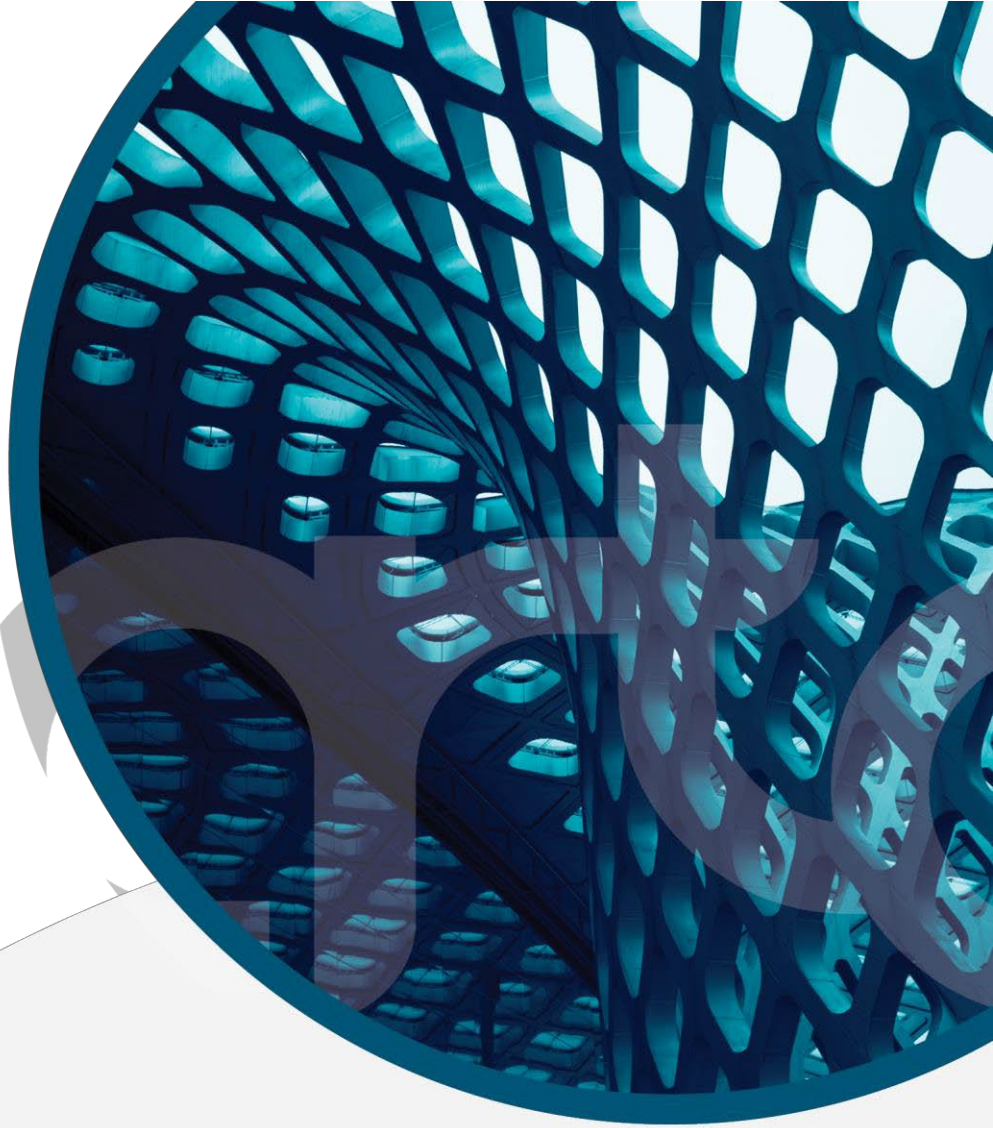




EVALUATION OF THE ENVIRONMENTAL RESEARCH GRANTS PROGRAM

FINAL EVALUATION REPORT

**DEPARTMENT OF PLANNING AND
ENVIRONMENT**

NSW ENVIRONMENTAL TRUST

REPORT PERIOD

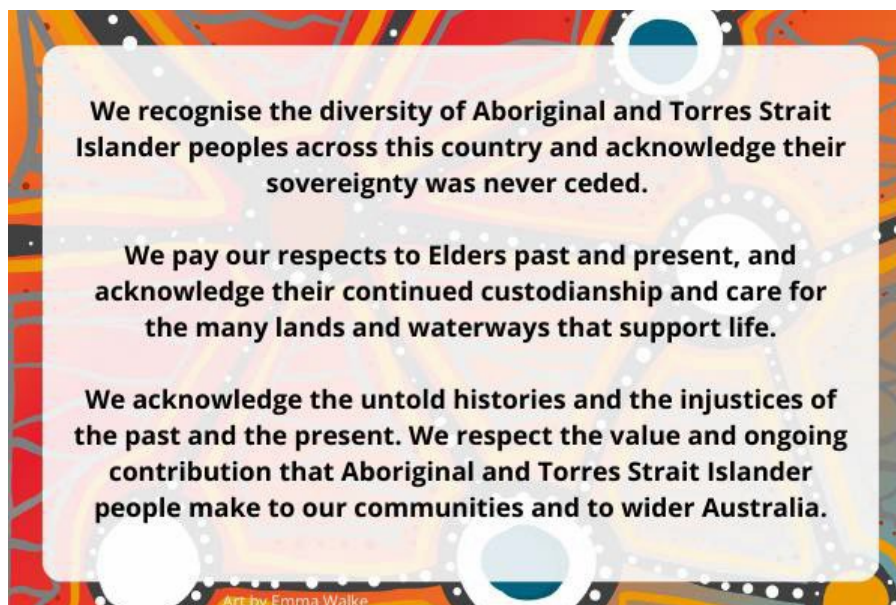
2017-2021 GRANT ROUNDS

ACKNOWLEDGMENTS

This work was completed with the assistance of Laura Purcell, Karen Wakely and Irene Soo in the NSW Environmental Trust section of the Department of Climate Change, Energy, the Environment and Water.

We would also like to thank the many key informants from the NSW Environmental Trust Executive and Technical Review Committee, university research offices, and applicants to the 2017- 2021 rounds of the Environmental Research Grants. We thank them for their time and insights and trust that their views are adequately represented in this report.

