THE PRICE OF NATURE:
Analysis of government spending on biodiversity

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Prepared by Cyan Ventures, a specialist sustainability project development and advisory firm.

Key insights

This study estimates the Federal spend on biodiversity and how it compares to the need and risk associated with biodiversity and other spending in the economy. Seven key insights:

1. Up to A$11 billion annually is needed to protect biodiversity, which is still significantly less than the potential economic loss
2. In the EU, biodiversity spend is around A$1.4 billion p.a. per member state
3. Australian Federal Government biodiversity annual expenditure has averaged A$475m over the last decade, with a recent increase in 2023/4
4. Federal Government spending over last decade is only about 30% of OECD levels, less than 8% of the estimated annual need, and less than 3% of the risks posed to the economy
5. The Federal Government is spending 16x more on subsidies for oil and gas companies than it is on protecting biodiversity
6. While information on state and territory spending on biodiversity is outdated, available data shows it is still far less than benchmarks and needs
7. Cumulative underspend over the last decade is A$55B, more than total government health spending on COVID-19 policies

Australia is losing biodiversity at an alarming rate and current data on biodiversity spend is outdated, fragmented, and incomplete

Overall biodiversity context

- Australia has a biodiversity crisis
- Over the last 200 years Australia has suffered the largest documented decline in biodiversity of any continent and at least 19 Australian ecosystems are reported to show signs of collapse or near collapse
- The continued degradation of nature will have significant consequences and economic impact – such as tourism, food production and agriculture.

Challenges with current data on biodiversity spend in Australia

- No up-to-date centralised view of federal biodiversity spend in Australia
- Limited understanding / incorporation of state biodiversity spend
- Limited understanding of what biodiversity spend should be
- Multiple data sources and fragmented

Approach taken in this project

- Consolidated a decade of federal budget numbers (focus on recent spend)
- Reviewed secondary literature on state spend
- Incorporated Australian and global literature on biodiversity need and risk
- Brought together a range of budget, academic, international sources into one place

1 Up to A$11 billion annually is needed to protect biodiversity, which is significantly less than the potential economic loss

	Description	Estimate (A$B p.a.)
Estimated need	The amount of money needed to protect biodiversity in Australia	**$1.7B – $11B**
Potential economic loss	The potential loss to the economy from biodiversity impacts in 2030	**$16.8B+**

Estimated need

- A group of Australian scientists have estimated that Australia should spend A$1.7b p.a. alone to address species loss. Biodiversity spend would need to be significantly higher.
- Globally, Nature Conservancy has estimated a funding gap of A$1.3T p.a. Australia's approximate share of that would be 0.5% of GDP or A$11B
- 22.1% of land is currently protected, implies another 7.9% (or 60m hectares) to reach the 2030 goal. Implies up to A$14.5b needed over the next 6 years to reach the goal

Potential economic loss

- The World Bank has estimated high income countries could lose 0.7% of GDP by 2030 (A$16.8B p.a.)
- ACF estimated 49% of Australia's GDP dependent on nature

Source: Wintle et al, Spending to save, 2019; Nature Conservancy, Closing the Nature Funding Gap, 2020; Adams et al, How Much Does it Cost to Expand a Protected Area System?; World Bank, Economic Case for Nature, 2021; ACF, The Nature based economy, 2022

