

Estimate of environmental expenditure 2023/24

Method and results

February 2024



Parliamentary Commissioner for the Environment

Te Kaitiaki Taiao a Te Whare Pāremata

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- Maritime New Zealand – Nō te rere moana Aotearoa
- Ministry for Primary Industries – Manatū Ahu Matua
- Ministry for the Environment – Manatū mō te Taiao
- Ministry of Business, Innovation and Employment – Hikina Whakatutuki
- Ministry of Justice – Te Tāhū o te Ture
- Ministry of Transport – Te Manatū Waka
- New Zealand Defence Force – Te Ope Kātua o Aotearoa
- New Zealand Transport Agency – Waka Kotahi
- Stats NZ – Tatauranga Aotearoa
- Te Puni Kōkiri
- The Treasury – Te Tai Ōhanga.

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Estimate of environmental expenditure 2023/24: Method and results

Introduction

This technical note provides an estimate of environmental expenditure incurred by central government agencies for the 2023/24 fiscal year. This represents the third instalment, and the second with direct agency input, in a series that I have committed to produce, at least until the Government resolves to compile its own estimate.

This assessment of spending has been published in part to meet the information needs of select committees and assist them in discharging their constitutional responsibilities. Information regarding environmental expenditure is critical to enable them to arrive at an informed view on the Government's environmental spending decisions, including:

- the relative prioritisation of environmental challenges and outcomes as revealed through the allocation of fiscal resources
- the general adequacy of the Government's response to environmental issues in terms of whether it is spending too much or too little to achieve its stated outcomes
- the effectiveness of that expenditure in terms of its impact on environmental outcomes.¹

While this note has largely been compiled for parliamentarians, the benefits of providing a whole-of-government account of environmental spending extend to ministers and other senior decision makers. Mapping public sector expenditure to environmental outcomes could be used to inform budgetary allocation decisions and identify shared cross-agency environmental outcomes with the aim of further enhancing coordination across agencies.

The previous estimate of environmental spending that I compiled for the 2022/23 fiscal year received considerable attention from parliamentarians.² This interest largely reflects shortcomings in the structure, format and content of existing public sector financial, performance and accountability reporting.

¹ For a more comprehensive discussion of these issues, refer to chapter three of *Environmental reporting, research and investment: Do we know if we're making a difference?* (PCE, 2022).

² PCE, 2023.

One important shortcoming is that the scope of existing reporting is typically confined to individual agencies and their appropriations. Accordingly, there is no single authoritative source of information that provides a coherent and comprehensive account of environmental expenditure across the public sector. This significantly hinders the ability of parliamentarians to exercise an appropriate level of scrutiny over government environmental spending decisions.

The challenges that parliamentarians encounter was highlighted in recent advice that I provided to the Environment Select Committee relating to their pilot briefing into freshwater outcomes.³ In my advice to the Committee, I noted that some agencies involved in the management of freshwater quality were able to provide a reasonable account of relevant activities. However, they struggled to provide an equally clear assessment of the effectiveness of their expenditure in terms of its impact on freshwater quality.

The estimates produced by my office should not be regarded as a panacea. It is my hope that they will be the start of a shared journey towards a higher quality information base, more informed decision making, and more robust parliamentary scrutiny.

To fully achieve this, however, the tagging and reporting of expenditure by environmental outcomes needs to be undertaken by government agencies and incorporated into standard budgetary and performance reporting. It also needs to be supplemented by better reporting on the difference that this spending is having. In the interim, I will continue to compile regular assessments of environmental expenditure to ensure this information remains accessible.

In the course of putting together this estimate, my office requested data from finance teams from across the public sector. I acknowledge that this request placed a heavy administrative burden on these teams, and I am grateful for the considerable time and effort they have expended to make this estimate possible.

Method

The following provides an overview of the method used to derive this estimate of environmental expenditure. It includes a definition of environmental expenditure, a description of the data collection process and details on quality assurance and analytical steps.

Defining environmental expenditure

For the purposes of this estimate, environmental expenditure is defined as central government spending on environmental protection and resource management activities.