ARTD consultancy team



CONTENTS

Executive summary	i
Project	i
Methods	i
Key findings	ii
Recommendations	vi
1. Introduction	12
1.1 The Environmental Research Grants program	12
1.2 Evaluation of the 2017 to 2021 rounds	14
1.3 Limitations	19
2. Key findings	20
2.1 Appropriateness	20
2.2 Effectiveness	38
2.3 Efficiency	44
2.4 Equity	52
2.5 Legacy	70
3. Recommendations	74
Survey tools	82
Interview guides	93
Advance Queensland Industry Research Fellowship budget	101
Standard Variation Form example	102
Rubric assessment and comparative analysis data	103
Value for money methods	104
Applications and successful coded by research theme	108

TABLES AND FIGURES

TABLES

Table 1.	Grant Round characteristics 2017-2021	13
Table 2.	Detailed evaluation questions.....	15
Table 3.	Document and desktop review sources	16
Table 4.	Stakeholder surveys and interviews	17
Table 5.	Rubric scores for 2017-2021 rounds compared to 2022 round.....	20
Table 6.	Overall alignment of trust themes (=N)	24
Table 7.	Average rating of alignment with needs of environmental research community	24
Table 8.	Average ranking of theme importance.....	25
Table 9.	Applicants understanding of the assessment criteria and process (=N)	30
Table 10.	Proportion of grantees that needed Variations to their ERG-funded projects 33	
Table 11.	Amounts approved compared to total funding allocation	34
Table 12.	Applications, granted amounts and priority themes by year	36
Table 13.	Proportion of grantees who used the grant to attract additional funding	40
Table 14.	Value for money metrics	45
Table 15.	Value for money analysis metrics by project (Average, minimum and maximum)	47
Table 16.	Staff levels and fte estimates provided by Trust.....	49
Table 17.	2017-2021 applicants and success rate by organisation type.....	57
Table 18.	how applicants found out about the grant (=N)	59
Table 19.	appropriateness of application requirements for grant size (=N)	61
Table 20.	Comparing the application experience to other research grants.....	62
Table 21.	Number of EOIs received 2017-2021	66
Table 22.	Examples of research impact from funded projects	70
Table 23.	Proposed structure of themes in guidelines.....	75

Table 24.	Opportunities to improve application forms	76
Table 25.	Suggested redesign of objectives table.....	78

FIGURES

Figure 1.	Overall alignment of trust themes.....	24
Figure 1.	ERG processes that support transparency.....	28
Figure 2.	Applicants understanding of the assessment criteria and process.....	30
Figure 3.	Ways in which unsuccessful applicants (n=19) were able to undertake their proposed projects	42
Figure 4.	ERG processes that support Equity.....	53
Figure 5.	Survey responses to gender (n=34).....	55
Figure 6.	Accessibility of application guidelines.....	58
Figure 7.	how applicants found out about the grant.....	59
Figure 8.	appropriateness of application requirements for grant size.....	60
Figure 9.	Hours taken to develop the project.....	64
Figure 10.	Hours to complete the application form	64
Figure 11.	Rating of difficulty overall and by type of application	65
Figure 12.	Proportion of applicants that would or would not apply to the erg again	65
Figure 13.	Ways in which grantees (n=11) communicated findings from ERG-funded projects	72

EXECUTIVE SUMMARY

PROJECT

The Environmental Research Contestable Grants Program (ERG) provides funding for applied research in priority environmental themes to help address contemporary environmental problems in New South Wales. The Program is one of four statutory annual contestable grants programs delivered by the NSW Environmental Trust (Trust). It has operated since 1990 with annual funding rounds delivering over \$27 million in funding.

The stated objectives of the program are to:

- increase knowledge and advance techniques to solve general environmental problems in NSW
- assess and test application of innovative solutions to decrease environmental degradation in NSW
- discover new methods of operation for NSW industries that are less harmful to the environment and enhance public good.

ARTD conducted an evaluation of the ERG's 2017-2021 rounds, to provide insights on its overall performance, its strengths and opportunities for improvement, as well as the extent to which it delivers value for money.

It also looks at alignment of the 2017-2021, as well as the 2022 rounds of the ERG with the Premier and Cabinet Grants Administration Guide (released 2022),¹ as well as with the Act Objects and Trust's Strategic Plan.

This evaluation report highlights areas which can be improved in future rounds and provides recommendations on how these can be made.

METHODS

ARTD undertook a mixed methods evaluation of the ERG program, combining administrative data with document and desktop review, as well as information gathered from key stakeholders through surveys and interviews. We also undertook a value for money assessment. We used a rubric approach to measure alignment between the ERG and the Premier and Cabinet Grants Administration Guide¹ (released 2022), Act Objects and Trust's Strategic Plan.

KEY FINDINGS

Evaluation of the Environmental Research Grants

Sample size

Survey

28 unsuccessful applicants	28% response rate
16 grantees	43% response rate
8 university research offices	40% response rate
6 TRC members/ reviewers	

Interviews



8

Trust staff and other stakeholders



7

grantees



4

TRC members/ reviewers



4

unsuccessful applicants

Key findings

Appropriateness

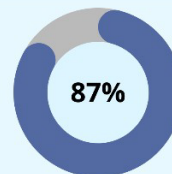
Alignment with DPC Grants Administration Guide

2017-2021	2022
Good	Good*

*Some data was unavailable due to the recency of these grants.



Survey respondents felt the Trust's research themes were aligned with environmental research needs



Grantees sought a variation to their projects

Many felt the **grant amount is low** for what it is expected to achieve.

However, the ERG is still **valued by grantees as a rare & critical source of funding**, filling an important niche.

Equity



Location is not a barrier, but there are greater costs to do research in remote areas



Rigour of grant application & reporting processes likely **excludes community groups/ non-profits & Aboriginal Community Organisations** from applying or successfully managing their grants

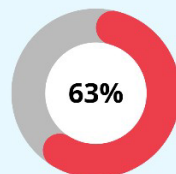


There are challenges with **balancing research outcomes & parent/ caregiver considerations**

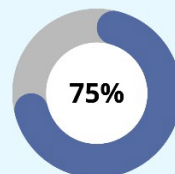
Effectiveness

Objective 1	Achieving
Objective 2	Achieving
Objective 3	Limited*

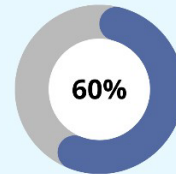
*Funded projects are less focused on targeting the industries, products or methods of operation which are the greatest drivers of environmental degradation



Unsuccessful applicants were not able to undertake their research without the ERG funding



Research projects tested, refined & shared more effective or efficient methods/ techniques for restoration & rehabilitation



Grantees were able to attract additional funding for their research

Efficiency

Provides good benefit for money with average **Benefit Cost Ratio of 1.75**.

There is **greater value for money** when more grants were awarded.

Legacy

Collaboration with end users encouraged faster use of research & increased the chances that funded projects deliver tangible & sustainable impacts.

There is clear evidence that the grants are working to help **build NSW's knowledge economy**, create jobs & a skilled workforce, support policy & decision-making, & **lead to publications & citations (81%)**.