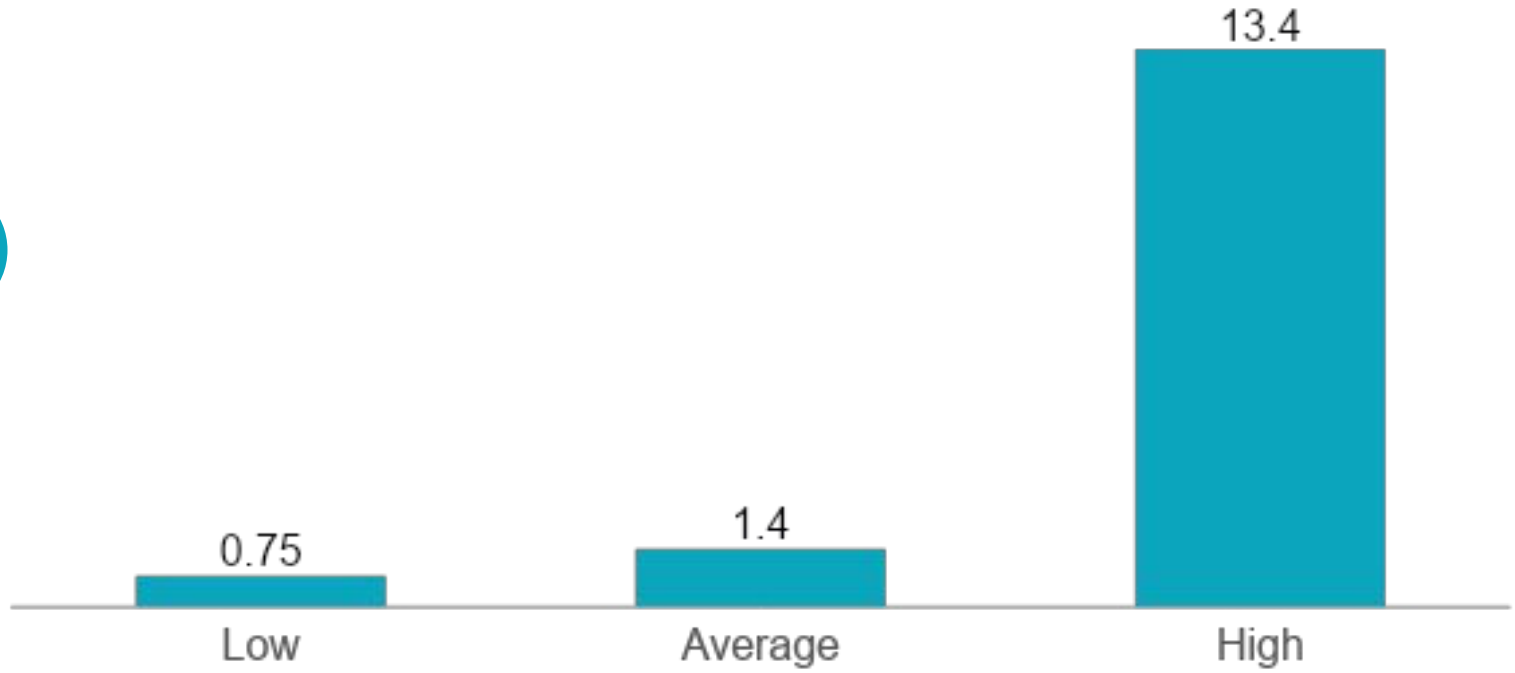
2 In the EU, biodiversity spending averages around A$1.4 billion p.a.

