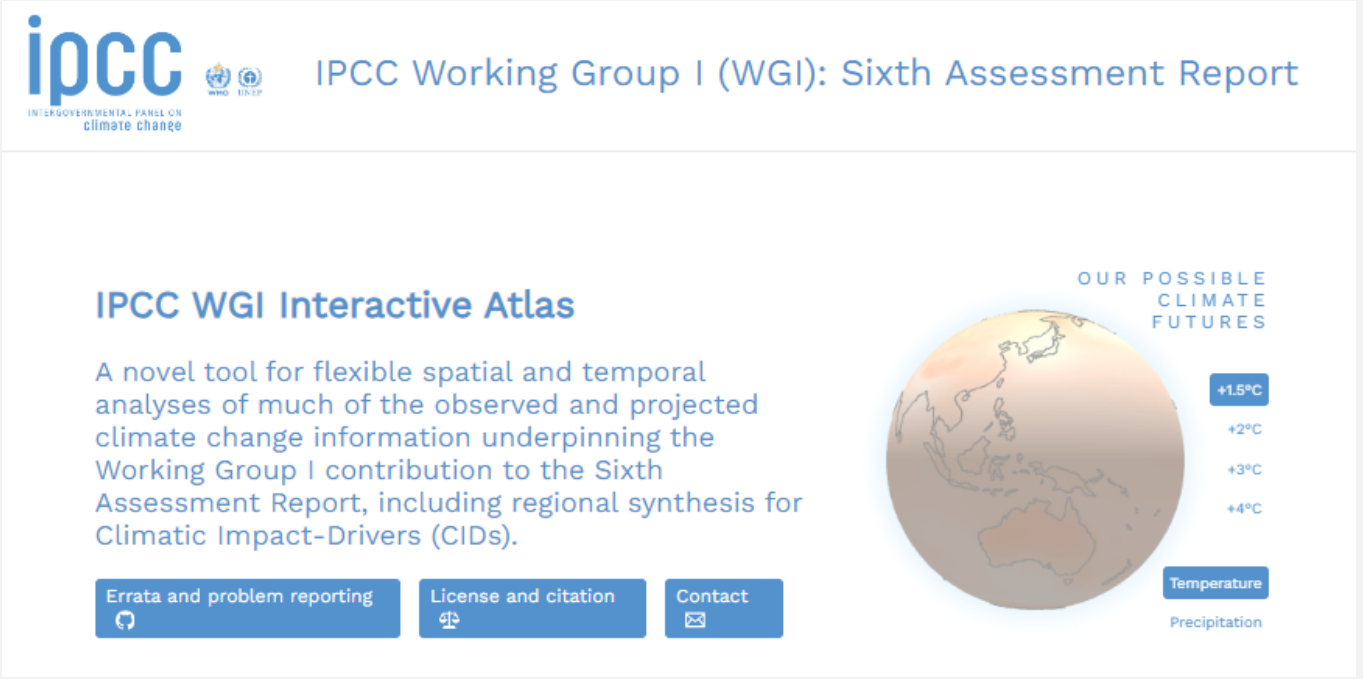
https://www.ngfs.net/ngfs-scenarios-portal/

NGFS
Central Banks and Supervisors
Network for Greening the Financial System

# Physical risk models

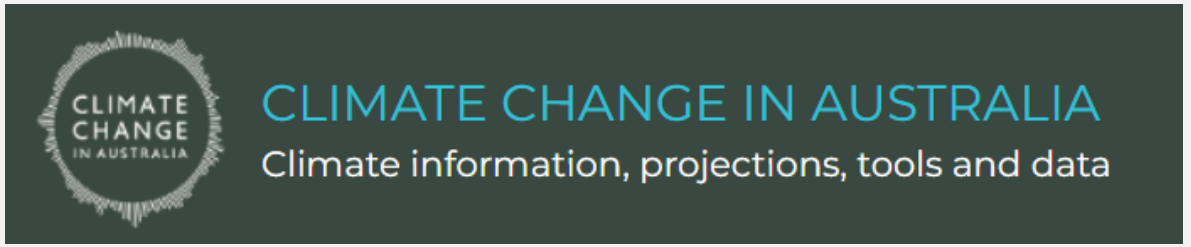
**IPCC WGI Interactive Atlas**

https://interactive-atlas.ipcc.ch/




**CSIRO**

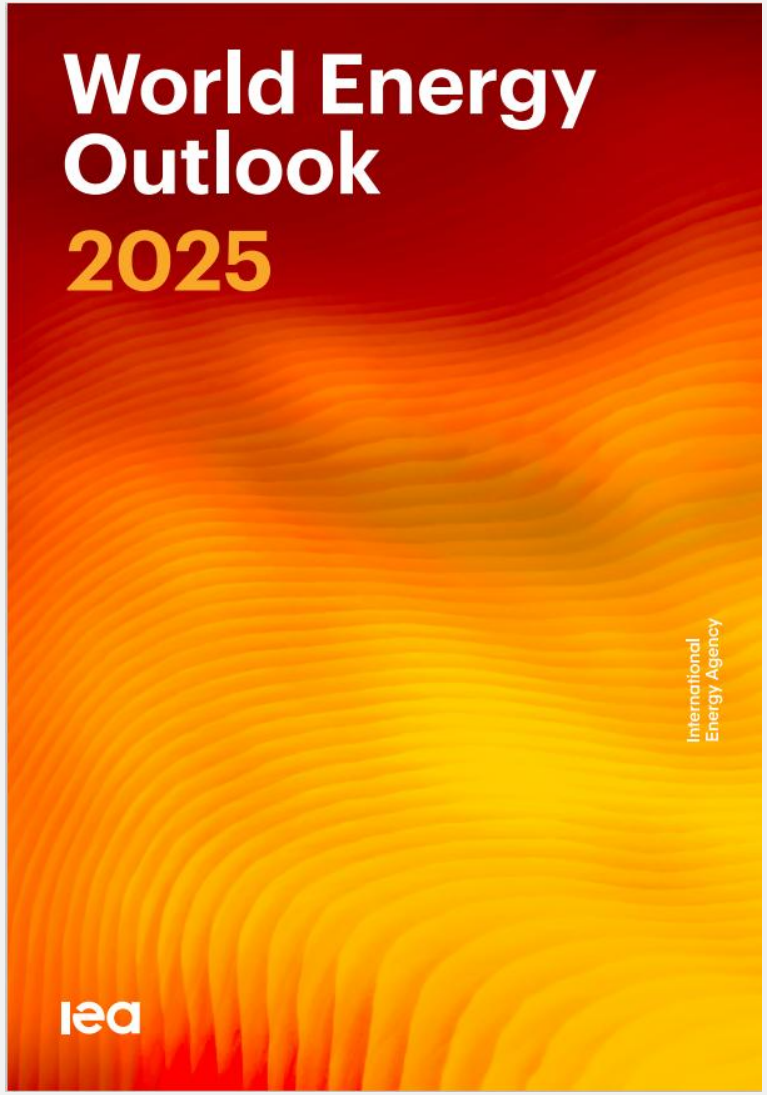
https://www.climatechangeinaustralia.gov.au/en/

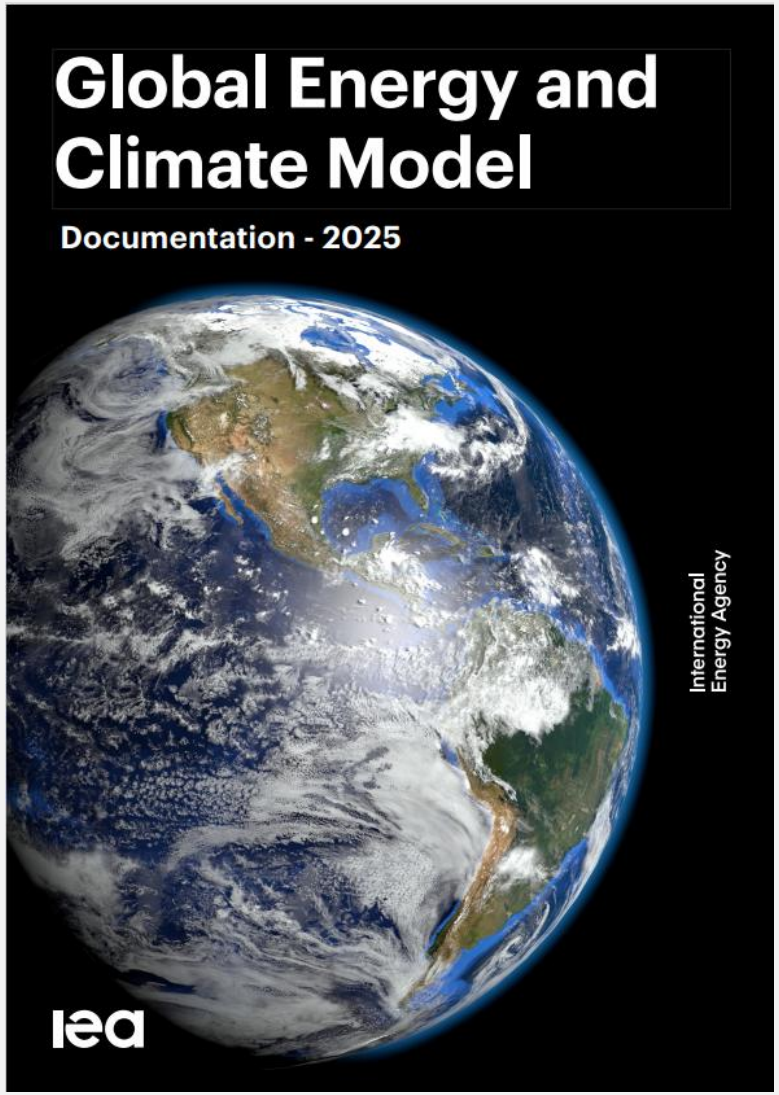


# External scenarios

**International Energy Agency**

https://www.iea.org/



# Mandatory requirement to conduct a scenario analysis

AASB S2, Appendix A, paragraphs B1 to B18

2 This application guidance (paragraphs B1–B18) draws on the range of practice outlined in documents published by the Task Force on Climate-related Financial Disclosures (TCFD), including *Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities* (2017) and *Guidance on Scenario Analysis for Non-Financial Companies* (2020).

BDO

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# Unpacking pillar 3: Risk Management

# Overview of the TCFD Recommendations

https://assets.bbhub.io/company/sites/60/2022/02/TCFD-Risk-Management-Workshop.pdf

| Governance | Strategy | Risk Management | Metrics and Targets |
|---|---|---|---|
| Disclose the company's governance around climate-related risks and opportunities. | Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material. | Disclose how the company identifies, assesses, and manages climate-related risks. | Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material. |
| Recommended Disclosures | Recommended Disclosures | **Recommended Disclosures** | Recommended Disclosures |
| a) Describe the board's oversight of climate-related risks and opportunities. | a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term. | a) Describe the company's processes for identifying and assessing climate-related risks. | a) Disclose the metrics used by the company to assess climate-related risks and opportunities in line with its strategy and risk management process. |
| b) Describe management's role in assessing and managing climate-related risks and opportunities. | b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning. | b) Describe the company's processes for managing climate-related risks. | b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. |
| | c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. | c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management. | c) Describe the targets used by the company to manage climate-related risks and opportunities and performance against targets. |

# Overview of AASB S2

| Governance | Strategy | Risk Management | Metrics and Targets |
|---|---|---|---|
| Those charge with governance | Climate-related risks and opportunities (physical risks and transition risks) | Processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks | Carbon footprint (scope 1, 2 & 3 emissions) |
| Management | Climate resilience of strategy and business model | Climate-related scenario analysis | How targets have been set and progress towards meeting targets |
| | Effects of the above on financial statements | Integrated into overall risk management process and risk register | Will carbon credits be used? |

# Importance of risk management

# Importance of risk management

https://assets.bbhub.io/company/sites/60/2022/02/TCFD-Risk-Management-Workshop.pdf

- Disclosing risk management processes provides important context for investors and other users of disclosure
- Investors and other users of climate-related financial disclosures are interested in understanding how a company's climate-related risks are identified, assessed, and managed and whether those processes are integrated into existing risk management processes. Such information supports users of climate-related financial disclosures in evaluating the company's overall risk profile and risk management activities
- Based on a survey to understand the most useful climate-related information for making financial decisions, users identified the following types of risk management information as the most useful:
  - Description of whether the company **considers existing and emerging regulatory requirements** related to climate change (e.g., limits on emissions) as part of its risk assessment processes
  - The company's processes for identifying and assessing climate-related risks
  - The company's processes for **prioritizing climate-related risks**, including how materiality determinations are made
  - The company's processes for managing climate-related risks, including **how it makes decisions to mitigate, transfer, accept, or control** those risks
  - How the company's processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management

