

The Senate

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Economics References Committee

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Funding and Resourcing for the CSIRO

April 2026

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# Abbreviations

AAMRI	Association of Australian Medical Research Institutes
ACCESS-NRI	Access National Research Infrastructure
AM	Member of the Order of Australia
AMOS	Australian Meteorological and Oceanographic Society
AMSA	Australian Marine Sciences Association
ATSE	Australian Academy of Technological Sciences and Engineering
CEO	Chief Executive Officer
<i>Consequential Amendments</i>	Climate Change (Consequential Amendments) Act 2022
COVID-19	Coronavirus Disease of 2019
CPI	Consumer Price Index
CSIRO	Commonwealth Scientific and Industrial research Organisation
<i>Cth</i>	Commonwealth
DISR	Department of Industry Science and Resources
ERU	Environment Research Unit
FOI	Freedom of Information
FTE	Full-Time Equivalent
GBARD	Government Budget Allocation for R&D
GDP	Gross Domestic Product
IP	Intellectual Property
MYEFO	Mid-year Economic and Fiscal Outlook
NFF	National Farmers' Federation
OECD	Organisation for Economic Co-operation and Development
PC	Physical Containment
PhD	Doctor of Philosophy
R&D	Research and Development
SERD	Strategic Examination of Research and Development
SIR Act	<i>Science and Research Industry Research Act 1949</i>
STEM	Science, Technology, Engineering, and Mathematics
SRI	Science, Research and Innovation
<i>the committee</i>	Senate Economics Reference Committee
USA	United States of America



# Terms of reference

Funding and resourcing for the Commonwealth Scientific and Industrial Research Organisation (CSIRO), with particular reference to:

- (a) the nature of recent and proposed job and program cuts in the CSIRO;
- (b) the importance of public funding for public good science;
- (c) the importance of public resourcing of Australian sovereign scientific capability;
- (d) the recruitment and retention of staff including senior and mid-career researchers, along with the training and career paths of early-career researchers;
- (e) CSIRO's commercialisation of scientific research;
- (f) the long-term capability needs of the CSIRO, including workforce, infrastructure and equipment;
- (g) the role and independence of the CSIRO's leadership in making resourcing allocation decisions;
- (h) the effects of these cuts on the program of scientific work conducted by the CSIRO, including in relation to:
  - (i) areas of fundamental and basic scientific study that do not find ready industry funding partners,
  - (ii) areas of scientific study that relate to emergent, pressing and/or priority issues like the pace, impact and mitigation of climate change including study of the oceans, biodiversity, agricultural adaptation to a changing climate, and related issues, and
  - (iii) the particular burden of proposed cuts on the Environment Research Unit; and
- (i) any related matters.



# List of recommendations

## Recommendation 1

- 5.6 The committee recommends that CSIRO continues to engage with CSIRO staff who have provided evidence that they feel there is a lack of consultation and dialogue around job losses or when programs are to be discontinued or redirected.

## Recommendation 2

- 5.8 The committee recommends that the Albanese Government clarify whether there will be any further funding cuts or jobs losses at CSIRO.

## Recommendation 3

- 5.12 The committee recommends that the Albanese Government publicly advise how Australia's sovereign, public research capability will be protected in the face of funding cuts and jobs losses at CSIRO.

## Recommendation 4

- 5.15 The committee recommends that the Government continues to engage with CSIRO regarding financial sustainability of this important public institution and consider the impacts that reduced public and private funding have on Australian research capability.

## Recommendation 5

- 5.18 The committee recommends that the Government continues to engage with CSIRO about its strategic direction in light of the final review report for Ambitious Australia: Strategic Examination of Research and Development (SERD Review report).

## Recommendation 6

- 5.23 The committee recommends that the Government address the recommendations within the Strategic Examination of Research and Development (SERD) Review report, particularly recommendations which will have either a direct or indirect impact on CSIRO, and publicly advise whether the Government will implement the SERD recommendations.



# Chapter 1

## Introduction

- 1.1 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) sits at the heart of Australia's national science and research ecosystem, driving the research and development that Australia needs to address our most important scientific challenges.
- 1.2 As this report sets out, CSIRO's research, including in partnership with industry, helps foster innovation and technological advancement, which in turn underpins Australia's long-term economic growth and productivity. At the same time, CSIRO is uniquely positioned to deliver 'public good science' – specifically, research that provides essential benefits to the community and environment that might not otherwise be undertaken by industry or other private interests. CSIRO also plays a critical role in building Australia's sovereign capability, ensuring that the nation maintains the independent scientific and technical expertise and critical infrastructure necessary to respond to national challenges and global shocks in an increasingly complex and uncertain world.
- 1.3 However, this inquiry also highlighted how CSIRO is confronting an increasingly difficult operational and financial landscape. The costs of undertaking world-class, complex scientific research are rising, placing pressure on CSIRO's internal budget within a context of broader constraints on the Federal Budget. This inquiry was in part prompted by, and concerned with, a series of recent and newly announced reductions in CSIRO's workforce, which have raised serious concerns about the long-term financial viability of the organisation. Central to this report is the question of whether current resourcing arrangements are sufficient to maintain Australia's sovereign scientific capability and address increasingly complex national challenges. There are significant concerns that CSIRO's funding, when measured in real terms, has not kept pace with the requirements of a modern, effective national science agency.
- 1.4 Central to CSIRO's work and mission are its people, from early- and mid-career researchers to the most experienced scientists, and the dedicated and capable support staff who enable their work. The committee received compelling evidence suggesting that this workforce is currently experiencing deep levels of frustration and distress. These sentiments stem not only from concerns staff have about their own job security and the wellbeing of their colleagues, but also a very genuinely felt view that the importance of their work is often misunderstood and discounted by CSIRO's leadership. Time and again, the committee was told that staff feel they are not being adequately consulted or

heard regarding CSIRO's direction and future. CSIRO can not afford to alienate the very people it relies on to deliver its mandate. The expertise held by CSIRO's staff in strategically important areas is often very difficult or impossible to replace; once this capability is lost, it cannot be easily replicated or 'picked up' by other research organisations, here or overseas.

- 1.5 As this report makes clear, it is essential that CSIRO's decision-making processes, particularly those concerning strategic research directions and cost-saving measures, are properly informed by the views of all stakeholders. In addition to more effective engagement with its own staff, CSIRO must ensure that its strategic path, while set independently, is nonetheless guided by the insights of industry partners and the broader Australian research and development community. This engagement, and careful consideration of the capacity and capabilities of the broader Australian Research and Development (R&D) landscape, will ensure CSIRO's priorities remain aligned with the national interest and its resource allocation supports a sustainable and resilient scientific future for Australia.

### **Referral of the inquiry**

- 1.6 On 26 November 2025, the Senate referred the question of the funding and resourcing of CSIRO to the Senate Economics References Committee ('the committee') for inquiry and report by 31 March 2026.
- 1.7 The reporting date was subsequently extended to 21 April 2026 and then 28 April 2026.

### **Conduct of the inquiry**

- 1.8 The committee published details of the inquiry on its website and called for written submissions by 30 January 2026. The committee also wrote to relevant stakeholders to invite them to make a submission.
- 1.9 The committee published 88 submissions, as well as answers to questions on notice, as listed in Appendix 1.
- 1.10 The committee held one public hearing in Canberra on 13 March 2026. Details of witnesses who appeared at the public hearing are listed in Appendix 2.

### **Acknowledgements**

- 1.11 The committee thanks the many inquiry participants who provided evidence, both in submissions and at the public hearing, on the range of issues relevant to funding and resourcing of the CSIRO.

### **Structure of this report**

- 1.12 In addition to this chapter, this report contains the following chapters:
- Chapter 2 provides an overview of CSIRO's legislated purposes, views put during the inquiry regarding its funding and decision-making about

strategic research directions, including the extent to which its decision-making processes are supported by appropriate consultation mechanisms and properly accounts for staff and other stakeholder concerns.

- Chapter 3 outlines the challenges for CSIRO leadership in addressing funding limitations, and impacts of recent resourcing decisions.
- Chapter 4 considers the importance of R&D in and for Australia, the role of public good science and need for sovereign scientific capabilities, sector capabilities and priorities, and broader funding consideration for scientific research.
- Chapter 5 presents the committee view and recommendations.

### **Notes on references**

1.13 In this report, references to Committee Hansard are to proof transcripts. Page numbers may vary between proof and official transcripts.



# Chapter 2

## CSIRO's funding and decision-making on research directions

2.1 This chapter examines evidence related to the role of CSIRO, its current and historical funding, and considers CSIRO decision-making processes, including in relation its strategic research directions and cost-saving measures.

### Overview of CSIRO's purpose and governance arrangements

#### CSIRO's legislated remit

2.2 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia's national science agency. It was established under the *Science and Industry Research Act 1949* (Cth) (SIR Act).<sup>1</sup>

2.3 CSIRO's primary purpose and functions, as set out in its establishing legislation, is:

(a) to carry out scientific research for any of the following purposes:

- (i) assisting Australian industry;
- (ii) furthering the interests of the Australian community;
- (iii) contributing to the achievement of Australian national objectives or the performance of the national and international responsibilities of the Commonwealth;
- (iv) contributing to giving effect to Australia's obligations under the Paris Agreement;
- (v) any other purpose determined by the Minister;

(b) to encourage or facilitate the application or utilisation of the results of such research.<sup>2</sup>

2.4 Secondary functions of CSIRO, as it describes them, include:

...international scientific liaison, training of research workers, publication of research results, technology transfer of other research, provision of scientific services and dissemination of information about science and technology.<sup>3</sup>

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<sup>1</sup> *Science and Industry Research Act 1949* (Cth) (SIR Act) as amended by the *Climate Change (Consequential Amendments) Act 2022* (Cth).

<sup>2</sup> *The Science and Industry Research Act 1949*; Note: This purpose statement was introduced by the *Climate Change (Consequential Amendments) Act 2022*.

<sup>3</sup> CSIRO, *We are CSIRO*, 15 August 2025, <https://www.csiro.au/en/about/We-are-CSIRO> (accessed 19 February 2026).

## Overview of CSIRO governance framework and decision-making

2.5 CSIRO is an Australian Government corporate entity, with a Board and Chief Executive. The *Public Governance, Performance and Accountability Act 2013* and related rules set out the governance, performance and accountability of CSIRO operations, including the use and management of public resources.<sup>4</sup> In addition to prescribing CSIRO's purpose (as noted above), the SIR Act also prescribes the respective roles and functions of the CSIRO Board and Chief Executive.<sup>5</sup>

2.6 CSIRO explained the role of its board as follows:

Under the Act, the CSIRO Board works with management to determine the organisation's strategy and is accountable to the Australian Government for CSIRO's overall direction, development, assurance and performance. The Board oversees the delivery of CSIRO's functions, approves strategic plans, monitors implementation and approves CSIRO's risk management frameworks and policies. Specifically relevant to [the committee's inquiry], the Board is legislatively responsible for CSIRO's annual Corporate Plan and budget and must ensure the proper use and management of public resources including the on-going financial sustainability of the organisation.<sup>6</sup>

2.7 The executive team, 'led by the Chief Executive, leads, directs, coordinates and controls CSIRO's operations - including resourcing allocation - to deliver the strategy'.<sup>7</sup>

2.8 While CSIRO is subject to Ministerial direction, such directions are rare. As CSIRO noted in its submission:

Historically, the responsible minister has not frequently issued formal directions to the CSIRO Board, with only 2 formal directions provided since 2014.<sup>8</sup>

2.9 At the same time, the Minister for Industry and Innovation and Minister for Science may issue a Statement of Expectations, providing CSIRO with 'clarity on whole-of-government objectives and expectations'.<sup>9</sup> The most recent Statement of Expectations was issued on 10 October 2025 by Senator the Hon Tim Ayres, Minister for Industry and Innovation and Minister for Science.<sup>10</sup> It outlines priorities for CSIRO's research, such as supporting Australia's net zero

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<sup>4</sup> CSIRO, [We are CSIRO](#), 15 August 2025, (accessed 19 February 2026).

<sup>5</sup> CSIRO, *Submission 30*, p. 49.

<sup>6</sup> CSIRO, *Submission 30*, p. 4.

<sup>7</sup> CSIRO, *Submission 30*, p. 49.

<sup>8</sup> CSIRO, *Submission 30*, p. 49.

<sup>9</sup> CSIRO, *Submission 30*, p. 4.

<sup>10</sup> Minister the Hon Tim Ayers, Minister for Industry and Innovation and Minister for Science, [Statement of Expectations](#), 10 October 2025.

transformation and building economic advantage in the tech economy.<sup>11</sup> The priorities are to be delivered in accordance with set expectations, including:

- Innovation and translation through partnerships and collaboration.
- High-impact national science and research infrastructure.
- Enduring and sustainable operations.
- Effective governance, safety, security and people management.
- Maintaining close coordination with the Minister's office and the Department of Industry, Science and Resources.<sup>12</sup>

2.10 CSIRO responds to the Minister's Statement of Expectations with a Statement of Intent,<sup>13</sup> outlining how CSIRO is delivering on identified focus areas.<sup>14</sup> The Statement of Intent also states that CSIRO will demonstrate accountability and report regularly on progress, including through objectives outlined in its Corporate Plans and reported on in its Annual Reports.<sup>15</sup>

2.11 The CSIRO Corporate Plan is its key strategic planning document, and outlines how CSIRO will deliver on its purpose over the four-year period.<sup>16</sup> CSIRO's current Corporate Plan identifies four objectives related to its purpose and role in Australia's innovation ecosystem:

- Drive science and technology for impact: Conduct impact-driven science and research that addresses Australia's challenges in 6 research areas
- Steward research infrastructure: Provide access to fit-for-purpose research infrastructure containing state-of-the-art facilities and equipment
- Connect science and innovation to society: Enhance the productivity and long-term competitiveness of Australia's innovation system by bridging the gap between community, science and industry
- Create an enduring and empowered CSIRO: Create a sustainable and adaptable organisation with a vibrant, diverse and safe culture that attracts and retains exceptional people.<sup>17</sup>

2.12 The Corporate Plan also sets out six research areas that CSIRO will focus on:

- Energy and Minerals: Build a sustainable future through clean, affordable and reliable energy and high-value mineral resources

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<sup>11</sup> CSIRO, *Submission 30*, p. 5.

<sup>12</sup> Minister the Hon Tim Ayers, [Statement of Expectations](#), 10 October 2025.

<sup>13</sup> Ms Ming Long AM, CSIRO Board Chair, [Statement of Intent](#), 16 December 2026.

<sup>14</sup> CSIRO, *Submission 30*, p. 5.

<sup>15</sup> Ms Ming Long AM, CSIRO Board Chair, [Statement of Intent](#), 16 December 2026.

<sup>16</sup> CSIRO, [Corporate Plan 2025-26](#), p. 2.

<sup>17</sup> CSIRO, [Corporate Plan 2025-26](#), p. 6.

- Food and Fibre: Grow productivity and exports of Australia's agricultural sector with reduced planetary impact.
- From Wonder to Discovery: Facilitate curiosity-driven research to lead to discovery and breakthroughs.
- Nature: Enhance the resilience and value of our unique natural and built environments in a changing climate.
- One Health: Enhance the wellbeing of Australians through an integrated approach that sustainably balances the health of humans, animals and ecosystems.
- Tech Economy: Responsibly advance Australian technology and science to drive innovation, boost productivity, and build a resilient, sovereign tech economy.<sup>18</sup>

2.13 In its submission, CSIRO summarised its decision-making process as follows:

... the CSIRO Board, with advice from the Executive Team, sets the strategic direction of the organisation and the Executive Team, led by the Chief Executive, leads, directs, coordinates and controls CSIRO's operations - including resourcing allocation - to deliver the strategy.<sup>19</sup>

2.14 In considering its decision-making powers, CSIRO advised that '[n]either the SIR Act nor the Statement of Expectations are so prescriptive as to create a list of research programs that CSIRO should deliver.'<sup>20</sup>

2.15 CSIRO explained that decisions about any changes to its research portfolio are driven by two major considerations, involving determinations of where CSIRO could have impact and an understanding of available resources:

What research we do is shaped by strategic choices to work at scale on critical national problems where we can have a major impact. How much research we do depends on our budget parameters. These are distinct drivers, though they often intersect.<sup>21</sup>

## CSIRO's Funding

### Public funding

2.16 Evidence to the committee drew attention to CSIRO's public funding, noting that despite appropriation increases, funding has not kept pace with inflation and is declining in real terms.<sup>22</sup>

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<sup>18</sup> CSIRO, [Corporate Plan 2025-26](#), p. 7.

<sup>19</sup> CSIRO, *Submission 30*, p. 49.

<sup>20</sup> CSIRO, *Submission 30*, p. 5.

<sup>21</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 58.

<sup>22</sup> See, for example, Mr Peter Derbyshire, Deputy Chief Executive Officer, Australian Academy of Technological Sciences and Engineering, *Committee Hansard*, 13 March 2026, p. 36; Dr Everard Edwards, *Submission 81*, p. [1]; Science and Technology Australia, *Submission 36*, pp. 3-5.

2.17 The Australian Academy of Science, for example, submitted:

The 2025-26 Science, Research and Innovation (SRI) Budget tables indicate Commonwealth appropriation funding for the Commonwealth Scientific and Industrial Research Organisation (CSIRO) of approximately \$983 million in 2025-26, compared with \$916 million in 2024-25.

Appropriation funding has increased by roughly 1.3% per year over the past 15 years, while inflation has averaged around 2.7% per year over the same period.<sup>23</sup>

2.18 The Australian Academy of Science further submitted the following figure to illustrate CSIRO's funding decline:

**Figure 2.1 Australian government funding for CSIRO in current prices and inflation adjusted (2022-23 prices)**

### Australian Government R&D programs and activities valued over \$100million



Created with Datawrapper

Source: Source: Australian Academy of Science, answer to question taken on notice, 13 March 2026 (received 23 March 2026). (Data from Science, Research and Innovation budget tables, large Government R&D programs and activities valued at over \$100m in 2025-26.)

Note 2024-2025 and 2025-2026 are forecasted figures.

## COVID-19

2.19 CSIRO received a larger-than usual appropriation funding from 2021-2024 intended to offset revenue shortfalls during the COVID-19 pandemic.

<sup>23</sup> Australian Academy of Science, answers to question on notice, 13 March 2026 (received 23 March 2026).

2.20 The CSIRO Staff Association reflected that the conclusion of that \$459.2 million funding in June 2024 has partially contributed to CSIRO's current budget challenges.<sup>24</sup>

#### **2026-27 MYEFO**

2.21 Evidence to the committee also noted CSIRO received an additional \$252.3 million in funding through the 2026-27 Mid-year Economic and Fiscal Outlook (MYEFO).

2.22 Ms Susan Tonks, Section Secretary at the CSIRO Staff Association, advised that this one-off funding boost was welcome and essential to 'stabilise some immediate operational and infrastructure pressures'<sup>25</sup> but 'does not address CSIRO's long-term sustainability'.<sup>26</sup> Ms Tonks expressed hope that additional funding would be available going forward.<sup>27</sup>

2.23 Mr Ryan Winn, CEO of Science and Technology Australia similarly advised that there is an 'infrastructure hole within CSIRO of around \$80 to \$135 million per annum'.<sup>28</sup> He noted that the MYEFO funding provided a 'stop gap'; however, ongoing funding to fill the gap is required.<sup>29</sup>

#### ***CSIRO funding as a proportion of GDP***

2.24 The committee received evidence that CSIRO's appropriation funding as a proportion of GDP has been steadily declining. This decline over the course of several decades is indicated in a document tabled during inquiry, at Figure 2.2.

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<sup>24</sup> CSIRO Staff Association, *Submission 42*, p. [7].

<sup>25</sup> Ms Susan Tonks, Section Secretary, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 8.