Data on global biodiversity spend is opaque and not consistent

However, EU benchmarking shows that public spending equated to 23B EUR in 2019

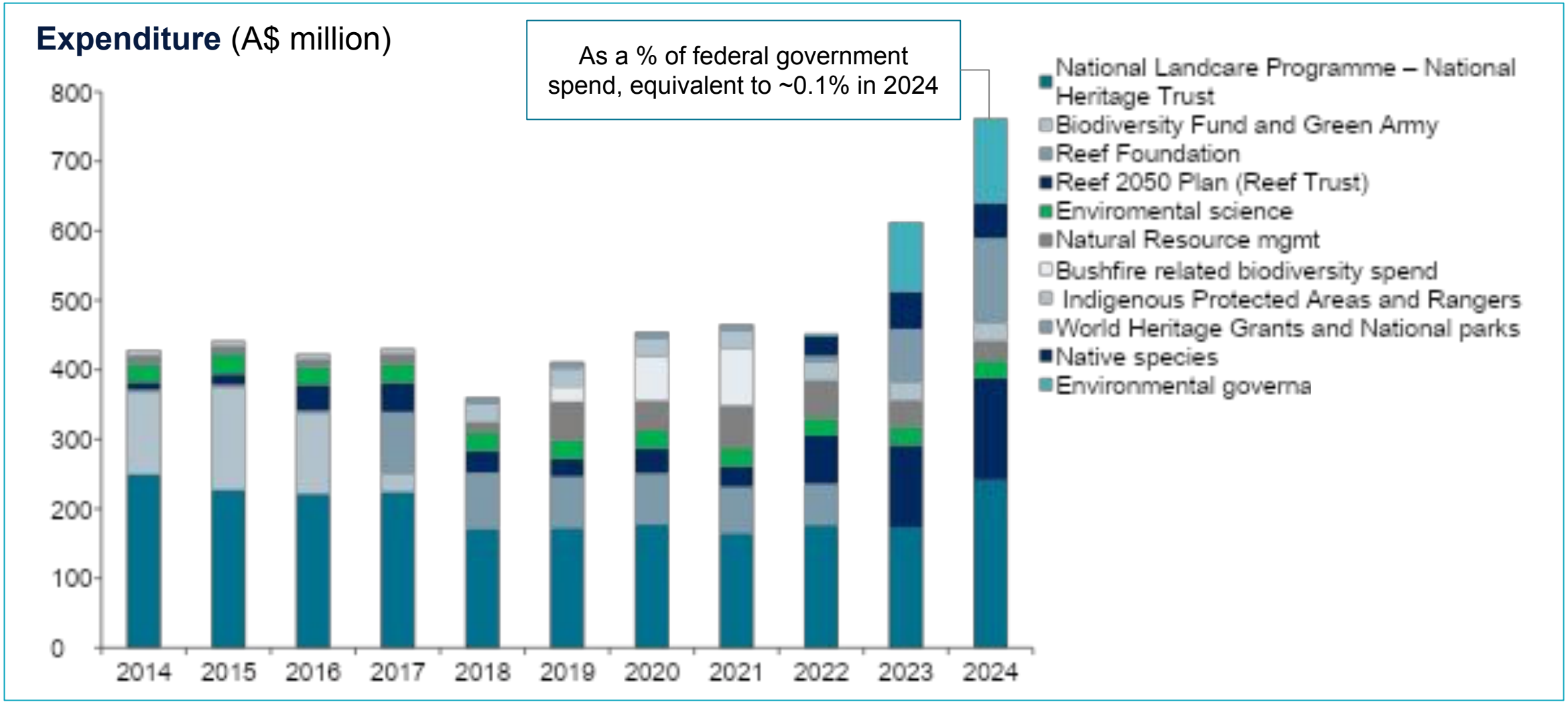
Average spending was $A1.4B per member state with highest spending countries up to $A13.4B p.a.

Annual spend on biodiversity ($A B)