# Objective of risk management

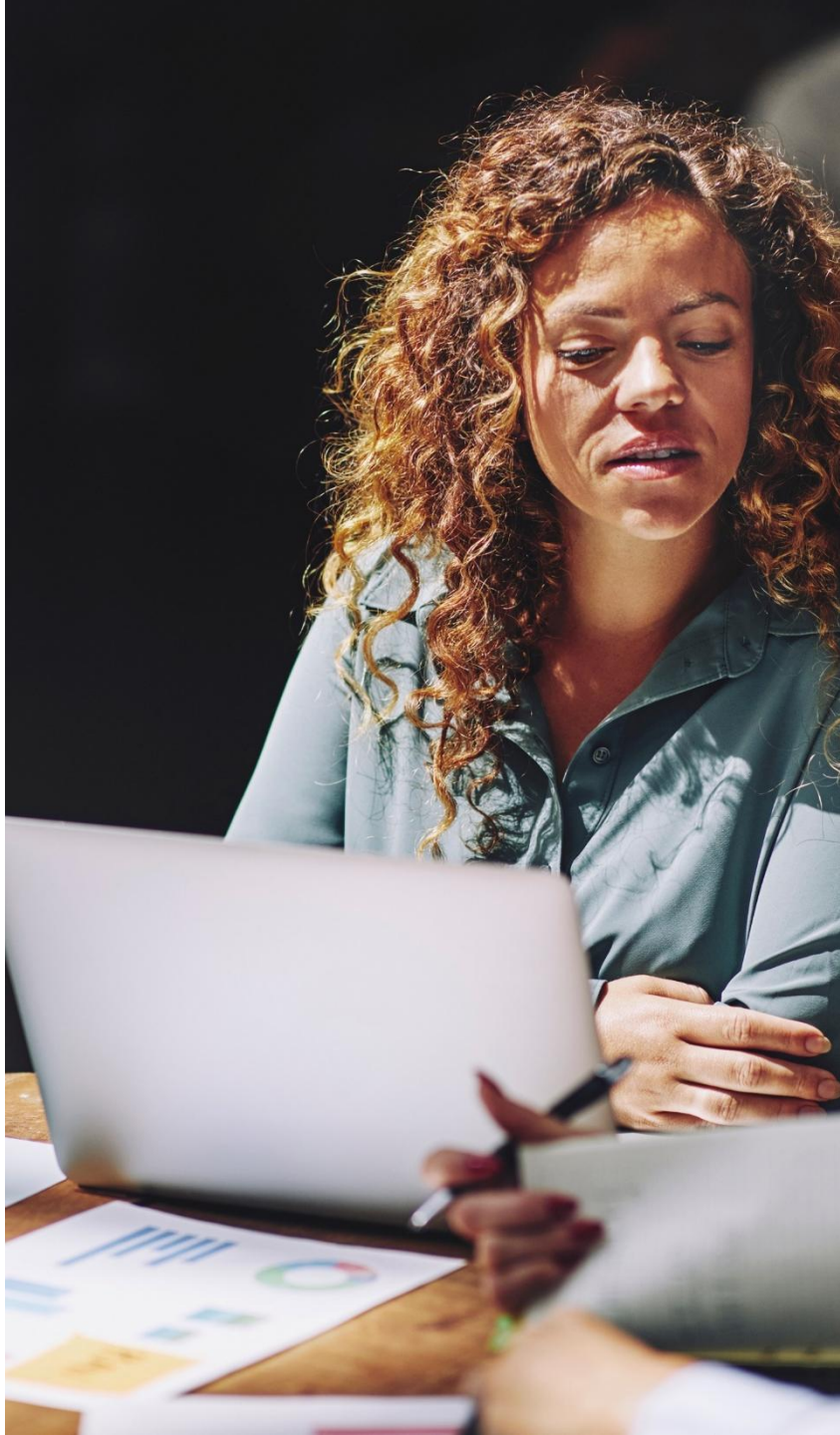
# Pillar 3: Risk Management

AASB S2 paragraphs 8 to 23

## Objective

- The objective of climate-related financial disclosures on risk management is to enable users of general purpose financial reports to understand:
  - An entity's processes to
    - Identify,
    - Assess,
    - Prioritise and
    - Monitor

    climate-related risks and opportunities
  - Whether and how those processes are integrated into and inform the entity's overall risk management process

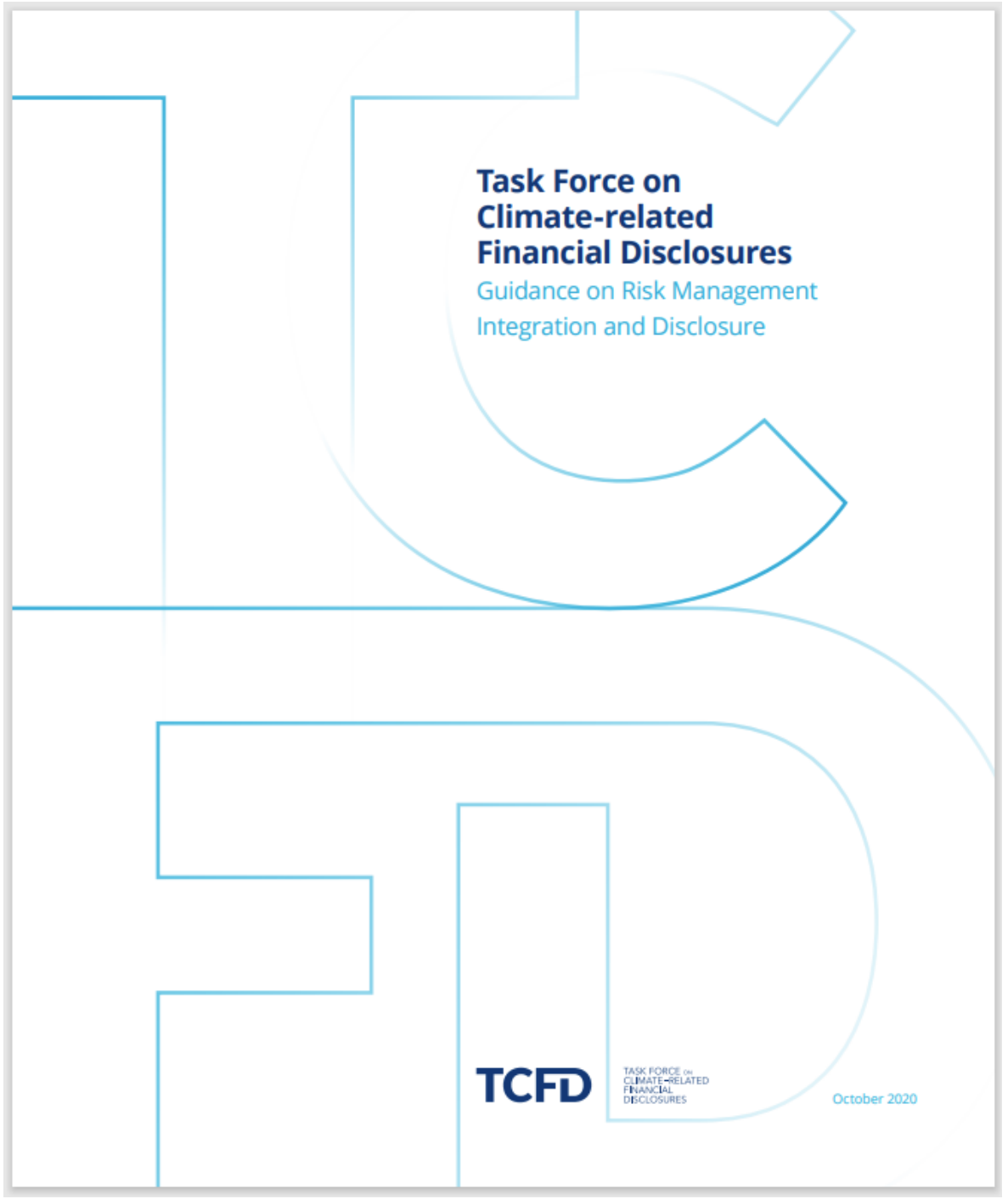


# Disclosure requirements

# TCFD guidance

# TCFD guidance

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf



# TCFD guidance

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

*"Incorporating climate change risks into the existing risk management framework is likely to be the best way to ensure that the impact of climate change is properly considered in decision making."*[5]

# Unique characteristics of climate-related risks

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Figure C1

## Possible Implications of Different Temperature Increases

| Warming by 2100 | <2°C | | 3°C | 5°C |
|---|---|---|---|---|
| ***Physical Impacts*** | 1.5 °C | 2 °C | | |
| Sea-level rise | 0.3-0.6 m | 0.4-0.8 m | 0.4-0.9 m | 0.5-1.7 m |
| Chance of ice-free Arctic summer | 1 in 30 | 1 in 6 | 4 in 6 (63%) | 6 in 6 (100%) |
| Frequency of extreme rainfall | +17% | +36% | +70% | +150% |
| Increase in wildfire extent | x1.4 | x1.6 | x2.0 | x2.6 |
| People facing extreme heatwaves | x22 | x27 | x80 | x300 |
| Land area hospitable to malaria | +12% | +18% | +29% | +46% |
| ***Economic Impacts*** | | | | |
| Global GDP impact (2018: $80tn) | -10% | -13% | -23% | -45% |
| Stranded assets | Transition: fossil fuel assets (supply, power, transport, industry) | | Mixed: some fossil fuel assets and some physical stranding | Physical: uninhabitable zones, agriculture, water-intense industry, lost tourism |
| Food supply | Changing diets, yield loss in tropics | | 24% yield loss | 60% yield loss, 60% demand increase |

# Unique characteristics of climate-related risks

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table C1

## Characteristics of Climate-Related Risks

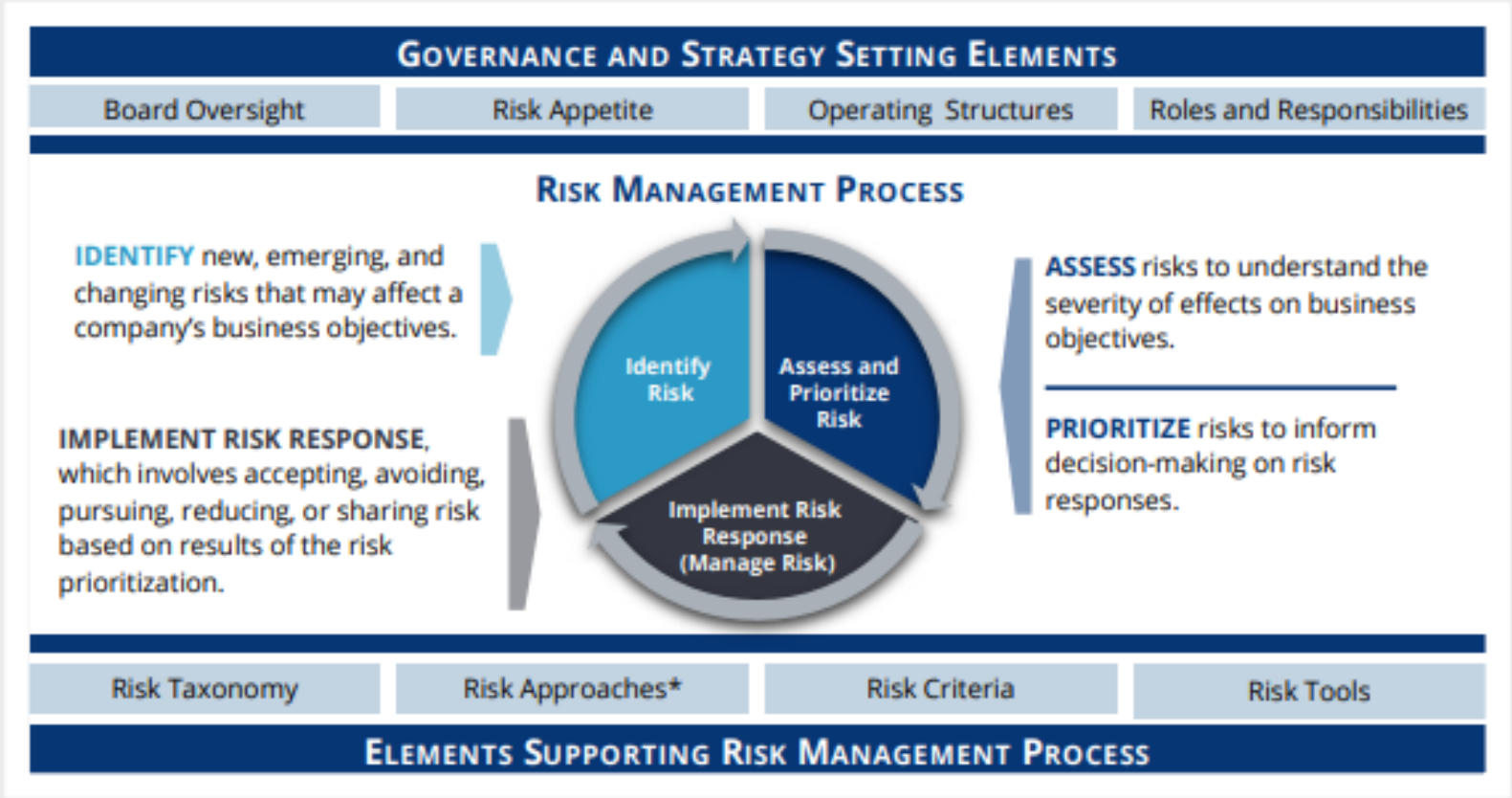
| | |
|---|---|
| Different effects based on geography and activities | The effects of climate change and climate-related risks occur on **local, regional, and global scales with different implications** for different businesses, products and services, markets, operations, and value chains, among others. |
| Longer time horizons and long-lived effects | Some climate-related risks exist and play out **over time horizons that stretch beyond traditional business planning and investment cycles**. These risks and related impacts may occur as a result of decades-long changes in driving forces (e.g., greenhouse gas concentrations in the atmosphere) leading to climate-related physical or transition risk changes over the short, medium, and long term. |
| Novel and uncertain nature | Many of the effects of climate change have no precedent, limiting the ability to apply statistical and trend analysis based on historical data. **Climate change is a dynamic and uncertain phenomenon** and possible mitigation responses are also complex, with many unknowns such as the development and deployment of critical technologies and adaptation strategies as well as changing market and consumer behaviors. |
| Changing magnitude and nonlinear dynamics | Climate-related risks may manifest at different scales over time, with increasing severity and scope of impacts. Climate systems may exhibit thresholds and tipping points that result in **large, long-term, abrupt, and possibly irreversible changes**.[10] Understanding the sensitivities of tipping points in the physical climate system, as well as in ecosystems and society, is essential for understanding climate-related risks. |
| Complex relationships and systemic effects | Risks associated with climate change are **interconnected across socioeconomic and financial systems**. Such interconnected risks are often characterized by knock-on effects and systemic effects, requiring a multidimensional perspective to assess the short-, medium-, and long-term implications for a company. |

