



Investor Expectations: National Climate Risk Assessment

July 2023

Summary

The National Climate Risk Assessment (NCRA) has the potential to significantly increase understanding and management of physical risk in Australia, should it be developed with meaningful stakeholder engagement.

IGCC recommends that NCRA:

1. Develop consistent and transparent guidance for physical risk assessments.
2. Provide an easy-to-access, centralised repository.
3. Produce credible assessments that can inform adaptation plans and policies.
4. Communicate a clear roadmap.

Implementing these recommendations will result in decision-useful data for investors and companies to develop investible physical risk assessments, facilitating their crucial engagement in adaptation and resilience.

Introduction

The Department of Climate Change, Energy, the Environment, and Water (DCCEEW) has been allocated \$37.3 million over the past two federal budgets to establish the Climate Risk and Opportunity Management Program. This includes scoping out and undertaking NCRA, which aims to:

- Develop and apply a nationally consistent method to measure all climate hazards and physical risks, and be the first application of a national framework that is scalable across subsequent climate assessments.
- Ascertain Australia's national priorities for climate adaptation and resilience.
- Enable targeted and timely investments.
- Allow for monitoring of adaptation progress over time, to guide and inform action and investment across and between all levels of government.

Relevance for investors

The physical impacts of climate change will cost the Australian economy hundreds of billions of dollars in the coming decades¹, primarily driven by loss of life and damage from extreme weather events². Public-private partnerships and other investment vehicles will be required to fund the magnitude of adaptation and resilience projects, which are essential to avoid detrimental economic impacts for vulnerable people and communities.

However, there are significant barriers for private investment, including uncertainty related to climate risks. Physical risk assessments, such as NCRA, will be a key lever to build investor confidence in adaptation and resilience, particularly around investing in regions that are highly exposed to physical risk. It is essential that investors engage with policymakers to ensure that NCRA is credible, decision-useful, collaborative, and transparent.

Investor recommendations

NCRA has the potential to be immensely valuable in increasing understanding and management of physical risk in Australia. However, the physical impacts of climate change are complex, regional, interconnected, and uncertain. As such, designing and implementing a credible national risk assessment is challenging. Continuous and meaningful stakeholder engagement during the scoping and development process will be essential, and therefore, the Investor Group on Climate Change (IGCC) has compiled the following recommendations.

1. Consistent and transparent guidance

An ongoing challenge for physical risk assessments has been their lack of comparability and consistency, which reduces the use of these assessments in financial decision-making. Additionally, many existing sources of physical risk information are either not available for commercial use (e.g., CSIRO's Climate Change in Australia³), difficult to access (e.g., local council flood studies), or lack transparency in their methodology and data sources (e.g., commercial data vendors). While total comparability is challenging due to the regional nature of physical risks, NCRA should develop consistent and transparent guidance for physical risk assessments in Australia. This should include:

- i. Consistent emission scenarios that align with the current best-practice scenario⁴ and disclosure requirements⁵, ensuring they are sufficiently challenging (i.e., 1.5°C and >3°C).
- ii. Methodological guidance that considers:

¹ Deloitte Access Economics (2022, January), Economic reality check: Adapting Australia for climate-resilient growth, <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-dae-economic-reality-check-minderoo-foundation-17012022.pdf>.

² IPCC (2022), Climate change 2022: Impacts, adaptation and vulnerability, <https://www.ipcc.ch/report/ar6/wg2/>;

³ Commonwealth Scientific and Industrial Research Organisation (December 2020), Climate Change in Australia: Climate information, projections, tools and data, <https://www.climatechangeinaustralia.gov.au/en/>

⁴ Network for Greening the Financial System (June 2020), Guide to climate scenario analysis for central banks and supervisors,

https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_scenario_analysis_final.pdf

⁵ Task Force for Climate-related Financial Disclosures (June 2017), Recommendations of the Task Force on Climate-related Financial Disclosures, <https://www.fsb-tcfd.org/recommendations/>; ISSB (March 2022), [Draft] IFRS S2 Climate-related Disclosures <https://www.ifrs.org/content/dam/ifrs/project/climate-related-disclosures/issb-exposure-draft-2022-2-climate-related-disclosures.pdf>

- a. Different physical risk outcomes to like emissions scenarios. For example, the Climate Measurement Standards Initiative⁶ (CMSI) recommended two physical change storylines that both aligned with a singular emissions scenario.
 - b. The availability of decision-useful data at appropriate levels of granularity⁷ for physical risk assessments, meaning that it is nationally consistent, sector- and region-specific, and addresses gaps in knowledge.
 - c. Systemic risks, including macroeconomic (e.g., Gross Domestic Product, inflation) and cascading impacts for supply and value chains.
 - d. The limits of adaptation measures, including social (e.g., risk to life and wellbeing), financial (e.g., costs are larger to adapt than to retreat), and environmental factors.
 - e. Updateability, by government and other actors, as more detailed sector-specific assessments and methodologies are developed.
 - f. Levers that may significantly alter the impacts of risks (e.g., adaptation, policy intervention, insurance, technological developments) and the consequences of these not being available and/or affordable.
 - g. Existing national (e.g., Resilient Valuation Initiative⁸, Climate Measurement Standards Initiative) and international (e.g., Physical Climate Risk Assessment Methodology⁹) best practice.
- iii. Disclosure recommendations that:
- a. Include key limitations and assumptions of data and models, the indices and metrics used, and data evaluation and assurance processes.
 - b. Align with mandatory climate disclosure requirements as they are developed.