KEQ	Answer
Appropriateness	
How well does the Program align with the: (i) DPC Grants Administration Guide (2022 Rounds onwards only), (ii) relevant Trust Act objects, and (iii) the Trust Strategic Plan 2020-2024?	In most areas, the ERG has a 'Good' alignment with the Grants Administration Guide. Improvements were made between 2021 and 2022 in governance and accountability, largely due to improved documented guidance for TRC review processes. Areas to improve are collaboration and partnership (of the Trust's ERG team with other areas of government), proportionality and outcomes orientation. Given 2022 grants have only recently been distributed, data was unavailable to make an assessment on some dimensions. Overall, the ERG is strongly aligned with the Objects of the Act and the Environmental Trust's Strategic Plan.
To what extent does the Program address the environmental research needs and evidence gaps identified as most critical by the research community and government?	Most (65%) survey respondents felt that the Trust's research themes were extremely well or well aligned with the needs of the environmental research community. Biodiversity, climate adaptation and landscape management were highest rated themes in terms of importance, and these were among the most funded applications, suggesting that the needs of the research community are being well met by the ERG. ERG is valued by grantees as a rare and critical source of funding for environmental research (including novel research), filling an important niche. The ERG's niche in the grants landscape was reiterated by our review of 16 other comparable grants programs.
Are assessment processes sufficiently robust and transparent to result in the selection of projects that align with the Program's objectives, offer value for money, and have the highest potential to deliver research impact?	The Trust has numerous best practice processes in place to ensure transparency of the Environmental Research Grants. The ERG is relatively unique in that government bodies can be grant holders or co-applicants. Some applicants are unclear on why government bodies are eligible for government research funding, which seems to be based on an unfamiliarity with grants of this kind. Most applicants did not understand who would be assessing their application and what criteria would be used for this assessment, however this information is available in the Guidelines. Grantees were much more likely than unsuccessful applicants to have felt they understood this process.
Is the current funding structure the most appropriate to deliver high impact environmental research and translation? (This includes funding amounts, round frequency, type of funding, eligible costs).	The funding allocation was exceeded by an average amount of \$220,400 per year. This suggests that the funding allocation is low in relation to the funding need in the research community. Many stakeholders, including TRC members and Trust staff, felt that the grant amount is low for what it is expected to achieve. Grantees explained that environmental research is often labour intensive, and that the grant size allows only for minimal staffing of the project, even with contributions from PhD students on lower wages. Similarly, biodiversity, conservation and climate science projects very rarely produce tangible results in 3 years. Nearly all (87%) grantees sought a variation to the timeframes of their ERG-funded projects. This may not be the norm, as disruptions from COVID-19, bushfires and floods affected most projects. All grantees who stated they did not attract additional funding (n=6) also sought a

variation. This suggests that additional funding from other sources is necessary to complete the project on time.

Effectiveness

To what extent does the program deliver on its three objectives to: (i) increase knowledge and advance techniques to solve priority environmental problems in NSW, (ii) assess and test the application of innovative solutions to decrease environmental degradation, and (iii) discover new methods of operation for NSW Industry that are less harmful to the environment and enhance the public good?

The ERG is delivering well on objective (i) and (ii). In 75% of all final project reports there was evidence of more effective or efficient methods and techniques for restoration and/or rehabilitation being tested, refined and shared, and in 31% a greater understanding of ecosystem functions and/or processes was developed, which improved (or would be likely to improve) the effectiveness of environmental management. Additionally, 69% of final project reports showed evidence that the collaboration with end-users had encouraged faster use of results.

The objective for which there is less evidence is discovering new methods of operation for NSW industry. The funded projects are less focussed on targeting the industries, products or methods of operation which are the greatest drivers of environmental degradation, instead focusing on addressing issues once they have reached the environment.

What impact does the grant have for successful applicants in the context of their other funding? (e.g. their ability to conduct the project, attract other funding, further their career in environmental research, attract high calibre researchers, capability to conduct future environmental research)

The ERG has a clear impact for grantees on their research record, their ability to create and sustain a functioning research group, and in helping them to attract more funding (60% of grantees were able to attract more funding).

About a third (37%) of unsuccessful applicants were able to undertake the project they applied to the ERG for, in some capacity. The majority were not able to undertake their research at all.

What unintended outcomes (positive and negative) were produced and have any unexpected benefits been generated by the selected projects (e.g., cultural, economic, social)?

The collaboration requirement of the grant provided post-graduate students working on the projects with networks, mentoring and, in some cases, direct employment. This is evidence that the grants are working to help build NSW's knowledge economy. Post-graduate researcher contributions were critical for the success of many projects.

One project built the capacity of Aboriginal researchers/project managers.

Because applicants have already invested in pulling together collaborators around a project idea, unsuccessful applicants may be more likely to apply with the same collaborators for funding elsewhere.

Efficiency

Does the program provide value for money when compared with similar programs?

The average Benefit Cost Ratio (BCR) of 1.75 shows the program provides good value for money and positive economic benefits for NSW through the combination of innovation benefits and the leveraging of external investment which would not have otherwise been made. There was not enough available data on the outcomes achieved by other programs to compare against how well the ERG compares to other grants in value for money delivered.

	There is greater value for money in the years in which more grants were awarded.
To what extent does using research themes support better value for money?	If the themes are too narrow or specific, such as in the 2021 round (Post-Fire Flora Research and Recovery), they can also limit the number of eligible applications to a point where it is no longer cost effective to run the grant round. The 2021 round delivered less value for money and was more intensive to run. Because there were numerous changes to the grant structure in the years between 2017 and 2021, it is difficult to draw conclusions about the extent to which priority research themes contribute to driving value for money. Input into priority research themes is currently ad hoc. Greater collaboration with other areas of NSW Government in setting the priority research themes would likely benefit the Trust and enhance value for money provided by the grants.
How can internal and external systems and resourcing be optimized to support better value for money?	Grantees and university research offices mostly agreed that they were able to receive support from the Trust. Trust staff are easy to contact, helpful and, in most cases, responsive. A lot of data is collected from applicants in applications and reports. However, (other than the project measures) it appears that this data is not being collated, analysed or used by the Trust. This is likely to be in part related to resourcing, and in part because until very recently no Monitoring and Evaluation Framework has been in place. The level of staffing required is similar whether 2 grants are awarded or 10, however there is much greater value for money from a program that funds 10 projects.
Equity	
To what extent does the Program address barriers to equitable participation through all stages of the grant lifecycle? (e.g. accessibility of information and systems; promotion of grants; geographic considerations; parent/caregiver considerations).	The Environmental Research Grants program has several processes and elements in place which support equitable participation through various stages of the grant lifecycle. All 5 University Research Office survey respondents agreed or strongly agreed that the application guidelines and eligibility criteria allow for equitable participation. While the distribution of grants suggests location is not a barrier to applying or holding an ERG grant, researchers highlighted the greater costs to doing work in remote areas. While there are elements of the ERG that support equitable participation by all genders, some grantees spoke about the challenges of balancing research outcomes with parent/ caregiver considerations. The Trust could consider promoting equity by providing deferments to start dates and grant extensions for parental/ caregiving leave. Given the burden of the application process, and the rigour reviewers require in terms of the research, there is a low likelihood of community groups/ non-profits and Aboriginal Community Organisations applying or being successful in their application to the ERG. The Trust could consider whether to make explicit in Guidelines that Aboriginal and community organisations partner with an academic researcher.