The definition of environmental expenditure used in this analysis to guide the identification and classification of spending is derived from the System of Environmental-Economic Accounting (SEEA) definition of environmental activities.⁴

³ New Zealand Parliament, 2023.

⁴ United Nations et al., 2014.

Under the SEEA framework, environmental activities are defined based on two categories:

- **Environmental protection activities** are those activities whose primary purpose is the prevention, reduction and elimination of pollution and other forms of degradation of the environment.⁵
- **Resource management activities** are those activities whose primary purpose is preserving and maintaining the stock of natural resources and hence safeguarding against depletion.^{6,7}

Data source

Data were obtained directly from those public sector agencies that have significant environmental management functions and responsibilities.⁸ The request covered budgeted expenditure for the 2023/24 fiscal year.

Identification and classification of data

Agencies were asked to identify expenditure consistent with the definition of either environmental protection or resource management activities. A guidance document was provided that included practical examples of activities consistent with the definition of environmental expenditure to assist agencies with identifying relevant spending. To minimise administrative burden, agencies were asked to identify only those items of expenditure that they considered to have a material and significant environmental purpose.

Agencies were asked to categorise this expenditure according to a single classification framework. This framework consisted of a hierarchical schedule of enduring and specific environmental outcomes derived from state of the environment reporting.

The guidance document requested that agencies attempt to identify and classify expenditure at a financial unit below that of appropriations to provide a more granular account of spending. However, agencies were given discretion to identify an appropriate financial unit based on considerations such as the:

- structure of their internal financial systems
- breadth and scope of their environmental protection and resource management activities
- administrative burden associated with the task.

5 This includes activities related to the protection of ambient air and climate; wastewater management; waste management; protection and remediation of soil and water; protection of biodiversity (including biosecurity activities where relevant); research and development; environmental monitoring; education and training; and general administration and regulation.

6 This includes the management of water stocks, forest resources, fish stocks, energy resources (renewable energy production and energy conservation measures) and minerals; research and development; education and training; environmental monitoring; and general administrative and regulatory activities.

7 United Nations et al., 2014, p.96.

8 Data were requested from the following agencies: Department of Conservation, Department of Internal Affairs, Inland Revenue, Land Information New Zealand, Maritime New Zealand, Ministry for Primary Industries, Ministry for the Environment, Ministry of Business, Innovation and Employment, Ministry of Justice, Ministry of Transport, New Zealand Defence Force, Stats NZ, Te Puni Kōkiri, The Treasury, and the New Zealand Transport Agency. The Ministry for the Environment provided data on behalf of the Climate Change Commission and the Environmental Protection Authority. The Ministry of Business, Innovation and Employment provided data on behalf of the Energy Efficiency and Conservation Authority. The Treasury provided data on behalf of the Department of the Prime Minister and Cabinet.

Given this flexibility, the approach adopted by agencies varied. For some agencies, appropriations were deemed to provide a reasonably accurate assessment of both the fiscal magnitude and scope of environmental spending. Accordingly, these agencies opted to supply expenditure estimates sourced from publicly available appropriation data released by the Treasury.

Other agencies were able to provide a more refined estimate of spending using data housed in internal accounting systems. When financial units had multiple objectives (i.e. both environmental and non-environmental), agencies were asked to identify and classify only the portion of spending consistent with the definition of environmental expenditure based on their reasonable judgement.

Quality assurance

Once received, datasets were subject to a quality assurance process. This involved an inspection of each dataset to confirm the identified expenditure was consistent with the definition of environmental expenditure. The assigned outcomes were also reviewed to ensure the classification hierarchy of enduring and specific outcomes had been correctly applied. Any issues relating to the identification and classification of data were resolved with the respective agency.

Analysis

Following quality assurance, datasets were prepared for analysis. This involved tidying the data to ensure a consistent format to facilitate further analysis. Data were analysed to derive a total estimate of environmental expenditure and an estimate disaggregated by administering agency and environmental outcome.

Results

The results showed that for the 2023/24 fiscal year, agencies had budgeted about \$3.6 billion of environmental expenditure. Within the context of total government expenditure for the year, this was equivalent to about 2.0% of budgeted expenditure.⁹ Table 1 shows this figure disaggregated by enduring and specific environmental outcomes.