2. Central repository

Fragmentation of physical risk information has been another ongoing challenge. For example, most flood studies are undertaken at the catchment-level, and fire mapping is usually managed at the state-level. This is not a problem if the methods, assumptions, and metrics are consistent (Recommendation 1); however, sourcing this data is very time-consuming for stakeholders requiring a multi-hazard, national view of physical risk (such as investors). It is also important that the Australian Government streamlines the handling of this information internally. Therefore, as part of NCRA, an easy-to-access, centralised repository should be established for:

- i. Existing physical risk assessments (e.g., at state or local council-level). Where possible, these should include data in easy-to-use, open-source formats, along with relevant metadata and reporting. The assessments included should be the most recent, highest resolution assessments available.
- ii. Physical risk assessments that are developed as part of NCRA (Recommendation 3).

⁶ CMSI (September 2020), Scenario analysis of climate-related physical risk for buildings and infrastructure: climate science guidance, <https://www.cmsi.org.au/reports>

⁷ Appropriate granularity of data to the risk profile and extremity of hazards (e.g., many acute events need to be assessed at an asset-level and occur on sub-daily timeframes at greater than 100-year reoccurrence intervals). The sequential nature of extreme events is also important for complex, acute and compound risks.

⁸ Resilient Valuation Initiative (2023), <https://resiliencevaluation.com.au/>

⁹ Coalition for Climate Resilient Investment (2022), Physical Climate Risk Assessment Methodology (PCRAM), <https://resilientinvestment.org/pcram/>

- iii. Physical risk assessments developed by other entities (e.g., regulators, sector representatives) that align with Recommendation 1. Where possible, these should include data in easy-to-use, open-sourced formats, along with relevant metadata and reporting.
- iv. Other relevant physical risk datasets, including hazard data, downscaled climate projections, and scenario information. In instances where it is not possible to host the data within the central repository, working links should be maintained with guidance on which information is the most recent and highest quality.
- v. A consolidated dataset of proposed and implemented resilience activities and outcomes (e.g., flood levees, projects from the Disaster Ready Fund¹⁰).

3. Credible assessments

Understanding how physical risks will change under different emission scenarios is crucial to ensure a resilient and prosperous future for Australia. This means preparing critical infrastructure, institutions and governance systems, and vulnerable communities for these changes. Even under 1.5°C of warming, large-scale, transformative adaptation will be required. Beyond 1.5°C, the likelihood of systems and environments moving beyond the capacity to adapt will increase¹¹.

Adaptation of this scale will require significant investment. Therefore, NCRA has an essential role to develop credible physical risk assessments that can inform adaptation plans and policies, which facilitate investment in adaptation. These assessments should:

- i. Implement the guidance from Recommendation 1 and be made publicly available in the central repository as per Recommendation 2.
- ii. Prioritise the most material risks to Australian communities. The process for prioritisation should consider the magnitude, timing, likelihood, and adaptive capacity of risks, and may include the following from the 6th IPCC Report¹²:
 - a. Increases in heat-related mortality and morbidity for people and wildlife.
 - b. Cascading impacts on cities, settlements, infrastructure, supply chains and services due to extreme events.
 - c. Failure of institutions and governance systems to manage climate risks.
 - d. Disruption and decline in agricultural production and increased stress in rural communities across southwestern, southern and eastern mainland Australia.
 - e. Loss of natural and human systems in low-lying coastal areas.
 - f. Loss and degradation of coral reefs, alpine diversity and kelp forests, and forest ecosystem collapse or transition in southern Australia.
- iii. Co-develop and collaborate on assessments with the sectors, regions, and communities impacted.
- iv. Share key learnings throughout the process to allow for economy-wide capability building.

¹⁰ NEMA (2023), Disaster Ready Fund, <https://nema.gov.au/disaster-ready-fund>

¹¹ IPCC (2018), Special Report: Global Warming of 1.5°C, <https://www.ipcc.ch/sr15/chapter/spm/>

¹² IPCC (2022), Sixth Assessment Report: Impacts, Adaptation and Vulnerability, <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

4. Clear roadmap

The scale and complexity of physical risks make it impossible to develop all required assessments concurrently. Therefore, a clear roadmap for the development of NCRA, and how the scope and focus will change over time, is essential. This should be designed and communicated in a way which allows other actors to develop their own capabilities in parallel and consistently with Recommendation 1. Additionally, communication of this roadmap should focus on ensuring that sectors and areas which are not an immediate focus of NCRA do not use this as an excuse to delay assessment and action.

Conclusion

IGCC members have identified barriers for investors and companies to meaningfully assess and manage physical risk across their portfolios and operations, respectively. Consistent and transparent guidance from NCRA would improve the lack of comparability between different vendor's data and assessments on physical risk, which will improve their utility in financial decision-making. A central repository for data on and tracking of physical risk management, hosted by the Australian Government, would provide a reputable source of decision-useful data for investors and companies to measure and ratchet their performance on physical risk. From this, credible assessments can be generated by all stakeholders which will create investible adaptation plans that facilitate the massive scale of investment required for Australia to become resilient to climate change's physical risks.

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