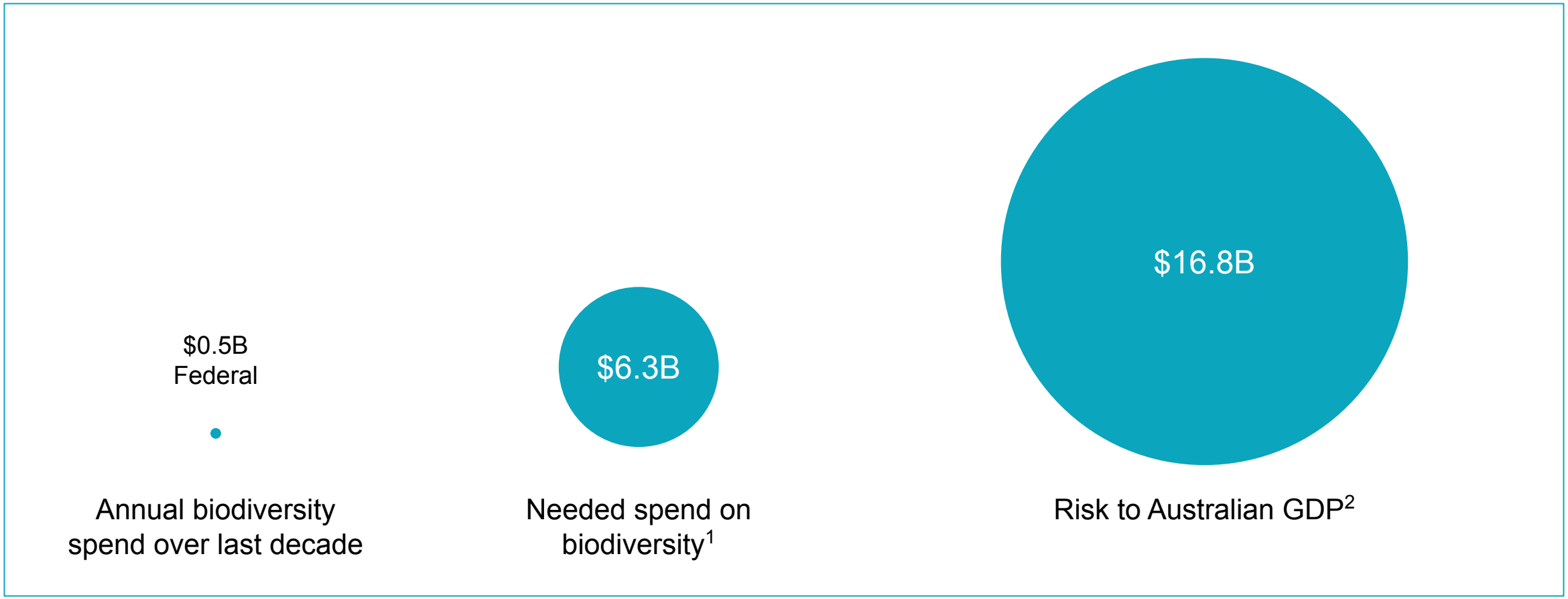
Source: European Commission, Biodiversity financing and tracking, 2022; Notes: Spend is EU and Member state domestic spend only; High = Average of top 6 countries; Spend is mostly federal, but sub-national spend is only partially included. Biodiversity spend per sqm and per $ GDP are also low compared to the EU (EU is roughly half land mass of Australia; it's GDP per capita is two-thirds of Australia's)

3 Australian Federal Government biodiversity expenditure has averaged A$475m over last decade, with a recent increase in 2023-4