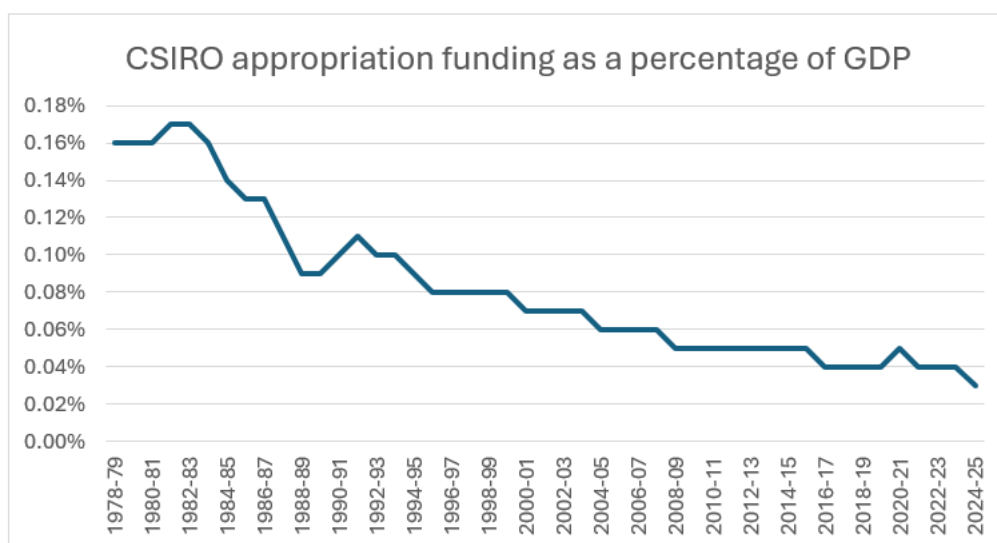
<sup>26</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 2.

<sup>27</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 8.

<sup>28</sup> Mr Ryan Winn, CEO, Science and Technology Australia, *Committee Hansard*, 13 March 2026, p. 39.

<sup>29</sup> Mr Ryan Winn, Science and Technology Australia, *Committee Hansard*, 13 March 2026, p. 39.

**Figure 2.2 CSIRO appropriation funding as a percentage of GDP**



Source: Parliamentary Library, *CSIRO Funding trends*, tabled 10 October 2025.<sup>30</sup>

2.25 Mr Peter Derbyshire, Deputy Chief Executive Officer of the Australian Academy of Technological Sciences and Engineering explained:

Analysis of data from the Parliamentary Library shows that since the 1978-79 financial year real funding for the CSIRO has fallen by an average of over \$3 million a year. That's over \$172 million lost in 2024-25 alone.<sup>31</sup>

2.26 Dr Scott Condie, a CSIRO research scientist appearing in a private capacity, told the committee:

While there has been some commentary on CSIRO funding not keeping pace with inflation, I think we need to look at this in terms of research and development investment as a proportion of our GDP. This is the international standard and is certainly most relevant, in terms of how it supports our economy. On these terms, CSIRO funding has actually fallen by, probably, at least a factor of five since the 1980s. In terms of the broader R&D investment, it's been falling, certainly since 2008, such that our current situation is now that R&D funding within Australia is less than two per cent of GDP, whereas I think most commentators agree that somewhere around three per cent is broadly accepted as the level capable of supporting a competitive and sustainable economy. This all places us somewhat close to the bottom of OECD countries at the moment. Throughout your proceedings, it's come up time and again that innovation is likely to be, more

<sup>30</sup> Parliamentary Library, *CSIRO Funding Trends Research Paper*, tabled document by Senator David Pocock, 2025-2026 Supplementary Budget Estimates, 10 October 2025, [https://www.aph.gov.au/-/media/Estimates/economics/supp2526/TabledDocument10\\_CSIRO\\_Funding\\_Trends\\_Research\\_Paper.pdf](https://www.aph.gov.au/-/media/Estimates/economics/supp2526/TabledDocument10_CSIRO_Funding_Trends_Research_Paper.pdf)

<sup>31</sup> Mr Peter Derbyshire, Deputy Chief Executive Officer, Australian Academy of Technological Sciences and Engineering, *Committee Hansard*, 13 March 2026, p. 36.

and more, the major driver of our future prosperity, so, obviously, these low levels of investment are a concern.<sup>32</sup>

### **Concerns regarding current funding model**

2.27 Witnesses explained to the committee how CSIRO's current funding model is not suitable to support its work, particularly long-term research, and risks undermining its strategic value.

2.28 Ms Susan Tonks, CSIRO Staff Association, contended that CSIRO's current funding model was not working, with costs continuing to exceed available funding, rising above inflation. Additionally she noted CSIRO faces 'ageing infrastructure and ongoing capital and depreciation costs, far exceeding current capital funding.'<sup>33</sup>

2.29 Ms Tonks argued that further public funding was needed, with funding indexed to reflect real rising costs in research and associated infrastructure:

As a matter of urgency, we are calling on the government to provide additional funding to halt and reverse staff losses and suspend further cuts, pending an independent external review of CSIRO's restructure process. Over the longer term, CSIRO's appropriations must increase at least in line with CPI, indexation arrangements must reflect real research and infrastructure costs and Australia must commit to rebuilding CSIRO's research capacity as a proportion of GDP.<sup>34</sup>

2.30 The Australian Academy of Science argued that declines in funding to CSIRO relative to research costs undermined the strategic value of CSIRO and its work as a 'national asset':

[T]he cost of doing research has gone up quite significantly with respect to just the CPI. If you go and look at actual investment in CSIRO with respect to inflation itself, it is not keeping up. Particularly the cost of doing research has gone up, but we are not even keeping up with inflation. That means there's a big gap in terms of what CSIRO has asked to do and what it is able to do because of the fact that we are not able to invest appropriate amounts in a strategic way and to see CSIRO as a national asset and science as a national asset for our nation.<sup>35</sup>

2.31 Dr Stephen Wilson, appearing in a private capacity, highlighted the challenges of the government approach to funding CSIRO research work on a short-term basis. He noted it is a destructive approach to fund something on a year-to-year basis which has a timescale of decades. Dr Wilson further explained that CSIRO

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<sup>32</sup> Dr Scott Condie, Private capacity, *Committee Hansard*, 13 March 2026, p. 29.

<sup>33</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 2.

<sup>34</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 3.

<sup>35</sup> Prof. Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, pp. 54-55.

management is 'under incredible financial pressure to keep cutting and keep cutting',<sup>36</sup> stating:

But they're faced with an almost impossible situation, and part of that goes to the fact that the government funding is essentially government funding; it comes as a block of money.<sup>37</sup>

- 2.32 Dr Scott Condie, similarly advised that the cyclical nature of research funding made it challenging to sustain research directions:

I would say that, at least in the areas that I know, we've actually somehow managed to do quite a good job of maintaining a lot of very important research directions. A lot of this is because we've established good collaborations and had good support from organisations that are focused on major strategic areas that are very important to the country—even though we do require significant external earnings. In my area at least, a lot of those still come through other parts of government, so that helps us focus on the major areas of national importance. But, having said that, a lot of that funding, too, is quite cyclic, so there are times when it is very challenging to maintain those sorts of efforts.<sup>38</sup>

### **Other funding sources**

- 2.33 Concerns were also raised with the committee about a growing reliance on external funding sources to maintain essential research.

- 2.34 Dr Stephen Rintoul, a delegate from the CSIRO Staff Association, explained that with falling government funding to CSIRO, a growing expectation emerged that an outside partner would provide an increasingly high proportion of CSIRO project funding. Dr Rintoul noted the pressures this model created:

The funding model for CSIRO is broken. Generations of CSIRO leadership have attempted to cope with reduced appropriation in real terms by seeking external funding. First, the appropriation funding was expected to be leveraged to obtain 30 per cent co-investment. Then it was 50 per cent. More recently, it was at least 70 per cent and preferably full cost recovery. Once all the appropriation is fully leveraged, it's the end of the road.<sup>39</sup>

- 2.35 Ms Tonks noted the vulnerability of research when there was an excessive reliance of external partner funding:

Half of all the staff surveyed stated that they were aware of basic or fundamental research conducted by CSIRO that lacked industry funding partners and may be affected by proposed cuts.<sup>40</sup>

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<sup>36</sup> Dr Stephen Wilson, Private capacity, *Committee Hansard*, 13 March 2026, pp. 31-32.

<sup>37</sup> Dr Stephen Wilson, Private capacity, *Committee Hansard*, 13 March 2026, pp. 31-32.

<sup>38</sup> Dr Scott Condie, Private capacity, *Committee Hansard*, 13 March 2026, p. 30.

<sup>39</sup> Dr Stephen Rintoul, Delegate, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 3.

<sup>40</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 2.

- 2.36 A heavy reliance on external funding, Dr Everard Edwards from the CSIRO Staff Association told the committee, was negatively impacting the ability of CSIRO to support nascent and emerging industries through research:

Currently, CSIRO believes that 70 per cent of research across the research unit is externally funded, and that includes the overheads, which typically are around 115 per cent of direct costs. The impact of this is that we actually no longer have the ability to support new, up-and-coming industries or smaller industries in the way that we did in the past.<sup>41</sup>

- 2.37 CSIRO advised the committee that it engages in partnerships for a range of reasons, but that the funding approach here was flexible and not mandated to a particular ratio.

... there is not a uniform mandate that any particular collaborative project needs to have a particular co-investment ratio. We partner for the purpose of achieving impact. As an applied science agency, we certainly ask people to think very carefully about how they go about achieving impact. That ranges from some very fundamental work all the way through to some really quite translational work.<sup>42</sup>

- 2.38 Dr Doug Hilton, Chief Executive of CSIRO emphasised the importance of external revenue to CSIRO's capacity to undertake the research it does, while noting that it did introduce a degree of volatility to CSIRO's cost-base and decisions around staffing levels:

I know external revenue has been a topic for discussion today, but fundamentally our ability to take the appropriation and work with partners who also co-fund what we do is the reason that we currently have 4,200 staff. If we were to fund our science just off the appropriation, we would have half that number. So there are some really good consequences from being collegial and collaborative and working with others to leverage the appropriation to drive impact and opportunities for staff, but it makes it extremely difficult to give you an estimate of staff numbers until we know with more certainty what areas might be impacted and how that would then flow on to external revenue.<sup>43</sup>

### **CSIRO's decision-making on research directions**

- 2.39 The Committee heard a range of concerns regarding the role and independence of CSIRO's leadership in making resource-allocation decisions, and the extent to which such decisions took account of the views and expertise of CSIRO's staff and other key stakeholders.

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<sup>41</sup> Dr Everard Edwards, Governing Councillor, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 3.

<sup>42</sup> Prof Elanor Huntington, Deputy Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, pp. 64–65.

<sup>43</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 63.

### CSIRO's review of its research portfolio

2.40 CSIRO noted that in 2023, Dr Doug Hilton, the then newly-appointed Chief Executive of CSIRO, had announced a comprehensive review of CSIRO's entire research portfolio, which commenced in 2024.<sup>44</sup> The review, CSIRO explained, was undertaken in the context of 'significant budget challenges', and because CSIRO needed to:

- prioritise across its research portfolio that had not, in toto, been reviewed for over a decade
- reduce the complexity of research delivery mechanisms to increase transparency, agility, and delivery efficiency
- ensure its research was maximising impact for national benefit
- increase accountability for delivery of the intended outcomes of research by clearly and transparently articulating the desired outcomes.<sup>45</sup>

2.41 Dr Hilton described the work CSIRO had undertaken determining the areas of research priority to focus its resources and efforts on, and the consultations involved:

To ensure CSIRO's research is focused on the areas of highest national priority, we've spent 18 months collectively reviewing our research portfolio. This is the first time, I think, in 10 to 15 years the organisation has looked comprehensively across its research portfolio. We've drawn insights from literally thousands of staff, from hundreds of our science leaders as well as external experts. This process has enabled us to clarify the focus and direction of our programs of research. It has given us, our partners and the public greater transparency of the work CSIRO does every day on behalf of the nation. It's also given CSIRO's leadership a sound, considered basis for the strategic choices we must take.<sup>46</sup>

2.42 In its submission, CSIRO noted that its review of its research portfolio was undertaken in the context of 'significant budget challenges'.<sup>47</sup> CSIRO further explained that 'considering diverse views and making choices about research direction is a crucial element of CSIRO's independence'.<sup>48</sup>

### Indirect impacts of workforce decisions

2.43 Whilst inquiry participants acknowledged the difficult decisions that CSIRO faced due to significant increases in the cost of research and a tightening budget,

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<sup>44</sup> CSIRO, *Submission 30*, p. 10.

<sup>45</sup> CSIRO, *Submission 30*, p. 10.

<sup>46</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 58.

<sup>47</sup> CSIRO, *Submission 30*, p. 10.

<sup>48</sup> CSIRO, *Submission 30*, p. 5.

including regarding the size and focus of its workforce,<sup>49</sup> some also noted the risks of cutting support services.

- 2.44 The committee was advised that CSIRO decisions to cut enterprise services and essential support functions created flow on effects that have not been fully considered including internal contests and detracting from the value of the research. For example, Dr David Newth, a Principal Research Scientist at CSIRO who made a written submission in a private capacity, submitted:

CSIRO leaders are responsible for very broad areas of science. When budgets tighten, they are forced to cut or shrink programs that are connected and mutually supporting. That turns resource decisions into internal contests, where teams spend time defending their existence instead of doing the work—and where short-term survivability can outweigh long-term national need.<sup>50</sup>

- 2.45 Dr Newth further noted that if research teams did not have sufficient and stable funding, this made it harder to deliver science that was shareable and transparent:

If teams can't reliably pay for essential things like publishing, data access, field upkeep, or sharing results, the science becomes less visible and less open to scrutiny. Over time, that makes it harder for CSIRO to act as an independent, trusted source of evidence—because good science needs stable support for transparency, not just funding for deliverables.<sup>51</sup>

### **The importance of independent decision-making by CSIRO**

- 2.46 Evidence to the committee emphasised the need for CSIRO to make decisions regarding the allocation of resources in a way that was both independent and strategic. For example, the Australian Academy of Science told the committee that it was:

...important that the CSIRO leadership team are empowered to make strategic and operational decisions in line with CSIRO's objectives and Australia's national needs.<sup>52</sup>

- 2.47 Similarly, the Association of Australian Medical Research Institutes (AAMRI), advised that the independence of CSIRO leadership in resource allocation decisions was essential to maintaining scientific integrity.<sup>53</sup> Dr Saraïd Billiards, Chief Executive Officer of the AAMRI, further noted CSIRO needs to be strategic when making changes to resource allocation and resulting workforce changes,

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<sup>49</sup> See, for example, Dr Tim McVicar, Submission 51, p. [6].

<sup>50</sup> Dr David Newth, Submission 74, p. [3].

<sup>51</sup> Dr David Newth, *Submission 74*, p. [3].

<sup>52</sup> Prof. Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 53.

<sup>53</sup> Association of Australian Medical Research Institutes, *Submission 60*, p. [4].

particularly to enable research to keep up with the contemporary environment.<sup>54</sup> Dr Billiards explained:

Most researchers are very talented in terms of being able to pivot, so it's not a matter of losing those skill sets; it's more about transferring those skill sets into other areas where the need is required. Being able to make those strategic decisions is critical not only for CSIRO but more broadly for the entire sector.<sup>55</sup>

2.48 AAMRI submitted, however, that CSIRO's capacity to make such strategic decisions was negatively impacted by existing funding settings:

Adequate baseline funding is a prerequisite for genuine strategic decision making. Without it, leadership is forced into reactive cost cutting measures that prioritise short term financial viability over long term national interest.<sup>56</sup>

2.49 The committee was also advised that the independence of resourcing decisions by CSIRO leadership was essential to respond to the 'dynamic and unpredictable' nature of scientific work and for 'creating the right environment to produce high-quality science.'<sup>57</sup> One submission, made on a 'name withheld' basis by a scientist with 15 years research experience, noted '[w]hen processes and bureaucracy get in the way, many critical and time-sensitive decisions can be missed.'<sup>58</sup>

2.50 Similarly, the committee was told that political influences on CSIRO funding allocation endangers a tradition of 'good independent science'. Dr Amanda Wilson, a retired research scientist, pointed to the United States as an example of the long-term damage that research cuts could have:

The defunding and destruction of environmental and medical science currently going on in the USA is a vivid example of this. It is estimated that it will take generations to repair the damage already done, and in the meantime significant numbers of lives could be lost.<sup>59</sup>

### **Consultation and the decision-making of CSIRO's leadership**

2.51 As noted above, CSIRO advised the committee that its review of its research priorities had been based on extensive consultation with staff and other stakeholders, which provided CSIRO leadership with 'a sound, considered basis' for its strategic choices. However, some inquiry participants questioned

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<sup>54</sup> Dr Saraïd Billiards, Chief Executive Officer, Association of Australian Medical Research Institutes, *Committee Hansard*, 13 March 2026, p. 20.

<sup>55</sup> Dr Billiards, Association of Australian Medical Research Institutes, *Committee Hansard*, 13 March 2026, p. 20.

<sup>56</sup> Association of Australian Medical Research Institutes, Submission 60, p. [4].

<sup>57</sup> Name Withheld, Submission 68, p. 2.

<sup>58</sup> Name Withheld, Submission 68, p. 2.

<sup>59</sup> Dr Amanda Wilson, Submission 72, p. [2].

whether proper consideration had been given to the impacts of those choices. For example, Dr Stephen Rintoul argued that cuts made by CSIRO leadership did not properly consider whether this work would be taken up elsewhere:

The reduction in CSIRO's appropriation in real terms has put CSIRO's past and present leadership in a difficult position. The funding situation has become so grim that cuts are needed. CSIRO's leadership has the responsibility to make resource allocation decisions. But they also have the responsibility to verify the assumptions made in making those cuts. For example, if areas of climate science are cut because the leadership believes universities can do the job, this assumption needs to be tested by asking the university sector what they can and can't do. To date, there is no evidence that CSIRO leadership has consulted with stakeholders about the impact of the planned cuts and the implications for Australia's national research effort.<sup>60</sup>

2.52 Submitters also raised significant concerns about the adequacy of CSIRO leadership's consultation with staff in relation to workforce changes and other cost-saving measures. In particular, the committee was advised that historical and current staff consultation mechanisms have not been adequate to develop a deep understanding of the nature of much of the research taking place and its overarching importance. Appearing before the committee as part of the CSIRO Staff Association, Dr Rintoul expanded on his reasoning:

My impression is that the decisions are being made at a level where people do not always appreciate exactly what work is being done and why it's important that CSIRO does that work rather than others. [...] That's the concern: CSIRO leadership, like the leadership of any organisation or business, has the responsibility to prioritise work, but it also has the responsibility to base those decisions on sound information and consultation with both staff and stakeholders who are affected by the cuts to CSIRO.<sup>61</sup>

2.53 The CSIRO Staff Association also commented that its survey of CSIRO staff suggested that decisions about new programs of research and cuts were not being made in a way that properly took account of the views of the staff undertaking research:

The survey respondents described a disconnect between executive management and the realities faced by researchers, with decisions often prioritising short-term fiscal metrics over long-term scientific capability. Over 66 per cent of our survey respondents said they do not believe CSIRO leadership understands the importance of specific scientific work when allocating resources, while over 80 per cent don't believe staff are genuinely consulted about priorities before decisions are made.<sup>62</sup>

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<sup>60</sup> Dr Stephen Rintoul, *Submission 67*, p. [3].

<sup>61</sup> Dr Stephen Rintoul, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, pp. 7-8.

<sup>62</sup> Ms Susan Tonks, Section Secretary, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 3.

2.54 Addressing such concerns, Dr Doug Hilton, CSIRO Chief Executive, advised that:

While changes to our program of research are necessary, I have to say they are incredibly difficult, particularly for our talented staff and their families. CSIRO is such a connected workplace that a change that impacts one staff member impacts our whole CSIRO family. We're deeply aware of this impact and are committed to meaningful, ongoing consultation with staff as we work through the process. We'll also continue to collaborate and consult with the research sector, industry and our many partners in government.<sup>63</sup>

2.55 Dr Hilton also emphasised that consultations would be at the centre of any decisions made about necessary job cuts, and provided the committee with an update on proposed cuts to staff numbers in CSIRO's Environment Research Unit:

We entered consultation, for example, with the environment research unit staff yesterday, and we take that consultation seriously. So we don't have final numbers, but we do have the estimate that we put out to consultation.<sup>64</sup>

2.56 Professor Elanor Huntington, CSIRO Deputy Chief Executive, also advised that consultations with the Data61 team, the Manufacturing Research unit and the Agriculture and Food Unit had commenced the week before the committee's public hearing (held 13 March 2026). At the time of the hearing, consultation with the Health and Biosecurity Unit and the Australian Animal Health Laboratory were due to commence soon.<sup>65</sup>

2.57 Dr Hilton emphasised that CSIRO's executive took such consultations very seriously, explaining that previous rounds of job losses had included consultation processes which had resulted in changes to the executive's proposals.<sup>66</sup>

2.58 He further explained that consultation processes often take a long time, with timelines included in the enterprise agreements followed very carefully. Prior to going into formal consultation, CSIRO takes part in 'early engagement', which includes discussions with staff about the challenges facing the organisation and getting feedback on how to deal with those challenges.<sup>67</sup>

2.59 In contrast to the evidence from CSIRO, the CSIRO Staff Association suggested staff were confused about how cuts would be made, for example, in the Environment Research Unit:

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<sup>63</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 59.

