Submission to the Senate Inquiry into Funding and Resourcing for the CSIRO

Kevin Hennessy, Director of Climate Comms

Thank you for the opportunity to make a submission on government funding for CSIRO.

I am a climate scientist, working as a private consultant for the past 8 years, having worked for CSIRO for the previous 30 years.

Before focusing on issues facing CSIRO, I would like to start by providing a broader context on total funding for national research and development (R&D).

National investment in R&D

In November 2022, the Minister for Industry, Science and Resources announced a national R&D investment target of 3% of GDP. However, Australia has been falling behind comparable developed nations[1]. In 2021, total Australian R&D expenditure was 1.68% of GDP, compared with 2.91% in the UK, 4.93% in Korea, 3.46% in the USA, 3.13% in Germany, and 3.3% in Japan (Figure 1), while the OECD average is 2.72%[1].

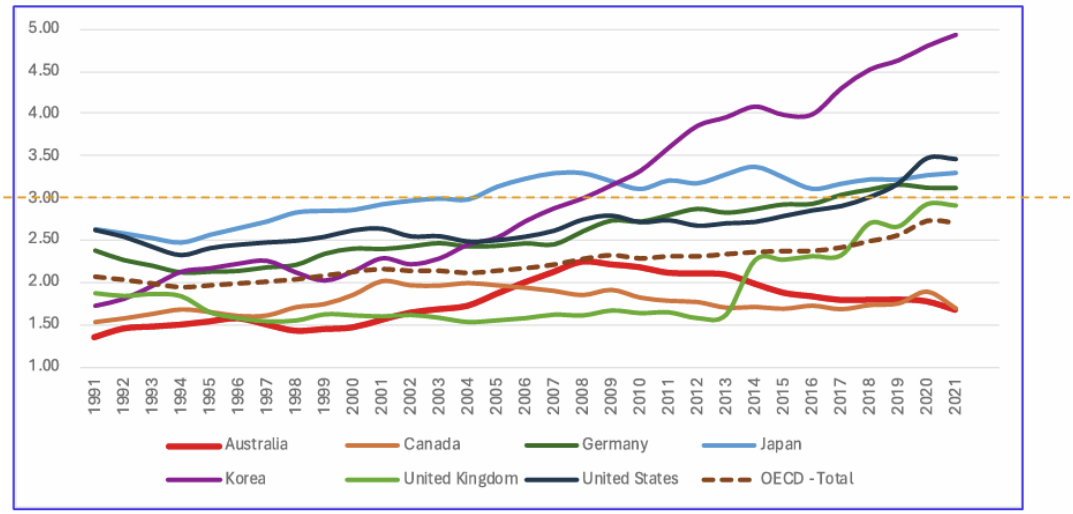

Figure 1: National investment in R&D as a proportion of GDP from 1991-2021. Source[1].

Government investment in R&D

Australian government investment in R&D for 2025–26 is 0.53% of GDP, which is very low[2]. Government investment peaked at 0.73% of GDP in 1993-94 (Figure 2)[1]. There has been a 6.3% decrease in inflation-adjusted government R&D investment from 2011-12 to 2023-24 (Figure 2)[1].

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[1] Howard (2024). Science, research and innovation in Australia: what the data tells us. https://www.uts.edu.au/globalassets/sites/default/files/2024-04/Science_Research_and_Innovation_What_the_Data_Tells_Us_0.pdf

[2] Academy of Science (2025). Latest figures show total government spending on R&D is in decline, again | Australian Academy of Science

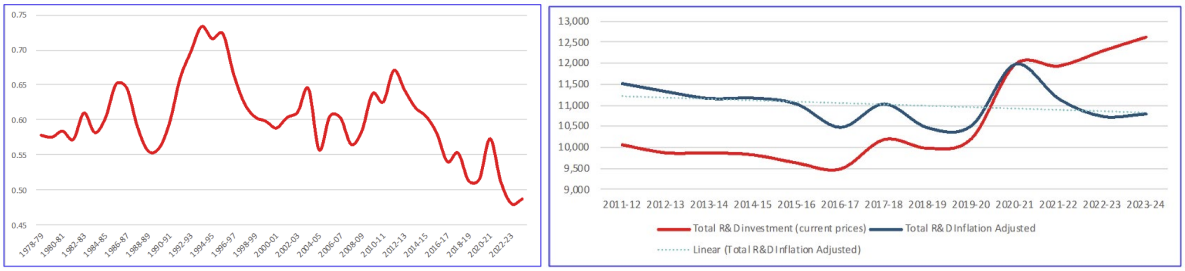

Figure 2: Australian government investment in R&D as a proportion of GDP (current prices) (left) and Australian government investment in R&D ($ million, inflation adjusted) from 2011-12 to 2023-24 (right). Source[1].

Inflation-adjusted investment in government research activities (mainly CSIRO, ANSTO and the DST Group) has not changed much since 2000 (Figure 3)[1].