Source: State of Environment Repor 2021, Budgets 2014 – 2024t

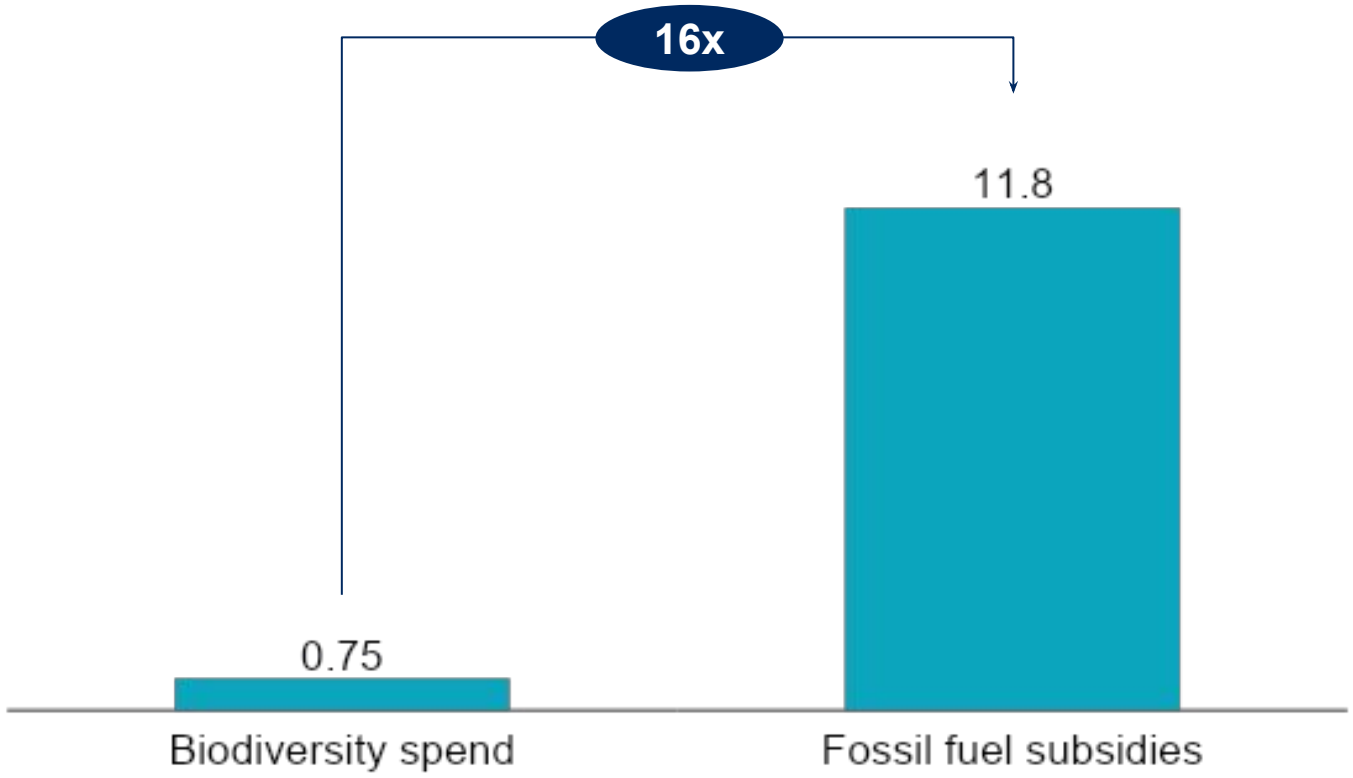
4 Annual Federal government spending over decade is <8% of estimated annual need, and <3% of risks posed to the economy



Notes: Average federal spend over decade; 1 Need is average of the low and high estimates; [2] Potential loss in 2030

5 Even in 2024, the Federal Government is spending 16x more on subsidies for oil and gas companies than it is on protecting biodiversity