# Integration in practice: Key principles and initial steps

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Figure D1

## Common Risk Management Processes and Key Elements



# Sample risk register

| | | | | | Inherent Risk Rating | | | Current Control Environment | | Residual Risk | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ref | Risk Name | Description and Cause | Category | Risk Owner | Likelihood | Consequences | Rating | Existing Controls | Existing Control Rating | Residual Risk Rating | Action Plan |
| | | | Actute physical | | | | | | | | |
| | | | Chronic physical | | | | | | | | |
| | | | Policy & legal | | | | | | | | |
| | | | Technology | | | | | | | | |
| | | | Market (customer) | | | | | | | | |
| | | | Reputation | | | | | | | | |
| | | | Resource | | | | | | | | |
| | | | Products and services | | | | | | | | |
| | | | Market (capital & assets) | | | | | | | | |
| | | | | | | | | | | | |

# Inherent risk rating

| Likelihood | Consequences | | | | | |
|---|---|---|---|---|---|---|
| | Ratings | 1 | 2 | 3 | 4 | 5 |
| | 5 | S | H | H | H | H |
| | 4 | S | S | H | H | H |
| | 3 | M | M | S | S | H |
| | 2 | L | L | M | S | S |
| | 1 | L | L | L | M | S |

## Likelihood (not taking into account existing controls)

| Level | Descriptor | Description |
|---|---|---|
| 5 | Almost Certain | Is expected to occur at some time |
| 4 | Likely | Will probably occur based on previous experience |
| 3 | Possible | May occur at some time |
| 2 | Unlikely | Could occur at some time but chances are remote |
| 1 | Rare | May occur only in exceptional circumstances |

## Consequences

| Level | Consequence | Example |
|---|---|---|
| 5 | Extreme | High regulatory impact, high client impact, financial loss in excess of $5m, major effect on operations and ongoing viability, greater than 10% impact on targets, adverse media attention, continuation of business jeopardised |
| 4 | Major | High regulatory impact, enforcement action by regulator, medium client and staff impact, potential for legal action, financial loss up to $2m, major effect on operations, up to 10% impact on targets. |
| 3 | Moderate | Regulatory impact, medium client and staff impact, financial loss up to $200k, some effect on operations, up to 5% impact on targets. |
| 2 | Minor | No regulatory impact, low client impact, financial loss up to $50k, no effect on operations, up to 1% impact on targets |
| 1 | Insignificant | No regulatory impact, no client or staff impact, no financial loss, no impact on targets |

# Inherent risk rating

**Table 3b.2: Examples of impact prioritization criteria**

| Risk rating | Definition |
|---|---|
| **Catastrophic** | • Financial loss: [ ]% of earnings before interest, taxes, depreciation and amortization (EBITDA) or more than [ ]% impact on share price<br>• International negative media coverage for more than six months that results in at least [ ]% revenue loss<br>• More than [ ]% employee turnover<br>• Prosecution, fines and litigation greater than [ ]% of expenses<br>• Threatened or actual loss of [ ]% or more strategic customers |
| **High** | • Financial loss: [ ]% of EBITDA or share price<br>• Reputation damage from media coverage that persists for one to six months and results in [ ]% nonrecurring revenue loss<br>• Results from employee survey showing staff morale more than [ ]% less than peer organizations<br>• Threatened or actual loss of [ ]% strategic customers |
| **Medium** | • Financial loss: [ ]% of EBITDA or share price<br>• Reputation damage from media coverage that persists for less than one month and results in [ ]% nonrecurring revenue loss<br>• Results from employee survey showing morale [ ]% less than peer organizations<br>• Threatened or actual loss of [ ]% strategic customers |
| **Low** | • Financial loss: less than [ ]% of EBITDA or share price<br>• Local reputation damage from NGO or media resulting in less than [ ]% revenue loss<br>• Individual feedback from employees on low staff morale<br>• Customer complaints from less than [ ]% of strategic customers |

*Please note percentages are not specified as they are for illustrative purposes only.*

# Current control environment

| Level | Descriptor | Description |
|---|---|---|
| 4 | Excellent | System is effective in reducing risk, responsibility clear, well documented, regularly reviewed |
| 3 | Good | Systems and documentation in place but room for improvement |
| 2 | Fair | Some controls in place but incomplete |
| 1 | Poor / Unsatisfactory | Ad hoc and poorly documented processes, or no controls at all |

# Residual risk

| Level | Descriptor | Description |
|---|---|---|
| H | High | Immediate action required with ongoing active management |
| S | Significant | Review of existing controls required |
| M | Medium | Controls in place but require regular review |
| L | Low | Risk of little concern and/or effective controls in place |

# Integration in practice: Key principles and initial steps

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D1

## Key Principles for Integration

**Interconnections.** Integrating climate-related risks into existing risk management requires analysis and collaboration across the company. The principle of interconnections means all relevant functions, departments, and experts are involved in the integration of climate-related risks into the company's risk management processes and in the ongoing management of climate-related risks.

**Temporal Orientation.** Climate-related physical and transition risks should be analyzed across short-, medium-, and long-term time frames for operational and strategic planning, which may require extending beyond traditional planning horizons.

**Proportionality.** The integration of climate-related risks into existing risk management processes should be proportionate in the context of the company's other risks, the materiality of its exposure to climate-related risks, and the implications for the company's strategy.

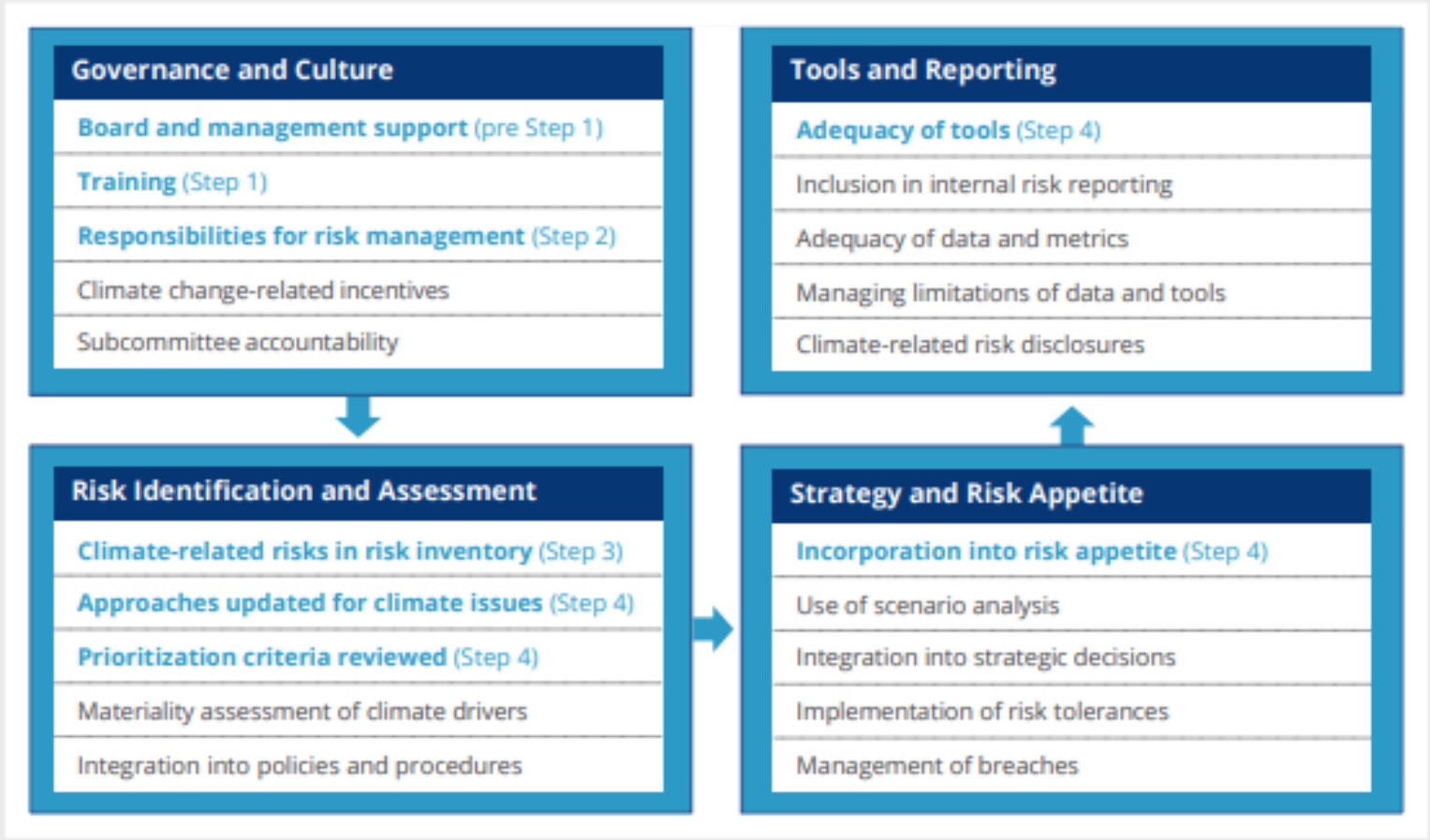
**Consistency.** The methodology used to integrate climate-related risks should be used consistently within a company's risk management processes to support clarity on analysis of developments and drivers of change over time.

# Integration in practice: Key principles and initial steps

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Figure D2

## Examples of Considerations Related to Integration



# Transition risks: Identification and assessment approaches

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D2

## Transition Risks and Identification and Assessment Approaches

| Type | Characteristics | Approaches | Possible Metrics |
|---|---|---|---|
| Policy and Legal | • **Differences in local, regional,** and **global** requirements and incentives<br>• **Novel and uncertain effects** of policy and legal actions across jurisdictions<br>• **Complex relationships** connecting different regulatory developments across different actors and departments | • Tracking of regulatory developments<br>• Assessment of impact of regulation, including implications across operations, supply chains, and jurisdictions<br>• Cross-functional, multidisciplinary collaboration to identify risks and implications<br>• Scenario analysis focused on policy environment, sequence, timing, and relationships | • Financial impact of carbon pricing and emission trading<br>• Asset write-off, asset impairment, and retirement cost<br>• Number of nodes of influence connecting key policy developments<br>• Number of relevant policy measures and development timelines<br>• Number of lawsuits brought forward |

# Transition risks: Identification and assessment approaches

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D2

## Transition Risks and Identification and Assessment Approaches

| Type | Characteristics | Approaches | Possible Metrics |
|---|---|---|---|
| Technology | • **Uncertain** role of different solutions and technologies over time, for different uses, and in different contexts<br>• **Novel** technologies, capabilities, and applications<br>• **Complex relationships** among market conditions, economics, and policy environment | • Technology assessment and forecasting<br>• Maturity and readiness of technology<br>• Cost-benefit analysis associated with key technologies<br>• Analysis of organizational skills, knowledge, and capabilities associated with key technologies<br>• Mapping of dependencies and enabling conditions (e.g., investment, policy)<br>• Scenario analysis focused on technological development, use, deployment, and impact | • Cost of supply, rate of return, return on investment, and payback periods for different technologies<br>• Product development effectiveness and cost<br>• Time to market and research and development success rate<br>• Capabilities across peers<br>• Number of and effectiveness of collaborative research relationships<br>• Number of patents |

# Transition risks: Identification and assessment approaches

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D2

## Transition Risks and Identification and Assessment Approaches

| Type | Characteristics | Approaches | Possible Metrics |
|---|---|---|---|
| Market | • **Novel** dynamics and signals from supply-demand relationships affecting raw materials, products, and services<br>• **Nonlinear** relationships affecting demand and costs<br>• **Complex relationships** among policy, consumers, and societal context | • Analysis of trends in supply and demand for products and services<br>• Comparison of company's position and strategy to competition<br>• Engagement with customers and suppliers<br>• Identification of merger and acquisition targets | • Market size<br>• Growth potential<br>• Commodity, product, and service pricing<br>• Market coverage and share index<br>• Opportunity and threat index<br>• Product portfolio index<br>• Revenue mix and sources |