Are the applicant and grantee requirements proportionate to the funding amount, compared with other grants?	More than half (52%) of applicants surveyed felt that the application requirements were not appropriate for the size of the grant, especially when compared with similar programs, with some also commenting that the application and reporting requirements were too laborious or complex considering the amount of funding received and when compared with similar funding schemes.
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In general, grantees and applicants were very positive about the EOI stage of the ERG's two stage grant process, and felt it saved them time and effort in writing up a full application for a highly competitive grant. However, many grantees and unsuccessful applicants highlighted that parts of the application and reporting requirements were too onerous or asked for excessive levels of detail that felt disproportionate to the amount of funding available. Several interviewees and survey respondents also noted that they or their colleagues would not apply again due to the application /reporting burden.

Legacy

To what extent did projects deliver sustainable impacts and resources that continue beyond the project lifetime?	The ERG's focus on applied research, and collaboration and end user requirements increase the chances that funded projects deliver tangible and sustainable impacts beyond the life of the grant. Final reports and interview data show ample evidence of job creation, improvements to the workforce, integration of research into policy, reducing risks in decision making, citations/ publications and other benefits.
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What elements of the Program's design could be improved to ensure it is research that puts NSW in a strong position to anticipate and respond to emerging and future environmental threats and priorities?	Future advice to reviewers should include some consideration of emergent environmental problems that lie outside the priority themes and how these should be considered. Another way to signal to applicants that emerging threats are a priority is to have a specific theme for emerging threats as identified by the research community/industry.
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RECOMMENDATIONS

CONSIDER INCREASING FUNDING LENGTH AND AMOUNT

Adding a further 6 months after project activities are completed to evaluate and disseminate results, finalise publications and allow time for other indicators of impact to be visible may be useful to researchers, as well as to the Trust in understanding the impact of the grants. The Trust could consider making a change to the grant whereby all project activity needs to be completed within 3 years, but allowing expenditure on communication and publication activities for a further 6 months. The final report could then be requested at the end of 3.5 years.

There was general consensus across stakeholder types (TRC members, Trust staff, grantees) that an **increase to the grant amount** would make projects and the scale of impact the Trust seeks to be more feasible. A few interviewees felt that the grant amount currently skews applications towards earlier career researchers. This is supported by the fact that environmental research tends to be personnel intensive, and the salary levels of mid-career researchers of between \$113,000 to \$157,000 per year, and a PhD/early career level (paid at

Level A) salary of between \$80,000 and \$107,000. To make it worthwhile for more experienced researchers at a higher level in their career to apply, allow research teams to support more PhD/early career researchers' to develop knowledge and skills, and enable more impactful projects, the Trust should consider increasing the maximum amount offered by the ERG to **\$360,000 for up to 3.5 years**. This would provide project funds of \$115,000 per year, and \$15,000 for dissemination and community engagement activities, compared to the \$66,666 per year currently provided by the \$200,000 over 3 years.

Increasing the funding pool to \$2 million per year would help to make the program more cost effective (allowing greater impact for time administering grants) and would allow the Technical Review Committee (TRC) to fund a similar number of projects to current at the recommended higher amount (\$360,000).

REVIEW PRIORITY RESEARCH THEMES TO IMPROVE RESPONSIVENESS TO EMERGING THREATS

Having regular and broad themes allows applicants to plan ahead, and enables applications to be made from diverse fields of research. There is value in the themes being flexible and responsive. Further collaboration with other government agencies on emerging threats and priority areas will help to identify where the ERG can add the most value.

The Trust could consider having a five theme structure each year, which may include:

- 3 fairly broad themes that rotate each year
- 1 theme for a knowledge gap or emerging threat identified in collaboration with other areas of government
- 1 theme for emerging environmental threats or priorities as identified by the environmental research community or industry.

SIMPLIFY APPLICATION PROCESSES AND FORMS

The Trust could consider reviewing what can be removed from the EOI and Invited Application forms. If the information asked for does not get used at that stage in the assessment checks and processes, it can be removed. Suggestions for areas to simplify are provided in the table below.

Information currently requested	Recommendation
Detailed information on each objective, including a breakdown of activities to meet each objective, project measures, ¹ total projected outputs, in which stage it will be undertaken, team members	Suggest this is simplified, and combined with requests for research team breakdown. A suggested redesign is provided in Table 25.

¹ The project measures are a series of codes that correlate with types of outputs expected from the grants. Some of the same measures are used across the Trust's other grants programs, and some of which are specific to the Environmental Research Grants program. These measures are used to report on the aggregate outputs of the Environmental Research Grants Program (for example, in the Annual Report).

Information currently requested	Recommendation
or collaborators responsible, and how the activity will be evaluated.	
A communications strategy, with a breakdown by target audience, target message, communication method, evaluation method, who is responsible and stages in which it will be undertaken.	Suggest this is removed and replaced with a free text question: How do you intend to engage collaborators/ end users and disseminate knowledge generated throughout the life of this project?
A breakdown of the research team, by individual and organisation, job/function, and who they will be paid by.	Suggest research team breakdown is combined into objective table (see Table 25), and integrate who will pay for their time into the budget spreadsheet.
A breakdown of the communications team by individual and organisation, job/function, and who they are paid by.	Suggest this is removed and added as a line item to budget spreadsheet.
A breakdown of collaborators, including name, position and organisation, anticipated roles and responsibilities in delivering the project. A separate table with the same items is provided for end users.	Suggest this is combined into objective table (see Table 25), and integrate who will pay for their time into the budget spreadsheet.
A question asking 'What selection criteria will you use to employ project staff and who will be making the selections?'	Employment policies are generally handled by the institution, and this information is ancillary to what is needed by assessors. This could be removed from the application, and a clause could be added about the requirements for employment procedures and policies to the Grant Agreement.
The budget form requires details on expected expenditure under different categories, including salaries. It includes a section to detail other sources of income and to describe what is being provided.	Suggest this is redesigned around Milestones rather than stages, to align with suggested redesign of objectives table (below). It is also suggested that the budget categories align as closely as possible with university cost centers for ease of financial reporting: a) Salaries b) Consultancy c) Equipment d) Consumables e) Travel

Information currently requested	Recommendation
	f) Other expenditure
	An example of a simpler budget for a grant project with multiple contributors (Advance Queensland Industry Research Fellowship) is provided in 0.
Researchers indicate the application form generally takes more than 10 hours to fill in. Note: The high end of the answer option scale is 10+ hours.	Consider changing the scale on this responses to this question, so that answers provide a more accurate snapshot of the length of time applications are taking. For example: a) 2-5 hours b) 5-10 hours c) 10-15 hours d) 15-20 hours e) 20+ hours

To improve usability and reduce duplication in the application, some of the information requested across several different sections in the Invited Application could be repackaged into one table, which allows for both free text input and quantitative answers (detailed suggestion at Table 25).

CLARIFY GRANT ASSESSMENT PROCESSES

Provide explicit documented guidance for TRC members and peer reviewers on how to make assessments— especially about applications which do not fit into funding priorities but should be considered on their merits. If a specific priority research theme is created for researcher or industry-identified emerging priorities, this makes it more apparent to reviewers on how to consider these applications. Guidance to the TRC on the process of decision making (after ranking based on alignment with criteria) can also include how equity should be considered by the TRC when deliberating between applicants with similar scores, to consider the mix of genders, types of research funded and geographic distribution in applications recommended for funding.