2024 Federal Biodiversity spend vs fossil fuel subsidies est.[1] (A$B)



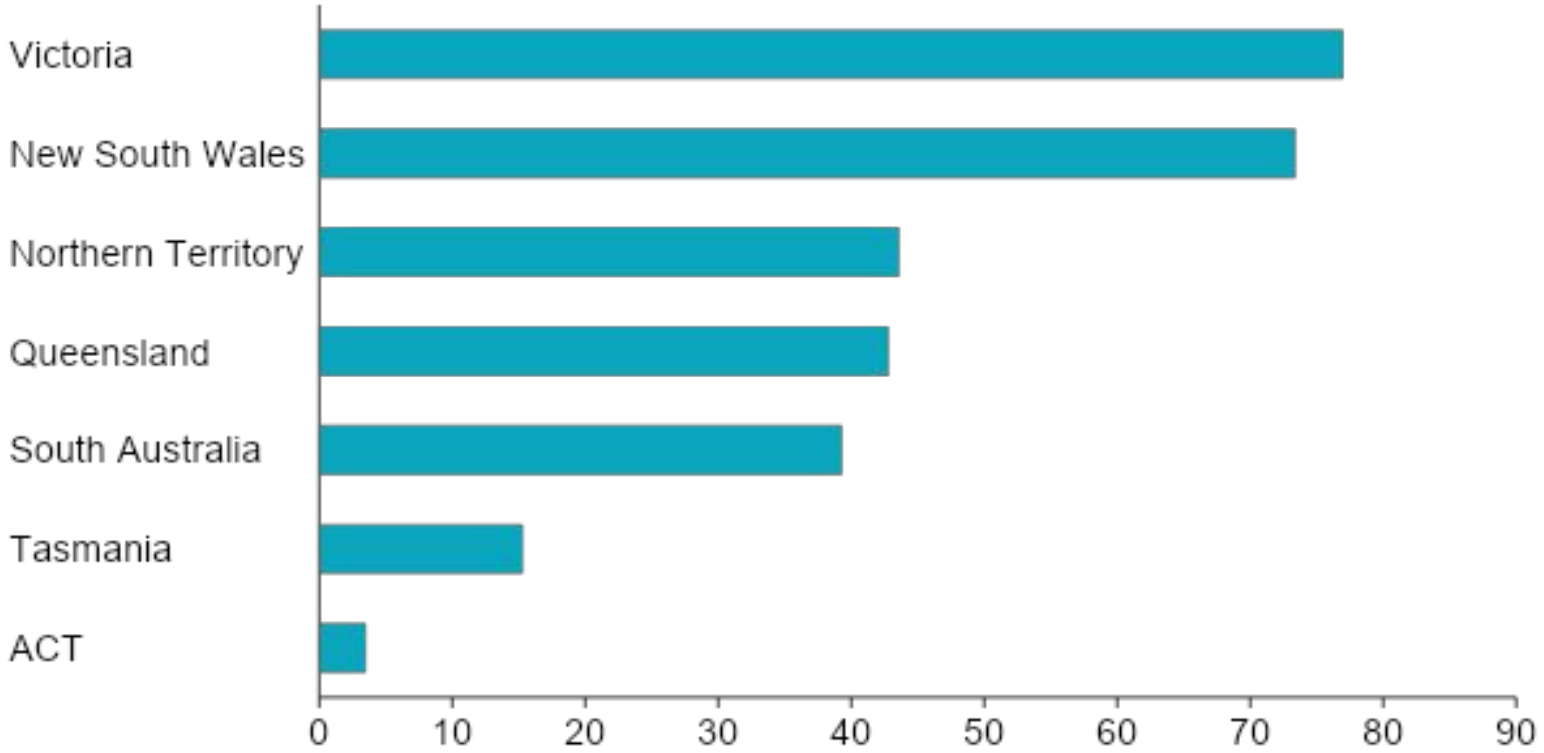
Total impact of fossil fuel costs is even higher

- Federal government spent $A 11.8B on subsidies such as the Fuel Tax credit scheme and other concessions
- This is only the in-year cost of the subsidies. The Federal government has budgeted $A54 billion over the lifetime of fossil fuel projects and programs listed in 2023–24 budget papers

Source: Australia Institute, Fossil Fuel subsidies in Australia in 2024, 2024; IMF, Fossil Fuel Subsidies data, 2023

6 While information on state and territory spending on biodiversity is outdated, available data shows it is far less than benchmarks and needs

Estimated biodiversity spend by state, 2018[1] (A$m)