<sup>64</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, pp. 59-60.

<sup>65</sup> Prof Elanor Huntington, Deputy Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 59.

<sup>66</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 59.

<sup>67</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 59.

We knew that staff were going. Obviously, we were told that 130 to 150 people would go from environment. There are [inaudible] people being made redundant, which was announced yesterday, and the extra loss of headcount will be made up of resignations or retirements that will be factored in. We will apparently lose 130 to 150 staff. We didn't know anything about where those cuts would be made until a town hall yesterday. The information that's been provided to date is very general. For example, 12 positions were lost from a group of 60, and there was a very brief, few-word description of the areas in which they would be cut. But it's still hard at this point to know exactly who is going. Those who have been told that they've been made redundant have not really been told why. CSIRO have listed a number of criteria they would use to determine who should be made redundant, but individual staff are not being told how those criteria were applied to them.<sup>68</sup>

- 2.60 More broadly, the CSIRO Staff Association advised that consultation with staff around resourcing decisions has been and continues to be inadequate.<sup>69</sup> Ms Tonks told the committee:

.... it's a much more corporatised approach now. We have a lot of meetings. There are a lot of emails—thousands of emails coming through with information. But, of course, trying to have a genuine collaborative one-on-one conversation is very difficult at that level.<sup>70</sup>

- 2.61 The committee also heard concerns about the significant scale and pace of job cuts at CSIRO and resulting negative consequences on staff morale.<sup>71</sup>
- 2.62 The CSIRO Staff Association reported staff advising that information being provided about potential staff and research cuts was at once overwhelming and lacking in appropriate detail. As a result, as Ms Tonks explained, staff were often left unable to provide considered, meaningful feedback on potential cuts:

From the first round of science support staff cuts, through to these research cuts, what we've seen is that it's been done not only at scale but at a rapid pace. It probably doesn't feel like that to the staff, because they feel like they're in an ongoing change management process constantly. There's a lot of paperwork and a lot of PowerPoint presentations provided, but hugely lacking is relevant real detail for the people who are directly affected to be able to give genuine feedback and to have responses to that feedback. Dr Edwards and I were recently in a consultation forum trying to get information about changes to programs of research. Other than getting the name of the program of research, there wasn't much other detail provided, no matter how many times the question was asked.

The people who are doing this work are not the ones that get involved directly, other than through a tick-and-flick process. There are a lot of town

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<sup>68</sup> Dr Rintoul, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 7.

<sup>69</sup> CSIRO Staff Association, *Submission 42*, p. [7].

<sup>70</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 7.

<sup>71</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 4.

halls. They're very moderated and very controlled. Feedback is given. It's rather homogenised and put into themes. But the people who are literally at the coalface and will be directly impacted—research scientists—are not the ones that are giving the input and setting the direction and strategy for what needs to happen, where any kind of change is required to improve things. I'm sure Dr Edwards would concur that that has been our experience the whole time. We spend a lot of time in meetings, but there's not a lot of relevant detail that's provided to staff.<sup>72</sup>

- 2.63 Ms Tonks pointed to cuts to Data61, CSIRO's data and digital arm, as an example of 'poor consultation' by CSIRO leadership:

We are still asking where the 120 positions that have been reduced came from. It was only just before CSIRO executive's appearance in Senate estimates that we got finally got admission that there were 120 positions that were gone, and it was a 20 per cent reduction. We'd been asking: 'Where were those positions? What were they? What does this mean for the work they were doing?'

...

We don't know where they are. We have to do a lot of work to try and find out where all these people are. We know the number. We know the research unit they're going from, but not much else.<sup>73</sup>

- 2.64 Elsewhere, Ms Tonks pointed to several examples of staff cuts being made in 2024 where staff had very little time to provide feedback on staffing cuts:

Mid-2024, we did raise consultation disputes around the loss of researchers in health and biosecurity in human health because it was just done with, pretty much, two days notice. They were getting rid of 43 of those positions.<sup>74</sup>

- 2.65 The CSIRO Staff Association called for the process of any staff cuts to be slowed to allow for greater shared consideration of future impacts of those cuts, however Ms Tonks stated:

I don't know that they can, which is why we have called for an independent look at how this is being done and what the actual future impacts of this are going to be.<sup>75</sup>

- 2.66 The committee was also advised that consultation processes to date have been very siloed.<sup>76</sup> The CSIRO Staff Association, for example, noted:

When all the support services went for frontline scientists, the scientists weren't involved in the consultation process for that. They were considered separate. Because it wasn't their area, they didn't get to know. It was the

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<sup>72</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 4.

<sup>73</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 7.

<sup>74</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 7.

<sup>75</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 4.

<sup>76</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 4.

people that supported the work that they did, which was going to increase their workload or in some cases stop them being able to do project work. They weren't part of that process.<sup>77</sup>

- 2.67 The committee also received evidence that industry partners and research clients were not adequately involved in consultation about proposed changes to CSIRO's research direction or resource cuts.
- 2.68 The committee heard concerns that CSIRO's decision making appears to be based on a false assumption that private sector or university sectors will pick up research that CSIRO excises from its research program. For example, Professor Andy Hogg, Director of ACCESS-NRI explained that CSIRO staff had been given the false impression that some modelling activities currently undertaken by CSIRO would be fulfilled by ACCESS-NRI instead of CSIRO.<sup>78</sup> Professor Hogg noted his is a research infrastructure organisation and to do research is contrary to his funding guidelines. The committee heard partners like Mr Hogg had not been consulted in the lead up to CSIRO's staffing cuts decisions about any expanded role, only asked to provide comment after the cuts were announced.<sup>79</sup>
- 2.69 The CSIRO Staff Association also noted staff concerns regarding the transparency and accountability of CSIRO decision-making process, including in regard to the use of external contractors engaged in relation to workforce planning:

For example, McKinsey Consulting was commissioned in 2022 at a cost of \$742,500 (nearly \$30,000 a day), for less than a month of work with no report required, to advise on the 'Future Ways of Working' program to streamline organisational processes. McKinsey Consulting was previously engaged by CSIRO at a cost of \$1.2m between October 2021 and March 2022. An FOI request related to the project contract provided no evidence that other suppliers were approached and that the outputs primarily consisted of PowerPoint presentations and talking points for the CSIRO Executive about 'Ways of Working'.<sup>80</sup>

## Next chapter

- 2.70 The next chapter in this report further considers the challenges for CSIRO leadership in addressing funding constraints, and impacts of recent resourcing decisions.

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<sup>77</sup> Ms Susan Tonks, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 4.

<sup>78</sup> Prof Andy Hogg, Director, ACCESS-NRI, Australia's Climate Simulator, *Committee Hansard*, 13 March 2026, p. 12.

<sup>79</sup> Prof Andy Hogg, ACCESS-NRI, *Committee Hansard*, 13 March 2026, p. 12.

<sup>80</sup> CSIRO Staff Association, Submission 42, p. [8].

# Chapter 3

## Challenges

- 3.1 As a world-leading multidisciplinary scientific institution, CSIRO is central to solving Australia’s biggest and most important scientific and technological challenges. However, this inquiry revealed significant threats to its mission. Beyond the question of a level of funding that many consider inadequate and unreliable, it also faces rising costs of maintaining a highly specialised workforce and substantial infrastructure footprint, alongside broader inflationary pressures in the research sector.
- 3.2 This chapter summarises the many challenges CSIRO currently faces and considers the flow-on effects of these current constraints, such as loss of talent (in particular, early and mid-career researchers) and the reductions of breadth and depth of research that CSIRO can perform.

### **Budgetary constraints**

- 3.3 CSIRO’s submission detailed how recent budgetary constraints have impacted staff funding and capital investments, compounded by the rising costs of conducting research.<sup>1</sup>
- 3.4 CSIRO explained that the reduction in its appropriate funding in real terms over a period of many years, as discussed in Chapter 2, combined with ongoing cost increases, has led to ‘significant sustainability challenges for the organisation’.<sup>2</sup>
- 3.5 Dr Doug Hilton, CSIRO’s Chief Executive, summarised this in his appearance before the committee:

It’s important to emphasise that the challenges to CSIRO’s financial sustainability have accumulated over generations and have now reached a critical point. They are driven by a range of factors, including the growing costs of maintaining and operating an ageing and sprawling property portfolio—and I’d say also an incredibly complicated property portfolio, and a number of witnesses have talked to the complexity of managing science infrastructure—and also the sharp increases in the costs of doing science.<sup>3</sup>

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<sup>1</sup> CSIRO, *Submission 30*, p. 13.

<sup>2</sup> CSIRO, *Submission 30*, p. 13.

<sup>3</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 57.

- 3.6 Many submitters urged increased funding to CSIRO to prevent job cuts and cover the up-lift required to CSIRO's infrastructure, as well as indexing CSIRO's funding to prevent its decline in real terms.<sup>4</sup>

### Nature of recent and proposed job and program cuts

#### *November 2025 job cuts*

- 3.7 In November 2025, CSIRO announced changes to its research direction, which would possibly impact 300 to 350 full-time equivalent (FTE) positions.<sup>5</sup> CSIRO's research units and the impact on these units of job losses are shown below in Table 3.1.

**Table 3.1 Potential staffing impacts by research unit**

Research Unit	Total FTE jobs	Potential Impact	Per cent of total FTE positions
Environment	701	130–150	18–21 per cent
Health and Biosecurity	345	100–110	29–32 per cent
Agriculture and Food	638	45–55	7–9 per cent
Mineral Resources	365	25–35	7–10 per cent

*Source: CSIRO, Submission 30, p. 59.*

- 3.8 According to CSIRO's submission, and reflected in the above table, the largest impact from these job losses would be felt in the Health and Biosecurity Unit, with a potential impact to its FTE jobs of between 29 and 32 per cent. The Environment Research Unit (ERU), CSIRO's largest research unit in both staff numbers and expenditure, has the largest potential job losses, although these losses would constitute a smaller percentage loss to their total FTE positions.<sup>6</sup>
- 3.9 According to CSIRO's submission, decisions about changes to CSIRO's research direction were based on a range of criteria, rather than on the relative size of each research unit. Its submission stated:

...the prioritisation of research does require making choices. In order to focus CSIRO's research capacity on priority areas, a reduction of capability that does not target and cannot be deployed to those areas is necessary.

<sup>4</sup> See, for example, Sam Tudman, *Submission 6*, p. [4]; Science and Technology Australia, *Submission 36*, pp. 1, 9; CSIRO Staff Association, *Submission 42*, p. 10.

<sup>5</sup> CSIRO, *Submission 30*, p. 59.

<sup>6</sup> CSIRO, *Submission 30*, p. 59.

While the specifics of the potential impacts on projects and staffing are not yet known and subject to consultation with staff, the proposed changes to the research direction for the Environment Research Unit are focussed on better integrating science across disciplines to more effectively address critical national challenges and deliver maximum science impact.<sup>7</sup>

- 3.10 Regarding job losses and changes to priorities for the ERU, CSIRO's submission stated that this Unit 'will have an ongoing but more targeted focus on the climate science that delivers actionable climate intelligence to support adaptation and/or mitigation measures and inform government policy.'<sup>8</sup>
- 3.11 CSIRO also made the point that there were multiple programs outside the ERU which delivered research on energy transition, climate change and environmental issues.<sup>9</sup>
- 3.12 A large number of submitters raised concerns about effects of CSIRO's cost-cutting measures, both to CSIRO in general, as well as impacts of the specific losses within the ERU.<sup>10</sup>
- 3.13 The CSIRO Staff Association noted that over the past year CSIRO has 'experienced a total of 818 announced job losses, with a further 350 positions flagged for redundancy as of 18 November 2025'.<sup>11</sup>
- 3.14 The CSIRO Staff Association provided the following details of job losses prior to the November 2025 announcement:
- over 400 science support roles lost;
  - 120 jobs cut from Data61, the CSIRO's digital and data division, being roughly 20 per cent of its workforce;
  - reduction of 30 jobs from the Agriculture and Food Research Unit, 43 from Health and Biosecurity, and 5 from Manufacturing Research;
  - 76 jobs lost from Information Management and Technology Client Services, part of the CSIRO's Enterprise Services team; and
  - active research programs to be reduced from approximately 95 to between 50 and 75.<sup>12</sup>

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<sup>7</sup> CSIRO, *Submission 30*, p. 59.

<sup>8</sup> CSIRO, *Submission 30*, p. 59.

<sup>9</sup> CSIRO, *Submission 30*, p. 60.

<sup>10</sup> See, for example, Australasian Institute of Digital Health, *Submission 11*, p. 5; Research Australia, *Submission 34*, pp. 1, 4; The Australian Coastal Society Ltd, *Submission 21*, p. 2; Dr Declan Page, *Submission 4*, p. 2; National Farmers Federation, *Submission 32*, pp. 5, 10.

<sup>11</sup> CSIRO Staff Association, *Submission 42*, p. [3].

<sup>12</sup> CSIRO Staff Association, *Submission 42*, p. [3].

- 3.15 The CSIRO Staff Association also noted that 19 per cent of Programs of Research would not be progressing.<sup>13</sup> According to feedback provided to the CSIRO Staff Association, employees of CSIRO had ‘expressed serious concerns about the lack of transparency and consultation surrounding the newly proposed Programs of Research,’ and key decisions about new Programs of Research appear to have been made without external reviews or input from existing research areas.<sup>14</sup>
- 3.16 Appearing at a public hearing for the inquiry, Ms Susan Tonks, Section Secretary of the CSIRO Staff Association, stated that while some of the job losses would include staff on term contracts, not all losses would be of contracted employees. She went on to say that feedback from staff indicated that job losses could be much higher than 350 FTE positions.<sup>15</sup>
- 3.17 Dr Stephen Rintoul, a Delegate of the CSIRO Staff Association, related that his work area had recently been part of consultation regarding job cuts and described staff as ‘devastated’, particularly due to their high commitment to CSIRO’s work. Within his own workgroup, Dr Rintoul stated that there had been three resignations within the last month with staff deciding their careers would be better off outside CSIRO.<sup>16</sup>

### **Increasing costs**

- 3.18 One of the main pressures currently impacting CSIRO is increased costs. According to CSIRO’s submission:

The impact of increasing costs has impacted CSIRO’s research capacity and led to an underinvestment in property, scientific and research infrastructure and equipment, information technology, digital technologies and cyber security. CSIRO’s ability to meet climate resilience and energy efficiency targets across its extensive ageing property portfolio has also been constrained by increasing costs.<sup>17</sup>

- 3.19 These cost increases include:

- research labour;
- repairs and maintenance to CSIRO’s property portfolio;
- physical and digital enabling infrastructure; and

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<sup>13</sup> CSIRO Staff Association, *Submission 42*, p. [4].

<sup>14</sup> CSIRO Staff Association, *Submission 42*, p. [4].

<sup>15</sup> Ms Susan Tonks, Section Secretary, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 5.

<sup>16</sup> Dr Stephen Rintoul, Delegate, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 6.

<sup>17</sup> CSIRO, *Submission 30*, p. 46.

- maintaining, operating and replacing research infrastructure, plants and equipment.<sup>18</sup>
- 3.20 According to its submission, CSIRO has attempted to address these increasing costs through efficiencies and cost-saving measures in non-research areas of its work, through self-funding the consolidation of property and finding additional funding sources for some capital. These mitigations are now ‘close to exhausted’ and CSIRO must further reduce costs in order to increase investment in its infrastructure, both physical and digital.<sup>19</sup>
- 3.21 The impact of CSIRO being unable to fully invest in its infrastructure due to increasing costs has led to the deterioration of its property and scientific infrastructure, as well as inadequate information and digital technologies for its needs. The committee was advised that this deterioration has resulted in increasing risks to health, safety and security for its staff, as well as a more general reduction in Australian national science capacity. CSIRO estimated it requires at least \$80 million to \$135 million per annum for the next decade, in addition to the loss of 300 to 350 FTE staff, in order to address the impacts of these increasing costs.<sup>20</sup>

### **Labour costs**

- 3.22 Rising labour costs represent a significant burden for CSIRO, driven at least in part by its highly specialised workforce. With approximately 4,250 staff across its research units and 40 per cent holding a PhD, CSIRO’s personnel requirements reflect the advanced nature of the organisation’s scientific output.<sup>21</sup>
- 3.23 Labour expenditure for CSIRO has increased by 24 per cent over the last five years, from \$796 million to \$987 million, reflective of increasing staff levels due to the COVID budget measure ‘JobMaker’, as well as an increase in wages over the wage costs index (approximately 11.4 per cent). CSIRO’s submission noted that, despite this increase, wages for senior researchers at CSIRO are lower than equivalent roles working in the higher education sector or industry, and can be less attractive to international talent.<sup>22</sup>
- 3.24 FTE positions have steadily declined at CSIRO since 2009, going from 4,510 FTE positions in the 2009-10 financial year to 3,693 FTE positions in 2021-22. The financial years of 2021-22 and 2023-24 reversed this trend due to the abovementioned ‘JobMaker’ budget measure. As of December 2025, CSIRO has

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<sup>18</sup> CSIRO, *Submission 30*, p. 14.

<sup>19</sup> CSIRO, *Submission 30*, p. 14.

<sup>20</sup> CSIRO, *Submission 30*, p. 15.

<sup>21</sup> CSIRO, *Submission 30*, p. 45.

<sup>22</sup> CSIRO, *Submission 30*, p. 46.

4,232 FTE researcher positions, which will be reduced by 300 to 350 FTE positions as was announced in November 2025.<sup>23</sup>

- 3.25 In its submission to the inquiry, Science and Technology Australia reinforced the high costs of research labour, describing it as ‘the biggest component of the cost of research.’<sup>24</sup> The cost of labour was not just the researchers themselves, but also technical staff who operate research infrastructure and other research support roles. It noted that pay increases, though ‘sorely deserved and necessary to retain highly skilled talent’, were a significant cost for both organisation and grant budgets, including CSIRO’s.<sup>25</sup>

### **Research costs**

- 3.26 The committee also received evidence about the increase in operating costs for performing research. These costs include things such as laboratory and material supplies, including raw materials, the costs of which had increased significantly due to market demand, as well as an increasing need for data and digital capability when conducting research.<sup>26</sup>
- 3.27 CSIRO’s submission noted that in the last five years, there had been a 35 per cent increase in its information technology costs, driven by market factors like licencing fees for software, increasing data storage and management requirements and cyber security costs.<sup>27</sup>
- 3.28 Science and Technology Australia’s submission noted that increases in research costs, including the cost of power and utilities, equipment, maintenance and consumables, were being felt by all research institutions and agencies.<sup>28</sup> It outlined examples of large increases in research costs just for essential supplies and consumables necessary for scientific research, such as:
- a 50 per cent increase in the cost of gases and other essential chemicals since 2021;
  - a 19 per cent increase in the cost of shoe covers used in clean labs and a 25 per cent increase in the costs of tri-blend gloves since 2024; and
  - a 43 per cent increase in the cost of additive fabrication material.<sup>29</sup>
- 3.29 Science and Technology Australia also noted that increased volatility in global supply chains can have a significant impact on the cost of research, noting that

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<sup>23</sup> CSIRO, *Submission 30*, p. 46.

<sup>24</sup> Science and Technology Australia, *Submission 36*, p. 5.

<sup>25</sup> Science and Technology Australia, *Submission 36*, p. 5.

<sup>26</sup> CSIRO, *Submission 30*, p. 46.

<sup>27</sup> CSIRO, *Submission 30*, p. 46.

<sup>28</sup> Science and Technology Australia, *Submission 35*, p. 5.

<sup>29</sup> Science and Technology Australia, *Submission 35*, p. 5.

krypton fluoride had increased in price from \$4,000/cylinder in 2020 to a current price of \$7,000/cylinder. High purity gold, necessary for use in various experiments, has also seen a 110 per cent increase in price over the last two years.<sup>30</sup>

- 3.30 At a public hearing, Mr Ryan Winn, Chief Executive Officer of Science and Technology Australia, provided the following example of increased research costs:

We also have an example where...the Heavy Ion Accelerator Facility, another [National Collaborative Research Infrastructure Strategy] facility, was upgrading its equipment and needed a cooling system around its equipment. It had budgeted for that, but the cost of that has increased by 100 per cent, so it's now twice as expensive as planned and they can't do it. It's fundamentally making it unsafe. To keep it safe, the costs are going up critically. Liquid nitrogen, which we use to keep samples and processes cool, has increased by 50 per cent since 2021. These are fundamental parts of safety infrastructure capabilities to do the things that we need to do for science. These things are not going up at one or two per cent like the appropriations.<sup>31</sup>

- 3.31 Professor Michael Dobbie, CEO of Phenomics Australia, underlined this point, stating 'that science is based on technology, and technology, particularly new technology, is expensive.' He also noted that a lot of the technology needed to undertake research in Australia needs to be purchased from overseas, which adds in exchange-rate considerations.<sup>32</sup>

### **Upgrades of departmental assets and infrastructure**

- 3.32 The committee also heard evidence about the need for, and impacts of the costs of, upgrades to CSIRO's assets and infrastructure. In its submission, CSIRO stated:

CSIRO, like all basic and applied research organisations, is capital-intensive and requires significant specialised scientific and research infrastructure and equipment. Throughout its century-long history, CSIRO has accumulated one of the most extensive asset portfolios within the Commonwealth, comprising 46 sites across remote, regional and metropolitan locations, as well as an international facility in Montpellier, France. CSIRO sites host a wide range of specialised research facilities and associated plant and equipment, including pilot and demonstration plants, biocontainment facilities, farms, greenhouses, aquaculture facilities, telescopes and space tracking facilities, a research vessel and high-performance computing. CSIRO also maintains extensive laboratory space

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<sup>30</sup> Science and Technology Australia, *Submission 35*, p. 5.