Consider also providing current TRC members with data on past rounds and assessment decisions and grantee reports to better inform their decisions, and implementing a post-round reviewer debrief/ feedback session to improve assessment processes.

SIMPLIFY AND STANDARDISE GRANTS MANAGEMENT AND REPORTING

While the frequency of reporting is in line with other grants, the format and types of information requested could be less onerous, better fit for purpose and better used by the Trust. The data suggests a need to **review the usefulness of the project measures** and **discuss standards for financial reporting/common financial reporting categories with**

university finance offices/research offices to find a satisfactory level of financial reporting that is not overly burdensome. This is an important aspect of fully meeting the criteria for the DPC Grants Administration Guidance around ensuring grants administration is designed and implemented to enable grantees to focus on achieving outputs, outcomes and benefits.

A standard list of reasons for which a variation should be requested should be listed in the Grant Agreement or as a separate variation guidance document available on the ERG webpage, and a standard variation form provided to grantees at the beginning of their grant to submit if they require a variation (see suggestions for form at 0). This should reduce the amount of time required to process variations.

OPTIMISE RESOURCING AND ENCOURAGE USE OF POST-GRADUATE STUDENTS TO PROVIDE BETTER VALUE FOR MONEY

Increasing the amount of total funding available and the number of grants made will increase the value for money of the program, as the largest cost is in staffing (a similar level of staffing is required whether 2 grants are made or 10). Increasing the funding pool to \$2 million per year is more in line with the worthy funding applications, and would allow for a similar number of grants to be made at the suggested \$360,000 over 3.5 years level. A greater level of impact per administrative dollar spent could be expected from increasing the grant amount, as a larger grant is likely to attract a higher calibre of researcher, and allow for larger scope of projects.

Reducing some of the complexity of the grant application and reporting forms and standardising some of the administration of the grants is likely to help reduce the amount of time staff spend supporting grantees with paperwork.

An additional provision to the Guidelines that the inclusion of PhD/ Masters students on projects will be highly regarded would improve the degree to which the grants increase the capacity of the NSW environmental research community, as well as value for money.

More systematically publishing research outcomes on website/case studies in annual report, as opposed to just successful grantee abstracts would also increase potential impact of the grants.

MAKE SMALL CHANGES TO IMPROVE EQUITY

- There are indications that geographic distances mean researchers working on projects in inland locations may be disadvantaged. The Trust could consider options such as offering an additional travel stipend for those undertaking work in remote locations.
- Continue to provide an EOI round. This allows people with more limitations on their time to participate as it does not require the same level of detail as a full application. Simplifying the application and reporting forms will also support greater accessibility.
- While the ERG application process does not have a section where PIs can explain career breaks, its focus on the substance and achievability of the research and the research team as a whole plays largely the same role. However, an additional note could be added to the ERG Guidelines that researchers can include career breaks or time away from traditional research roles in their CVs as a means of letting researchers know that

the Trust is cognisant of and equally considers diverse research trajectories and experiences.

- Consider adding details to the Grant Agreement or a separate variation advice document about what kinds of variations can be requested, including expectations around how significant periods of carers/ parental leave are dealt with.
- While the ERG is open for Aboriginal Community Groups, community organisations and non-profits to apply, the application and assessment processes do not support the success of these applications. Consider adding a requirement to Guidelines that these organisations must collaborate with an academic researcher.
- Consider a more systematised approach to providing feedback/ reasoning for decisions to unsuccessful applicants, so that feedback is provided more equitably and is more transparent.

IMPROVE PERCEPTIONS OF TRANSPARENCY

- Add wording to Guidelines to the effect that a key desired outcome of the grants program is to increase the use of research in the NSW Governments' management of and response to environmental issues, and to increase collaboration with the academic sector, and that appropriate agencies would therefore ideally be included as collaborators/end users.

IMPROVE ALIGNMENT WITH GRANTS ADMINISTRATION GUIDE

- Consider implementing processes for the Trust to manage and track risks (e.g. a conflict of interest/ fraud/ misconduct register).
- Consider tracking use of staff time more systematically, (e.g. time taken to process variations, time taken to review milestone reports, time taken to address reported risks), to help identify areas for process improvements.
- Consider adding reporting fields to capture economic benefits of funded projects (e.g. employment outcomes, other grants funding leveraged), and include these indicators in the program's monitoring, evaluation and reporting plan.
- Grant guidelines include a step-by-step process for the EOI/application process. Consider including similar process in grant guidelines for reporting process (to ensure grantees budget for this work).
- Consider adding to TRC guidelines that ideally TRC applicants would have some understanding or knowledge in research ethics (animal and/or human).

1. INTRODUCTION

1.1 THE ENVIRONMENTAL RESEARCH GRANTS PROGRAM

The Environmental Trust (the Trust) is an independent statutory body that exists to support projects which enhance the environment of New South Wales. The Trust was established under the Environmental Trust Act 1998 and administers grants including contestable grants, major projects and various NSW Government initiatives. The aims of the Trust are guided by objects that provide support for research, education and acquisition/ declaration activities to ensure the continued protection of the environment from pollution, waste and degradation.

The Environmental Research Contestable Grants Program (the Program) provides funding for applied research in priority environmental themes to help address contemporary environmental problems in New South Wales. The Program is one of three statutory annual contestable grants programs delivered by the Trust. It has operated since 1990 with annual funding rounds delivering over \$27 million in funding.

The stated objectives of the program are to:

- increase knowledge and advance techniques to solve general environmental problems in NSW
- assess and test application of innovative solutions to decrease environmental degradation in NSW
- discover new methods of operation for NSW industries that are less harmful to the environment and enhance public good.

Generally, applicants have been able to seek up to \$200,000 in funding through a two-stage process, where an initial Expression of Interest (EOI) round is reviewed by the Technical Review Committee (TRC), before proceeding to a full application process. Over the evaluation period (2017-2021), there have been a number of notable administrative changes affecting allocation of funding, as well as shifting research priorities in some years to align with broader NSW Government policy priorities (i.e. Bushfire Recovery). Differences in how rounds were run and varying priorities are highlighted below.