# Transition risks: Identification and assessment approaches

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D2

## Transition Risks and Identification and Assessment Approaches

| Type | Characteristics | Approaches | Possible Metrics |
|---|---|---|---|
| Reputation | • **Magnitude** of severity and scope of impact can rapidly change, often enabled by the internet and social media<br>• **Novel** nature of responses and reactions as societal awareness and understanding shifts<br>• **Interconnected** issues driving impacts and actions | • Use of social media, customer feedback, and market research to track customer sentiment and changing preferences<br>• Evaluation of employee engagement and satisfaction<br>• Identification of relationships between events and news and business and financial impacts | • Share price change<br>• Competitors' market positions<br>• Employee satisfaction level<br>• Customer loyalty and retention level (e.g., net promoter score)<br>• Changes in customer satisfaction<br>• Media and social media sentiment<br>• Number of new customers<br>• Independent rankings and ratings |

# Transition risks: Identification and assessment approaches

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D3

## Physical Risks and Identification and Assessment Approaches

| Type | Characteristics | Approaches | Possible Metrics |
|---|---|---|---|
| Acute | • **Uncertain** timing, scope, and severity of impacts of extreme weather events<br>• **Different effects** based on events (e.g., cyclones, hurricanes, floods, drought) and geography<br>• **Changing magnitude and nonlinear** impacts associated with events<br>• **Complex relationships and interconnections** between factors and variables that influence weather events | • Use of expert input from meteorologists, oceanographers, and climate and atmospheric scientists<br>• Stress testing to assess sensitivity and resilience of key business units and activities<br>• Forecasting using historical data and lookback studies<br>• Scenario analysis focused on frequency, intensity, and location of extreme weather events<br>• Hazard mapping and catastrophe modeling | • Number of locations, facilities, business lines, etc. exposed or affected<br>• Duration of event<br>• Projected or identified loss or damage to business facility, supply chain, etc.<br>• Projected or identified cost of business interruption, repairs, etc.<br>• Projected or identified impact on sales and consumer behavior<br>• Insurance costs |

# Transition risks: Identification and assessment approaches

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D2

## Transition Risks and Identification and Assessment Approaches

| Type | Characteristics | Approaches | Possible Metrics |
|---|---|---|---|
| Chronic | • **Longer time horizons** associated with certain climate changes (e.g., sea level rise)<br>• **Changing magnitude and nonlinear** impacts associated with tipping points and thresholds<br>• **Different effects** based on events and geography | • Use of expert input from meteorologists, oceanographers, and climate and atmospheric scientists<br>• Scenario analysis focused on potential impacts and implications of chronic physical climate change<br>• Hazard mapping and catastrophe modeling | • Projected or identified impact on revenues and expenditures<br>• Changes in operating and capital costs<br>• Changes in market behavior<br>• Projected or identified impact on sales and consumer behavior<br>• Insurance costs |

# Risk identification and assessment: Prioritisation criteria

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

A company's assessment of its risks is fundamental to its prioritization of those risks and management of (response to) the most significant ones. Many companies use a traditional "likelihood and impact" approach to gauge the severity or materiality of their risks. To prioritize their risks, companies may use the severity of the risks as determined by the intersection of their likelihoods and impacts and then evaluate the severity of the risks relative to risk appetite.

Given some of the unique characteristics of climate-related risks, companies may want to consider expanding their prioritization criteria to include "vulnerability" and "speed of onset." These prioritization criteria are defined as follows:[27]

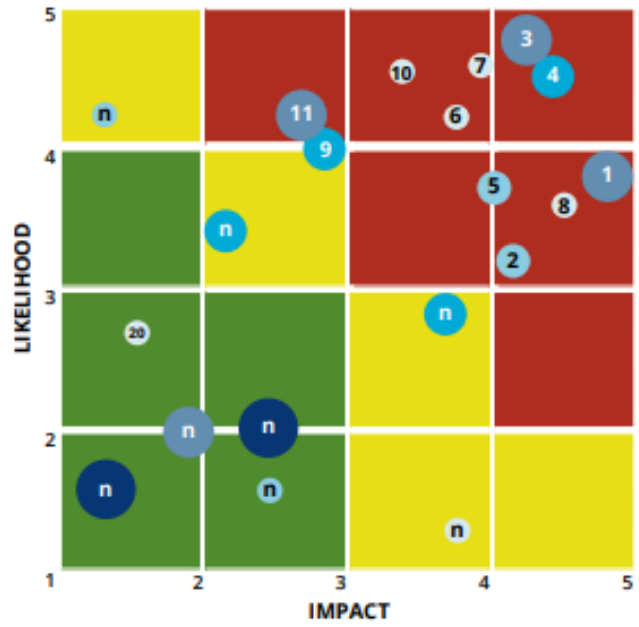
- **Vulnerability** refers to the susceptibility of a company to a risk event in terms of the company's preparedness, agility, and adaptability. Vulnerability is related to impact and likelihood — the more vulnerable the company is to the risk, the higher the impact is if the event occurs. If risk controls are not in place and operating as designed, then the likelihood of an event increases.
- **Speed of onset** refers to the time that elapses between the occurrence of an event and the point at which the company first feels its effects. Knowing the speed of onset is often useful when developing risk response plans.

# Risk identification and assessment: Prioritisation criteria

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Figure D7

## Illustrative Heat Map Based on Prioritization Criteria




| # | Risk | I | L | V | S |
|---|---|---|---|---|---|
| 1 | Supply chain disruption | 4.8 | 3.7 | 3.8 | 4 |
| 2 | Customer preference shift | 4.1 | 3.3 | 3.5 | 2 |
| 3 | Copper price rise >10% | 4.3 | 4.7 | 2.3 | 4 |
| 4 | Work stoppage > 1 week | 4.4 | 4.5 | 4.1 | 3 |
| 5 | Economic downturn | 4.0 | 3.7 | 3.5 | 2 |
| 6 | Supplier consolidation | 3.8 | 4.2 | 3.2 | 1 |
| 7 | Local competitors enter | 3.9 | 4.5 | 3.6 | 1 |
| 8 | New substitutes available | 4.5 | 3.6 | 4.2 | 1 |
| 9 | Cost of capital rise >5% | 2.9 | 4.0 | 2.9 | 3 |
| 10 | Tighter emission standards | 3.4 | 4.6 | 2.9 | 1 |
| 11 | Exchange rate fluctuations | 2.7 | 4.1 | 2.7 | 4 |
| n | ... | ... | ... | ... | ... |
| 20 | Impairment of assets | 1.6 | 2.7 | 1.6 | 1 |

I = Impact L = Likelihood V = Vulnerability S = Speed of Onset

**LEGEND**

Dots represent risk #1 - #n

Dot size and color reflect speed of onset:

Very Low Low Medium High Very High

**ILLUSTRATIVE RATING SCALES FOR CRITERIA**

| Rating | Impact | Likelihood | Vulnerability | Speed of Onset |
|---|---|---|---|---|
| 5 | Extreme | Frequent | Very High | Immediate |
| 4 | Major | Likely | High | Rapid |
| 3 | Moderate | Possible | Medium | Medium |
| 2 | Minor | Unlikely | Low | Slow |
| 1 | Incidental | Rare | Very Low | Very Slow |

# Key takeaways

https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf

Table D5

## Key Takeaways

**Common Understanding.** Before beginning efforts to integrate climate-related risks into existing processes, it is useful to ensure there is a basic level of understanding across the company of climate change concepts and its potential impacts.

**Interconnections.** Integrating climate-related risks into existing risk management requires analysis and collaboration across the company. The principle of interconnections means all relevant functions, departments, and experts are involved in the integration of climate-related risks into the company's risk management processes and in the ongoing management of climate-related risks.

**Temporal Orientation.** Climate-related physical and transition risks should be analyzed across short-, medium-, and long-term time frames for operational and strategic planning, which may require extending beyond traditional planning horizons.

**Proportionality.** The integration of climate-related risks into existing risk management processes should be proportionate in the context of the company's other risks, the materiality of its exposure to climate-related risks, and the implications for the company's strategy.

**Consistency.** The methodology used to integrate climate-related risks should be used consistently within a company's risk management processes to support clarity on analysis of developments and drivers of change over time.

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# Unpacking pillar 4: Metrics and targets

27 August 2025

# Overview

# Objective of climate-related financial disclosures on metrics and targets

AASB S2 paragraph 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 climate-related risks and opportunities
- Progress towards any climate-related targets it has set
- Progress towards any targets it is required to meet by law or regulation

# Objective of climate-related financial disclosures on metrics and targets

AASB S2 paragraph 28

To achieve this objective, an entity **shall** disclose:

- information relevant to the cross-industry metric categories (AASB S2 paragraphs 29–31)
- targets set by the entity, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities
- any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities,
- metrics used by the governance body or management to measure progress towards these targets

# Why are we setting carbon targets?

# Measuring carbon emissions

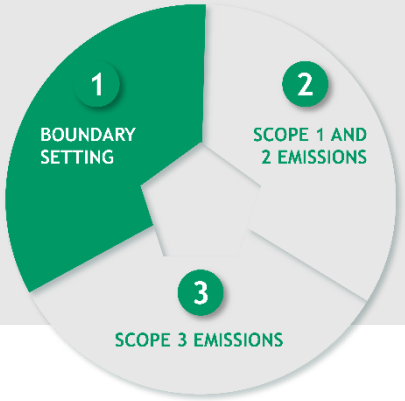
In Australia, we are subject to two measurement frameworks. Our *Carbon footprint general guidance series* is based on the specific requirements of the following frameworks:

- National Greenhouse and Energy Reporting (NGER) Scheme
- Greenhouse Gas Protocol (GHG Protocol) with a focus on *A Corporate Accounting and Reporting Standard Revised Edition* and the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*.

## 1 BOUNDARY SETTING

The foundational step upon which the remainder of an entity's carbon footprint is based. It defines specific inclusions and exclusions in an entity's carbon emission measurements.

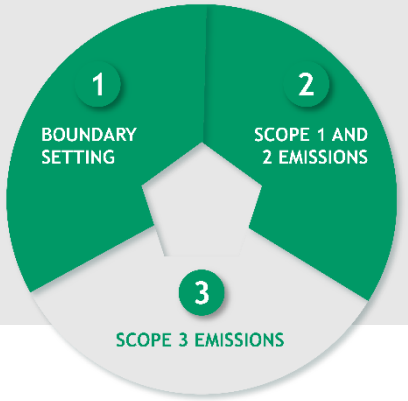
The process involves selecting an approach to determine which entities (and what percentage) to include in a consolidated organisational calculation and how to categorise the emissions from the businesses and operations in the group. Thorough documentation of boundaries and framework selection ensures a practical and efficient approach is taken in subsequent stages.




## 2 SCOPE 1 AND 2 EMISSIONS

Scope 1 represents direct emissions from sources that are owned and controlled by the entity.

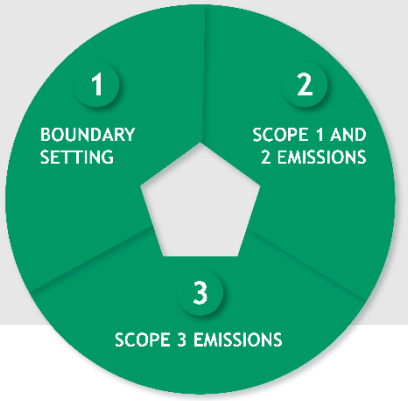
Scope 2 is the indirect emissions that arise as a result of energy, heat, coolants or steam being purchased for an entity's own consumption. These are indirect because while the purchased volume is controlled by the entity, the emissions related to its production occur at sources owned or controlled by another entity.




## 3 SCOPE 3 EMISSIONS

Scope 3 emissions comprise all other indirect emissions that are a consequence of the operations of the reporting company but occur at sources owned or controlled by another entity.

This incorporates emissions within the entire value chain, both upstream from the supply chain and downstream including end-use and end-of-life disposal.