<sup>31</sup> Mr Ryan Winn, Chief Executive Officer, Science and Technology Australia, *Committee Hansard*, 13 March 2026, p. 42.

<sup>32</sup> Prof Michael Dobbie, Chief Executive Officer, Phenomics Australia, *Committee Hansard*, 13 March 2026, p. 42.

that must be equipped with cutting-edge technology to ensure research remains impactful and internationally competitive.<sup>33</sup>

- 3.33 CSIRO's submission stated that the 'net book value' of its assets (land, buildings and equipment) was \$2.4 billion, but that much of its portfolio has low or no real value. The calculated replacement value of its portfolio is currently \$5.9 billion. Currently, CSIRO sources the capital to replace and maintain its asset base from depreciation funding (received through appropriation), grants from different sources and property sales. CSIRO's current depreciation funding is fixed at \$80 million and was set in the 1999-2000 financial year. This amount has not been indexed or adjusted since that time.<sup>34</sup>
- 3.34 Specifically regarding property, CSIRO has more than 840 buildings on 46 sites, with 83 per cent of those buildings beyond their technical end-of-life. These obsolete buildings create further problems, such as:
- present increasing costs for repair and maintenance
  - do not meet the requirements for modern research
  - often require major investment to decommission, vacate or demolish,
  - make it difficult to attract the best scientists
  - increasingly carry unacceptable health and safety risks to staff, unless remediated.<sup>35</sup>
- 3.35 Mr Tom Munyard, CSIRO Chief Operating Officer, relayed that CSIRO had been self-funding property consolidation to create savings. CSIRO sites had reduced from 58 to 45 since 2019. CSIRO sites in Canberra have been reduced from six to soon to be one site. This was an ongoing process and CSIRO would continue to try and find savings through reviewing its cost base into the future.<sup>36</sup>
- 3.36 CSIRO stated in its submission that there has been significant progress in consolidating these sites, but this has been slowed due to limited capital for 'refurbishing, remediating and demolishing' the existing facilities at consolidated locations. Currently, CSIRO's backlog of repair and maintenance costs is \$280 million for the 2025-26 financial year, an increase from \$175 million in 2010-11. Property operating costs have also increased by 23 per cent over the last five years.<sup>37</sup>
- 3.37 CSIRO also submitted, that its property costs are significantly higher than the costs incurred by other government agencies, due to the specialist requirements of the research facilities they house. For example, a laboratory used for mineral processing uses four times the electricity as an office building. Additional costs

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<sup>33</sup> CSIRO, *Submission 30*, p. 43.

<sup>34</sup> CSIRO, *Submission 30*, p. 43.

<sup>35</sup> CSIRO, *Submission 30*, p. 45.

<sup>36</sup> Mr Tom Munyard, Chief Operating Officer, CSIRO, *Committee Hansard*, 13 March 2026, p. 63.

<sup>37</sup> CSIRO, *Submission 30*, p. 45.

of a research facility could include things like specialised controls (for example, gas sensors and fumigation), stable power requirements that must be operated continuously, temperature controls, specialised waste services, safety and security requirements, and the supply of chemicals and gas.<sup>38</sup>

- 3.38 Due to budget constraints, CSIRO has also had to choose between investing in scientific equipment and other capital works. Currently, CSIRO's expenditure on scientific equipment was \$281 million. CSIRO benchmarks its scientific equipment expenditure against the United States National Science Foundation's figures. In order to meet the benchmark figures, CSIRO would require an additional \$65 million of investment.<sup>39</sup>
- 3.39 The costs of maintaining CSIRO's property, scientific and research infrastructure and equipment has faced historical underinvestment and this has led to increasing 'regulatory, security and health, safety and environment risks relating to both physical and digital assets, despite significant interventions.'<sup>40</sup> This underinvestment has accumulated over decades, due to a combination of factors, such as CSIRO attempting to self-fund property and infrastructure needs through the sale of assets, general funding constraints, and decisions by CSIRO to prioritise the investment of appropriations into research capacity.<sup>41</sup>
- 3.40 CSIRO's submission to the inquiry also noted that there has also been a lack of investment in digital infrastructure due to limited funding. These older systems require increasing maintenance costs and pose a significant cyber security risk.<sup>42</sup>
- 3.41 Science and Technology Australia's submission to the inquiry reinforced this, making note that research infrastructure often includes extremely high costs for maintenance and procurement. They made the point that research equipment often requires maintenance contracts with product suppliers which can significantly affect capital expenditure budgets.<sup>43</sup>
- 3.42 At the public hearing for the inquiry, Mr Tom Munyard, Chief Operating Officer of CSIRO, confirmed that CSIRO would need an additional \$80 million to \$125 million a year for the next ten years just to ensure their infrastructure was safe, fit-for-purpose and would enable the long-term financial sustainability of CSIRO. This would include digital and physical infrastructure, strengthen

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<sup>38</sup> CSIRO, *Submission 30*, p. 45.

<sup>39</sup> CSIRO, *Submission 30*, p. 47.

<sup>40</sup> CSIRO, *Submission 30*, p. 48.

<sup>41</sup> CSIRO, *Submission 30*, p. 48.

<sup>42</sup> CSIRO, *Submission 30*, p. 48.

<sup>43</sup> Science and Technology Australia, *Submission 35*, p. 5.

cyber-security, and assist CSIRO to maintain operations at the Australian Centre for Disease Preparedness.<sup>44</sup>

- 3.43 Dr Hilton, CSIRO Chief Executive, reinforced this point, saying the required funds were not to be used for 'bells and whistles' or 'flashy buildings', but were to be used to ensure CSIRO's staff had a safe workplace, something which was particularly important considering the diverse range of facilities and equipment used across CSIRO's facilities.<sup>45</sup>
- 3.44 The concerns about equipment and infrastructure at CSIRO were reiterated in surveys conducted by the CSIRO Staff Association and included as part of its submission to the inquiry. In responses to a survey, 40 per cent of respondents identified inadequate infrastructure as a workplace challenge and 25 per cent of respondents reported that poor equipment hindered their work. Issues such as these had led to 'project delays, increased stress and reduced research quality.'<sup>46</sup>
- 3.45 Ms Susan Tonks of the CSIRO Staff Association added that due to reductions in maintenance staff, other staff were having to wait for repairs on important pieces of equipment.<sup>47</sup>

### **Effects of constraints**

- 3.46 The committee received a large amount of evidence about the effects of the current budgetary constraints on CSIRO, both within CSIRO itself and on the broader Australian scientific, technology and research community.
- 3.47 Some submitters took the view that a lack of CSIRO funding could weaken Australia's long-term sovereign science capability. Dr Declan Page stated in his submission:

Sector bodies and experts highlight that just-in-time or one-off funding does not deliver secure, long-term capability. For example, the Australian Academy of Science and ATSE both criticised the lack of forward-looking investment necessary to protect strategic research capacity and underpin productivity. Further analysis has shown that Australia's public R&D investment as a share of GDP remains below OECD averages, and CSIRO's funding as a share of GDP has declined over decades, intensifying pressure on public-good research.<sup>48</sup>

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<sup>44</sup> Mr Tom Munyard, Chief Operating Officer, CSIRO, *Committee Hansard*, 13 March 2026, p. 61.

<sup>45</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 61.

<sup>46</sup> Ms Susan Tonks, Section Secretary, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 3.

<sup>47</sup> Ms Susan Tonks, Section Secretary, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 5.

<sup>48</sup> Dr Declan Page, *Submission 4*, p. [2].

- 3.48 Ms Susan Tonks of the CSIRO Staff Association reinforced this view, saying that a loss of sovereign scientific capability could lead to increasing reliance on foreign expertise in areas like climate projection, pandemic preparedness and water security and further leading to risks to the national interest. She also noted this could lead to a weakening of Australia's 'world-leading environmental, mineral and biosecurity research.'<sup>49</sup>
- 3.49 The CSIRO Staff Association provided information about specific programs or areas of research which had been cut:
- research into high amylose wheat and allergen-free egg white products;
  - the loss of Data61 researchers had led to termination of projects, including one into flood management research in northern Australia;
  - cuts to the Health and Biosecurity Research Unity meant that clinical research would no longer continue, leading to the closure of the clinical trial unit at Westmead Hospital and withdrawal from the South Australian Health and Medical Research Institute;<sup>50</sup>
  - research areas at risk include 'climate modelling, groundwater integrity, marine research, recycling technologies and biosecurity'<sup>51</sup>; and
  - various collaborations with Indigenous communities, government and industry are also at risk, with numerous national initiatives and long-term partnerships threatened.<sup>52</sup>
- 3.50 CSIRO's submission stated that the changes to CSIRO's research direction were part of a strategic shift that was separate from, though intertwined with, its budget concerns. It explained that the challenges to CSIRO's ongoing sustainability meant that, rather than being able to hire new staff for priority research areas, it needed to be able to realise savings. CSIRO submitted that it would 'make shifts within its reduced capability envelope to achieve stronger alignment with areas of priority as identified in the research portfolio build process.'<sup>53</sup>

### **Loss of staff**

- 3.51 Several submitters made specific comments on the most recent round of job losses at CSIRO and the loss of knowledge and experience that would occur as a result of this round of retrenchment.

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<sup>49</sup> Ms Susan Tonks, Section Secretary, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 2.

<sup>50</sup> CSIRO Staff Association, *Submission 42*, p. [9].

<sup>51</sup> CSIRO Staff Association, *Submission 42*, p. [9].

<sup>52</sup> CSIRO Staff Association, *Submission 42*, p. [9].

<sup>53</sup> CSIRO, *Submission 30*, p. 52.

- 3.52 In its submission, the CSIRO Staff Association made the point that reductions to the Enterprise Services and maintenance teams have led to governance and safety risks. They also stated that cuts to the CSIRO Business and Infrastructure Services Team, a group responsible for facility safety and maintenance, could ‘jeopardise both research staff and community safety’, as many of the cuts have occurred at the Australian Centre for Disease Preparedness, a high-risk facility where highly dangerous pathogens are studied.<sup>54</sup>
- 3.53 The CSIRO Staff Association also remarked that there was significant strain on remaining staff, with understaffing resulting in unsafe work practices, increased operational risk, as well as increased workload and administrative burden. A recent staff culture survey had shown a significant decline in staff morale and erosion in trust and staff engagement.<sup>55</sup>
- 3.54 Mr Kevin Hennesy, a climate scientist who had previously worked with CSIRO for 30 years, described the losses of 300 to 350 staff as ‘devastating’. The large losses in the Environment Research Unit (ERU), Mr Hennesy submitted, could jeopardise research in many important areas of climate related research, including climate prediction/projection capability, contributing to future national or regional climate risk assessments or climate adaptation plans, and contributing to sustainable development.<sup>56</sup>
- 3.55 Several submitters to the inquiry noted the effects of the job losses on the ERU and particularly the flow-on effects of those losses to Tasmania, with many of the ERU staff based out of Hobart working in fields including ‘atmospheric, ocean, cryosphere and biosphere, climate prediction and climate modelling and adaptation research of national significance.’<sup>57</sup>
- 3.56 The Tasmanian Government noted that losses to local CSIRO programs, particularly the ERU, could impact an estimated 40-50 roles based in Tasmania, with significant flow-on effects such as a reduction in career pathways for researchers in the Antarctic and Southern Ocean sector.<sup>58</sup> This sector, it explained, is a ‘significant multi-international market for Tasmania’, representing roughly five per cent of the Tasmanian economy.<sup>59</sup> The committee was advised that Hobart’s status as an Antarctic gateway was critical as hub for key business

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<sup>54</sup> CSIRO Staff Association, *Submission 42*, p. [8].

<sup>55</sup> CSIRO Staff Association, *Submission 42*, p. [9].

<sup>56</sup> Mr Kevin Hennesy, *Submission 9*, pp. [4–5].

<sup>57</sup> Tasmanian Government, *Submission 28*, p. 4.

<sup>58</sup> Tasmanian Government, *Submission 28*, p. 4.

<sup>59</sup> Tasmanian Government, *Submission 28*, p. 2.

and conference events, hosting Antarctic vessels from other countries and with the sector representing 0.5 per cent of total Tasmanian employment.<sup>60</sup>

- 3.57 Research Australia also expressed concerns about the job losses at CSIRO, noting there was a risk of the loss of talent and skills which will be hard, if not impossible, to rebuild in the future. Research Australia also questioned whether the savings created by these cuts would create the financial stability intended and called for more transparency around the nature of the cuts and which work areas would be impacted by them.<sup>61</sup>
- 3.58 One submitter to the inquiry, Dr Trevor Booth, noted that the recent round of job losses had included many Honorary Fellows, and that in the future Honorary Fellows would be limited to 'short term retention' tenures which was 'an unfortunate decision based on misleading information.'<sup>62</sup>

### **Impacts on early and mid-career researchers**

- 3.59 Several submitters drew particular attention to the loss of early and mid-career researchers in CSIRO.
- 3.60 Professor Samantha Capon explained that CSIRO is an important training organisation for early career scientists, saying it works to:
- ...[facilitates] an appreciation of the challenges associated with science policy interactions and nurturing inter-and transdisciplinary approaches as well as effective communication and engagement. Additionally, CSIRO is critical to the retention, synthesis and evaluation of technical knowledge and expertise and maintaining a record and long-term perspective of scientific activity in Australia – minimising wasted investments to 'reinvent the wheel'.<sup>63</sup>
- 3.61 Mr Hennessy made the point that CSIRO's Early Career Fellow program's retention rate was at 46 per cent in 2024-25, with many staff recruited on short-term contracts which are not extended.<sup>64</sup>
- 3.62 The CSIRO Staff Association advised that recent cuts are creating the risk of 'brain drain' due to talented scientists and researchers moving overseas where jobs were not available locally. They drew attention as well to the loss of mid-career researchers and the associated loss of mentoring capacity and

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<sup>60</sup> Tasmanian Government, *Submission 28*, p. 2.

<sup>61</sup> Research Australia, *Submission 34*, p. [3].

<sup>62</sup> Dr Trevor Booth, *Submission 5*, p. [1].

<sup>63</sup> Professor Samantha Capon, *Submission 8*, p. 1.

<sup>64</sup> Mr Kevin Hennessy, *Submission 9*, p. [4].

institutional memory. They described this a ‘major threat to Australia’s ability to response to future scientific challenges.’<sup>65</sup>

3.63 These concerns were echoed by organisations outside of CSIRO. The National Farmers Federation expressed concerns about loss of talent to the agricultural R&D sector both through people leaving the sector entirely or talent moving overseas.<sup>66</sup>

3.64 Research Australia was also concerned by these job cuts, suggesting that these cuts were particularly harmful to early and mid-career researchers and led to perceptions that research was an unstable career path. Research Australia’s submission stated that many early and mid-career researchers identified significant challenges to remaining in research roles, such as underpayment, poor work-life balance, inadequate career development and stress. Short-term contract employment was also very common within the sector, and much higher than the national averages. This was reflected within CSIRO, where 26 per cent of staff were classed as non-ongoing employees in the 2025-25 Annual Report. The submission went on to say:

Attracting and retaining this critical workforce segment is vital to prevent breaks in the workforce pipeline and protect the future functioning of the sector. As well as reversing staff attrition, further reform is needed to improve the long-term retention of researchers.<sup>67</sup>

3.65 Dr Everard Edwards, a Governing Councillor with the CSIRO Staff Association, explained that many early career scientists currently at CSIRO commenced work there through a COVID era recruitment program called ‘Impossible Without You’ who ‘came in with a lot of hope and did a lot of really good work’ hoping they would be offered a job at the end of their contracts. These early career researchers have by and large since left CSIRO.<sup>68</sup>

3.66 CSIRO’s submission also detailed information on the ‘Impossible Without You’ campaign, which increased recruitment in response to the impacts on the R&D sector brought about by the COVID-19 pandemic. This campaign increased recruitment and retention for the years from 2021-22 to 2023-24. The submission emphasised that this was a temporary campaign, responsive to the challenges of the COVID-19 pandemic. All ‘Impossible Without You’ fellows will either have completed, or being completing their terms by the end of 2026.<sup>69</sup>

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<sup>65</sup> CSIRO Staff Association, *Submission 42*, p. [7].

<sup>66</sup> National Farmers’ Federation (NFF), *Submission 32*, p. 12.

<sup>67</sup> Research Australia, *Submission 34*, pp. [3–4].

<sup>68</sup> Dr Everard Edwards, Governing Councillor, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 6.

<sup>69</sup> CSIRO, *Submission 30*, p. 29.

- 3.67 Dr Saraid Billiards, CEO of the Association of Australian Medical Research Institutes, gave evidence that the loss of early to mid-career researchers is a problem not just at CSIRO but across the sector. She went on to say that she is increasingly seeing that people don't want to enter the research industry anymore, largely due to job insecurity.<sup>70</sup>
- 3.68 Dr Nadia Levin, CEO of Research Australia, made the point that the cycle of applying for grants was making research a less attractive, stable career path for young people.<sup>71</sup>
- 3.69 Other evidence to the committee drew attention to the impact of the loss of early and mid-career research careers for women. Dr Talia Avrahamzon, Head of Policy, Projects and Advocacy at Research Australia, noted that in the health and medical research sector, women represent approximately 52 per cent of the workforce, but only 25 per cent of leadership positions. Further losses of early and mid-career researchers would further drain attempts to achieve gender parity in this sector at higher levels. Dr Avrahamzon also noted that these losses would particularly affect people working in research in the regions disproportionately.<sup>72</sup>
- 3.70 Dr Edward Doddridge, appearing in a private capacity, noted that job losses at CSIRO have a broader impact than just on their internal early and mid-career scientists. He explained that when CSIRO cuts jobs it creates more competition within the university and other research sectors.<sup>73</sup>
- 3.71 This view was reiterated by Mr Ryan Winn, CEO of Science and Technology Australia, who noted that Science and Technology Australia had found that around one third of all STEM professionals were thinking of leaving the sector, and citing that low success rates for grants have contributed to job insecurity in the sector.<sup>74</sup>
- 3.72 CSIRO's submission to the inquiry was firm that it 'is committed to developing future research talent and fostering collaboration with universities to support education.'<sup>75</sup> CSIRO submitted that it does this through:

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<sup>70</sup> Dr Saraid Billiards, Chief Executive Officer, Association of Australian Medical Research Institutes, *Committee Hansard*, 13 March 2026, p. 23.

<sup>71</sup> Ms Nadia Levin, Chief Executive Officer, Research Australia, *Committee Hansard*, 13 March 2026, p. 23.

<sup>72</sup> Dr Talia Avrahamzon, Head, Policy, Projects and Advocacy, Research Australia, *Committee Hansard*, 13 March 2026, p. 23.

<sup>73</sup> Dr Edward Doddridge, Private capacity, *Committee Hansard*, 13 March 2026, p. 26.

<sup>74</sup> Mr Ryan Winn, Chief Executive Officer, Science and Technology Australia, *Committee Hansard*, 13 March 2026, p. 26.

<sup>75</sup> CSIRO, *Submission 30*, p. 29.

- partnering with universities and industry to offer undergraduate traineeships and postgraduate studentships; and
- providing structured three-year term roles for recent PhD and Engineering Masters graduates, the CSIRO Early Research Career Fellows (CERC Fellows) program, which includes development plans to prepare early career researchers for their careers either within CSIRO or outside it.<sup>76</sup>

3.73 Relating to the next generation of researchers and scientists, the Australian Science Communicators made note of the closure of youth science programs, such as the Double Helix Club and the CSIRO Discovery Centre. They contended that these closures meant CSIRO was losing the ability to build public trust, support for CSIRO, and scientific literacy with Australian young people and that 'this loss may not be immediately visible; by the time this generation has matured it will be too late.'<sup>77</sup>

### **Next chapter**

- 3.74 Matters relating to loss of sovereign scientific capability, including specific research areas which have been affected by cuts to CSIRO, are discussed in the next chapter.
- 3.75 The committee's views on the above matters and any recommendations relating to them are discussed in chapter five of this report.