TABLE 1. GRANT ROUND CHARACTERISTICS 2017-2021

	2017	2018	2019	2020	2021
Total funding available	\$1M	\$1M	\$1m	\$1m	\$500k
Maximum per grant	\$150k	\$150k	\$200,000	\$200,000	\$200,000
Duration of project	3 years	3 years	3 years	3 years	1 year
Stages in grant process	2	2	2	2	1
EOIs received	146	95	80	20	NA
Full applications	27	24	31	12	5
Grants approved	9	10	6	6	2
% invited from EOI	18%	25%	39%	60%	NA
% successful from full application	33%	42%	19%	50%	40%
Total approved amount	\$1,266,428	\$1,352,125	\$1,065,033	\$1,197,911	\$192,134
Priority research themes	Contaminants and pollution; biodiversity; climate adaptation; mechanisms for social engagement Resource Management; Wetlands and River systems; landscape management; Marine, coastal and estuarine ecosystems Mechanisms for social engagement; Resource Management; Landscape Management; Wetlands and River systems Eucalyptus Dieback: investigating management interventions; Investigating historical relationships; Investigating species resilience and vulnerability; investigating soil factors Post-Fire Flora Research and Recovery - survey work (100 high priority species could be nominated from); Supporting threatened species recovery; addressing climate change impacts				
Priority setting	Office of Environment & Heritage Knowledge Strategy; 2016 outreach to stakeholders; DPI research areas. Office of Environment & Heritage Knowledge Strategy; 2016 outreach to stakeholders; DPI research areas. Office of Environment & Heritage Knowledge Strategy; 2016 outreach to stakeholders; DPI research areas. Major Projects Prospectus 2018-2020 (brought together 140+ stakeholders and SMEs to identify priority issues and projects) Strategic Plan overarching priorities and immediate funding priorities				
Types of eligible research	Biophysical; economic; social	Biophysical; economic; social	Biophysical; economic; social	Biophysical; economic; social	Survey work
Maximum per org	3 EOIs per category; 12 in total	3 EOIs per category; 12 in total	3 EOIs per category; 12 in total	3 EOIs total	3 Applications total
Required progress reports	Annual	Annual	Annual	Annual	Quarterly
Required before grant application	Project Plan; Project Measures	Project Plan; Project Measures	Project Plan; Project Measures	Workplan	Workplan

In 2022, the program returned to broad research themes with a 2-stage process. A new TRC was appointed, program guidelines were reviewed for consistency with other Trust grant programs, and the governance framework was strengthened. A new online Grants Management System was also put in place.

Grants are offered to eligible applicants who work collaboratively with a range of stakeholders. Eligible applicants include:

- Universities
- Government agencies (including councils)
- Incorporated community organisations or groups
- Local Aboriginal Land Councils

Applicants must demonstrate that they have the capability to undertake the applied research. They must also include relevant collaborators who will help deliver the project and end-users who will use the research findings in a meaningful way.

1.2 EVALUATION OF THE 2017 TO 2021 ROUNDS

The purpose of this evaluation is to provide insights on the overall performance of the Environmental Research Grants (ERG) Program in its 2017-2021 rounds, and whether it has achieved its planned outcomes and delivered value for money.

This evaluation has two additional elements. The first is a comparative analysis of 16 grants programs with similarities to the ERG, undertaken to provide a view of how the grant is situated and its role in the broader funding context, as well as to highlight any good practices in other grants programs which may be useful for the Trust team to consider for the ERG.

The second is an analysis of the alignment of grant rounds 2017-2021 and 2022 with the Premier and Cabinet Grants Administration Guide (released 2022),¹ as well as with the Act Objects and Trust's Strategic Plan. Compliance with the Guide is a legislative requirement under clause 31 of Schedule 1 to the *Government Sector Finance Act 2018* (NSW). The Guide applies to all grant activities from 19 September 2022, and the Trust has been reviewing its granting processes to ensure strong alignment with this Guide. We applied a rubric approach to our analysis.

This report highlights areas for improvement and provides recommendations on how these can be made, as well as on how the Program can achieve greater alignment with the Department of Premier and Cabinet Grants Administration Guide.

1.2.1 KEY EVALUATION QUESTIONS

Broadly, the present evaluation can be considered in terms of five overarching areas of the program:

- Appropriateness

- Effectiveness
- Efficiency
- Equity
- Legacy

To answer these effectively, a set of detailed evaluation questions was developed corresponding to each area and workshopped with the program team (see Table 2). Data sources to evaluation questions included administrative data, document review, desktop review of like grants, surveys and interviews.

TABLE 2. DETAILED EVALUATION QUESTIONS

Focus area	Detailed Evaluation Question
Appropriateness	How well does the Program (2022 Rounds onwards) align with the: • DPC Grants Administration Guide • relevant Trust Act objects • the Trust Strategic Plan 2020-2024?
	How well did the Program (2017-2021 rounds) align with the: • relevant Trust Act objects • Trust Strategic Plan 2020-2024?
	To what extent does the Program address the environmental research needs and evidence gaps identified as most critical by the research community and government?
	Are assessment processes sufficiently robust and transparent to result in the selection of projects that align with the Program's objectives, offer value for money, and have the highest potential to deliver research impact?
	Is the current funding structure the most appropriate to deliver high impact environmental research and translation? (This includes funding amounts, round frequency, type of funding, eligible costs).
Effectiveness	To what extent does the program deliver on its three objectives to: • increase knowledge and advance techniques to solve priority environmental problems in NSW? • assess and test the application of innovative solutions to decrease environmental degradation? • discover new methods of operation for NSW Industry that are less harmful to the environment and enhance the public good?
	What impact does the grant have for successful applicants in the context of their other funding? (e.g. their ability to conduct the project, attract other funding, further their career in environmental research, attract high calibre researchers, capability to conduct future environmental research)
	What unintended outcomes (positive and negative) were produced and have any unexpected benefits been generated by the selected projects (e.g., cultural, economic, social)?
Efficiency	Does the program provide value for money when compared with similar programs?

Focus area	Detailed Evaluation Question
Equity	To what extent does using research themes support better value for money?
	How can internal and external systems and resourcing be optimized to support better value for money?
	To what extent does the Program address barriers to equitable participation through all stages of the grant lifecycle? (e.g. accessibility of information and systems; promotion of grants; geographic considerations; parent/caregiver considerations).
	Are the applicant and grantee requirements proportionate to the funding amount, compared with other grants?
Legacy	To what extent did projects deliver sustainable impacts and resources that continue beyond the project lifetime?
	What elements of the Program's design could be improved to ensure it is research that puts NSW in a strong position to anticipate and respond to emerging and future environmental threats and priorities?

1.2.2 METHODS

ARTD undertook a mixed methods evaluation of the ERG program, combining administrative data with document and desktop review (including of comparative grants programs), as well as information gathered from key stakeholders through surveys and interviews. We drew on all data sources to assess the alignment of the ERG with the Grants Administration Guide, Trust Act Objects and the Trust's Strategic Plan, using a rubric approach. We also undertook a value for money assessment.

The methods used for this evaluation are summarised in the tables below. More details of the methods and data collection instruments including the survey and interview tools are provided in Appendix 1 and 2, the full Value for Money method in 0, and the rubric assessment and grants comparative analysis in 0.

TABLE 3. DOCUMENT AND DESKTOP REVIEW SOURCES

Document type	Number reviewed
Application forms and guides	Total 19
Application Guidelines	5
EOI Guide	2
Invited Application Guide	3
Application forms	5
Grant Agreement	4

Document type	Number reviewed
Applications	Total 19
EOI unsuccessful	6
Successful invited applications	9
Unsuccessful invited applications	11
Grants administration spreadsheet	Total 1
This included all applicants, project titles applied for, granted amounts and geographic locations of applicant.	
Other grant programs	Total 16
Grants reviewed included a mix of 3 Federal Government research grants, 4 Australian Philanthropic Grants, 4 State Government grants and 5 international grants (full data provided at 0)	

We undertook surveys and interviews with a broad range of stakeholders, to provide a 360-degree view of the grants programs from planning the grant round to a grantee's final report.