# Emissions categories

| Scope 1 | Scope 3 upstream | Scope 3 downstream |
|---|---|---|
| • Mobile combustion<br>• Stationary combustion<br>• Chemical and industrial processing<br>• Fugitive emissions (eg waste processing) | • Category 1: Purchased goods and services<br>• Category 2: Capital goods<br>• Category 3: Fuel and energy-related activities<br>• Category 4: Upstream transport and distribution<br>• Category 5: Waste generated in operations<br>• Category 6: Business travel<br>• Category 7: Employee commuting<br>• Category 8: Upstream leased assets | • Category 9: Downstream transport and distribution<br>• Category 10: Processing of sold products<br>• Category 11: Use of sold products<br>• Category 12: End-of-life treatment of sold products<br>• Category 13: Downstream leased assets<br>• Category 14: Franchises<br>• Category 15: Investments |
| **Scope 2** | | |
| • Purchased electricity, heat, cooling & steam | | |

# GHG Inventory done. What next …?

A corporate GHG emission reduction target is the logical follow-up to developing a GHG inventory

# Why set a GHG target?

- Helps ensure that an issue is kept on senior management's "radar screen"
- Helps ensure that an issue is factored into relevant decisions about:
  - What products and services to provide
  - What materials and technologies to use
- Minimising and managing GHG risks
- Achieving costs savings and stimulating innovation
- Preparing for future regulations
- Demonstrating leadership and corporate responsibility
- Participating in voluntary programs

# Steps in setting a GHG target

# GHG PROTOCOL PUBLICATIONS

https://ghgprotocol.org/standards


Corporate Standard

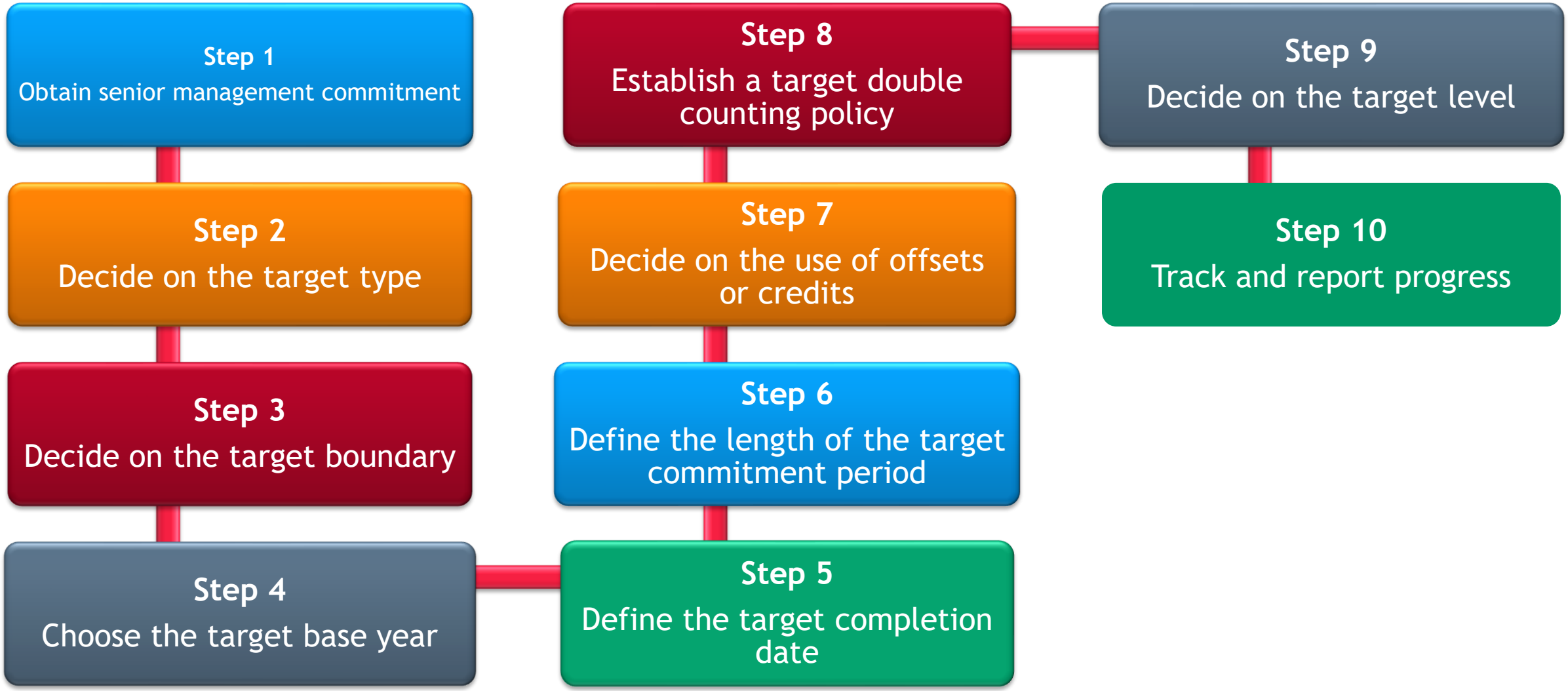

Scope 2 Guidance


Value Chain Standard Scope 3

## Other standards

Product life cycle, guidance for cities, etc.

# Steps in setting a GHG target



# Develop a base year recalculation policy

# GHG accounting and reporting principles

GHG accounting and reporting are based on the following principles:

### Relevance

Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.

### Completeness

Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.

### Consistency

Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.

### Transparency

Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.

### Accuracy

Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

These principles are derived from the GHG Protocol. Aspects of these principles overlap with audit assertions and for that reason, these principles should be applied in all carbon accounting work, regardless of the emissions measurement framework selected.

# When should base year emissions be recalculated?

- Recalculating base year emissions is necessary to maintain consistency and enable meaningful comparisons of the inventory over time

- Companies are required to recalculate base year emissions when the following changes occur and have a significant impact on the inventory:
  - Structural changes in the reporting organization, such as mergers, acquisitions, divestments, outsourcing, and insourcing
  - Changes in calculation methodologies, improvements in data accuracy, or discovery of significant errors
  - Changes in the categories or activities included in the emissions inventory

# Establishing a base year recalculation policy

- When setting a base year, companies shall develop a base year emissions recalculation policy and clearly articulate the basis and context for any recalculations

- Whether base year emissions are recalculated depends on the significance of the changes

- A significance threshold is a qualitative and/or quantitative criterion used to define any significant change to the data, inventory boundaries, methods, or any other relevant factors
  - For example, a significant change could be defined as one that alters base year emissions by at least ten percent
  - As part of the base year emissions recalculation policy, companies shall establish and disclose the significance threshold that triggers base year emissions recalculations
  - Companies shall apply the recalculation policy in a consistent manner

# What about changes in calculation methodology or improvements in data accuracy over time

- A company might report the same sources of GHG emissions as in previous years, but measure or calculate them differently over time
  - For example, in its third year of reporting scope 3 emissions, a company may significantly improve its data quality by collecting more data from suppliers or increasing the accuracy and precision of emissions estimates
- The company should ensure that changes in the inventory over time are a result of actual emissions increases or decreases, not changes in methodology, so that the company tracks "like with like" over time
- Therefore, if changes in methodology or data sources result in significant differences in emissions estimates, companies are required to recalculate base year emissions applying the new data sources and/or methodology
- However, often the more accurate data input may not reasonably be applied to all past years or new data points may not be available for past years. The company may then have to acknowledged the change without recalculation

# No recalculation for organic growth or decline

- Base year emissions and any historic data are not recalculated for organic growth and decline
- Organic growth/decline refers to increases or decreases in production output, changes in product mix, and closures and openings of operating units that are owned or controlled by the company
- The rationale for this is that organic growth or decline results in a change of emissions to the atmosphere and therefore needs to be accounted for as an increase or decrease in the company's emissions profile over time

# Illustrative examples of actions to reduce scope 3 emissions

# Illustrative examples of actions to reduce scope 3 emissions

Table 9.7 on page 110 of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*

| *Category* | *Examples of actions to reduce scope 3 emissions* |
|---|---|
| **1. Purchased goods and services** | • Replace high-GHG-emitting raw materials with low-GHG-emitting raw materials<br>• Implement low-GHG-procurement/purchasing policies<br>• Encourage tier 1 suppliers to engage their tier 1 suppliers (i.e., the reporting company's tier 2 suppliers) and disclose these scope 3 emissions to the customer in order to propagate GHG reporting throughout the supply chain |
| **2. Capital goods** | • Replace high-GHG-emitting capital goods with low-GHG-emitting capital goods |
| **3. Fuel- and energy-related activities (not included in scope 1 or scope 2)** | • Reduce energy consumption<br>• Change energy source (e.g., shift toward lower-emitting fuel/energy sources)<br>• Generate energy on site using renewable sources |

# Illustrative examples of actions to reduce scope 3 emissions

Table 9.7 on page 110 of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*

| *Category* | *Examples of actions to reduce scope 3 emissions* |
|---|---|
| **4. Upstream transportation and distribution** | • Reduce distance between supplier and customer<br>• Source materials locally if it leads to net GHG reductions<br>• Optimize efficiency of transportation and distribution<br>• Replace higher-emitting transportation modes (e.g. air transport) with lower-emitting transportation modes (e.g. marine transport)<br>• Shift toward lower-emitting fuel sources |
| **5. Waste generated in operations** | • Reduce quantity of waste generated in operations<br>• Implement recycling measures that lead to net GHG reductions<br>• Implement lower-emitting waste treatment methods |
| **6. Business travel** | • Reduce the amount of business travel (e.g., encourage video conferencing and web-based meetings as an alternative to in-person meetings)<br>• Encourage more efficient travel<br>• Encourage lower-emitting modes of travel (e.g., rail instead of plane) |

# Illustrative examples of actions to reduce scope 3 emissions

Table 9.7 on page 110 of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*

| *Category* | *Examples of actions to reduce scope 3 emissions* |
|---|---|
| **7. Employee commuting** | • Reduce commuting distance (e.g., locate offices/facilities near urban centers and public transit facilities)<br>• Create disincentives for commuting by car (e.g., parking policies)<br>• Provide incentives for use of public transit, bicycling, carpooling, etc.<br>• Implement teleworking/telecommuting programs<br>• Reduce number of days worked per week (e.g., 4 days x 10 hour schedule instead of 5 days x 8 hour schedule) |
| **8. Upstream leased assets** | • Increase energy efficiency of operations<br>• Shift toward lower-emitting fuel sources |

# Illustrative examples of actions to reduce scope 3 emissions

Table 9.7 on page 111 of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*

| Category | Examples of actions to reduce scope 3 emissions |
|---|---|
| **9. Transportation and distribution of sold products** | • Reduce distance between supplier and customer<br>• Optimize efficiency of transportation and distribution<br>• Replace higher emitting transportation modes (e.g. air transport) with lower emitting transportation modes (e.g. marine transport)<br>• Shift toward lower-emitting fuel sources |
| **10. Processing of sold products** | • Improve efficiency of processing<br>• Redesign products to reduce processing required<br>• Use lower-GHG energy sources |
| **11. Use of sold products** | • Develop new low- or zero-emitting products<br>• Increase the energy efficiency of energy-consuming goods or eliminate the need for energy use<br>• Shift away from products that contain or emit GHGs<br>• Reduce the quantity of GHGs contained/released by products<br>• Decrease the use-phase GHG intensity of the reporting company's entire product portfolio<br>• Change the user instructions to promote efficient use of products |

# Illustrative examples of actions to reduce scope 3 emissions

Table 9.7 on page 111 of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*

| Category | Examples of actions to reduce scope 3 emissions |
|---|---|
| 12. End-of-life treatment of sold products | • Make products recyclable if it leads to net GHG reductions<br>• Implement product packaging measures that lead to net GHG reductions (e.g., decrease amount of packaging in sold products, develop new GHG-saving packaging materials, etc.)<br>• Implement recycling measures that lead to net GHG reductions |
| 13. Downstream leased assets | • Increase energy efficiency of operations<br>• Shift toward lower-emitting fuel sources |
| 14. Franchises | • Increase energy efficiency of operations (e.g., set efficiency standards)<br>• Shift toward lower-emitting fuel sources |
| 15. Investments | • Invest in lower-emitting investments, technologies, and projects |