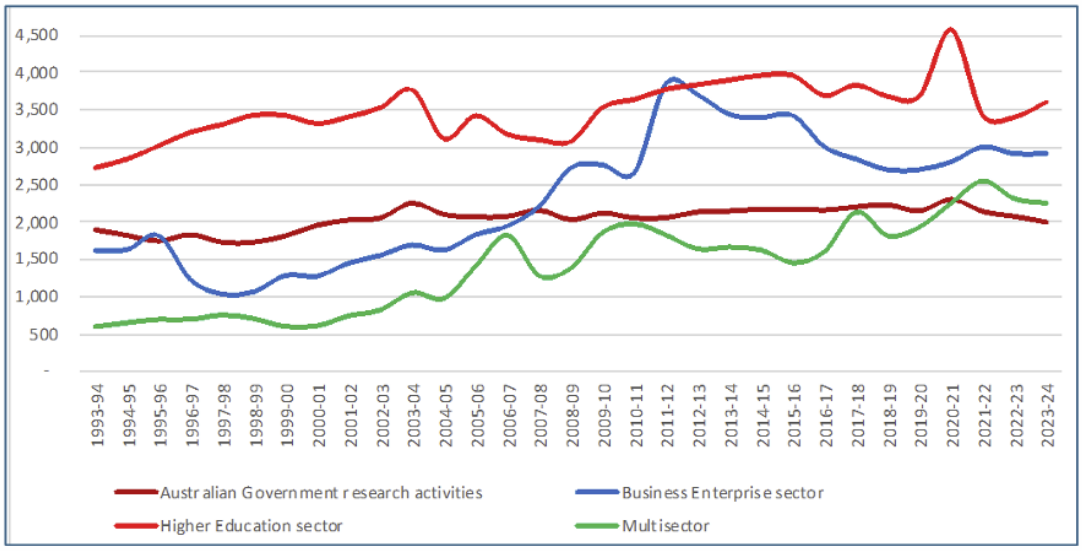

Figure 3: Australian government investment in R&D by sector ($ million, inflation-adjusted) from 1993-94 to 2023-24. Source[1].

Government funding for CSIRO

Over the last 15 years, government funding for CSIRO has risen by 1.3% per year, but inflation rose by an average of 2.7% per year over the same period[3]. Over the 16-years from 2007-08 to 2023-24, the inflation-adjusted funding for CSIRO decreased by 0.9%, with variations in sectoral focus over time in response to national priorities (Figure 4)[1].

[3] Statement regarding additional funding for CSIRO - CSIRO

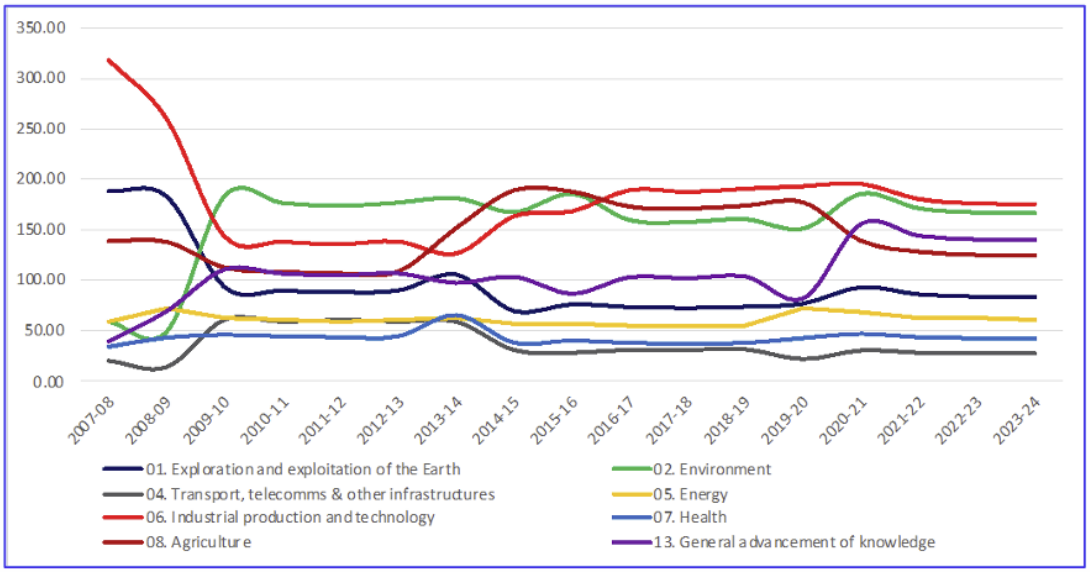

Figure 4: Government investment in R&D for CSIRO by sector, 2007-08 to 2023-24 ($million, inflation-adjusted). Source[1].

In 2024-25, CSIRO received $0.916 billion from the government and generated $0.661 billion in external revenue, giving a total revenue of $1.577 billion, but total expenses were $1.637 billion, resulting in a loss of $60 million[4]. This is not sustainable.