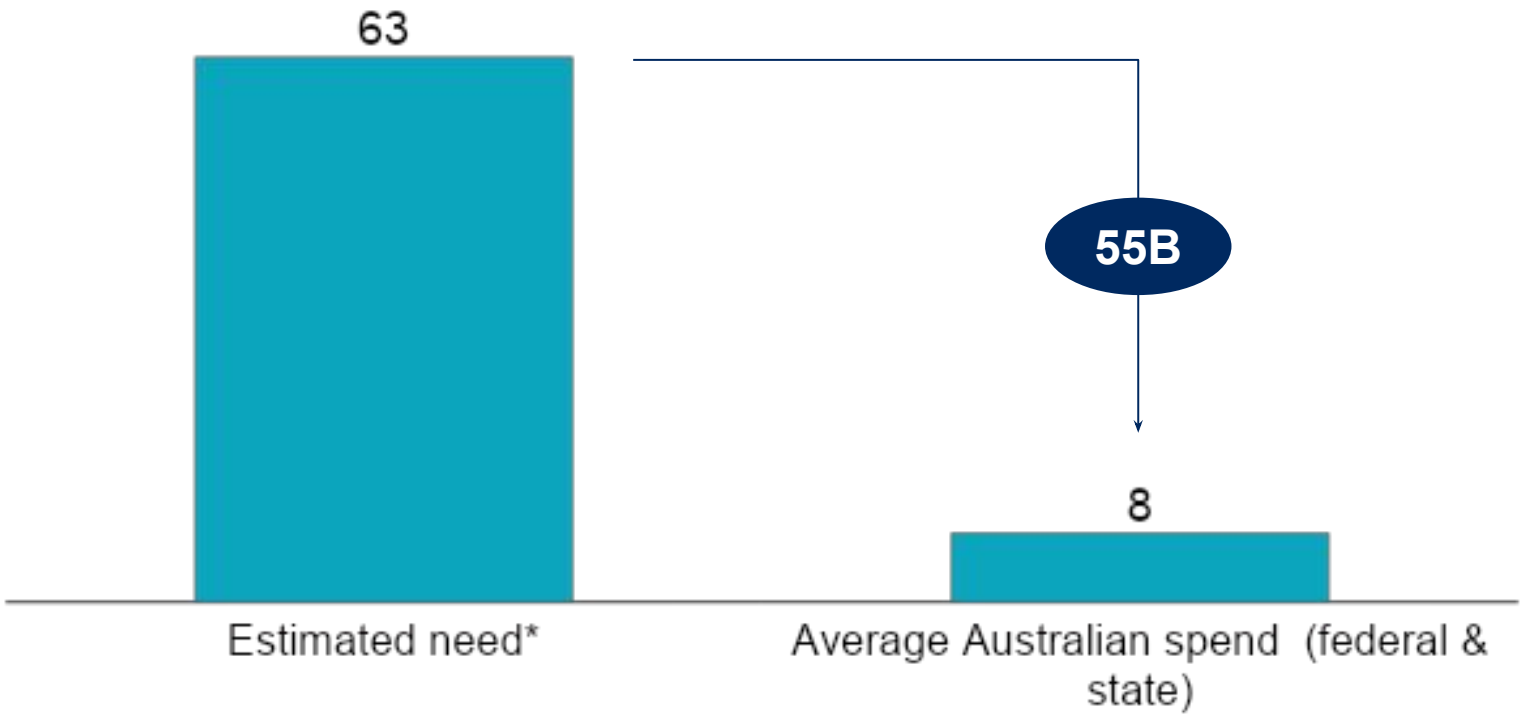
Total estimated state spend 2018

~A$300m

1. Based on estimates by Wintle et al, Spending to save, 2019. Numbers extrapolated from state spending estimates on threatened species. For instance, in Victoria includes Catchment Management, Biodiversity on Ground, Threatened Species Initiative, National parks spend. Aligns with EU sub-national spend data

7 Cumulative underspend over last decade is A$55B which is more than total government health spending during COVID-19

Cumulative needed spend on biodiversity vs average Australian spend over last decade ($B)



- $63B is the estimated spending needs to protect biodiversity over the past 10 years (it is an average of the high and low estimates)
- $8B is the estimated cumulative biodiversity spend (Federal and state) over the last decade
- $55B is cumulative underspend over the last decade
- Australian government is estimated to have spent $45B on health related measures during COVID-19