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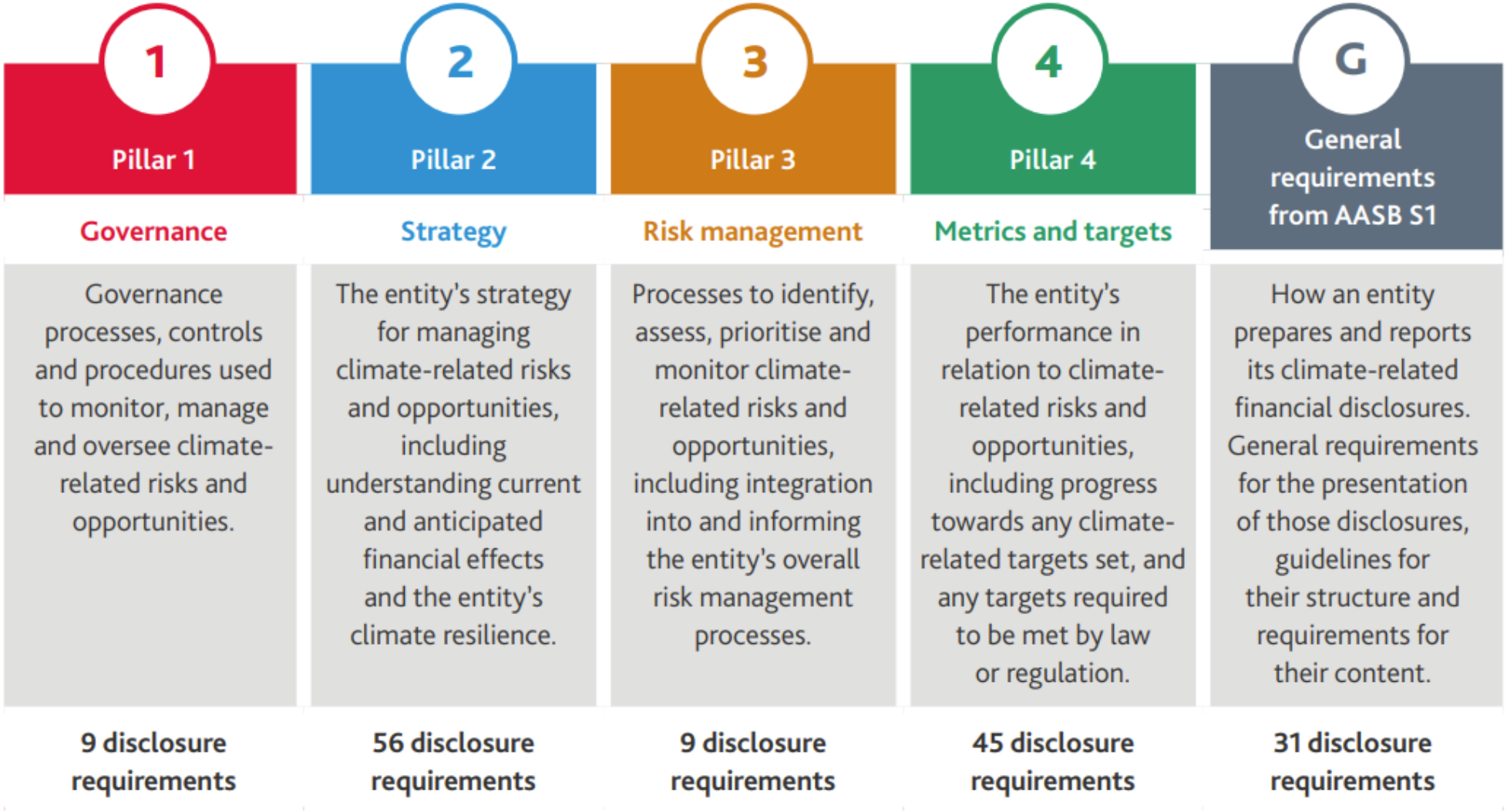
# Pulling it all together in a mandatory sustainability report

# BDO's AASB S2 *Climate-related Disclosures* Checklist

https://bdoaustralia.bdo.com.au/acton/media/18110/climate-related-disclosures-aasb-s2-checklist



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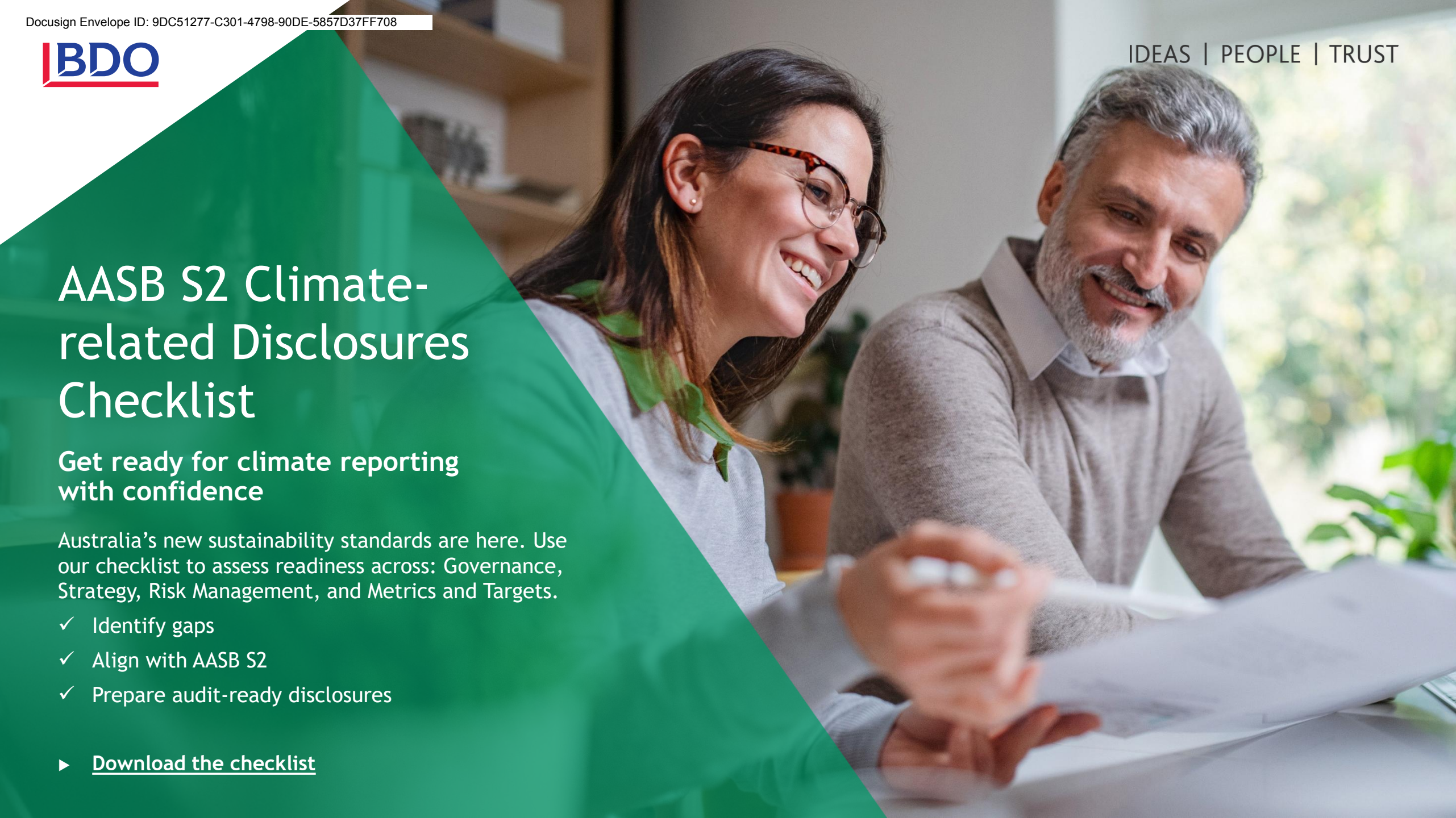
# AASB S2 Climate-related Disclosures Checklist

## Get ready for climate reporting with confidence

Australia's new sustainability standards are here. Use our checklist to assess readiness across: Governance, Strategy, Risk Management, and Metrics and Targets.

- ✓ Identify gaps
- ✓ Align with AASB S2
- ✓ Prepare audit-ready disclosures

▸ **Download the checklist**



# Illustrative sustainability report in accordance with IFRS Sustainability Disclosure Standards

Illustrative-Sustainability-Report-2025.pdf

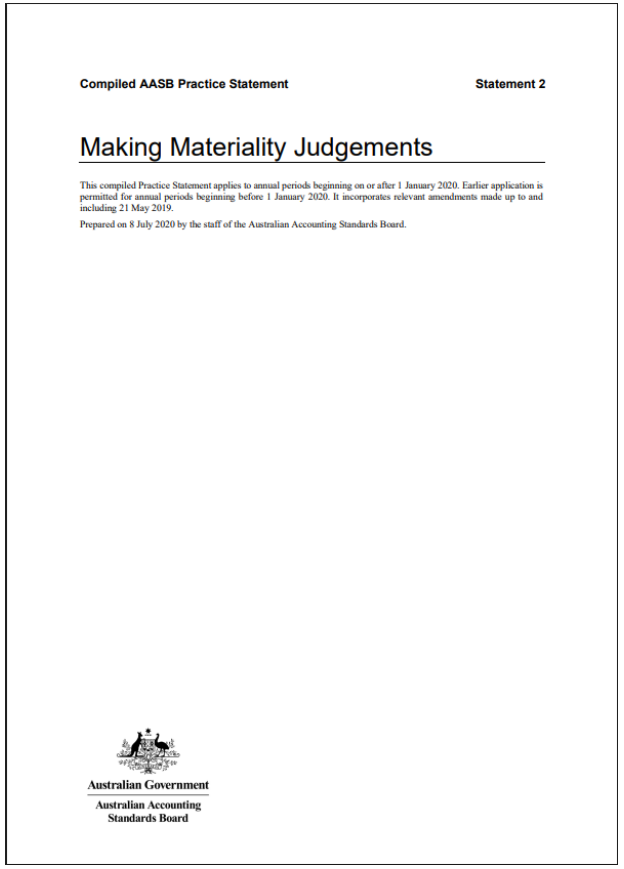
- BDO Global, together with our Australian team, launched the Illustrative Sustainability Report. It covers the new IFRS S1 and S2 standards (and AASB S2 for Australia)
- Real-world examples showing exactly how these standards work in practice
- It's a practical tool for our clients, helping them get ready for mandatory sustainability disclosures—especially Group 1 entities in Australia
- It brings governance, strategy, risk management, and metrics to life, making the link between sustainability and financial reporting clear and actionable

# Materiality

?

# Reference materials


https://www.ifrs.org/content/dam/ifrs/supporting-implementation/issb-standards/issb-materiality-education-material.pdf




https://www.aasb.gov.au/admin/file/content102/c3/AASBPS2_12-17_COMPmay19_01-20.pdf

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# IFRS Practice Statement 2
# *Making Materiality Judgements*

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# Definition of materiality

- Information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial reports make on the basis of those reports, which provide financial information about a specific reporting entity
- In other words, materiality is an entity-specific aspect of relevance based on the nature or magnitude, or both, of the items to which the information relates in the context of an individual entity's financial report
- When making materiality judgements, an entity needs to take into account how information could reasonably be expected to influence the primary users of its financial statements—its primary users—when they make decisions on the basis of those statements
- The objective of financial statements is to provide financial information about a reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity
- The entity identifies the information necessary to meet that objective by making appropriate materiality judgements

# Judgement

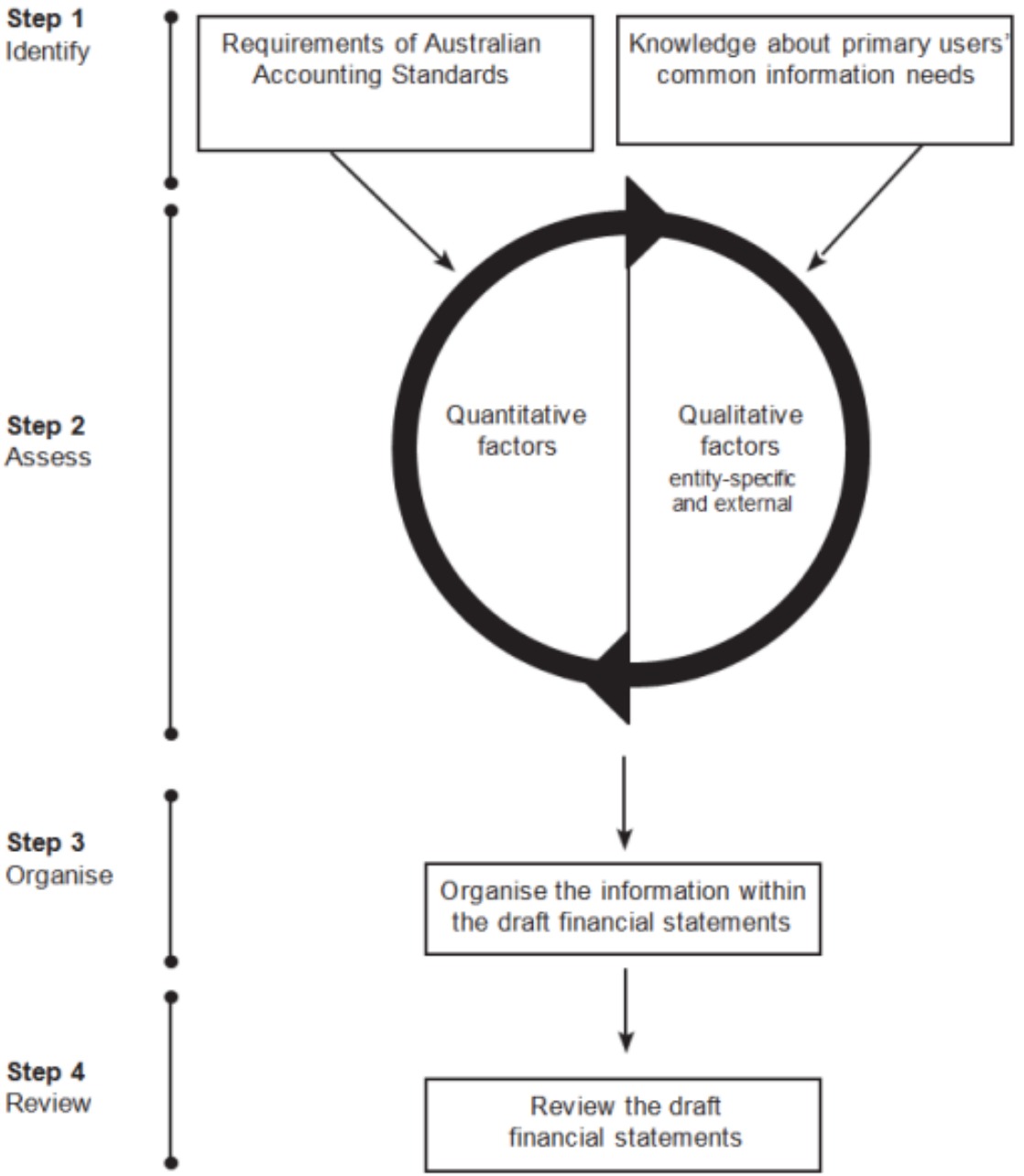
- When assessing whether information is material to the financial statements, an entity applies judgement to decide whether the information could reasonably be expected to influence decisions that primary users make on the basis of those financial statements
- When applying such judgement, the entity considers both its specific circumstances and how the information provided in the financial statements responds to the information needs of primary users
- Because an entity's circumstances change over time, materiality judgements are reassessed at each reporting date in the light of those changed circumstances