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<sup>76</sup> CSIRO, *Submission 30*, p. 29.

<sup>77</sup> Australian Science Communicators, *Submission 35*, p. 2.

# Chapter 4

## Research and development in Australia

4.1 While this inquiry was primarily concerned with matters related to CSIRO's funding and resourcing, it also addressed broader questions regarding the long-term social, economic, environmental and security returns on Australia's investment in its scientific capabilities. As the Australian Academy of Science observed, the issue before the committee in this inquiry:

... is not only about the funding of a single agency it is also about whether Australia will invest in maintaining the scientific capability required to support our economy, environment, security and wellbeing in the decades ahead.<sup>1</sup>

4.2 One of the major themes that emerged in evidence to this inquiry was the importance of funding for scientific work as a public good—'public good science', as specifically referred to in the inquiry terms of reference—and CSIRO's leading role in driving that work. In a related sense, inquiry participants also underlined the importance to Australia of continuing to build and maintain our sovereign scientific capability and, again, the central position of CSIRO and its dedicated workers in securing that capability.

4.3 In addition to outlining evidence received on the importance of public good science and building Australia's sovereign scientific capability, and CSIRO's role therein, this chapter also summarises evidence on the broader question of Australia's investment in research and development (R&D). In doing so, this chapter considers the quantum, quality and balance of investment in R&D from both government and non-government sources, and CSIRO's place in the broader R&D landscape.

### **Australian investment in R&D relative to OECD averages**

4.4 A number of inquiry participants highlighted that government investment in R&D over the last decade had declined in real terms as a proportion of GDP. This decline, the committee heard, was more pronounced still when considered relative to Organisation for Economic Co-operation and Development (OECD) averages.

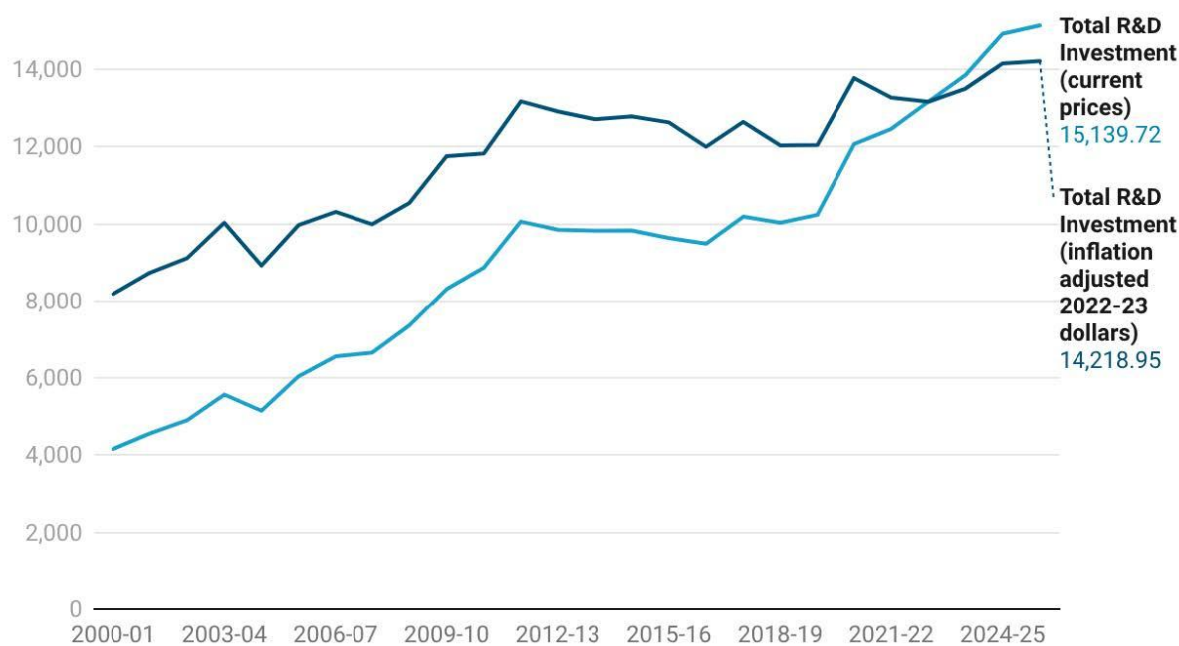
4.5 The Australian Academy of Science provided evidence showing a 'sustained decline' in Australian Government R&D investment over the last decade (see Figure 4.1, below).

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<sup>1</sup> Prof Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 53.

**Figure 4.1 Total Government investment in Research and Development**

**Aust. Govt. investment in R&D, 2000-01 to 2024-25 (\$m inflation adjusted, 2022-23 dollars)**



Created with Datawrapper

Source: Australian Academy of Science, answers to question on notice, 13 March 2026 (received 23 March 2026). (Data: Science, Research and Innovation budget tables).

Note 2024-2025 and 2025-2026 are forecasted figures. Includes the R&D Tax Incentive.

- 4.6 This decline was especially stark when compared to a relatively steady average level of the same type of investment across the same period in the OECD. To illustrate the point, the Australian Academy of Science provided the committee with a table, as at Figure 4.2 below, which showed both the budget allocations for R&D for both Australia and the OECD average, since 2002. (The Australian Academy of Science explained that its accounting for Government Budget Allocations for R&D (GBARD), 'includes R&D expenditure from departmental funds and R&D support from administered funds. This expenditure is spread across government, business and higher education sectors depending on where the R&D activity takes place. It does not include tax incentives.'<sup>2</sup>)

<sup>2</sup> Australian Academy of Science, answers to question on notice, 13 March 2026 (received 23 March 2026).

**Figure 4.2 Australian government budget allocations for research and development**

### **Aust. Govt. Budget Allocation for R&D (GBARD) and OECD Average as a percentage of GDP, 2002-03 to 2023-24**



Created with Datawrapper

Source: Australian Academy of Science, Answer to Question Taken on Notice, 20 March 2026, p. 4. (Data: OECD Main Science and Technology Indicators, Department of Industry, Science and Resources (DISR), Science, research and innovation (SRI) budget tables 2024–25.)

Note: Australian data for 2023 onwards are forecasted.

- 4.7 The committee heard that the fall in investment in scientific R&D in Australia was not just limited to the government funding (to CSIRO or otherwise) but also concerned an economy-wide decline in R&D investment.
- 4.8 For example, the Australian Academy of Science advised the committee that, beyond the question of funding available to CSIRO specifically, there had been a broader 'significant decline' in investment in R&D as a proportion of Australia's economy in recent decades. In 2008, Australia's total investment in R&D across the economy was 2.26 per cent of Australia's GDP, compared to an OECD average of 2.3 per cent. Since 2008, Australia's investment in R&D had fallen to 1.69 per cent, whereas the OECD average had in fact increased to 2.7 per cent:

So we were very close to the OECD average in 2008, but, today, we've got a one per cent gap in GDP investment. Just to put that into numbers, we're talking about \$27 billion of 'gap'. This gap is from the public funding point of view and the business sector point of view as well. With government investment, we need to be able to invest at least a minimum of \$1.8 billion in order to be able to maintain the OECD average. But the remaining

\$25 billion needs to come from private sector investment as well. In both of those sectors, we have really declined. We need to move towards changing the decline in funding to an increase in funding and develop a decadal plan to make sure in the next decade or so we're able to meet that OECD average. We're in the bottom half of the OECD countries.<sup>3</sup>

- 4.9 The Australian Academy of Technological Sciences and Engineering also pointed Australia's low investment in the R&D system, relative to other OECD economies:

Research funding as a proportion of GDP now sits at 1.68 per cent. In South Korea it's 4.9 per cent. The OECD average is 2.7 per cent. That means there is no space in our R&D system to pick up any of this lost capacity. There is no safety net.<sup>4</sup>

### **CSIRO in the broader R&D landscape**

- 4.10 The committee received significant evidence about the role of CSIRO within the broader Australian R&D landscape and its unique value as an institution. A broad range of submitters and witnesses highlighted CSIRO's role in building Australia's sovereign scientific capability.

- 4.11 Professor Paul Scuffham, Chair of the Policy Advisory Committee for the Australian Academy of Health and Medical Sciences, described CSIRO's role as follows:

CSIRO plays a distinctive role in the national research system through its ability to integrate expertise across disciplines, conduct horizon scanning and provide system-level insights to inform government decision-making. These functions depend on sustained capability and institutional knowledge.<sup>5</sup>

- 4.12 A large amount of information received by the committee focused on the importance of CSIRO's current contributions to a variety of industries and sectors in Australia, as well the impact of cuts on those sectors.

- 4.13 The Australian Meteorological and Oceanographic Society (AMOS) pointed out that, due to the interconnected nature of research enterprise, a small cut to CSIRO can give rise to a disproportionate reduction in research capacity nationwide. AMOS noted that CSIRO provides support for modelling

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<sup>3</sup> Prof. Chennupati Jagadish, President, Australian Academy of Science, Committee Hansard, 13 March 2026, p. 54.

<sup>4</sup> Mr Peter Derbyshire, Deputy Chief Executive Officer, Australian Academy of Technological Sciences and Engineering, *Committee Hansard*, 13 March 2026, p. 36.

<sup>5</sup> Professor Paul Scuffham, Chair, Policy Advisory Committee, Australian Academy of Health and Medical Sciences, *Committee Hansard*, 13 March 2026, p. 18.

infrastructure and observations, which are used as a key inputs by the wider scientific community, such as universities, government and the private sector.<sup>6</sup>

4.14 Evidence from Mr Everard Edwards of the CSIRO Staff Association (Staff Association), noted that the budget cuts had reduced CSIRO's ability to support new and smaller industries like they had done in the past.<sup>7</sup>

4.15 The Australian Marine Sciences Association (AMSA) cautioned that cuts to CSIRO risked 'eroding long built scientific capability, undermining both the stewardship of critical public environmental assets and Australia's global leadership in marine science.'<sup>8</sup>

4.16 ACCESS-NRI noted that climate science within CSIRO had shifted from fundamental scientific disciplines to a focus on applied science (for example, more focused on the mitigation of climate change), often at the cost of fundamental science. It contended that, from the outside, this appeared to be a shift motivated by a need to recover more than 70 per cent of research costs. The submission continued:

Given the cost recovery model for CSIRO projects, it seems likely that job losses will hit hardest in public good science - such as climate science. On the other hand, science that can be externally funded, often as consultancies, may be prioritised. The end result is that CSIRO's appropriation may be used to subsidise cut-price consultancies in areas tangential to national benefit.<sup>9</sup>

4.17 CSIRO rejected suggestions it was moving away from climate modelling, with the Chief Executive, Dr Doug Hilton stating that of the 60 staff currently involved climate modelling, 12 were potentially impacted by job losses. He assured the committee:

We retain an absolute major commitment to climate modelling and supporting the collaborative research that gets done. I know that the various collaborative groups that are involved in climate modelling, including CSIRO, are looking for funding from a range of areas. That will be ongoing, and we'll continue to support that. But the idea that CSIRO is retreating in a major way that will decimate a climate modelling and prediction is just not the case.<sup>10</sup>

4.18 The effects of cuts to CSIRO were also being felt outside of the scientific community, with the Australian Institute of Architects stating that reductions in CSIRO capability would affect building regulation and planning through a lack

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<sup>6</sup> Australian Meteorological and Oceanographic Society (AMOS), *Submission 38*, p. [2].

<sup>7</sup> Mr Everard Edwards, Governing Councillor, CSIRO Staff Association, *Committee Hansard*, 13 March 2026, p. 3.

<sup>8</sup> Australian Marine Sciences Association, *Submission 25*, p. [1].

<sup>9</sup> ACCESS-NRI, *Submission 29*, p. 1.

<sup>10</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 62.

of quality evidence in climate science, energy, environmental systems and materials.<sup>11</sup>

- 4.19 Ms Nadia Levin, CEO of Research Australia, echoed this view, saying that research ‘is not a tap that you can turn on and off.’<sup>12</sup> She stated that long term investment in research was needed and that cuts to CSIRO affected the national capability of Australia in research.<sup>13</sup>

### **Unique role of CSIRO**

- 4.20 The committee was provided with evidence about the unique role of CSIRO and its unique facilities. For example, Mr Zac Rayson advised the Australian Centre for Disease Preparedness was a good example of ‘critical sovereign infrastructure,’ essential for Australia’s biosecurity and our regional partners.<sup>14</sup>

- 4.21 Ms Levin echoed this, outlining CSIRO’s role in biosecurity and noting that CSIRO owns one of the two Physical Containment (PC) 4 zoonosis and bioimaging facilities in Australia, which is essential for protecting the Australian agriculture sector.<sup>15</sup>

- 4.22 Ms Levin also expanded on the work of CSIRO in digital health, in particular the recording of high-level information through the My Health Record system, which can include data like heart rate and blood pressure. Ms Levin stated:

That information can really help researchers to understand and predict how to make people better off—what works, what doesn't. CSIRO are now integrating that and using systems to be able to summarise that information so that we as researchers make sense of it and create meaningful change. No-one else is doing this.<sup>16</sup>

- 4.23 Dr Saraïd Billiards, CEO of the Association of Australian Medical Research Institutes put plainly, CSIRO was ‘not just a research agency, it’s part of Australia’s scientific capability and innovation ecosystem,’ with work that supports national security, environmental stewardship, economic prosperity

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<sup>11</sup> Australian Institute of Architects, *Submission 37*, p. 2.

<sup>12</sup> Ms Nadia Levin, Chief Executive Officer, Research Australia, *Committee Hansard*, 13 March 2026, p. 22.

<sup>13</sup> Ms Nadia Levin, Chief Executive Officer, Research Australia, *Committee Hansard*, 13 March 2026, p. 22.

<sup>14</sup> Mr Zac Rayson, Senior Policy Officer, Rural Affairs, National Farmers Federation, *Committee Hansard*, 13 March 2026, p. 48.

<sup>15</sup> Ms Nadia Levin, Chief Executive Officer, Research Australia, *Committee Hansard*, 13 March 2026, p. 22.

<sup>16</sup> Ms Nadia Levin, Chief Executive Officer, Research Australia, *Committee Hansard*, 13 March 2026, pp. 22–23.

and public wellbeing. Science, Dr Billiards argued, should be seen as an economic contributor and not as a discretionary expense.<sup>17</sup>

- 4.24 A range of inquiry participants emphasised the public benefits of scientific research, and the need for strong and sustained levels of public funding commensurate to those benefits. Professor Chennupati Jagadish, President of the Australian Academy of Science, explained why he considered public investment in research was so important to the Australian economy, and why cuts to public funding—including to CSIRO—would leave a gap that would not be effectively filled from elsewhere:

Publicly funded research is particularly important to ensure that knowledge stays in public hands and also to enable that to be used by all industries or whoever wants to benefit... Fundamental research is the foundation for applied research and then for the translation of those technologies for economic benefit. That is why fundamental research mainly needs to be funded publicly—that is, by the government. For example, with the CSIRO, because of the staff cuts you are talking about, if some programs are going to be cut, who else is going to do it? Is anybody else is going to do it? If there's not, nobody else is going to do it. Can we afford to lose that capacity as a nation to really learn about our own environment and our own surroundings? Nobody is going to come and do that, and that is why it is in our national interest to invest in research.<sup>18</sup>

- 4.25 On a similar note, Ms Su McCluskey, Interim Chief Executive of the National Farmers' Federation highlighted CSIRO's essential role in Australia's biosecurity. She explained CSIRO's research in areas such as soil monitoring, mouse plagues and rabbit biocontrol are essential, ensuring our trade and market access.<sup>19</sup> Ms McCluskey noted the long-term requirements of CSIRO's agricultural research, stating for example, '[w]e need the next 10 years of rabbit biocontrol research locked in now because that's how long it takes to come up with the next effective biocontrol.'<sup>20</sup> She advised:

We're really fortunate in Australia to have a world-leading RDC system. We've got great universities and private companies that invest, but there's no doubt that the CSIRO has played and must continue to play their unique role and their vital role in the agriculture innovation ecosystem.<sup>21</sup>

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<sup>17</sup> Dr Saraïd Billiards, Committee Hansard, 13 March 2026, p. 17.

<sup>18</sup> Prof. Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 56.

<sup>19</sup> Ms Su McCluskey, Interim Chief Executive, National Farmers' Federation, *Committee Hansard*, 13 March 2026, p. 51.

<sup>20</sup> Ms Su McCluskey, Interim Chief Executive, National Farmers' Federation, *Committee Hansard*, 13 March 2026, p. 51.

<sup>21</sup> Ms Su McCluskey, Interim Chief Executive, National Farmers' Federation, *Committee Hansard*, 13 March 2026, p. 47.

4.26 Ms McCluskey highlighted Australian agriculture relies heavily on innovation that can drive productivity, particularly as it is not subsidised.<sup>22</sup> She also advised the positive impacts from R&D investment in Australian agriculture were significant, with both direct benefits and flow-on benefits for communities, the economy and society at large. Ms McCluskey explained that for every dollar invested in agriculture R&D there is a direct return of around \$8.<sup>23</sup> However, Ms McCluskey noted public investment, which ‘underpins agricultural innovation and productivity growth’, has been dropping by two to three per cent per year.<sup>24</sup>

4.27 Dr Scott Condie, a principal research scientist with CSIRO who appeared before the committee in a private capacity, was asked whether long-term public-good science was a ‘comfortable fit’ within CSIRO, given the importance of the industry component in shaping CSIRO’s work. Dr Condie responded that he thought it was essential that the two aspects of CSIRO’s work were ‘kept together’:

I’ve seen great benefits from achieving that balance between knowing what we as scientists view as strategically important and, at the same time, being influenced by many external factors.<sup>25</sup>

4.28 Many inquiry participants posed the question of who, if not CSIRO, would undertake the public-good research that Australia needed. Asked to comment on claims that some research being undertaken by CSIRO could simply be undertaken by another country or the private sector, the Australian Academy of Science argued that it was important to recognise where CSIRO was uniquely placed to undertake or contribute to such research:

Typically there’s capability in universities and other places, but we do trust that CSIRO would take a comprehensive look at the entire environmental research environment and identify what CSIRO uniquely does, and that we can’t let go of; that needs to be funded sustainably. We do need collaboration. In fact, greater coordination internationally and domestically across our institutions is critical, especially in earth system science that takes into consideration air, land and water research and where we piece all of that together in a very coordinated way, ideally. But there are elements of

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<sup>22</sup> Ms Su McCluskey, Interim Chief Executive, National Farmers’ Federation, *Committee Hansard*, 13 March 2026, p. 47.

<sup>23</sup> Ms Su McCluskey, Interim Chief Executive, National Farmers’ Federation, *Committee Hansard*, 13 March 2026, p. 47.

<sup>24</sup> Ms Su McCluskey, Interim Chief Executive, National Farmers’ Federation, *Committee Hansard*, 13 March 2026, p. 47.

<sup>25</sup> Dr Scott Condie, *Committee Hansard*, 13 March 2026, p. 30.

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that puzzle that CSIRO does uniquely, and we need to identify those and ensure they're sustainably funded.<sup>26</sup>

4.29 The Australian Academy of Science described Australia's publicly funded research agencies, including CSIRO, as 'essential to generate knowledge that private sector parties do not and should not generate, and provide the national scientific data and capabilities needed to address long-term challenges, make sound public policy decision and deliver shared benefits.'<sup>27</sup>

4.30 The Australian Academy of Science also explained that, while private sector funding of research was important, it remained the case that public-good research needed to be publicly funded to ensure it was rigorous and freely available. The Australian Academy of Science used the example of climate monitoring to demonstrate its point:

If the private sector were to be funding climate monitoring and keeping that data to themselves, not sharing it with other parts of the world, and if we did not have a complete picture of that sort of information across both hemispheres of this globe, aeroplanes probably couldn't fly and ships probably couldn't navigate. We do need this global picture of our earth and it needs to remain in public hands so that it can be shared openly and transparently. When research is funded by the private sector, we absolutely welcome private sector funding of research and we encourage more of it. But public-good research needs to be funded by the public sector.<sup>28</sup>

4.31 Also referring to the example of ocean modelling and monitoring to understand climate change, the Australian Academy of Science argued that Australia had certain sovereign research responsibilities that simply could not be delegated elsewhere.<sup>29</sup>

4.32 Professor Andy Hogg, Director of ACCESS-NRI, went further at the public hearing, making the point that CSIRO is the primary agency in the Southern Hemisphere contributing to climate modelling and Australia could not afford to lose that unique capability. He went on to note that climate modelling, in particular, had been hit hard in the latest round of job cuts and said Australia was at risk of losing the capability to predict future climate as climate change becomes more severe.<sup>30</sup>

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<sup>26</sup> Ms Anna-Maria Arabia, Chief Executive, Australian Academy of Science, *Committee Hansard*, 13 March 2026, pp. 56-57.