Of the \$3.6 billion identified, about \$1.1 billion was allocated towards reducing greenhouse gas emissions and adapting to climate change. Disaggregated by specific outcome, \$840 million was directed towards climate mitigation activities and \$55 million was directed towards climate adaptation. The remaining \$188 million could not be attributed to a specific outcome due to insufficient information or because agencies judged this expenditure to fall outside the scope of the pre-specified specific outcomes.

A further \$875 million was directed towards improving the biodiversity and ecosystem functioning and resilience of Aotearoa. About \$666 million was allocated towards improving our land and freshwater. More than \$435 million and \$431 million were spent on reducing pollution and waste and improving the efficiency of institutions, respectively. While \$104 million was used to improve the coastal and marine environment of Aotearoa.

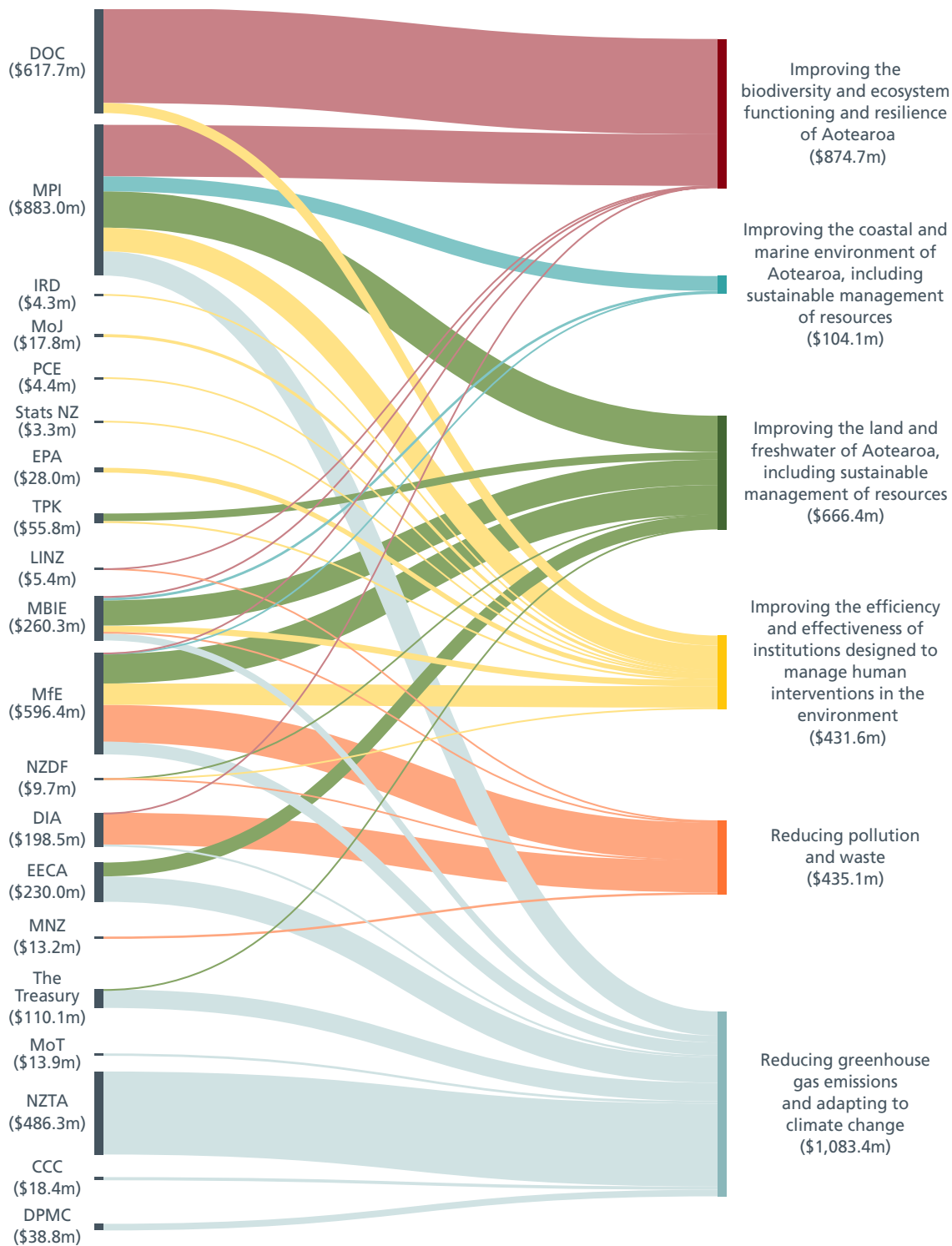
⁹ This figure was calculated using financial data sourced from The Treasury, 2023.

