

I am a researcher working at the CSIRO, and long-term observer of Australia's public science system, with extensive experience in geology and sustainability in mineral resources and mining. This submission draws on my perspective regarding the role of CSIRO in supporting long-term national capability and public good outcomes. The views expressed are offered in a personal capacity and are intended to support the Committee's consideration of long-term national science capability.

## **Submission to the Senate Economics References Committee**

### **Inquiry into Funding and Resourcing for the CSIRO**

January 2026

#### **Summary for the Committee**

This submission addresses aspects of the Committee's Terms of Reference relating to funding adequacy, capability retention, and strategic governance in CSIRO. It argues that **Australia's long-term national interest depends on a strong, publicly funded CSIRO with the independence, stability, and mandate to undertake fundamental and applied research** for public good outcomes.

While recent investment levels have not been insignificant, current restructuring decisions risk erosion of sovereign scientific capability through cumulative workforce losses, site closures, and program discontinuity. Australia's national interest depends on maintaining a strong, independent CSIRO, capable of delivering long-horizon public good science.

#### **Relevance to the Terms of Reference**

This submission addresses the Committee's Terms of reference relating in particular to:

- The adequacy, stability and transparency of CSIRO funding
- The impact of funding and restructuring on scientific capability, workforce retention and infrastructure
- Governance, strategic decision-making and alignment with legislative intent
- The role of CSIRO in delivering long-term public good and sovereign capability.

#### **Key points**

- The intent and spirit of the *Science and Industry Research Act* risk being diluted by over-emphasis on short-term commercial framing.
- Sequential reforms - first removing large numbers of support staff, now cutting research roles - risk compounding capability loss rather than delivering sustainable efficiency.
- Recent additional government funding has not altered planned changes, which might prompt questions regarding transparency, governance and strategic intent.
- Fundamental, nationally owned science cannot be outsourced to education institutions or private industry without long-term loss of capability, independence, and public benefit.
- Once scientific capability, infrastructure, and institutional memory are lost, they are costly and slow to rebuild.
- International experience demonstrates that nations that relinquish public scientific capacity often later seek to re-establish it at significantly higher cost.

- Retaining and nurturing long-horizon scientific capability is a sound, national investment, not a discretionary expense.

The submission contends that capability erosion is not an inevitable consequence of funding pressure, but a result of strategic choices that warrant close scrutiny.

### Key Issues

**Sequential capability loss** - An initial reform removed substantial numbers of enabling and support staff. This was followed by proposed reductions in scientific roles and site consolidation or closure. Together, these changes compound risk to research continuity, safety, and delivery to society rather than producing sustainable efficiency.

**Funding versus outcomes mismatch** – despite the provision of significant additional government funding, planned workforce and site reductions reportedly remain unchanged. This raises questions about internal allocation decisions, strategic prioritisation, and governance, rather than the adequacy of public investment in science.

**Public good science at risk** - Many CSIRO programs address national needs unsuited to short-term commercial funding models, including environmental baselines, climate and ecosystem monitoring, sovereign sensing capability, step-changes at scale for industry and energy and foundational science. Curtailing these activities does not remove national need - it merely defers cost and risk to the future.

**Irrecoverable loss of sovereign capability** - scientific teams, infrastructure, and institutional knowledge take decades to build but can be dismantled quickly. Once lost, they are slow and costly to recreate. Industry and universities may not substitute for this capability if they are unable to quickly replicate the long-term institutional memory, trusted national reputation, and sector-specific heritage that CSIRO took decades to grow.

### What the Committee may wish to examine

- Whether sequential workforce and site reductions align with the intent of the *Science and Industry Research Act*.
- Whether current restructuring appropriately distinguishes between financial pressure and long-term capability risk.
- The transparency of internal decision-making following recent increases in government funding.

### Possible recommendations

1. To reaffirm **public good science** as a core CSIRO mandate protected from short-term financial cycles
2. To assess **cumulative impacts of reforms**, not individual cuts in isolation
3. Require explicit justification for **site closures and capability reductions** where additional funding has been provided
4. Treat sovereign scientific capability as **critical national infrastructure**.

### Detail

The following sections elaborate on the key issues above, focusing on legislative intent, public good science, workforce capability, infrastructure, and governance. Together, they demonstrate that current risks arise from strategic choices rather than unavoidable funding pressure.

### **1. The purpose of the CSIRO and the Science Act**

The *Science and Industry Research Act* establishes the CSIRO as a public institution charged with conducting scientific research for the benefit of the Australian nation. This purpose is not 'value-neutral' - it explicitly recognises the importance of public ownership, public accountability, and public good outcomes.

Recent language in statements of intent and strategic framing risks CSIRO shifting emphasis from these foundations. While collaboration with industry, educational institutions, and government departments is essential, public science must not become contingent on external priorities, funding cycles, or institutional incentives that are not aligned with the stewardship of long-term national capability. Fundamental research, national capability building, and long-term risk mitigation are core responsibilities of government, not market functions.