TABLE 4. STAKEHOLDER SURVEYS AND INTERVIEWS

Stakeholder type	Method	Completion rate
Unsuccessful applicants	- Survey: N=28 - Interviews: N=4	28% (of 99 with valid emails) 14% (of those who completed surveys)
Grantees	- Survey: N=16 - Interviews: N=7	43% (of 37 with valid emails) 44% (of those who completed surveys)
TRC members/ peer report reviewers	- Survey: N=6 - Interviews: N=4	NA
Trust staff and former staff	Interviews: N=5	NA
University research offices/ organisational equivalent	Survey: N=8	40% completion (of 20 with valid emails)

Other program stakeholders	• Interviews: N=3	• NA
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COMPARATIVE ANALYSIS

We undertook a scan of the grants landscape to identify grants that had shared characteristics with the ERG program. Shared characteristics were:

- research funding for which applicants to the ERG would be eligible
- funding that targets environmental issues
- funding with a similar focus on translational research in a non-medical field.

Details were added to a spreadsheet (provided 0), and analysed to identify trends as well as similarities and differences to the ERG in funding structure and administration. Insights are highlighted in blue boxes throughout the report.

RUBRIC ANALYSIS

A rubric was developed with dimensions and indicators based on key items from the Premier and Cabinet Grants Administration Guide, and on the Trust Act Objects and Strategic Plan, and including some specifics around grants administration based on Advance Queensland's Industry Research Fellowships, which is similar to the ERG program. This was reviewed with the ERG program team, and assessments were given against each of the indicators based on available evidence. This was performed for the 2017-2021 rounds, and separately, for the 2022 round. Suggestions for improvements have been provided from the 2022 round rubric assessment.

VALUE FOR MONEY ANALYSIS

Conducting a value for money (VFM) analysis is useful to understand how affordable and effective the program has been over time, and, where possible, to characterise performance in relation to similar programs. It is a useful tool for establishing the economic contribution of the program.

A cost-effectiveness analysis (CEA) compares the relative costs of activities to the outcomes (effects) of actions. CEA is particularly useful when the benefits of a program cannot be directly monetised, but the outcomes can still be counted and compared.

Input data and metrics for the cost effectiveness analysis came from budget data for the Environment Trust, including data on internal resourcing (staff levels and full time equivalent (FTE) loading), along with spending on grants and reported actual grant outcomes as part of acquittals.

A cost-benefit analysis approach, which looks at the impacts of the program in terms of savings as a result of the program, was considered as part of the evaluation. While direct benefits on a grant by grant basis could not be monetised, a benefit-cost ratio could be estimated based on existing literature relating to the economic value of research and

innovation, and combined with reported data from grants and the stakeholder survey. The full methods, assumptions and framework are provided in 0.

1.3 LIMITATIONS

This evaluation relies on small sample sizes from each stakeholder group, both in surveys and interviews, so the data should be taken as indicative of existing views and judgement should be used alongside the data when making decisions about future strategies and improvements.

Grant acquittal reports from the 2020 round (Eucalyptus Dieback Round) were not available, as these projects were all ongoing at the time of the evaluation. This round was significantly different from others, and we have drawn some insights from the available data about how such a targeted theme when coupled with efforts to increase collaboration can create greater impact – however, the acquittal reports (once available) are likely to provide a more fulsome view of this.

2. KEY FINDINGS

2.1 APPROPRIATENESS

2.1.1 ALIGNMENT OF THE PROGRAM WITH THE NSW GOVERNMENT'S GRANTS ADMINISTRATION GUIDE, RELEVANT TRUST ACT OBJECTS AND THE TRUST STRATEGIC PLAN

We designed a rubric against which to assess alignment of the ERG against the NSW Government's Grants Administration Guide, relevant Trust Act Objects and the Trust's Strategic Plan.

We drew on the domains of the Grants Administration Guide, and developed a series of criteria for each of these domains to inform a rating of Adequate, Good or Excellent. The below table provides the average ratings for each of the domains. The full rubric (provided as an attachment at 0) provides greater detail.

In most areas, the ERG has a 'Good' alignment with the Grants Administration Guide. Areas of strength are in governance and accountability, and in aligning with the Objects of the Act and the Environmental Trust's Strategic Plan. Areas to improve are *collaboration and partnership* (of the Trust's ERG team, rather than the grantees), *proportionality* and *outcomes orientation*. This broadly reflects the findings of the evaluation also.

The rubric highlights that between 2021 and 2022, improvements were made in governance and accountability, largely due to improved documented guidance for TRC review processes. Given 2022 grants have only recently been distributed, data was unavailable to make an assessment on some dimensions.

TABLE 5. RUBRIC SCORES FOR 2017-2021 ROUNDS COMPARED TO 2022 ROUND

Rubric theme	Average rating (2017-2021)	Average rating (2022)	Suggestions for improvement
Robust planning and design	Good	Good	Consider having changes to project-specific special conditions reviewed by legal teams. TRC Terms of Reference show reviewers where they can access information about assessing risk, but consider implementing ways that the Trust can manage and track risks. Consider including a clause in Grant Agreements to include a requirement to notify the Trust if other sources of funding are secured for this project or work that could reasonably be considered part of the same research.

Rubric theme	Average rating (2017-2021)	Average rating (2022)	Suggestions for improvement
Collaboration and partnership	Adequate	Adequate	Work more closely with the DPE's Science, Economics and Insights Division (and other bodies, such as Premier Priorities) when setting and reviewing grant themes. Consider implementing a post-round reviewer debrief/ feedback session with Trust grant administration staff to discuss how assessment processes could be feasibly improved. Be more strategic in data collected from applicants and grantees in application forms and reporting templates - ensuring a balance between burden of data collection and usefulness to Trust, as well as aligning with MER needs/ priorities.
Proportionality	Adequate	Adequate	Consider using data collected from applicants and grantees in application forms and reporting templates to review application and reporting requirements. Do they remain fit or purpose?
Outcomes orientation	Adequate	Adequate	Gain consensus on key desired outcomes, performance measures and targets (where relevant), and develop a MER Framework to better monitor, review and update these - updating application forms, reporting templates and other policy/ data collection instruments where necessary Consider tracking use of staff time more systematically, in line with performance targets (e.g. time taken to process variations, time taken to review milestone reports, time taken to address reported risks) Consider more systematically publishing research outcomes on website/ case studies in annual reports, as opposed to just successful grantee abstracts.
Value for money	Good	Good	Consider providing guidance to grantees about how to capture data on economic benefits of their research, and include these indicators in the program's MER.
Governance and accountability	Good	Excellent	Grant guidelines include a step-by-step process for the EOI/application process. Consider including similar process in