Notes: Need is average of low and high estimates; Source: Wintle et al, Spending to save, 2019; Nature Conservancy, Closing the Nature Funding Gap, 2020; Health spend: https://www.aihw.gov.au/reports/health-welfare-expenditure/health-expenditure#Government

Appendix

Scope of project

	Description	In / Out of scope
Direct spend	Spend where most of the funding can be clearly linked to biodiversity, for example through, e.g., ▪ Protecting areas of biodiversity ▪ Mitigating impact on threatened flora or fauna ▪ Improving research on biodiversity	In-scope
Indirect spend	Spend where the funding may have a link to biodiversity, but the link is not clear e.g., ▪ Department of Environment general spend ▪ Natural parks annual spend[1] ▪ Biodiversity-related spend at other Departments e.g. Ag	Considered, but out of scope
State & Territory spend	State and Territory direct and indirect spend on biodiversity	High level estimate but not main focus of work

1. Focus of this spend would not primarily be on biodiversity related spend; but would be a mixture of administrative, tourism and indirect biodiversity spending. Recent Federal government initiative with a specific aim of promoting biodiversity "protecting iconic National parks" has been included.

Pre-2023 main spending categories

National Landcare Programme	▪ The National Landcare Program was a large-scale natural resource management programme aimed at addressing issues such as loss of vegetation, soil degradation, invasive species, water quality and flows, and changing fire regimes, which have beneficial flow-on effects for biodiversity in the broader landscape. ▪ Regional Land Partnerships is the largest subprogram under Phase 2 of the National Landcare Program. The program is investing in 120 threatened species, particularly birds and mammals.
Biodiversity Fund and Green Army	▪ The Biodiversity Fund program was established as a competitive grants program, with a budget of ~$950m over six years from 2011. The objective of the program was to maintain ecosystem function and increase ecosystem resilience to climate change. The objective was to be achieved through grants to land managers for on-ground works, such as revegetation, protection of existing biodiversity, and prevention of the spread of invasive species. ▪ The Green Army Program was a hands-on environmental action program that supported local environment and heritage conservation projects across Australia. The Program delivered over 1,000 projects across Australia and engaged with over 11,000 young Australians as participants.
Reef Foundation funding	▪ The Reef Foundation funding was a six-year, A$443m partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation. So far, more than 370 projects are underway with over 500 partners, and we are on track to deliver against the Partnership's objective of achieving significant, measurable improvement in the health of the Great Barrier Reef.
Other	▪ Bushfire funding. The Australian Government invested more than A$200 million to support the recovery of Australia's native wildlife and their habitats from the devastating Black Summer bushfires of 2019–20

2023 Federal government biodiversity related priorities

National heritage project funding	Allocating A$740m over 5 years from the Natural Heritage Trust to support local and long-term environmental and agricultural outcomes. Funding includes: ▪ A$341m to protect nature, threatened species and habitats and to maintain delivery capability through NRM ▪ A$302m to support a climate-smart, sustainable agricultural sector including funding for NRM organisations
Environmental protection Australia	Provide A$215m over 4 years to deliver the Nature Positive Plan, including: ▪ A$121m over 4 years to establish Environment Protection Australia ▪ A$51m over 4 years to establish Environment Information Australia ▪ A$34m over two years to implement the Nature Positive Plan
Protecting iconic parks	A$355m over 4 years to protect Commonwealth National Parks and marine reserves. Funding includes: ▪ A$127m to sustain the Director of National Parks' core business, and deliver environmental conservation, on-park research and threatened species protection
Other	▪ Climate adaptation: The Government will provide A$28m over two years to develop Australia's first National Climate Risk Assessment and a National Adaptation Plan to understand the risks to Australia from climate change ▪ Securing the future of Australian marine science: The Government will provide A$163m to secure the future of the Australian Institute of Marine Science (AIMS), addressing its ongoing financial sustainability