



Melbourne, Thursday 29 January 2026

Subject: 2026–27 Pre-Budget Submissions

Dear Treasury,

Australia's economy and society are increasingly vulnerable to climate variability and change. [Insurance losses related to weather and climate have more than tripled since the late 1990s, now accounting for around 0.7% of our GDP every 5 years¹](#), totalling billions of dollars. This will only increase as climate instability worsens. Moreover, every decision made today about energy, water, food, the environment and regional security inevitably involves a climate decision.

The Australian Research Council Centre of Excellence for the Weather of the 21st Century calls for budget allocations to *lift Australia's underpinning national capability to respond to climate change*. At the core of all climate decision-making are climate information systems that are deeply rooted in climate science. This is critical to build resilience and capture opportunities arising from climate change in Australia.

A single, fully integrated, national climate information entity

We advocate for an ongoing, targeted commitment to delivering climate change information at world-standard for all Australians. This requires a deep integration of:

- Climate science to develop the foundational knowledge and deliver observational and climate modelling systems. This function is currently mainly delivered by the Bureau of Meteorology, CSIRO and universities.
- Operational application of these systems to deliver national climate information. This is currently missing.
- Translation of this information to government, businesses and communities. This is currently mainly delivered by the Australian Climate Service and the National Environment Science Program.
- Underpinning observational, supercomputing and data infrastructure. This is currently mainly delivered by the BoM, CSIRO and the National Collaborative Research Infrastructure Strategy (NCRIS), and needs a significant uplift in funding to make it comparable to equivalent nations.

¹<https://insurancecouncil.com.au/resource/new-data-shows-long-term-cost-of-extreme-weather/>



As evidenced above, currently the various components of the development, generation and provision of climate intelligence are spread widely over many organisations with little to no national coordination. Importantly, almost all of them lack ongoing funding. It is urgent to establish a more secure funding model that fully integrates the science, infrastructure, and service delivery in a single entity.

We cannot emphasise enough the critical need for timely, ongoing, robust and transparent climate information for the benefit of all. Every day we lose in preparing our response to climate change, our ability to meet national and internationally agreed targets will become more difficult and likely more expensive.

Furthermore, the introduction of the Climate-Related Financial Disclosures Legislation requires that the best information be provided to businesses to improve their ability to make accurate assessments of their climate-change related exposures and opportunities. This cannot be achieved without more detailed information from climate models and an ongoing, coordinated approach to disseminating it.

*21st Century Weather strongly recommends **establishing a single, fully integrated, national climate information entity** to provide better information for Australian decision-making that is deeply rooted in climate science.*

Funding to consolidate sovereign supercomputing capabilities

Enhancing Australia's resilience to weather and climate change requires ongoing support to develop robust scientific knowledge and climate information delivery platforms, in particular, the supercomputing and data infrastructure that will deliver robust predictions of our future climate. Our climate supercomputing infrastructure is currently delivered through the National Computing Infrastructure (NCI). The committed funding for [NCI's next upgrade of AUD 55 million in 2027](#)² is dwarfed by the budget of equivalent nations, with the [United Kingdom spending AUD 1.4 billion on its upgrades](#)³, [South Korea AUD 13.8 billion](#)⁴ and [Canada AUD 84 million](#)⁵.

This financial limitation sends us backwards and will put us at a serious competitive disadvantage. The next generation of climate models that will provide the detailed climate information needed in decision making cannot be used on a computer with the currently committed level of funding. The lack of robust knowledge on localised weather and climate change will prevent us from examining local impacts of climate change with increased confidence. Acquiring this confidence requires more detailed climate model simulations. We have the modelling tools, but simply cannot apply them due to the severely limited computing power.

*21st Century Weather strongly advocates for **significantly expanding and committing funding for climate computing at NCI**. Without it, Australia's economy runs the risk of making ill-informed decisions with maladaptive outcomes that can unintentionally worsen the effects of climate change.*

²<https://www.education.gov.au/national-research-infrastructure/resources/ncris-2025-funding-opportunity-funding-projects>

³<https://www.universitiesuk.ac.uk/latest/insights-and-analysis/new-national-supercomputer-edinburgh-why>

⁴<https://www.ainvest.com/news/south-korea-supplementary-budget-catalyst-tech-infrastructure-growth-2506/>

⁵<https://www.sfu.ca/sfunews/stories/2024/06/sfu-awarded--80-million-to-upgrade-supercomputing-facility-.html>

Regional leadership

Recent and significant geopolitical instability, including proposed budget cuts for two world-leading climate agencies in the United States at NASA and the National Center for Atmospheric Research (NCAR), is a threat to Australia's ability to use alternative tools to establish detailed information about weather and climate change. These actions underscore the need for a sovereign climate entity and associated infrastructure, which, in their absence, would leave us increasingly blind to future climate change.

Lifting our national sovereign climate science and information capability is critical at a time when importing systems from overseas is unreliable. The current technology boom, driven by machine learning and artificial intelligence, adds pressure on Australia to strengthen funding for peak computing facilities. Moreover, Australia is uniquely placed to provide regional leadership through a renewable-powered, world-class, high-performance computing and data system in the Indo-Pacific.

We are happy to discuss any subject raised in this submission.

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On behalf of the ARC Centre of Excellence for the Weather of the 21st Century

The ARC Centre of Excellence for the Weather of the 21st Century is a consortium of world-leading climate and weather researchers based across five Australian universities, together with major domestic and international partner organisations, including the Bureau of Meteorology and CSIRO.

21st Century Weather aims to address these challenges by answering a vital question:
How will Australia's weather transform as our climate changes?

We will advance our understanding of atmospheric circulation and weather systems, and develop ultra-high-resolution climate models to enhance our understanding of Australia's weather and climate.

The foundational knowledge we create will enable policymakers, industry and communities to make better decisions, harness weather resources and help us prepare for high-impact weather.