A CSIRO that is required to justify its existence primarily through short-term commercialisation risks undermining the very rationale for its creation.

### **2. Public funding for public good science**

Public good science includes work that

- Addresses national risks and long-term challenges,
- Produces benefits that cannot be fully captured by private markets,
- Requires continuity, institutional memory, and sustained investment, and
- Serves policy, regulation, environmental stewardship, and national preparedness.

Examples include: climate science, biodiversity monitoring, environmental baselines, sovereign sensing capability, and fundamental geoscience and materials research. These areas often struggle to attract sustained industry funding despite being essential to national resilience and informed decision-making.

Cuts to such programs do not eliminate the need for the science - they merely defer costs to the future, often at greater expense and with diminished capability.

### **3. Sovereign scientific capability and national ownership**

Australia's scientific sovereignty depends on retaining capability within publicly accountable institutions. Once specialised teams, infrastructure, and tacit knowledge are lost, they are exceptionally difficult to rebuild.

International experience demonstrates that countries that have heavily privatised or hollowed out public research capability, often later attempt to re-nationalise or reinvest after recognising

- loss of independent advice
- over-reliance on external providers
- reduced national bargaining power
- strategic vulnerability in areas such as energy, environment, defence, and resources.

CSIRO represents a rare and valuable concentration of interdisciplinary expertise that cannot be replicated through fragmented short-term contracts or outsourced research models: the kind of expertise that can deliver value-added products to the Future Made in Australia economy.

#### **4. Workforce retention, career pathways, and capability loss**

Workforce reductions within CSIRO are not merely staffing decisions but structural capability choices that have enduring national implications. Proposed cuts may disproportionately affect mid-career and senior researchers - whose expertise anchors teams, mentors early-career staff, and sustains long-running programs.

Universities and private industry are unlikely to fully substitute for this role:

- Universities face high staff turnover and strong incentives for short delivery and publication cycles, with very different goals and aims overall
- Industry typically prioritises proprietary outcomes and near-term returns
- Neither has the explicit remit nor is structured to deliver and maintain long-term broad reaching national capability across decades.

Reductions in experienced staff may result in a loss of accumulated expertise and long-term investment in national capability.

#### **5. Commercialisation as a means, not the mission**

An expectation that CSIRO should primarily operate only where others cannot risks limiting the capacity a National Science Agency to support long-term public value.

CSIRO's history demonstrates that public investment in science can yield substantial national and economic returns over time. Many successful, broad-reaching innovations emerged after extended periods of development, often well beyond typical commercial investment horizons.

Publicly funded science should remain publicly accountable, with commercial outcomes structured to return value to the Australian.

#### **6. Long-term capability and horizon-3 investment**

Many current CSIRO capabilities represent horizon-3 investments - initiated five, ten, or more years ago. Those programs often require sustained nurturing before delivering their full value. Terminating such work prematurely:

- Squanders prior public investment
- Disrupts cumulative scientific progress
- Sends a signal that long-term thinking is not supported.

Strategic patience is essential. Nations that succeed in science-led innovation are those willing to sustain investment beyond electoral and budget cycles.

#### **7. Infrastructure, sites, and national scientific assets**

CSIRO's sites are national scientific assets - losing them may reduce capability that cannot be rebuilt quickly and will cost more to do so in the long-run. CSIRO laboratories, field stations, testing facilities, and observational sites constitute national scientific infrastructure, not discretionary property assets, and their value lies in continuity, location, and accumulated capability.

Many are geographically unique and co-located with long-running datasets, environmental baselines, or specialised equipment that cannot be relocated without loss of continuity and value. Planned site reductions may fragment research programs, reduce regional capability, and limit Australia's capacity to observe, measure, and respond to long-term environmental, industrial, and technological challenges. Once closed or divested, such sites are rarely re-established, even when future need becomes evident. Decisions affecting national scientific infrastructure, therefore, warrant the same level of scrutiny and long-term planning applied to other critical national assets.

#### **8. Governance, leadership, and the framing of the funding challenge**

Planned workforce and site reductions, despite recent increases in government funding, may raise questions about governance, strategic prioritisation, and transparency. These changes were framed as efficiency reforms. However, the subsequent need to reduce scientific headcount and consolidate/close many sites may indicate that foundational capability could be impacted.

Science capability should not be incrementally eroded through successive restructuring rounds. Once laboratories, field sites, and expert teams are dismantled, restoration is neither rapid nor cost-effective, evident from national and international efforts to do so. Committee scrutiny of decision-making processes, transparency, and alignment with legislative intent is therefore essential.

#### **Conclusion**

Australia's prosperity, resilience, and sovereignty depend on maintaining a strong, independent CSIRO, capable of undertaking long-term public good science. The cost of preserving this capability is modest compared to the cost of rebuilding it once lost.

This inquiry presents an opportunity to reaffirm the original intent of the CSIRO: science owned by Australia, conducted for Australia, and stewarded for future generations.

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