Addressing the Terms of Reference

The importance of public funding for public good science

Federal government funding for public-good science supports research that is unlikely to be fully funded by other sources. CSIRO's business model includes projects that are entirely funded by government, partly funded by government, or fully funded by external parties (e.g. industry). Government funding often supports data collection and curation, improvement in process understanding, public-good products and services, national and international research programs, and providing independent scientific advice. CSIRO's 2024-25 Annual Report estimates that for every $1 invested in CSIRO, there is a return on investment of at least $8.80[4]. CSIRO engaged almost 5,000 national and international industry and government entities including 1,989 SMEs, 659 large Australian corporations and 999 overseas corporations[4]. CSIRO also partnered with Indigenous networks representing over 1500 Indigenous businesses[4].

The importance of public resourcing of Australian sovereign scientific capability

According to CSIRO's 2024-25 Annual Report, 'innovation is vital to securing sovereign capability, long-term competitiveness and productivity. CSIRO delivers essential scientific research and advice that supports national priorities and serves a broad range of stakeholders'. Government funding enables 'collaboration with innovators to

[4] CSIRO Annual Report 2024-25

transform discoveries and ideas into technologies, services and best practices that benefit the nation'. CSIRO generates about $13 billion in annual value for Australia, contributing to economic prosperity, as well as advancing environmental sustainability and social wellbeing[4].

The recruitment and retention of staff including senior and mid-career researchers, along with the training and career paths of early-career researchers

This is a problem for CSIRO due to recent and proposed staff cuts at all levels (including Post-Retirement Fellows and Visiting Scientists who deliver tangible benefits for almost no cost). CSIRO's Early Career Fellow program had a retention rate of 46% in 2024-25[4]. Many staff are recruited on short-term contracts which are rarely extended.

CSIRO's commercialisation of scientific research

CSIRO does both fundamental and applied research. The challenge for CSIRO is to strike an appropriate balance between these activities, given the declining support for fundamental research and the growing pressure to generate external revenue. CSIRO enables industry engagement through strategic partnerships and targeted initiatives that accelerate research translation and innovation uptake[4]. Commercialisation efforts delivered strong results in 2024-25. Annual intellectual property (IP) revenue reached $62 million, the highest on record, and four new spinout companies commercialised CSIRO-developed technologies[4].

The long-term capability needs of the CSIRO, including workforce, infrastructure and equipment

CSIRO and the government need to explore future scenarios where inflation-adjusted government funding (a) continues to decline, (b) stabilises at the current level, and (c) increases and stabilizes at a higher level. These scenarios would have different outcomes for workforce capacity, infrastructure, equipment, productivity and impact.

The nature of recent and proposed job and program cuts in the CSIRO

In 2025, CSIRO announced cuts of 300–350 FTE in research positions, citing a "critical inflection point" where funding has not kept pace with rising research costs. This came after about 800 FTE in enterprise support positions were cut over the prior 18 months. While an extra $233 million in government funding for CSIRO infrastructure repairs and maintenance (17 December 2025) is welcome, this one-off payment cannot fix the ongoing funding shortfall.

The effects of these cuts on the program of scientific work conducted by the CSIRO:

CSIRO employed 6234 FTE in 2023-24, dropping to 5676 FTE in 2024-25, a decrease of 558 FTE[4]. A further cut of 300-350 FTE would be devastating. Difficult decisions will be made about which research areas to shrink or exit. Up to 150 FTE could be cut in the

Environment Research Unit, jeopardising research in critical areas such as (1) observed changes in the atmosphere, oceans, cryosphere and biosphere, (2) improving our climate prediction/projection capability, (3) contributing to national and regional climate risk assessments, (4) contributing to national and regional climate adaptation plans, (5) monitoring adaptation effectiveness, and (6) contributing to sustainable development. This would have implications for CSIRO's capacity to address our five National Research Priorities[5]:

- transitioning to a net zero (greenhouse gas emissions) future
- supporting healthy and thriving communities
- elevating Aboriginal and Torres Strait Islanders knowledge systems
- protecting and restoring Australia's environment
- building a secure and resilient nation (including climate adaptation).

Recommendations

I support the recommendations proposed by Edwina Barton, with some minor edits:

- The committee should request that the Science Minister (Senator Tim Ayres) meet urgently with the CEO of CSIRO (Dr Doug Hilton) to seek his views on how much additional government funding (indexed to inflation) would be required over the next 10 years to improve CSIRO's performance and sustainability. A range of different scenarios should be explored.
- The committee should request that the Finance Minister (Senator Katy Gallagher) meet urgently with the Science Minister (Senator Tim Ayres) to explore how additional CSIRO funding could be accommodated within the budget, and how a case could be put to the Expenditure Review Committee of Cabinet.
- The views of the former Science Minister, the Hon Ed Husic MP, should be sought, given that Senator Ayres is relatively new to the portfolio.
- The views of Australia's Chief Scientist (Emeritus Professor Tony Haymet) and the Australian Academy of Science should be sought as input to the CSIRO funding situation, and the broader national R&D investment target of 3% of GDP.

[5] Australia's National Science and Research Priorities | Department of Industry Science and Resources