# Four-step materiality process

- The steps identified as a possible approach to the assessment of materiality in the preparation of the financial statements are, in summary:
  - Step 1 — Identify. Identify information that has the potential to be material
  - Step 2 — Assess. Assess whether the information identified in Step 1 is, in fact, material
  - Step 3 — Organise. Organise the information within the draft financial statements in a way that communicates the information clearly and concisely to primary users
  - Step 4 — Review. Review the draft financial statements to determine whether all material information has been identified and materiality considered from a wide perspective and in aggregate, on the basis of the complete set of financial statements

# Four-step materiality process

**Diagram—the four-step materiality process**



# The definition of material information and its application to AASB S2

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# The use of materiality in AASB S2

- The definition of material information in AASB S2 focuses on whether information could reasonably be expected to influence the decisions that primary users make on the basis of general purpose financial reports, which include financial statements and sustainability-related financial disclosures

- Primary users are existing and potential investors, lenders and other creditors

# The use of materiality in AASB S2

- Materiality is used to assess whether information required by AASB S2 would need to be disclosed by a particular entity

- In other words, the definition of ‘material information’ is used as a filter to assess whether information about a sustainability-related risk or opportunity would need to be provided by an entity to meet the requirements set out in AASB S2

# The use of materiality in AASB S2

- The term materiality is **not** used in AASB S2 in relation to the significance or importance of a sustainability-related risk or opportunity

- Instead, AASB S2 requires disclosure of (material) information about the sustainability-related risks and opportunities that could reasonably be expected to affect an entity's prospects

- In considering what could reasonably be expected to affect an entity's prospects, the entity considers an external perspective—that is, what an external party could reasonably expect

# The use of materiality in AASB S2

- When making materiality judgements, an entity assesses whether omitting, misstating or obscuring information could reasonably be expected to influence the decisions primary users make about providing resources to the entity
- When making materiality judgements, an entity considers whether the information—if omitted, misstated or obscured—could reasonably be expected to affect primary users' expectations about returns, for example, dividends, principal and interest payments or market price increases
- Those expectations depend on primary users' assessment of the amount, timing and uncertainty of future net cash inflows to the entity and on their assessment of stewardship of the entity's economic resources by the entity's management and its governing body(s) or individual(s)

# The use of materiality in AASB S2

## Part A - Climate risk and opportunity assessment

Assess whether a climate-related risk or opportunity could reasonably be expected to affect the entity's prospects (cash flows, its access to finance or cost of capital over the short, medium or long term)

If YES

## Part B - Identifying and disclosing material information

Assess whether information about a sustainability-related risk or opportunity would need to be provided by an entity to meet the requirements set out in AASB S2

1 - Could the information reasonably be expected to influence the decisions that primary users make on the basis of general purpose financial reports)

2 - Assess whether omitting, misstating or obscuring information could reasonably be expected to influence the decisions primary users make about providing resources to the entity

# Identifying and disclosing material information

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# Identifying and disclosing material information

- Once an entity has identified its sustainability-related risks and opportunities, it will need to identify and disclose material information about those risks and opportunities

- AASB S2 does not require that an entity disclose all information about the sustainability-related risks and opportunities that it has identified

- AASB S2 has been designed to result in an entity providing information that is useful for the decisions that primary users of general purpose financial reports make

# Identifying and disclosing material information

- The following is an example of a process an entity might follow to identify and disclose such information:
  - Step 1 — Identify information about sustainability-related risks and opportunities that has the potential to be material
  - Step 2 — Assess whether the potentially material information identified in Step 1 is, in fact, material
  - Step 3 — Organise the information within the draft sustainability-related financial disclosures
  - Step 4 — Review the draft sustainability-related financial disclosures

# In the context of sustainability-related financial disclosures

- Although the definition of ‘material information’ in AASB S2 is aligned with the definition of the same term in IFRS Accounting Standards, the information required to meet the objective of the respective general purpose financial reports is distinct

- Sustainability-related financial disclosures and financial statements each serve specified objectives and provide distinct information about an entity

- Therefore, the materiality judgements an entity makes in preparing its sustainability-related financial disclosures will be distinct from those it makes in preparing its financial statements

# In the context of sustainability-related financial disclosures

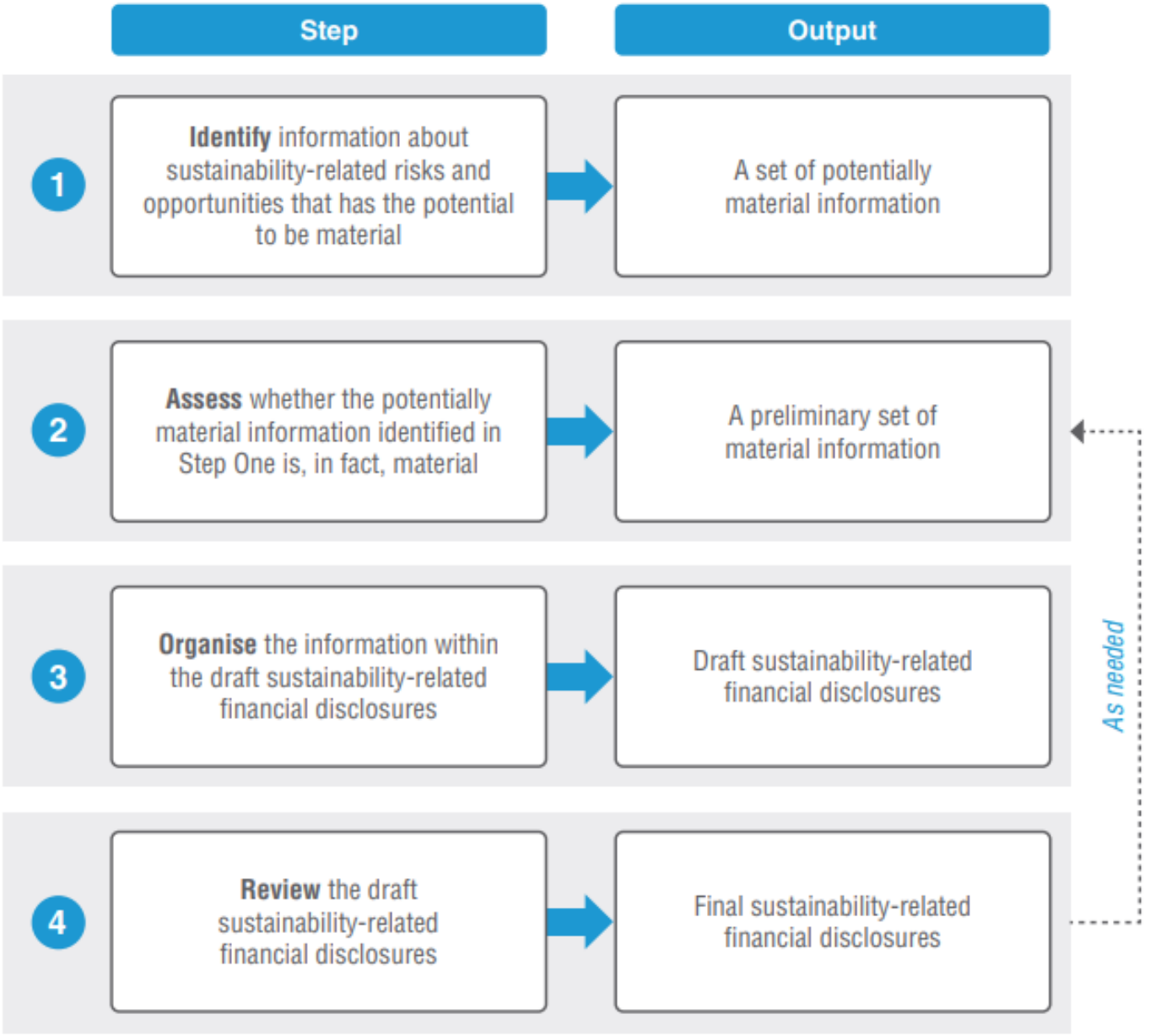
- Sustainability-related financial disclosures:
  - complement information in an entity's financial statements
  - are likely to include more qualitative information and forward-looking information than financial statements
  - provide information about sustainability-related risks and opportunities that could reasonably be expected to affect an entity's prospects, whereas financial statements provide information about an entity's assets, liabilities, equity, income and expenses
  - Therefore, sustainability-related financial disclosures that provide information about sustainability-related risks and opportunities are not limited to information about whether those risks and opportunities have affected or relate to an entity's assets, liabilities, equity, income or expenses
  - For example, sustainability-related financial disclosures include information about:
    - other aspects of the entity—such as its governance, strategy and risk management processes in relation to a sustainability-related risk or opportunity; and
    - anticipated financial effects.

# In the context of sustainability-related financial disclosures

- In preparing sustainability-related financial disclosures, entities will more often have to:
  - consider implications over longer time periods than those used in preparing financial statements (although in the preparation of financial statements judgement about the long term can also be required); and
  - consider implications of interactions throughout their value chain (see paragraph BC69 of the Basis for Conclusions on IFRS S1)

# Identifying and disclosing material information

**Figure 3.1—Identifying and disclosing material information about sustainability-related risks and opportunities that could reasonably be expected to affect an entity's prospects**

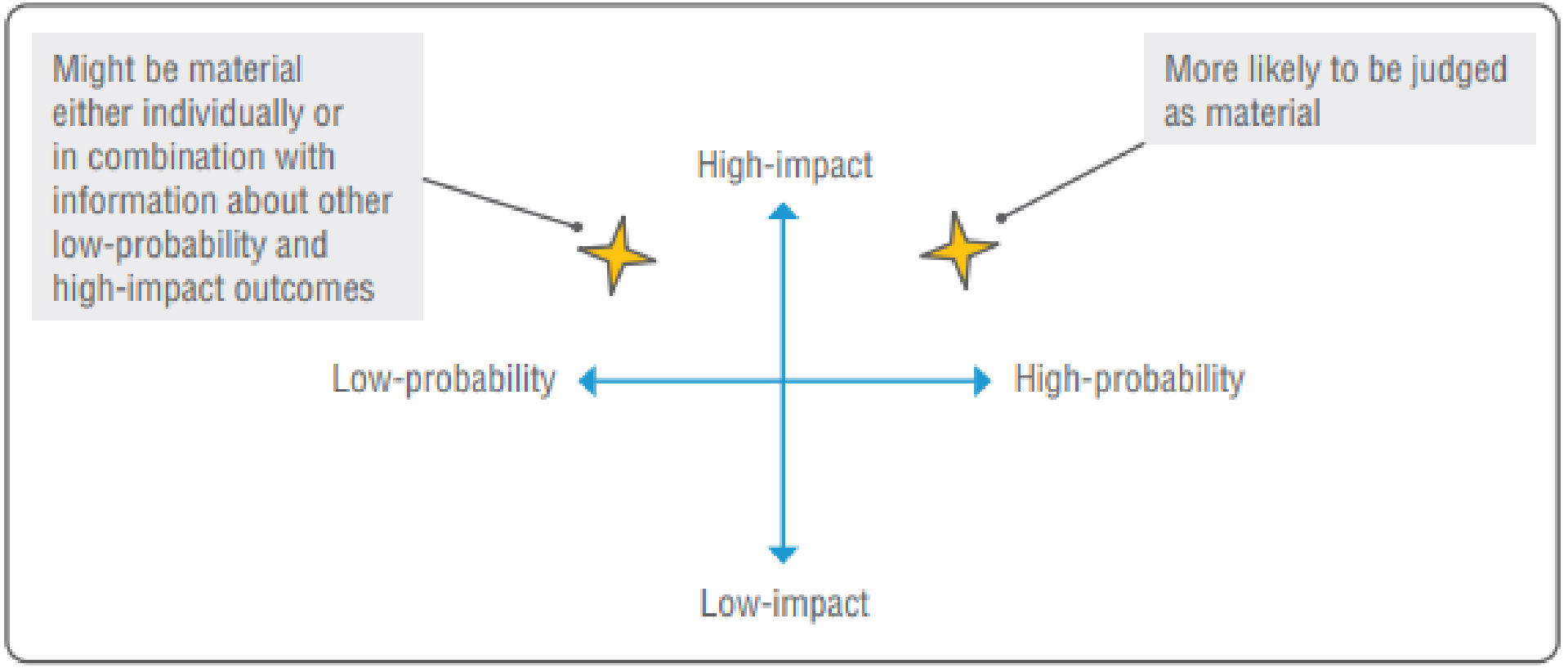


# Consideration of quantitative and qualitative factors

- An entity could identify information as material based on one or more quantitative or qualitative factors
- In general, the more factors that apply to a particular sustainability-related risk or opportunity, or the more significant the possible effect of those factors, the more likely it is that information about that risk or opportunity is material
- Such factors have no hierarchy: neither quantitative factors nor qualitative factors are more important than the other
- As an entity assesses the materiality of information by considering both quantitative and qualitative factors, it would be inappropriate for the entity to rely on purely numerical guidelines or to apply a uniform quantitative threshold for all materiality judgements

# Consideration of possible future events with uncertain outcomes

**Figure 3.3—Assessing materiality of information about possible future events**



# Consideration of possible future events with uncertain outcomes

- Information about a possible future event that is expected to affect an entity's cash flows many years in the future is less likely to be material than information about a possible future event with similar effects that has the possibility of occurring sooner
- However, some information could reasonably be expected to influence primary users' decisions regardless of the magnitude of the potential effects of the future event or the timing of that event

**Example—Material information about sustainability-related risks in the aggregate**

An entity might be exposed to several sustainability-related risks, each of which could cause the same type of disruption, such as disruption to the entity's supply chain. Information about an individual source of risk might not be material if disruption from that source is highly unlikely to occur. However, information about the aggregate risk—the risk of supply chain disruption from all sources—might be material.