Table 1: Disaggregation of environmental expenditure by enduring and specific outcomes.

Environmental expenditure 2023/24	Amount \$ (000)
Disaggregated by enduring and specific outcomes	
Reducing greenhouse gas emissions and adapting to climate change	\$1,083,409
New Zealand's per person emissions are declining	\$840,212
New Zealand is effectively adapting to the impacts of climate change	\$55,438
Other expenditure not elsewhere classified	\$43,103
Indeterminate	\$144,655
Improving the biodiversity and ecosystem functioning and resilience of Aotearoa	\$874,662
Our native plants, animals and ecosystems are thriving	\$868,263
Other expenditure not elsewhere classified	\$6,399
Improving the land and freshwater of Aotearoa, including sustainable management of resources	\$666,387
Land management is improved to enhance soil and water quality	\$240,938
Mineral and energy resources are managed sustainably	\$201,783
Management of water takes is improved, to ensure sustainability of our freshwater ecosystems	\$144,118
Urban growth is managed without affecting versatile land and native biodiversity	\$7,199
Other expenditure not elsewhere classified	\$58,195
Indeterminate	\$14,154
Reducing pollution and waste	\$435,142
Waste and pollution in urban areas is reduced	\$226,747
Pollution in farming areas is reduced and waterways in farming areas are cleaned up	\$26,153
Other expenditure not elsewhere classified	\$58,700
Indeterminate	\$123,542
Improving the efficiency and effectiveness of institutions designed to manage human interventions in the environment	\$431,576
–	\$431,576
Improving the coastal and marine environment of Aotearoa, including sustainable management of resources	\$104,061
Fish stocks are managed sustainably to improve the health of our oceans	\$90,074
Other expenditure not elsewhere classified	\$11,873
Indeterminate	\$2,114
Total	\$3,595,237

Note: Individual figures may not sum to stated totals due to rounding.

Figure 1 links environmental expenditure to the agencies that administer it. This provides an indication of the magnitude of spending across various agencies and the outcome this spending is being directed towards.



Note: CCC = Climate Change Commission; DOC = Department of Conservation; DIA = Department of Internal Affairs; DPMC = Department of the Prime Minister and Cabinet; EECA = Energy Efficiency and Conservation Authority; EPA = Environmental Protection Authority; IRD = Inland Revenue; LINZ = Land Information New Zealand; MNZ = Maritime New Zealand; MBIE = Ministry of Business, Innovation and Employment; MfE = Ministry for the Environment; MoJ = Ministry of Justice; MoT = Ministry of Transport; MPI = Ministry for Primary Industries; NZDF = New Zealand Defence Force; NZTA = New Zealand Transport Agency; PCE = Parliamentary Commissioner for the Environment; TPK = Te Puni Kōkiri.

Figure 1: Environmental expenditure by government agencies attributed to enduring environmental outcomes. The left side of the figure provides a sense of total environmental spending; the right side provides a sense of where that spending is focused. Flows capture the contribution of individual agencies.

Note that the estimate of environmental spending excludes non-cash items administered by the Ministry for the Environment related to the operation of the New Zealand Emissions Trading Scheme (NZ ETS). These non-cash expenses are significant and represent \$2.8 billion of expenditure for the 2023/24 fiscal year.