<sup>27</sup> Australian Academy of Science, *Submission 33*, p. 1.

<sup>28</sup> Ms Anna-Maria Arabia, Chief Executive, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 56.

<sup>29</sup> Ms Anna-Maria Arabia, Chief Executive, Australian Academy of Science, *Committee Hansard*, 13 March 2026, pp. 55-56.

<sup>30</sup> Prof Andy Hogg, Director, ACCESS-NRI, Australia's Climate Simulator, *Committee Hansard*, 13 March 2026, p. 10.

4.33 Dr Trevor McDougall provided similar views about the importance of CSIRO's work in the Southern Ocean, noting that CSIRO is better placed to do this work than universities, in part because of the climate modelling it produces from its facilities there, as well as its role in operating the RV *Investigator*, its Hobart-based research vessel. Dr McDougall went on to say:

It's not just the modelling that Australia produces and contributes to the world effort; it's the fact that we have a credible number of people doing that that gives us access to all that knowledge in the world. If we have people that are not up to scratch doing that work, we're just a user of the data rather than a contributor and we don't get the inside running on the latest information.<sup>31</sup>

4.34 The CSIRO advised that its review of research portfolio priorities took into consideration whether CSIRO was best placed to undertake particular research.<sup>32</sup>

4.35 The committee also heard evidence that the CSIRO is uniquely placed to work in partnership with industry. Mr Michael Edwards, Vice President, Global Technology with Boeing Engineering and Technology Innovation—Australia, advised that CSIRO was an excellent partner because of the breadth of technologies it works on, its industry focus and consistency in delivery.<sup>33</sup> Mr Edwards highlighted that the CSIRO and Boeing Technology Innovation group have together invested over \$200 million in more than 200 projects over 35 years.<sup>34</sup> Further, Mr Edwards advised that in some cases the CSIRO has capabilities that cannot be found within private industry.<sup>35</sup> By way of example Boeing highlighted Australia's development of the of the MQ-28 Ghost Bat Collaborative Combat Aircraft by Boeing Australia, explaining:

Boeing's first military combat aircraft program outside the United States, and the first such program in Australia in over 50 years — demonstrates what can be achieved with targeted co-investment at scale (actively supported by the Royal Australian Air Force and the Defence Science and Technology Group) and the mobilisation of research, technology and supplier partners around a focused mission. A world-leading program which continues to achieve significant milestones as it now transitions into operational service.<sup>36</sup>

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<sup>31</sup> Dr Trevor McDougall, Private capacity, *Committee Hansard*, 13 March 2026, p. 11.

<sup>32</sup> CSIRO, *Submission 30*, p. 11; Dr Hilton, *Committee Hansard*, 13 March 2026, p. 63.

<sup>33</sup> Mr Michael Edwards, Vice President, Global Technology, Boeing Engineering and Technology Innovation—Australia, *Committee Hansard*, 13 March 2026, p. 45.

<sup>34</sup> Boeing, *Submission 44*, p. 3.; Mr Michael Edwards, Boeing, *Committee Hansard*, 13 March 2026, p. 44.

<sup>35</sup> Mr Michael Edwards, Boeing, *Committee Hansard*, 13 March 2026, p. 45.

<sup>36</sup> Boeing, *Submission 44*, pp. 3-4.

- 4.36 Boeing noted their partnership with CSIRO enabled them to develop projects relevant to both parties and put collaborative projects into action quickly because of the existing framework and funding agreements.<sup>37</sup> The agreements include contract research and work explicitly for Boeing, where Boeing holds the Intellectual Property (IP), and other research where CSIRO have ownership of the IP and Boeing takes licence of that into its industry applications.<sup>38</sup>
- 4.37 Mr Edwards acknowledged that CSIRO's work in broader public-interest research is foundational to its successful collaborations:

There's certainly an ongoing nature of investment that CSIRO and others make across the areas. They develop fundamental capabilities that obviously then grow into things that we can draw upon and, and use in specific applications and mature for our application. So I do agree that it is important that there be continuing investment in the capability developments that ultimately mature to the point that we are able to use them in industry.<sup>39</sup>

### **Sovereign scientific capability**

- 4.38 Several submitters provided information about the need for Australia to build and maintain a strong national sovereign scientific capability, and CSIRO's role underpinning that capability. Evidence to the committee strongly supported funding CSIRO to ensure they are undertaking research not able to be undertaken elsewhere in the R&D sector.<sup>40</sup>
- 4.39 The Australian Academy of Health and Medical Sciences' submission put plainly that current funding challenges facing CSIRO should be seen not as institutional failure, but instead as a 'warning signal' about funding across the Australian R&D sector. It mentioned the Strategic Examination of Research and Development (SERD) review<sup>41</sup> (discussed further below) as an opportunity to move towards a more coordinated national stewardship of national research across publicly funded agencies.<sup>42</sup>
- 4.40 Private sector funding of CSIRO research (also discussed in chapter one) was discussed, with Ms Arabia of the Australian Academy of Science saying that, while the private sector partnering with CSIRO was 'absolutely terrific' and

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<sup>37</sup> Mr Michael Edwards, Boeing, *Committee Hansard*, 13 March 2026, p. 44.

<sup>38</sup> Mr Michael Edwards, Boeing, *Committee Hansard*, 13 March 2026, p. 45.

<sup>39</sup> Mr Michael Edwards, Boeing, *Committee Hansard*, 13 March 2026, p. 46.

<sup>40</sup> See, for example, Prof. Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 57.

<sup>41</sup> The Strategic Examination of Research and Development was ongoing at the time this submission was being written.

<sup>42</sup> Australian Academy of Health & Medical Sciences, *Submission 86*, p. 2.

could coexist with public sector funding, it could not be how CSIRO sustains its funding model.<sup>43</sup>

- 4.41 Professor Jagdish suggested that the work of CSIRO should be viewed an investment and not a cost and could be viewed as ‘superannuation for the nation.’<sup>44</sup>
- 4.42 Professor Jagdish also emphasised the importance of working out Australia’s national needs, and provided the example of the work currently ongoing in the Southern Ocean as an area where CSIRO plays a very important role.<sup>45</sup> She went further by citing events of the COVID-19 Pandemic, noting that supply chain issues and nations increasingly investing in their own needs during that period, had created a situation where Australia struggled to get the critical technologies it required to care for its population. She said that investing in sovereign capability was a way to prevent a similar situation arising in the future. She argued the need to shift from a resource-based economy to knowledge-based economy to provide jobs and a high quality of life for the next generation of Australians.<sup>46</sup>

### **R&D sector focus and capability**

- 4.43 Evidence presented to the committee indicated that the R&D sector is currently fragmented, highlighting an urgent need for a unified strategy and better collaboration between government departments, publicly funded research agencies, and CSIRO.<sup>47</sup>
- 4.44 As discussed above, CSIRO’s current funding pressures can be seen as symptomatic of larger pressures on publicly funded research in Australia, ‘including declining real investment in research and development, increasing fragmentation, and the absence of a coherent mechanism to sustain national capability across agencies.’<sup>48</sup>
- 4.45 The Australian Academy of Health and Medical Sciences cautioned that any reprioritisation of CSIRO’s research should not be used as a pretext for further

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<sup>43</sup> Ms Anna-Maria Arabia, Chief Executive, Australian Academy of Science, Committee Hansard, 13 March 2026, p. 56.

<sup>44</sup> Prof. Chennupati Jagdish, President, Australian Academy of Science, Committee Hansard, 13 March 2026, p. 57.

<sup>45</sup> Prof. Chennupati Jagdish, President, Australian Academy of Science, Committee Hansard, 13 March 2026, p. 54.

<sup>46</sup> Prof. Chennupati Jagdish, President, Australian Academy of Science, Committee Hansard, 13 March 2026, p. 55.

<sup>47</sup> Ms Anna-Maria Arabia, Australian Academy of Science, Committee Hansard, 13 March 2026, p. 56.

<sup>48</sup> Australian Academy of Health & Medical Sciences, Submission 86, p. 2.

withdrawal of capability, so it can maintain the ability to mobilise that capability in response to emerging needs in Australia.<sup>49</sup>

### **Strategic Examination of Research and Development**

- 4.46 The Australian Government, through the Department of Industry, Science and Resources (DISR), commissioned the Strategic Examination of Research and Development to identify the ‘challenges and opportunities facing Australia’s R&D system.’<sup>50</sup> The final report of this process was published on 17 March 2026, and included 20 recommendations to government.<sup>51</sup>
- 4.47 The SERD review was announced in the 2024-25 Budget, making up part of the Future Made in Australia package and following on from the Universities Accord.<sup>52</sup>
- 4.48 The final SERD Review report, *Ambitious Australia: Strategic Examination of Research and Development final report*, was released after the committee had held its public hearing for the inquiry and as such there was no commentary from witnesses or submissions about the content of the report. However, several witnesses provided their views on what would be important for the report going forward.
- 4.49 Dr Doug Hilton, CSIRO Chief Executive, stated that the organisation had been pleased to contribute to the SERD Review and to consider how CSIRO is best placed to be utilised within the broader national R&D ecosystem. Reviews currently being undertaken by CSIRO of its own strategic direction were adjacent to the SERD Review process and were done to ensure CSIRO was ‘focused, relevant and sustainable.’<sup>53</sup>
- 4.50 Ms Anna-Maria Arabia, Chief Executive of the Australian Academy of Science, was hopeful that the SERD Review would provide a blueprint for the sector and described the review as an:

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<sup>49</sup> Australian Academy of Health & Medical Sciences, Submission 86, p. 3.

<sup>50</sup> Department of Industry, Science and Resources (DISR), *Ambitious Australia: Strategic Examination of Research and Development final report*, 17 March 2026, <https://www.industry.gov.au/publications/ambitious-australia-strategic-examination-research-and-development-final-report> (accessed 13 April 2026).

<sup>51</sup> DISR, *Ambitious Australia: Strategic Examination of Research and Development final report*, 17 March 2026, <https://www.industry.gov.au/publications/ambitious-australia-strategic-examination-research-and-development-final-report> (accessed 13 April 2026).

<sup>52</sup> DISR, *Strategic Examination of Research and Development*, <https://www.industry.gov.au/science-technology-and-innovation/strategic-examination-research-and-development> (accessed 13 April 2026).

<sup>53</sup> Dr Doug Hilton, CSIRO Chief Executive, [Opening Statement 10 October 2025](#), Supplementary Estimates, Additional information and tabled documents

...opportunity for government to grasp those recommendations with both hands and start this journey to create a flourishing Australia so that we can meet those defence and national security imperatives that we have so we continue to enjoy good quality of life and the health outcomes that we have come to expect and enjoy in this country. We can't take that for granted though. It is slipping through our fingers, and we do need to act swiftly.<sup>54</sup>

- 4.51 This was underscored by evidence provided by Professor Jagadish, President of the Australian Academy of Science, who noted there was a strong need for nationally co-ordinated efforts in the scientific sectors. Professor Jagadish used the example of earth sciences, making the point that the Academy's National Committee for Earth System Sciences had identified there was no national co-ordinated system for this area of science and 'nobody knows who is doing what – what the universities are doing or what the national organisations are doing.'<sup>55</sup>
- 4.52 Professor Jagadish went on to say that without a comprehensive review of the entire sector, continued piecemeal investment in R&D would lead to missed opportunities for the country. He went on to say a comprehensive review was needed to ensure all aspects of research were fully covered.<sup>56</sup>
- 4.53 Ms Arabia of the Australian Academy of Science urged quick action, noting that the issues within CSIRO were symptomatic of a long-term decline in funding in research:

What we're seeing today is the symptoms of a long-term decline in funding. This has been going on for more than 10 years. We cannot kick the can down the road any longer. If we do, not only will we continue to fall further behind the rest of the world but the journey back gets harder and harder. The time to start is now – to look at the system comprehensively and to fix it over the next 10 years in a non-partisan plan for the future of Australia that's underpinned by robust science and technology capability. We absolutely need to start today.<sup>57</sup>

- 4.54 Professor Paul Scuffham, Chair of the Policy Advisory Committee for the Australian Academy of Health and Medical Sciences, had similar views, stating that the most effective response would be in 'strengthening coordination across the national research system'.<sup>58</sup>

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<sup>54</sup> Ms Anna-Maria Arabia, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 57.

<sup>55</sup> Prof. Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 54.

<sup>56</sup> Prof. Chennupati Jagadish, President, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 57.

<sup>57</sup> Ms Anna-Maria Arabia, Australian Academy of Science, *Committee Hansard*, 13 March 2026, p. 57.

<sup>58</sup> Professor Paul Scuffham, Chair, Policy Advisory Committee, Australian Academy of Health and Medical Sciences, *Committee Hansard*, 13 March 2026, p. 18.

**Next chapter**

4.55 The committee's views on the above evidence, as well as recommendations relating to these matters, are contained in chapter five of this report.



# Chapter 5

## Committee view

### *CSIRO funding is an investment*

- 5.1 The committee acknowledges that for decades CSIRO has served as a cornerstone of Australia's national public research, delivering innovations like Wi-Fi and polymer banknotes that have fundamentally shaped our nation's prosperity.
- 5.2 Over decades, Government investment in CSIRO has secured Australia's sovereign capability and place in the global economy.
- 5.3 The Albanese Government must acknowledge that investment in CSIRO is an investment in Australia's future prosperity, not simply a cost to the budget.

### *Commitment to open dialogue with staff*

- 5.4 The committee notes concerns from CSIRO employees that consultation in relation to job cuts has been inadequate and has seemingly not delved into the nature of important research.
- 5.5 Further, the committee notes concerns from CSIRO employees about the scale and pace of historical and proposed job cuts within the CSIRO.

### **Recommendation 1**

- 5.6 **The committee recommends that CSIRO continues to engage with CSIRO staff who have provided evidence that they feel there is a lack of consultation and dialogue around job losses or when programs are to be discontinued or redirected.**

### *Further funding cuts and job losses*

- 5.7 The committee acknowledges the impact, to both the organisation and the staff of CSIRO, due to funding cuts and job losses due to the decisions of the Albanese Government.

### **Recommendation 2**

- 5.8 **The committee recommends that the Albanese Government clarify whether there will be any further funding cuts or jobs losses at CSIRO.**

### *Securing sovereign capability*

- 5.9 The CSIRO has legislated functions including, assisting Australian industry and furthering the interests of the Australian community.

- 5.10 The committee understands the importance of CSIRO's research to protecting Australia's way of life, including by providing practical industry assistance in critical areas like biosecurity and minerals.
- 5.11 The committee also acknowledges the importance of ensuring a pipeline of young Australian researchers, to safeguard our sovereign capability and ensure our brightest minds solve critical, national challenges. Similarly the retention of experienced and knowledgeable mid-career and long-term scientists is critical to Australia's sovereign capability.

### **Recommendation 3**

- 5.12 The committee recommends that the Albanese Government publicly advise how Australia's sovereign, public research capability will be protected in the face of funding cuts and jobs losses at CSIRO.**

#### *Future funding*

- 5.13 The committee notes concerns raised in submissions regarding the shrinkage of CSIRO's budget in real dollars, as a result of the Albanese Government's failure to control inflation, and the resulting challenges faced by CSIRO to sustain strong research capabilities.
- 5.14 The committee acknowledges that when a government loses control of the economic basics, including the budget, inflation and productivity, the impacts are felt by organisations, like the CSIRO, who pay the price through higher costs.

### **Recommendation 4**

- 5.15 The committee recommends that the Government continues to engage with CSIRO regarding financial sustainability of this important public institution and consider the impacts that reduced public and private funding have on Australian research capability.**

#### *Strategic direction of CSIRO*

- 5.16 CSIRO holds a critical role in providing sovereign scientific capability for Australia and focusing on public good science. As such, its strategic direction needs to consider the long term scientific capability needs in Australia that help restore our standard of living and protect our way of life.
- 5.17 The committee acknowledges that sustained national research capability is fundamental to innovation, productivity and Australia's ability to respond to complex economic and strategic challenges. Without a healthy and active research and development sector, these capabilities cannot be effectively realised.

## **Recommendation 5**

**5.18 The committee recommends that the Government continues to engage with CSIRO about its strategic direction in light of the final review report for *Ambitious Australia: Strategic Examination of Research and Development* (SERD Review report).**

### *Implementation of the SERD review report*

5.19 The committee also acknowledges the ongoing challenges to CSIRO with reduced funding from both government and private R&D investment.

5.20 As a nation, R&D investment has fallen to 1.68 per cent of GDP – well below the OECD average, and since 2008, business investment in R&D has dropped by 35 per cent.

5.21 The committee acknowledges that whilst the final SERD Review report, *Ambitious Australia: Strategic Examination of Research and Development* final report, was released after the committee had held its public hearing for the inquiry and as such there was no commentary from witnesses or submissions about its content, the report provides recommendations which impact CSIRO, including private R&D investment, government funding programs and the strategic direction of CSIRO.

5.22 The Government must ensure that it works collaboratively with CSIRO on the SERD Review report recommendations.

## **Recommendation 6**

**5.23 The committee recommends that the Government address the recommendations within the *Strategic Examination of Research and Development* (SERD) Review report, particularly recommendations which will have either a direct or indirect impact on CSIRO, and publicly advise whether the Government will implement the SERD recommendations.**

**Senator Kerryne Liddle**

**Chair**

**Liberal Senator for South Australia**



# Australian Greens Senators' dissenting report

- 1.1 On behalf of the Australian Greens, we want to thank the committee and the secretariat for their work on this inquiry. We would also like to add a personal thanks to all those who shared evidence.
- 1.2 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) plays an irreplaceable role in delivering world-leading science and innovation that underpins Australia's prosperity, security and wellbeing.
- 1.3 CSIRO has been responsible for globally significant scientific developments including Wifi, plastic bank notes, Aerogard and the Hendra virus vaccine.<sup>1</sup> Public investment in science and research is often what delivers innovation that lays the groundwork for these kinds of commercial breakthroughs and increased productivity.
- 1.4 Yet government funding for CSIRO's public research has declined from 0.16% of GDP in 1978/79 to just 0.03% of GDP in 2024/25, worth approximately \$193 million (in real dollars) and a decline of over 17% in 46 years.<sup>2</sup> Under the Labor Government funding has only gotten worse and the institution is at breaking point.
- 1.5 The inquiry into CSIRO's funding and resources uncovered systemic erosion of Australia's public science capability driven by chronic underinvestment and policy choices that prioritise short-term savings over long-term national interest.
- 1.6 Over the past year, CSIRO has lost more than 800 jobs, and now another 350 full-time-equivalent research roles are set to go. The scale of the cuts under the current government are set to surpass those made under the Abbott government. In the words of the CSIRO Staffing Association, "put simply, CSIRO is barely surviving and needs urgent help."<sup>3</sup>
- 1.7 The consequences of long-term staffing and funding cuts are vast; including fewer scientists, weaker sovereign capability, diminished climate research, and a dangerous shift away from national interest led research toward research that can be commercially sold.
- 1.8 The recommendations made in the Chair's report do not reflect the evidence received and set out in this inquiry's report. That evidence creates a strong case for action. The CSIRO does not need more consultation, it needs additional funding and a new commitment from current and subsequent governments to

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<sup>1</sup> CSIRO Staffing Association, *Submission 42*.

<sup>2</sup> Parliamentary Library, [CSIRO Funding Trends Research Paper](#), tabled document by Senator David Pocock, 2025-2026 Supplementary Budget Estimates, 10 October 2025.

<sup>3</sup> CSIRO Staffing Association, *Submission 42*.

real increases in the resources available to our premier public science organisation.

- 1.9 In light of this, our Dissenting Report makes specific recommendations for action, with a renewed commitment to the CSIRO. Without this, our science capability will continue to decline, with frightening consequences for Australia's ability to meet its current challenges, including in relation to climate change, as well as our future challenges.