# Review of draft sustainability-related financial disclosures

**Figure 3.4—Review of draft sustainability-related financial disclosures to determine whether all material information has been identified.**

| In performing this review, the entity considers whether: | The review might lead to: |
|---|---|
| All relevant relationships between different items of information have been identified. Identifying new relationships between information might lead to that information being identified as material for the first time. | Additional information being provided in the sustainability-related financial disclosures. |
| Items of information that are individually immaterial, when considered together, could nevertheless reasonably be expected to influence primary users' decisions. | Greater aggregation or disaggregation of information. |
| The information in the sustainability-related financial disclosures is communicated in an effective and understandable way, and organised to avoid obscuring material information. | Information that is identified as immaterial being removed from the sustainability-related financial disclosures to avoid obscuring material information. |
| The sustainability-related financial disclosures provide a fair presentation of the entity's sustainability-related risks and opportunities. | Information being reorganised within the sustainability-related financial disclosures. |

# Materiality - Importance of judgement!

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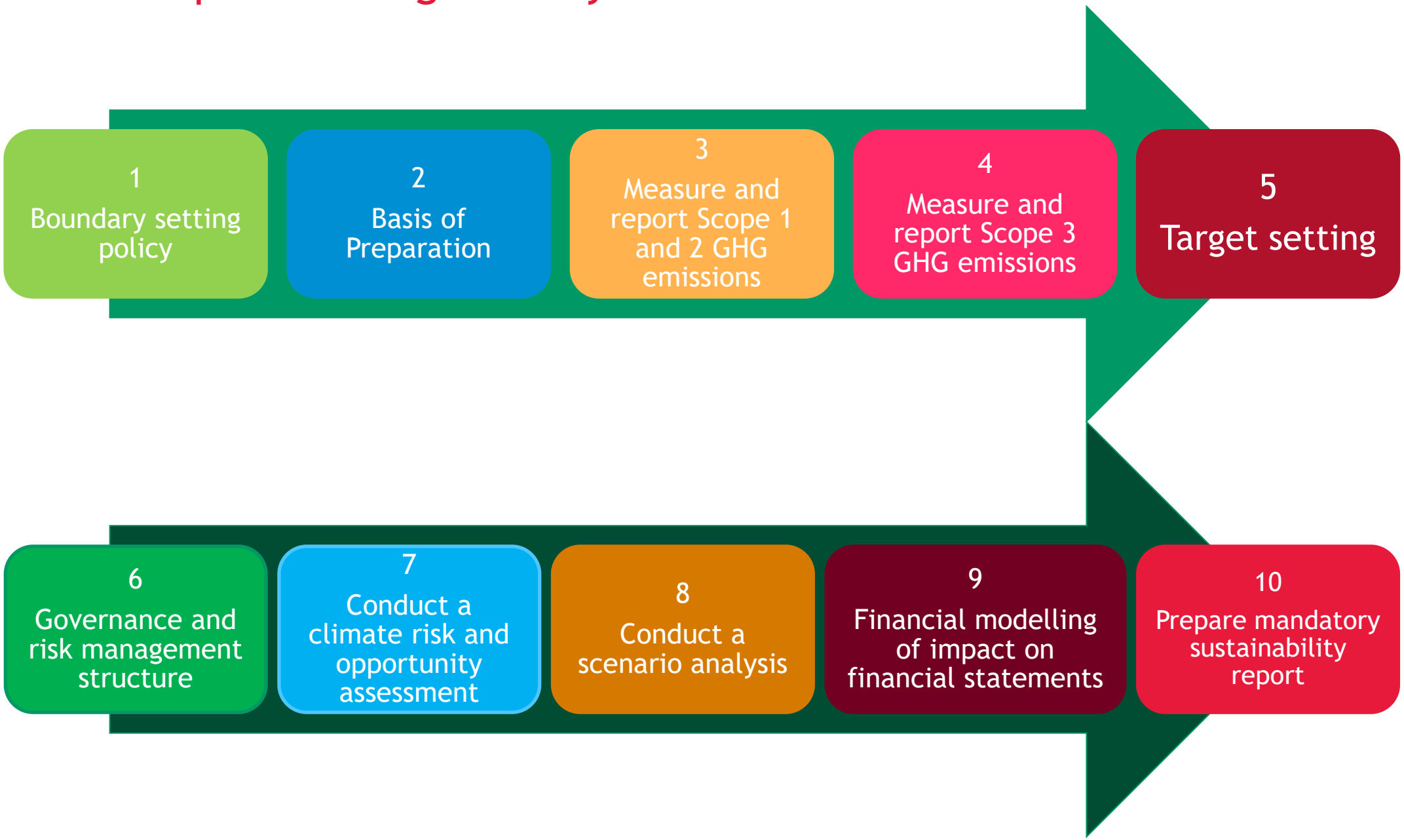
# How BDO can help

# Best practice roadmap – Group 1 entities

<table>
<tr><th colspan="3">PROJECT STREAMS</th><th>Financial year ending on 31 December 2025 or 30 June 2026</th><th>Financial year ending on 31 December 2026 or 30 June 2027</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">COMPLIANCE FOCUS: Carbon Footprint Measurement</td><td>Scope 1 and 2 emissions</td><td colspan="2">Mandatory calculation and reporting of Scope 1 and 2 GHG emissions, subject to assurance:<br>1. Set carbon inventory boundary<br>2. Develop a Basis of Preparation (carbon accounting methodology)<br>3. Measure and report Scope 1 and Scope 2 GHG emissions</td></tr>
<tr><td>Scope 3 emissions</td><td>4. Initial measurement (significant estimation) and report internally Scope 3 GHG emissions<br>5. Set targets in relation to scope 1, 2 and 3</td><td>Mandatory calculation and external reporting of Scope 3 GHG emissions</td></tr>
<tr><td>2</td><td>COMPLIANCE FOCUS: Climate-related disclosures</td><td>AASB S2 (Mandatory)</td><td>Mandatory reporting of all AASB S2 disclosures:<br>6. Establish or improve appropriate governance and risk management structure<br>7. Conduct a climate risk and opportunity assessment<br>8. Prepare a scenario analysis<br>9. Financial modelling of impact on financial statements<br>10. Prepare first mandatory sustainability report, including a materiality assessment</td><td>Ongoing mandatory reporting of all AASB S2 disclosures</td></tr>
<tr><td>3</td><td>STRATEGIC FOCUS: General sustainability-related disclosures</td><td>AASB S1 (Voluntary)</td><td colspan="2"><u>Activate sustainability strategy</u><br>• Step 1 – Current state assessment<br>• Step 2 - Materiality assessment (stakeholder engagement)<br>• Step 3 – Identify gaps<br>• Step 4 – Commit and measure to address gap identified<br>• Step 5 – Prepare separate voluntary sustainability report</td></tr>
</table>

# Iterative process to get ready for AASB S2



# Register for our 2026 monthly Sustainability webinars

Register here

Sustainability reporting in 2026: What's changing and what's expected
Watch

Making the case: Why sustainability should matter to CEOs and Boards
25 February

AASB S2 explained: Climate science meets policy
25 March

Strengthening governance for climate risk and sustainability
29 April

Mandatory climate reporting: Lessons from year one
27 May

Climate risk assessment: What it is and why it matters
24 June

How to conduct a climate risk assessment
29 July

Scenario analysis in practice: Using public data for qualitative and quantitative insights
26 August

Financial modelling for climate risk and opportunity
30 September

Setting metrics and targets that matter
28 October

Decarbonisation: Strategies that drive real change
25 November

Building your mandatory sustainability report
16 December

# Sustainability Essentials for Financial Leaders or professionals

## Master sustainability reporting with engaging, mobile-first videos


Build your sustainability capability fast.

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# Carbon Accounting Masterclass - Virtual

Measuring your organisation’s carbon footprint is essential in developing its sustainability roadmap. Join us for this one-day masterclass, where we'll combine theoretical knowledge with case studies and practical experience.

## Dates and details

**Cost:** $650 (including GST) per person

**CPD:** Certificate supplied post-completion. Participants are to determine the relevance and amount of time this workshop counts towards their CPD.

Wednesday 13 May 2026
Wednesday 9 September 2026
Wednesday 11 November 2026
9:00am – 5:00pm Melbourne time

Register now

**Previous participant feedback**

*“…it was brilliant and the best money I have ever spent on knowledge development. I am so grateful that I was able to be at your masterclass. I now get carbon accounting thanks to you”.*

# Carbon Accounting Masterclass Alumni

## Dates and details

**Cost:** Complimentary

**CPD:** Certificate supplied post-completion. Participants are to determine the relevance and amount of time this workshop counts towards their CPD.

Monday 11 May 2026
Monday 10 August 2026
Monday 9 November 2026

12:00pm – 2:00pm Melbourne time

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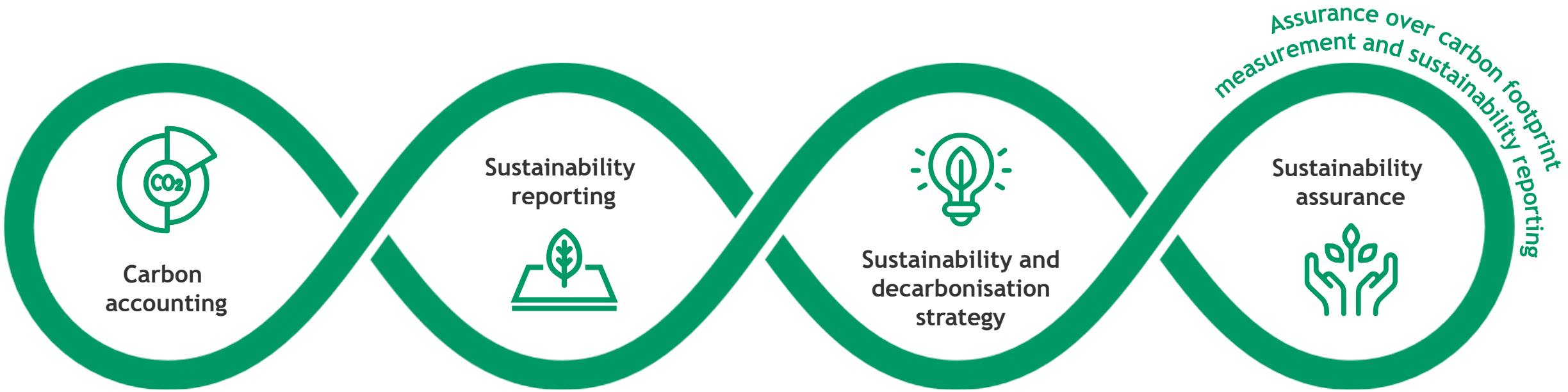
BDO has partnered with the Australian Financial Review as the Presenting and Methodology Partner for the 2026/2027 Sustainability Leaders Program, recognising organisations delivering measurable sustainability impact.

**Find out more about the program, BDO's role, and whether your organisation could be a strong entrant.**

# Core sustainability services

## A continuous improvement journey




# BDO's core sustainability services

## Advisory services


### Carbon footprint measurement

- Carbon accounting (GHG Protocol)
- Baseline measurements and benchmarking
- Target development (e.g. Science Based Target initiative (SBTi))

### Sustainability reporting

1. Mandatory reporting in the annual report:
   - TCFD and IFRS S2 readiness
   - IFRS S1 readiness.
2. Voluntary reporting in separate sustainability reports (e.g. GRI, WEF IBC)

### Sustainability and decarbonisation strategy

- Current state assessment (ESG health check)
- Materiality assessment
- ESG risk and opportunity assessment
- Sustainability or decarbonisation strategy development
- ESG priorities and targets identification and communication
- Sustainability roadmap development
- Organisational transformation

## Assurance services

### Assurance

Third-party assurance over mandatory and voluntary sustainability reporting.

This also includes:

- NGER audits
- Carbon credit audits and certification assurance
- Second-party opinion on sustainable finance products.

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