These non-cash expenses are included in the Ministry for the Environment's financial schedules as an accounting provision to allow for the recognition of a liability incurred by the Crown. They result from measures intended to contain costs for NZ ETS participants or recognise a fiscal risk to the Crown. Accordingly, these items do not represent tangible expenditure directed towards activities or programmes intended to reduce greenhouse gas emissions. Consequently, these expenses have been excluded from our estimate on the basis that they are inconsistent with the definition of environmental expenditure.

Consistency

These results update the previous agency-led estimate of environmental expenditure compiled for the 2022/23 fiscal year. This previous estimate showed that budgeted environmental protection and resource management expenditure was \$3.5 billion for the 2022/23 fiscal year. This was equivalent to about 2.2% of expenditure authorised for that year.¹⁰

When comparing these estimates, any discrepancy will reflect both real world changes in environmental spending and differences in methodological compilation and presentation of results. Accordingly, caution is warranted when making direct comparisons between estimates at the whole-of-government and individual agency level.

The general method used to compile this estimate remains unchanged from the previous assessment of environmental expenditure. The definition of environmental expenditure continues to be based on the SEEA framework, with relevant financial data requested directly from government agencies. Differences regarding methodological compilation stem from changes to the classification framework and the expanded scope and detail of this update with respect to agency coverage.

The classification framework used to map expenditure to environmental outcomes has been amended to enable a more accurate categorisation of agency spending. This includes the relabelling of the climate change enduring outcome from 'reducing greenhouse gas emissions' to 'reducing greenhouse gas emissions and adapting to climate change'. This change was made to clarify that this enduring outcome encompasses both climate mitigation and adaptation expenditure.

Furthermore, an additional specific outcome labelled 'other expenditure not elsewhere classified' has been added to the framework. This outcome is intended to act as a residual category assigned to spending that falls outside the scope of the pre-defined list of specific outcomes but is not indeterminate in nature.

In terms of changes with respect to agency coverage and detail, expenditure incurred by Maritime New Zealand has been included in this assessment of environmental expenditure for the first time. In addition, expenditure incurred by the Climate Change Commission, the Energy Efficiency and Conservation Authority and the Environmental Protection Authority is now reported separately (as shown in Figure 1).

¹⁰ PCE, 2023.

Spending by these agencies was included in the 2022/23 assessment but was subsumed under the category of their respective monitoring agency.¹¹ The separate reporting of spending incurred by these agencies will reduce the spending estimates presented here for both the Ministry for the Environment and the Ministry of Business, Innovation and Employment relative to the previous assessment.

In terms of differences relating to data presented for specific agencies, the difference in spending administered by the Ministry of Justice reflects changes in the reporting of agency spending in budgetary documents. This has enabled the identification and classification of additional environmental expenditure. Consequently, the discrepancy between the current and previous spending estimate for the Ministry of Justice does not reflect an increase in real world spending.

Limitations and data quality

The results should be interpreted in the context of the following limitations and data quality considerations. These issues ensure that there remains an unquantified degree of uncertainty associated with the accuracy of the 2023/24 estimate.

Overall, it should be noted that the financial management systems employed by public sector agencies are not designed to facilitate the identification and categorisation of spending by outcome. Consequently, there is an inherent degree of both imprecision and subjectivity associated with the method used to compile the results presented in this note.

While agencies adhered to a consistent definition of environmental expenditure, they adopted a more flexible approach regarding the selection of a financial unit to identify and classify spending. This inconsistent approach will result in a variable level of accuracy and detail across agencies with respect to the supplied expenditure estimates.

Another limitation stems from the use of forward-looking financial information. This analysis is based on budgeted expenditure for the 2023/24 fiscal year. Accordingly, these figures may change as expenditure is incurred throughout the year and is subject to a formal audit process.

Furthermore, expenditure data were in the process of being compiled prior to the 2023 New Zealand general election. Consequently, the results presented here will not reflect any subsequent reallocation of budgetary resources to meet the policy or fiscal priorities of the new government.

Currently, climate-related expenditure is classified under a single enduring outcome that encompasses both mitigation and adaptation spending. This is despite such expenditure being directed towards activities that are intended to achieve markedly different outcomes in terms of our response to climate change. Accordingly, the current structure and wording of the classification framework will be reviewed as part of ongoing development work to provide a more transparent and accurate account of climate-related expenditure for future estimates.