### **Chronic underfunding masked as strategic reform**

- 1.10 Evidence to the inquiry makes clear that the challenges facing CSIRO are the direct consequence of chronic underfunding by governments. Nominal funding by the federal Government has flatlined over the last couple of decades and decreased in real terms, but this is compounded by other cost pressures.
- 1.11 Beyond headline funding levels, CSIRO faces a convergence of escalating cost pressures including research expenses rising faster than indexation, the growing burden of maintaining complex national scientific infrastructure, and capital and depreciation costs that far exceed available funding.
- 1.12 The consequence is a steady squeeze on core public-interest research capacity, as resources are diverted away from long-term, nationally significant science toward covering basic operational and infrastructure costs.
- 1.13 CSIRO's funding is being eroded in real terms because indexation doesn't keep pace with the rising cost of scientific research, particularly in energy, climate, and advanced technologies, reducing its purchasing power over time.
- 1.14 Mr Winn explained:
- When your appropriations from government are increasing at two per cent, the price of clean shoes that you wear in a lab go up by 19 per cent, the price of gold you need for experiments is going up by 110 per cent and some of the gases are going up by 100 to 300 per cent - the equation falls apart quickly.<sup>4</sup>
- 1.15 The result is that CSIRO is being forced to cut capability simply to remain within budget.
- 1.16 At the same time, the organisation carries significant obligations to maintain and upgrade a vast portfolio of specialised scientific infrastructure, from laboratories to national research facilities, which require ongoing and often escalating investment.
- 1.17 These pressures are intensified by capital and depreciation costs that substantially exceed current capital funding allocations, forcing CSIRO to absorb the shortfall within its operating budget.

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<sup>4</sup> *Committee Hansard*, 13 March 2026, p. 39.

1.18 Dr Doug Hilton said:

Certainly, the increases in the appropriation have not kept pace with the cost of doing science, and I think we're also hostage to a hundred years of history. We have facilities that are spread across 45 sites. We have 800 buildings, and more than 80 per cent of them are at their technical end of life. We have had depreciation funding, which is what we use to renew our buildings through capital investment, that has not been indexed at all since 1999-2000, so it has remained at \$80 million for the last 26 years. Those are constraints that make it difficult to continue to do the same volume of science on the same breadth of topics.<sup>5</sup>

1.19 Taken together, it's clear that CSIRO is not being funded to maintain a fit-for-purpose capability. Instead, it is being forced into a cycle of internal cuts, short-term trade-offs, and erosion of long-term capacity.

1.20 This is not the result of a single decision, but of successive governments failing to provide sustained, adequate investment in Australia's premier public research institution.

1.21 Sustained underfunding is not just constraining CSIRO, it is actively reshaping it. Witnesses described a shift away from long-term, fundamental research toward short-term, applied and consulting-style 'research' work driven by funding pressures. Stakeholders were clear that incremental changes will not resolve these issues: structural increases in funding and long-term certainty are required.

1.22 Dr Rintoul highlighted the extent of this shift in practice, noting that:

Generations of CSIRO leadership have attempted to cope with reduced appropriation in real terms by seeking external funding. First, the appropriation funding was expected to be leveraged to obtain 30 per cent co-investment. Then it was 50 per cent. More recently, it was at least 70 per cent and preferably full cost recovery.<sup>6</sup>

1.23 The model of funding is increasingly shaping what research is undertaken and constraining CSIRO's capacity to prioritise long-term, public interest science (more on this below).

1.24 CSIRO made the case that whilst financial sustainability challenges have accumulated over generations, they have now reached a critical point.

We must also invest at least an additional \$80 million to \$135 million from our appropriation each year over the next 10 years so that our buildings, equipment, technology and digital assets are safe and staff safety is utmost in our minds, certainly at the board and for the senior management and our

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<sup>5</sup> *Committee Hansard*, 13 March 2026, p. 60.

<sup>6</sup> *Committee Hansard*, 13 March 2026, p. 4.

leaders through the organisation as well as our staff but also secure and fit for purpose.<sup>7</sup>

### **Workforce destruction and loss of sovereign capability**

1.25 Sustained underfunding of CSIRO is actively degrading Australia's scientific workforce and eroding sovereign capability.

1.26 At its core, CSIRO's capability is its people. Highly specialised scientific expertise takes years, often decades, to build. Once lost, it cannot be quickly or easily replaced. Witnesses repeatedly warned that current funding settings are forcing reductions in staffing and driving the loss of critical skills.

1.27 In practice, workforce reductions are being used as the primary mechanism to absorb funding shortfalls. Professor Dobbie emphasised that research infrastructure is inseparable from workforce capability:

It's fundamentally people - skilled people - that take a long time to train and retain, and we want to make sure that there is security and that there is certainty in the long term. That's Australia's strength.<sup>8</sup>

1.28 Without that certainty, skilled staff leave, institutional knowledge is lost, and national capability fragments. As Dr McDougall told the committee:

Doing this requires nurturing the staff over a decade or two or three. People don't develop this expertise in five minutes; you don't come out of a university with a PhD and all of a sudden you're an expert in this complicated field. That's what we should be doing.<sup>9</sup>

1.29 This goes to the heart of the issue. You cannot solve long-term national problems on short-term funding logic. By squeezing out fundamental science, governments are undermining the intellectual engine that drives innovation, preparedness and national resilience.

1.30 The evidence also highlights that once lost sovereign capability cannot simply be re-purchased from the market. In areas such as climate science, environmental monitoring, and long-term national infrastructure, there is no private sector substitute and no international provider that can fully replicate Australia-specific expertise.

1.31 Australia is not just underfunding science - it is dismantling the workforce and capability needed to confront the defining challenges of this century.

### **Climate science is being deliberately undermined**

1.32 Australia is actively dismantling the scientific capability it depends on to understand and survive the climate crisis.

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<sup>7</sup> CSIRO, *Committee Hansard*, 13 March 2026, p. 59.

<sup>8</sup> *Committee Hansard*, 13 March 2026, p. 40.

<sup>9</sup> *Committee Hansard*, 13 March 2026, p. 11.

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- 1.33 Witnesses were clear that funding pressures within CSIRO are driving a shift toward short-term, applied work at the expense of deep, long-term climate science. This is not an incidental outcome, it is a direct consequence of policy and funding choices, and it carries significant national risk.
- 1.34 Professor Hogg made clear that this shift has real-world consequences:
- While adaptation and resilience are undeniably important, without investing in the proper fundamental science we're going to be adapting blindly to the changes in our weather and climate that we don't fully understand and can't effectively predict.<sup>10</sup>
- 1.35 The inquiry heard evidence that Australia's climate science capability is both globally significant and locally irreplaceable.
- 1.36 Professor Hogg outlined that global climate models currently cannot agree on a basic question of critical national importance whether rainfall in the Murray-Darling Basin will increase or decrease in coming decades. This uncertainty exists in part because most major modelling centres are located in the Northern Hemisphere and focus on different climate systems. Australia's climate is different and understanding it requires locally developed expertise built over decades.<sup>11</sup>
- 1.37 CSIRO currently holds that capability. It has spent decades building the knowledge, infrastructure and skilled workforce needed to model Southern Hemisphere climate systems. This is not something that can simply be outsourced or picked up elsewhere. Rebuilding it would take years of sustained investment and the cuts now underway risk losing it altogether.
- 1.38 By cutting fundamental science at CSIRO, the government is not just reducing research capacity it is abandoning Australia's ability to make informed decisions about its own future. This not only has significant consequences for the wellbeing of everyone living in this country but it will also mean spending more in the long-run.
- 1.39 Dr Doddridge explained that without reliable projections, governments are forced into guesswork when making major infrastructure decisions. "We don't need to worry about funding climate science if we're happy to waste it on misguided adaptation."<sup>12</sup>
- 1.40 Professor Hogg reinforced this economic dimension:
- The more we know about the future, the better we can make these projections, the more we can target our adaptation and the more we can

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<sup>10</sup> *Committee Hansard*, 13 March 2026, p. 10.

<sup>11</sup> *Committee Hansard*, 13 March 2026, p. 14.

<sup>12</sup> *Committee Hansard*, 13 March 2026, p. 28.

target the funding we provide for that adaptation... the economic cost of adaptation is enormous.<sup>13</sup>

- 1.41 By allowing fundamental climate capability at CSIRO to erode, governments are not just reducing research output they are forcing Australia to navigate the climate crisis blind, relying on models and expertise developed for other countries and other conditions.

### **Consequences for the workers**

- 1.42 The impact of the ongoing CSIRO restructuring is being felt most acutely by the workforce itself, with staff describing a breakdown in trust, morale and basic fairness in the process.
- 1.43 Staff and their representatives describe this as a prolonged period of instability and under-resourcing, with the CSIRO Staff Association latest culture survey shows a snapshot of a workforce struggling with low morale, lacking confidence in the organisation's strategic direction and still reeling from the impact of hundreds of job cuts to support roles.<sup>14</sup>
- 1.44 Mr Tonks told the committee that there is an "ongoing change management process constantly" but what is "hugely lacking is relevant real detail for the people who are directly affected to be able to give genuine feedback and to have responses to that feedback."<sup>15</sup> On the same theme, Ms Tonks described the process and pace of change as "dehumanising", highlighting the cumulative psychological toll on staff.<sup>16</sup>
- 1.45 This concern is reinforced by Dr Rintoul who notes that staff being made redundant are not told why they were selected, despite the existence of criteria, meaning individuals are left without transparency or procedural understanding of decisions directly affecting their employment.<sup>17</sup>
- 1.46 The CSIRO Staff Association has warned that consultation processes are being experienced as insufficient and that workers feel unable to genuinely influence outcomes affecting their roles and teams, contributing to declining trust in leadership and the broader institution.

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<sup>13</sup> *Committee Hansard*, 13 March 2026, p.15.

<sup>14</sup> CSIRO Staff Association, 'CSIRO survey results reveal low staff morale and confidence', <https://csirostaff.org.au/news/2025/08/08/csiro-survey-results-reveal-low-staff-morale-and-confidence/>

<sup>15</sup> *Committee Hansard*, 13 March 2026, p. 4.

<sup>16</sup> *Committee Hansard*, 13 March 2026, p. 6.

<sup>17</sup> *Committee Hansard*, 13 March 2026, p. 7.

## A deliberate shift away from public good science

- 1.47 The evidence to this inquiry shows that what is currently occurring within CSIRO is an acceleration of a decades-long, deliberate shift away from public-good science toward revenue-generating, commercialised research activity.
- 1.48 Witnesses consistently described a system increasingly driven by external funding dependence, short-term contracts and revenue imperatives conditions that inevitably favour applied and commercially attractive projects over long-horizon national interest science.
- 1.49 The level of external reliance creates structural pressure to prioritise work that can attract funding, rather than work that is strategically necessary for the nation. Professor Hogg was clear that this has direct consequences for Australia's science system:
- It's fairly clear in the cuts proposed for CSIRO's environment unit yesterday that this type of public-good science is under threat.<sup>18</sup>
- 1.50 The core issue is that markets do not fund what they cannot monetise. As Professor Scuffham explained in relation to health research, even highly valuable work is often left unfunded or underfunded because it does not generate commercial returns. Much of this work involves improving patient care, hospital systems and clinical guidelines, activities that deliver enormous social value but limited financial return.<sup>19</sup>
- 1.51 When funding is structured this way, fundamental research is not just deprioritised it is structurally excluded. "In order to solve the really big problems that confront the country, we need to ask very basic and very hard questions, and they aren't the sorts of things you can get funded by a local council or something."<sup>20</sup>
- 1.52 Witnesses framed this as a broader national decision about what kind of science system Australia wants to maintain. As Dr Rintoul put it:
- We as a country need to decide what sort of future we want: if we want a future that's informed by the best possible science or if we're just going to take our chances.<sup>21</sup>
- 1.53 That choice is being made in practice through funding decisions that privilege short-term, externally funded and commercially oriented work over long-term, public-good research.

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<sup>18</sup> *Committee Hansard*, 13 March 2026, p. 10.

<sup>19</sup> *Committee Hansard*, 13 March 2026, p. 24.

<sup>20</sup> Dr Trevor McDougall, *Committee Hansard*, 13 March 2026, p. 14.

<sup>21</sup> *Committee Hansard*, 13 March 2026, p. 8.

- 1.54 This is not an accident of funding pressure. It is a structural and political choice to shift CSIRO away from public-good science. And that choice carries consequences.
- 1.55 Without sustained public investment in non-commercial research, Australia will increasingly rely on fragmented, market-driven science systems that are unable to address the nation's most complex and long-term challenges.

## **Recommendations**

### **Recommendation 1**

- 1.56 The Australian Greens recommend the Australian Government immediately cease and reverse all recently determined and imminently expected ongoing funding and staffing cuts to the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

### **Recommendation 2**

- 1.57 The Australian Greens recommend the Australian Government commit new, increased and ongoing funds to the CSIRO for "public good" science. Further, the Australian Greens recommend that the Australian Government establish a forward funding trajectory for CSIRO that increases research capacity annually in real terms to meet the growing and emerging scientific challenges Australia faces. This trajectory should reflect international best practice in relation to the funding of equivalent bodies as a proportion of GDP.

### **Recommendation 3**

- 1.58 The Australian Greens recommend the Australian Government urgently establishes a review to address and mitigate internal governance and cultural norms that require scientists to seek new sources of external revenue (clients) to fund "public good" science (for example, but not limited to, climate and atmospheric monitoring and research, environmental research and public health research).
- **Note:** The Australian Greens acknowledge that some areas of commercial endeavour, and any associated scientific or industrial research conducted by CSIRO (for example: mineral extraction or manufacturing), may reasonably and appropriately be underpinned by external revenue targets and that these targets may be reflected in funding structures and sources for these specific CSIRO research streams.

### **Recommendation 4**

- 1.59 The Australian Greens recommend the Australian Government urgently establish an audit of CSIRO, conducted by the Australian National Audit Office (ANAO), with particular focus on its capital funding situation and the

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impacts of previous management decisions on both past and projected organisational sustainability.

#### **Recommendation 5**

**1.60 The Australian Greens recommend the Australian Government urgently establishes a mechanism for the provision of low-or-no interest loans (off-balance sheet) or similar finance to fund capital works and infrastructure maintenance or upgrades as required by the CSIRO.**

- **The intention of such mechanisms would be to alleviate the sustained budgetary pressures these works place on the CSIRO's operating costs which have precipitated much of the current organisational requirement to find savings.**

**Senator Barbara Pocock**

**Member, Economics References Committee inquiry into Funding and Resourcing for the CSIRO**

**Australian Greens Senator for South Australia**

**Australian Greens Spokesperson for Finance, Workplace Relations, Jobs and Employment and Public Sector**

**Senator Peter Whish-Wilson**

**Participating Member, Economics References Committee inquiry into Funding and Resourcing for the CSIRO**

**Australian Greens Senator for Lulruwita/Tasmania**

**Australian Greens Spokesperson for Science, Industry and Innovation**



## **Labor Senators' Additional Comments**

- 1.1 Labor Senators acknowledge the critical role of the CSIRO as Australia's national science agency and support the ongoing need to ensure it remains fit for purpose, financially sustainable, and focused on delivering public good science and sovereign capability.
- 1.2 The Albanese Government values the critical work of our national science agency. We want the CSIRO to be sustainable, independent and dynamic, supporting Australian industry while helping to tackle the most pressing challenges facing our nation.
- 1.3 This Government values the contribution CSIRO scientists and broader staff make to Australia and is committed to ensuring that their work is sustainable over the long term.

### **CSIRO funding**

- 1.4 Labor Senators note that claims of 'ongoing funding cuts' to CSIRO are not supported by the evidence before the committee.
- 1.5 The Albanese Government has not cut the CSIRO's funding. The CSIRO receives close to \$1 billion per year in appropriation funding from the Australian Government. In addition, the Government announced \$233 million in new, additional funding for CSIRO in the December 2025 MYEFO.
- 1.6 Labor Senators further note that evidence to the committee clearly established that CSIRO's current challenges reflect long term funding trends, including significant historical cuts.
- 1.7 Labor Senators reject the assertion that the Albanese Government's economic management has directly affected CSIRO. After a decade of stagnation in public investment under the former Coalition Government, the Government has taken a responsible approach to budget management, and it is misleading to conflate broader fiscal conditions with staffing or research priorities determined independently by CSIRO.
- 1.8 In particular, the Abbott Government cut \$111 million from CSIRO in the 2014 Budget, resulting in the loss of more than 500 research jobs (361 FTE in 2014–15 and a further 228 FTE in 2016–17).
- 1.9 Those cuts had lasting impacts on workforce capability and organisational stability, and form part of the cumulative pressures CSIRO is now managing.

### **CSIRO governance and independence**

- 1.10 Following an 18-month review of its research portfolio, CSIRO Board and management made a preliminary assessment identifying potential areas for reprioritisation, subject to staff and stakeholder consultation.

- 1.11 This was the first whole-of-organisation research portfolio review in over 15 years, and Labor Senators acknowledge CSIRO's Board and management in making difficult decisions to ensure the organisation remains fit for purpose and focused on national priorities.
- 1.12 The portfolio adjustments reflect a strategic focus on areas such as a clean, affordable energy transition, critical minerals and materials, climate adaptation and resilience, advanced technologies including AI and quantum, and strengthening sovereign resilience and biosecurity.
- 1.13 Labor Senators do not support Recommendation 2, which calls on the Government to 'clarify whether there will be any further funding cuts or job losses at CSIRO'.
- 1.14 Labor Senators note that CSIRO operates as an independent statutory authority with responsibility for its internal management and resource allocation decisions vested in its Board and executive, decisions regarding staffing levels and the implementation of workforce changes sit with CSIRO's Board and management.

**Senator Lisa Darmanin**  
**Deputy Chair**  
**Labor Senator for Victoria**

**Senator Deborah O'Neill**  
**Member**  
**Labor Senator for New South Wales**

# Senator David Pocock's Additional Comments

## Introduction

- 1.1 This inquiry has heard that decades of underfunding of our national science agency are having a huge impact on the organisation's ability to conduct the science we need to meet the challenges we face. The case for a permanent uplift in CSIRO's appropriation is clear and urgent.
- 1.2 As an independent senator for the Australian Capital Territory, I am conscious that CSIRO has one of its largest national footprints in the ACT. More than 1,000 Canberrans work for the organisation and the Black Mountain campus is one of CSIRO's most significant national research sites. It is home to landmark facilities including the recently completed National Collections Building, which houses 15 million natural history specimens and was jointly funded by NCRIS and CSIRO. As a result, staff cuts and the long-term decline in CSIRO appropriation are felt directly by Canberrans and give rise to significant community concern.
- 1.3 The strength of public feeling on this is reflected in the response to a petition I have been running. The petition calls on the Albanese Government to commit to long-term, sustainable funding that rebuilds our national science capability rather than managing its decline. It has attracted more than 22,000 signatures to date and can be viewed and signed at [davidpocock.com.au/save\\_our\\_csiro](http://davidpocock.com.au/save_our_csiro).
- 1.4 The central recommendation of these additional comments is a permanent, ongoing increase in CSIRO's base appropriation. Six further recommendations sit alongside that basic requirement. But it is first important to understand the context that makes the case for action urgent and compelling.

## The CSIRO is in crisis

- 1.5 CSIRO's funding history over the past four decades is well documented and is outlined in the Chair's report. Some of the figures are repeated here to underline the severity of the funding crisis.
- 1.6 In the early 1980s, federal appropriation for CSIRO was approximately 0.17 per cent of GDP. Today it is 0.03 per cent a fall of around three-quarters in relative terms. Per capita, federal investment in CSIRO is less than half what it was in the 1980s.<sup>1</sup>
- 1.7 The Australian Academy of Science noted that Australia's broader investment in research and development has fallen to 1.69 per cent of GDP, well below the OECD average of 2.7 per cent. Government budget allocations for R&D

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<sup>1</sup> Parliamentary Library, *CSIRO Funding Trends*, [https://www.aph.gov.au/-/media/Estimates/economics/supp2526/TabledDocument10\\_CSIRO\\_Funding\\_Trends\\_Research\\_Paper.pdf](https://www.aph.gov.au/-/media/Estimates/economics/supp2526/TabledDocument10_CSIRO_Funding_Trends_Research_Paper.pdf) (accessed 28 April 2026).

specifically are at 0.36 per cent of GDP, against an OECD average of 0.74 per cent.<sup>2</sup> The Academy estimates the gap, against the OECD average, at around \$27 billion a year.<sup>3</sup>

- 1.8 CSIRO's own submission states that the average indexation of its appropriation over the last 15 years has been 1.3 per cent per annum, against an average inflation rate over the same period of 2.7 per cent.<sup>4</sup> That is real-terms decline, year on year, for a decade and a half. The consequences have been visible in the past 12 months. CSIRO has announced 818 job losses, with a further 300 to 350 redundancies flagged in November 2025.<sup>5</sup>
- 1.9 Of those further losses, the Environment Research Unit is taking a disproportionate share. Professor Nathan Bindoff describes the Unit as 12 per cent of CSIRO's workforce shouldering 43 per cent of the cuts.<sup>6</sup> Dr Edward Doddridge of the University of Tasmania puts a number on the long-term decline: in real terms, CSIRO funding today is roughly \$500 million below what would be required to do as much research as CSIRO did 15 years ago.<sup>7</sup>
- 1.10 This decline is the consequence of a long-term, bipartisan failure to fund Australia's national science agency at a level commensurate with what Australians want and expect the organisation to do. CSIRO notes that the cost of operating a modern science agency has risen significantly while appropriation has not kept pace.<sup>8</sup>
- 1.11 The Committee heard repeatedly that the gaps left by CSIRO cuts cannot simply be filled by other actors. Ms Su McClusky, Interim Chief Executive of the National Farmers' Federation, was direct on the point in response to questions, saying "There is no-one to come in and fill the gap."<sup>9</sup> The Australian Academy of Science was equally clear on the Environment Research Unit specifically, observing that no other country can do this research for Australia.
- 1.12 Cuts to the Environment Research Unit come at a time of acute global instability in the science enterprise. Submissions from Professor Trevor McDougall AC FAA FRS, the Australian Meteorological and Oceanographic Society and the

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<sup>2</sup> Australian Academy of Science (AAS), *Submission 33*, p. 2.

<sup>3</sup> AAS, *Submission 33*, p. 2.

<sup>4</sup> CSIRO, *Submission 30*, p. 8.

<sup>5</sup> CSIRO Staff Association, *Submission 42*, p. 2.

<sup>6</sup> Professor Nathan Bindoff, *Submission 73*, p. 2.

<sup>7</sup> Dr Edward Doddridge, *Submission 75*, p. 1.

<sup>8</sup> Dr Doug Hilton, Chief Executive, CSIRO, *Committee Hansard*, 13 March 2026, p. 60.

<sup>9</sup> Ms Su McClusky, Interim Chief Executive, National Farmers Federation (NFF), *Committee Hansard*, 13 March 2026, p. 52.

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Australian Academy of Technological Sciences and Engineering all note that the United States is rapidly retreating from its leadership role in climate research, including significant reductions to the National Oceanic and Atmospheric Administration's Indo-Pacific capability. Australia must step up, not step back.<sup>10</sup>

### **The need for a permanent and substantial increase in CSIRO's appropriation**

- 1.13 Many submitters and witnesses identified a declining appropriation in real terms as the core driver in long-term reduction of CSIRO's ability to conduct the science needed to meet the challenges we face. The CSIRO Staff Association submitted that a \$252.3 million lift in the appropriation is required to halt and reverse the announced loss of 1,168 staff.<sup>11</sup>
- 1.14 This proposal is significantly different from the \$233 million one-off injection announced in the 2025 Mid-Year Economic and Fiscal Outlook (MYEFO). That measure was welcome and has eased acute infrastructure pressures, but the Australian Academy of Technological Sciences and Engineering put the matter clearly: a one-off boost does not arrest the long-term decline.<sup>12</sup> CSIRO has itself confirmed that the MYEFO injection will not be sufficient to halt the announced staff cuts.
- 1.15 CSIRO's own submission states that, separately from the proposed staffing changes, the agency needs to invest at least an additional \$80 to \$135 million per annum over the next 10 years into essential infrastructure and technology.<sup>13</sup> This is an honest acknowledgement of the gap, and the Government should take it as a floor rather than a ceiling.
- 1.16 The arithmetic of the various proposals points the same way. The Staff Association's \$252.3 million immediate injection plus indexation top-ups; CSIRO's own \$80 to \$135 million annual infrastructure ask; and Dr Doddridge's \$500 million target to restore parity with 15 years ago. These figures describe the same problem over different timeframes. The Government should fund the immediate uplift now, commit to indexation reform, and set the medium-term target.

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<sup>10</sup> Professor Trevor McDougall AC, *Submission 19*; Australian Meteorological and Oceanographic Society (AMOS), *Submission 38*; Australian Academy of Technological Sciences and Engineering (AATSE), *Submission 39*.

<sup>11</sup> CSIRO Staff Association, *Submission 42*.

<sup>12</sup> AATSE, *Submission 39*, p. 1.

<sup>13</sup> CSIRO, *Submission 30*, p. 10.

## Recommendation 1

**1.17 That the Federal Government provide an immediate uplift of \$252.3 million to CSIRO's appropriation in the 2026-27 Budget, ongoing, together with annual indexation top-ups sufficient to halt and progressively reverse the real-terms decline in CSIRO funding.**

### **Australia's R&D investment must increase to meet the challenges we face**

1.18 The figures in the submission from the Academy of Science are striking. Australia is at 1.69 per cent gross expenditure on R&D against an OECD average of 2.7 per cent. We currently have 0.36 per cent government budget allocation for R&D against an OECD average of 0.74 per cent. The shortfall is around \$27 billion a year.<sup>14</sup>

1.19 OECD analysis cited in several submissions shows R&D spending growth slowing across the OECD overall while surging in China, which lifted its R&D investment by 8.7 per cent in 2023 alone, reaching 2.58 per cent of GDP.<sup>15</sup>

1.20 The case for treating R&D spending as an investment rather than an expense has been made repeatedly throughout this inquiry.<sup>16</sup> Every dollar invested in CSIRO returns \$8.80 to the economy on a conservative estimate, against \$3.50 for R&D investment generally.<sup>17</sup>

1.21 Increased CSIRO appropriation under Recommendation 1 is the most direct way for the Albanese Government to start closing the gap. But it must be part of a broader, time-bound plan to lift Australia's R&D performance against the OECD. The Strategic Examination of Research and Development provides the roadmap for this. The Government should adopt its recommendations and publish a 10-year investment plan with measurable milestones and reporting against them.

## Recommendation 2

**1.22 That the Federal Government act decisively on the recommendations of the Strategic Examination of Research and Development to establish a measurable, time-bound to increase total Australian R&D investment.**

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<sup>14</sup> AAS, *Submission 33*, p. 2.

<sup>15</sup> AATSE, *Submission 39*, p. 4.

<sup>16</sup> Research Australia, *Submission 34*; AAS, *Submission 33*; The Australian Academy of Health and Medical Sciences, *Submission 86*; Association of Australian Medical Research Institutes, *Submission 60*.

<sup>17</sup> AATSE, *Submission 39*, p. 2.

## **Halt proposed Environment Research Unit redundancies**

- 1.23 The Environment Research Unit cuts are of particular concern, and require real scrutiny. As noted above, Professor Bindoff, an ARC Laureate Fellow and lead author of multiple IPCC chapters, has identified the disproportionate burden on the Unit: 12 per cent of CSIRO's workforce, 43 per cent of the proposed cuts.<sup>18</sup>
- 1.24 The Australian Meteorological and Oceanographic Society warned that the cuts threaten the viability of important CSIRO research that informs Australians about the risks of climate and environmental change.<sup>19</sup> The Australian Academy of Science said the proposed cuts to the Environment Research Unit are of particular concern because the research it does cannot be replicated by any other country. Climate scientist Professor Sarah Perkins-Kirkpatrick, president of the Australian Meteorological and Oceanographic Society, told ABC News in March 2026 that the cuts are 'one of the worst things I've seen during my career'.<sup>20</sup>
- 1.25 CSIRO's response has been to argue that it is shifting its focus toward applied climate adaptation research. I do not find this persuasive. Effective climate adaptation needs accurate climate projections. Accurate projections need fundamental climate science conducted by climate scientists.

## **Recommendation 3**

- 1.26 That the proposed redundancies in the Environment Research Unit be halted and reconsidered by the CSIRO, given the clear need for climate modelling capabilities within CSIRO to be maintained.**

## **Reform the depreciation appropriation**

- 1.27 Fixing the depreciation appropriation is one of the cleanest and simplest reforms available to The Albanese Government in the 2026-27 Budget.
- 1.28 CSIRO's depreciation appropriation has been fixed at \$80 million since 1999–2000. It has not been indexed in 26 years. Over that same period, CSIRO's annual depreciation expense has increased by approximately 129 per cent, or \$91 million.<sup>21</sup> The unfunded depreciation gap is now \$91 million per annum and growing, and has been self-funded by CSIRO largely through one-off property sales and CSIRO itself acknowledges that this strategy is close to exhausted.<sup>22</sup>

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<sup>18</sup> Professor Nathan Bindhoff, *Submission 73*, p. 2.

<sup>19</sup> AMOS, *Submission 38*.

<sup>20</sup> Bianca Hall, 'Worst thing I've ever seen: CSIRO slashes climate modelling jobs', *Sydney Morning Herald*, 12 March 2026 <https://www.smh.com.au/environment/climate-change/worst-thing-i-ve-ever-seen-csiro-slashes-climate-modelling-jobs-20260310-p5o97a.html> (accessed 28 April 2026).

<sup>21</sup> CSIRO, *Submission 30*, p. 13.

<sup>22</sup> CSIRO, *Submission 30*.

- 1.29 The consequences show up across the organisation. CSIRO's submission states that 83 per cent of its buildings are beyond technical end of life.<sup>23</sup> The backlog of operational repair and maintenance has increased from \$175 million in 2010-11 to over \$280 million in 2025-26<sup>24</sup> and Property maintenance costs have risen 17 per cent in five years.<sup>25</sup>
- 1.30 CSIRO needs a one-off uplift to bring the depreciation appropriation in line with actual depreciation expense and ongoing indexation to ensure it does not fall behind again. As Science and Technology Australia's recommendations, the Federal Government must develop a new indexation rate for research-related appropriations that accurately reflects the true rising cost of doing research.

#### **Recommendation 4**

- 1.31 That the Federal Government index CSIRO's depreciation appropriation, beginning in the 2026-27 Budget, and undertake a one-off reset to bring the depreciation appropriation into line with current capital and depreciation costs.**

#### **Reform co-investment expectations and promote public-good research**

- 1.32 Over recent decades, there has been a shift of CSIRO's portfolio away from fundamental science and toward applied work that can attract external funding. ACCESS-NRI points to a CSIRO directive to recover more than 70 per cent of research costs is one of the key drivers of this.<sup>26</sup> As ACCESS-NRI put it, the consequence is that CSIRO appropriation is being used to subsidise cut-price consultancies in areas tangential to national benefit, while public-good science in areas like climate research is starved of resources.<sup>27</sup>
- 1.33 The 70 per cent target is not a defensible policy, particularly when applied uniformly across research areas with very different commercialisation prospects. Climate observation, atmospheric monitoring, ocean science, biodiversity research and biosecurity preparedness are not consultancy markets. They are public goods and treating them as if they should hit the same revenue benchmarks as applied minerals or manufacturing research distorts CSIRO's portfolio at the cost of public good research.
- 1.34 The Minister's Statement of Expectations should be updated to recognise this, to identify the categories of research where co-investment expectations should

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<sup>23</sup> CSIRO, *Submission 30*, p. 45.

<sup>24</sup> CSIRO, *Submission 30*, p. 45.

<sup>25</sup> CSIRO Staff Association, *Submission 42*, p. 5.

<sup>26</sup> ACCESS-NRI, *Submission 29*.

<sup>27</sup> ACCESS-NRI, *Submission 29*.

not apply, and to direct the CSIRO Board to set differentiated cost-recovery targets accordingly.

### Recommendation 5

**1.35 That the Federal Government update the Minister's Statement of Expectations to the CSIRO, to substantially reduce the need for cost-recovery targets in research areas designated as public-good or as protected sovereign capabilities, and that this Statement of Expectations explicitly recognise the legitimate public-good purpose of certain research that cannot reasonably be commercialised.**

### Transparency and value for money on consultancy spend

1.36 The McKinsey contracts raised during the hearing and in previous Estimates hearings, deserve particular scrutiny. On the evidence currently available, they can't be defended. In 2022, CSIRO commissioned McKinsey & Company at a cost of \$742,500, close to \$30,000 per day, for less than a month of work, with no written report required.

1.37 A Freedom of Information request, reported in *The Mandarin* in December 2025,<sup>28</sup> established that the procurement provided no evidence other suppliers had been approached. The outputs were primarily PowerPoint presentations and talking points for the CSIRO Executive and there was no report provided. This was confirmed in a response to a Question on Notice I put to the CSIRO during 2025-26 Estimates.<sup>29</sup>

1.38 This kind of spending is concerning in its own right, but it is even more damaging to public confidence in the agency because it occurred not long before the recent cuts to staff.

1.39 The documents and presentations associated with both McKinsey engagements should be released in full. There is no reasonable basis on which the public, the staff, or this Parliament should be expected to accept that nearly \$2 million in consultancy spend is shielded from scrutiny on commercial-in-confidence grounds.

1.40 The procurement and oversight settings that allowed those contracts to occur in the first place also need fixing. CSIRO is a corporate Commonwealth entity and

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<sup>28</sup> Conner Pearce, 'CSIRO pays McKinsey \$742,500 for 'advice', no report required', *The Mandarin*, 12 December 2025, <https://www.themandarin.com.au/304845-csiro-pays-mckinsey-742500-for-advice-no-report-required/> (accessed 28 April 2026).

<sup>29</sup> CSIRO, answers to questions taken on notice no. 394, Senate Economics Committee Supplementary Budget Estimates 2025-26, 9 December 2026 (available at: <https://www.aph.gov.au/api/qon/downloadestimatesquestions/EstimatesQuestion-CommitteeId3-EstimatesRoundId28-PortfolioId44-QuestionNumber394/>).

is not bound by the Commonwealth Procurement Rules in the same manner as non-corporate entities.

### **Recommendation 6**

**1.41 That the CSIRO immediately release in full all documents, presentations and other outputs produced by McKinsey & Company under the 2022 Future Ways of Working engagement and the prior 2021-22 engagement. And that CSIRO contracts above \$200,000 require open and competitive tendering on the Commonwealth tender model.**

### **Conclusion**

1.42 CSIRO is one of the most successful research organisations anywhere in the world. It has invented Wi-Fi, the polymer banknote, Aerogard, the Hendra vaccine, and biological controls for rabbits and weeds that have delivered tens of billions of dollars.

1.43 It has built, and continues to maintain, sovereign capabilities such as climate modelling, atmospheric monitoring, animal health diagnostics and ocean observation that no other Australian institution can replicate and no other country will do for us.

1.44 The evidence to this inquiry is that we are now allowing those capabilities to erode through chronic underinvestment, then explaining the consequence as a result rather than a choice we have made.

1.45 The workforce cuts are a direct consequence of 15 years of real-terms funding decline. The aging infrastructure is the result of a depreciation appropriation that hasn't moved in a quarter-century. Public-good research has narrowed because internal cost-recovery targets were imposed in place of adequate appropriation.

1.46 These are fixable problems and the 2026-27 Budget is the opportunity for the Albanese Government to act, and to begin the long work of restoring CSIRO to a level of resourcing commensurate with what we ask it to do.

### **A note of thanks**

1.47 We would like to thank the Committee Secretariat for all of the work put into this inquiry, and to all of the submitters and those who gave evidence to the Committee.

1.48 Thank you also to all of the incredible scientists and those who work with them at CSIRO. I know from your correspondence that things have been very difficult for you for far too long. I will continue to work hard to advocate for national investment in research and development and real support for our national science agency

**Senator David Pocock**

**Member**

**Independent Senator for the Australian Capital Territory**



# Appendix 1

## Submissions

- 1 Ms Edwina Barton
- 2 Dr Julian Ratcliffe
- 3 Ms Kate Russell
- 4 Dr Declan Page
- 5 Dr Trevor Booth
- 6 Sam Tudman
- 7 Petina Pert
- 8 Prof Samantha Capon
- 9 Mr Kevin Hennessy
- 10 Blake Spady
- 11 Australasian Institute of Digital Health
- 12 Mr Silvio Apponyi OAM
- 13 Ms Sharon Hook
- 14 Robyn Kaplan
- 15 Mr Liam Norton
- 16 Ms Gemma Kaplan
- 17 Dr Ee Ling Ng
- 18 Mr Chris Hodgkins
- 19 Professor Trevor McDougall
- 20 Dr Jane Hodgkinson
- 21 Australian Coastal Society Ltd
- 22 Dr Marc Elmoultie
- 23 Ms Shirley Proctor
- 24 Ms Joy Mettam
- 25 Australian Marine Sciences Association
- 26 Dr Margaret Bennett
- 27 Professor Clare Murphy
- 28 Tasmanian Government
- 29 ACCESS-NRI
- 30 CSIRO
  - 30.1 Supplementary to submission 30
- 31 Australian Chiropractors Association & Chiropractics Australia
- 32 National Farmer's Federation
- 33 Australian Academy of Science
- 34 Research Australia
- 35 Australian Science Communicators
- 36 Science & Technology Australia
- 37 Australian Institute of Architects

- 38 Australian Meteorological and Oceanographic Society
- 39 Australian Academy of Technological Sciences and Engineering (ATSE)
- 40 Council of Australian Postgraduate Associations
- 41 Australian Antarctic Program Partnership
- 42 CSIRO Staff Association
- 43 Brisbane Residents United
- 44 Boeing Australia
- 45 A/Prof Stephen Wilson
- 46 Chris Brown
- 47 Dr Max Rintoul
- 48 Leigha Aitken
- 49 Riley Wagner
- 50 Name Withheld
- 51 Dr Tim McVicar
- 52 Angela Molina
- 53 Name Withheld
- 54 Name Withheld
- 55 Joy Norton
- 56 Name Withheld
- 57 Marcus Norton
- 58 Name Withheld
- 59 Name Withheld
- 60 Association of Australian Medical Research Institutes
- 61 Name Withheld
- 62 Mr Greg Short
- 63 Name Withheld
- 64 Name Withheld
- 65 Name Withheld
- 66 Name Withheld
- 67 Dr Stephen Rintoul
- 68 Name Withheld
- 69 Name Withheld
- 70 Dr Larissa Fedunik
- 71 Dr Caitlin Kuempel
- 72 Dr Amanda Wilson
- 73 Prof Nathaniel Bindoff
- 74 Dr David Newth
- 75 Dr Edward Doddridge
- 76 Ms Delia Crabbe
- 77 Dr Scott Condie
- 78 Mr John Gunn
- 79 Professor Julie Arblaster
- 80 Dr Chaojiao Sun

- 81 Dr Everard Edwards
- 82 Dr Kathleen McInnes
- 83 Dr Anthony Worby
- 84 Professor Matthew England
- 85 Name Withheld
- 86 Australian Academy of Health and Medical Sciences
- 87 Debbie Norton
- 88 Name Withheld



# Appendix 2

## Public hearing

*Friday 13 March 2026*

Committee Room 2S1

Parliament House

Canberra

*CSIRO Staff Association*

- Dr Everard Edwards, Governing Councillor
- Ms Susan Tonks, Section Secretary
- Dr Stephen Rintoul, CSIRO Fellow and Research Team Leader

*ACCESS-NRI*

- Professor Andy Hogg, Director

*Australian Meteorological and Oceanographic Society*

- Dr Martin Singh, Immediate Past President
- Associate Professor Andrew King, Vice President

*Professor Trevor McDougall (AC FAA FRS), Private capacity*

*Research Australia*

- Ms Nadia Levin, Chief Executive Officer
- Dr Talia Avrahamzon, Head of Policy, Projects and Advocacy

*Australian Academy of Health and Medical Sciences*

- Professor Paul Scuffham, Chair of Policy Advisory Committee

*Association of Australian Medical Research Institutes*

- Dr Saraid Billiards, Chief Executive Officer

*Dr Edward Doddridge, Private capacity*

*Professor Nathan Bindoff, Private capacity*

*Dr Scott Condie, Private capacity*

*Associate Professor Stephen Wilson, Private capacity*

*Science and Technology Australia*

- Dr Sarah Tynan, Director of Policy and Government Relations
- Mr Ryan Winn, Chief Executive Officer
- Professor Michael Dobbie, Chief Executive Officer - Phenomics Australia

*Australian Academy of Technological Sciences and Engineering (ATSE)*

- Mr Peter Derbyshire, Deputy Chief Executive Officer
- Dr Helen Cleugh, ACT Division Chair

*Boeing Engineering and Technology Innovation Australia*

- Mr Michael Edwards (FTSE), Vice President - Global Technology

*National Farmer's Federation*

- Ms Su McClusky, Interim Chief Executive
- Mr Zac Rayson, Senior Policy Officer - Rural Affairs

*Australian Academy of Science*

- Professor Chennupati Jagadish AC, President
- Ms Anna-Maria Arabia, Chief Executive

*CSIRO*

- Dr Doug Hilton, Chief Executive
- Professor Elanor Huntington, Deputy Chief Executive
- Mr Tom Munyard, Chief Operating Officer
- Dr Peter Mayfield, Executive Director – Environment, Energy and Resources