In addition to these more general considerations, there are issues related to specific datasets supplied by agencies that are noted below.

¹¹ The Energy Efficiency and Conservation Authority is monitored by the Ministry of Business, Innovation and Employment. The Ministry for the Environment is the monitoring agency for the Climate Change Commission and the Environmental Protection Authority.

- For research, science and innovation funding administered by the Ministry of Business, Innovation and Employment:
 - Expenditure estimates relate to the 2022/23 fiscal year. Funding for the 2023/24 fiscal year was still in the process of being allocated to specific projects at the time this estimate was compiled. Accordingly, financial information from the previous fiscal year was used to enable mapping of environmentally related research, science and innovation expenditure to outcome categories. However, all other financial data supplied by the Ministry of Business, Innovation and Employment regarding the management of energy and resources relates to the 2023/24 fiscal year.¹²
 - There is a discrepancy between the classification of environmental research spending presented here and the classification of environmental research published by the Ministry of Business, Innovation and Employment as part of its administration of New Zealand’s science funding system.¹³ The re-classification of research, science and innovation funding against environmental outcomes was based on existing categories assigned using the Australian and New Zealand Standard Research Classification (ANZSRC).¹⁴ Translating these categories to environmental outcomes required mapping relevant ANZSRC codes to the schedule of outcomes. This was undertaken by the Ministry of Business, Innovation and Employment as part of this data request and has not been verified or endorsed by the organisations undertaking the research.
- With respect to expenditure incurred by the Department of Internal Affairs, a significant proportion of this spending relates to the Water Services Reform programme. The programme aims to achieve a range of environmental objectives relating to the management of drinking water, wastewater and stormwater. This expenditure could potentially be classified under several different environmental outcomes. However, to avoid issues such as double counting, this expenditure was classified under a single outcome that may not fully reflect the scope of environmental outcomes associated with this programme.
- Expenditure administered by the Ministry of Justice includes salaries and allowances set by the Remuneration Authority for Environment Court Judges, Environment Commissioners, and Deputy Commissioners. The estimate is based on the current remuneration approved and may change during the year.
- Expenditure administered by the New Zealand Transport Agency does not include in principle expense transfer carryover amounts that have been requested but not confirmed at the time of data collection. Accordingly, the figures presented here may understate the New Zealand Transport Agency’s final spend on climate-related transport initiatives for the 2023/24 fiscal year.

12 Environment-related research, science and innovation funding accounted for \$111 million or 43% of the Ministry of Business, Innovation and Employment’s \$260 million spend presented in Figure 1.

13 These data are publicly available on the Ministry of Business, Innovation and Employment website: <https://www.mbie.govt.nz/science-and-technology/science-and-innovation/research-and-data/successful-funding-application-anzsrc-data/>.

14 ANZSRC provides a standardised framework used to measure and analyse research and experimental development. For additional information regarding ANZSRC, see <https://www.mbie.govt.nz/science-and-technology/science-and-innovation/research-and-data/anzsrc/>.

References

New Zealand Parliament, 2023. Briefing on environmental outcomes – freshwater. <https://selectcommittees.parliament.nz/v/0/9a9081dc-641e-45d3-dba2-08db647a11c1>.

Parliamentary Commissioner for the Environment (PCE), 2022. Environmental reporting, research and investment: Do we know if we're making a difference? Wellington: PCE.

Parliamentary Commissioner for the Environment (PCE), 2023. Estimate of environmental expenditure 2022/23: Method and results. Wellington: PCE.

The Treasury, 2023. Budget 2023 data from the estimates of appropriations 2023/2024. <https://www.treasury.govt.nz/publications/data/budget-2023-data-estimates-appropriations-2023-24>.

United Nations, European Commission, Food and Agricultural Organization of the United Nations, International Monetary Fund, Organisation for Economic Co-operation and Development and The World Bank, 2014. System of Environmental-Economic Accounting 2012 – Central Framework. New York: United Nations.

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