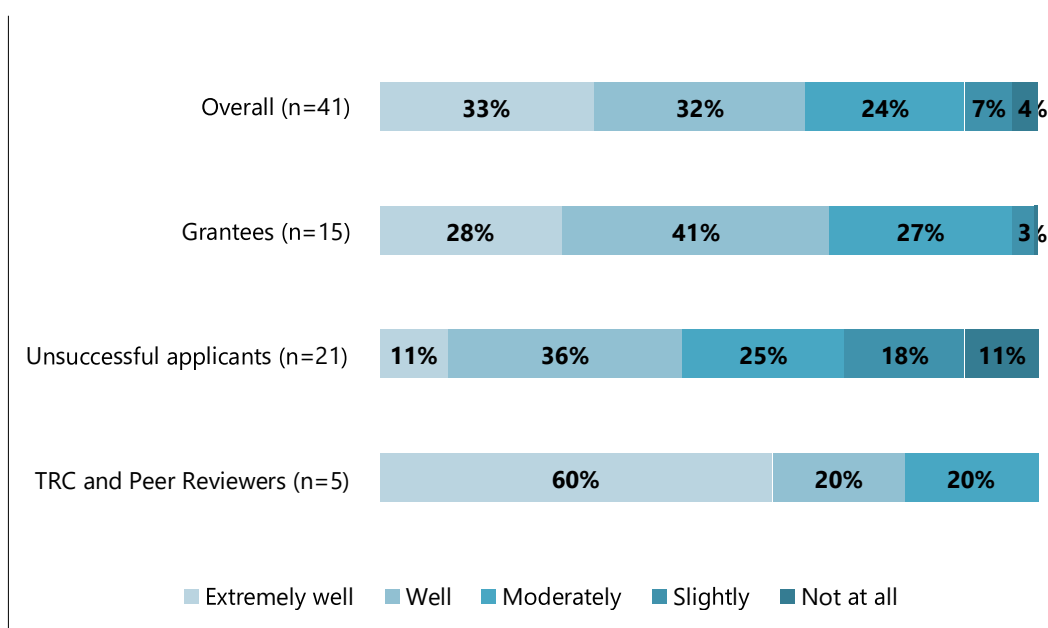
Rubric theme	Average rating (2017-2021)	Average rating (2022)	Suggestions for improvement
			grant guidelines for reporting process. Consider providing current TRC members with data on past rounds and assessment decisions and grantee reports to better inform their decisions.
Probity and transparency	Good	Good	Consider providing more FAQs, videos or other supports to help all applicants/grantees access support more equitably. Consider a more systematised approach to providing feedback/ reasoning for decisions to unsuccessful applicants, so that feedback is provided more equitably/ is more transparent. Consider developing/ implementing a dedicated conflict of interest/ fraud/ misconduct register. Consider adding to TRC guidelines that ideally TRC applicants would have some understanding or knowledge in research ethics.
Objects of the Act	Excellent	Excellent	Consider ways in which the grant could better encourage researchers to support the Objects of the Act, such as: (a) better use of DPE environmental degradation surveys and the Biennial prospectus survey in setting research themes/ priorities (b) encouraging/ providing more time/funding specifically for researchers to develop environmental education programs, or changing practices/ policies in NSW private industry or public sector (i.e. by providing additional 6 months for dissemination and impact and larger amounts of funding) (c) better define what is meant by 'local solutions' in the Act Objects (i.e. does this mean community-identified and led; does it refer to scale; does it preclude international collaboration? etc) (d) add directions for community groups/ other organisations to apply in partnership with an academic researcher/s / institution
Strategic Plan	Excellent	Excellent	Continue to reference the Strategic Plan in research funding priorities.

2.1.2 TO WHAT EXTENT DOES THE PROGRAM ADDRESS THE ENVIRONMENTAL RESEARCH NEEDS AND EVIDENCE GAPS IDENTIFIED AS MOST CRITICAL BY THE RESEARCH COMMUNITY AND GOVERNMENT?

"The grant offered the opportunity to do something novel and creative that you know it's not a, it's a little abstract to be a consultancy project and it's a little too concrete to be something funded by the Australian Research Council. So it's what they call Mode 2 research. It's applied multiple stakeholders involved and the Environmental Trust looked like ... a nice in between space where you could try something new." – Unsuccessful applicant (interview)

Across all priority research themes, most (65%) survey respondents reported that the Trust's research themes were extremely well or well aligned with the needs of the environmental research community (Figure 1).

FIGURE 1. OVERALL ALIGNMENT OF TRUST THEMES



Source: ERG Grantee Survey 2023. ERG Unsuccessful Applicant Survey 2023. ERG University Research Office Survey 2023.

TABLE 6. OVERALL ALIGNMENT OF TRUST THEMES (=N)

	TRC and Peer Reviewers (n=5)	Unsuccessful applicants (n=21)	Grantees (n=15)	Overall (n=41)
Extremely well	3	2	4	13
Well	1	7	6	13
Moderately	1	5	4	10
Slightly	0	4	1	3
Not at all	0	2	0	2

Source: ERG Grantee Survey 2023. ERG Unsuccessful Applicant Survey 2023. ERG University Research Office Survey 2023.

There were no specific research themes which applicants felt were not well aligned with the needs of the environmental research community. Biodiversity and landscape management were highest rated in terms of alignment with research community needs by grantees, with climate adaptation being a theme that both grantees and unsuccessful applicants thought was well aligned.

TABLE 7. AVERAGE RATING OF ALIGNMENT WITH NEEDS OF ENVIRONMENTAL RESEARCH COMMUNITY

Trust theme	Average rating of alignment with needs of environmental research community		
	Grantees (n=15)	Unsuccessful applicants (n=21)	Overall (n=36)
Biodiversity	Extremely well	Well	Well
Climate Adaptation	Well	Well	Well
Contaminants and Pollution	Well	Moderately	Moderately
Eucalyptus dieback	Well	Moderately	Moderately
Landscape Management	Extremely well	Moderately	Well
Marine, Coastal and Estuarine Ecosystems	Well	Moderately	Well
Mechanisms for Social Engagement	Well	Moderately	Moderately
Post-fire native flora	Well	Moderately	Well
Resource Management	Well	Moderately	Moderately
Wetlands and river systems	Well	Moderately	Well
Overall	Well	Moderately	Well

Source: ERG Grantee Survey 2023. ERG Unsuccessful Applicant Survey 2023.

Survey respondents were also asked to rank research themes by order of priority from 1 to 11 (Table 8), where 1 was the most important theme, and 11 was the least important theme. On average, applicants and TRC/Peer reviewers held similar views about which themes were most important:

1. Biodiversity
2. Climate adaptation
3. Landscape management

Assessment of funded applications show that these themes are among the most funded (0), which suggests the needs of the research community are being well met by the priority research themes and the TRC's selection of projects.

Lower priority themes included:

- Eucalyptus dieback
- Contaminants and Pollution
- Mechanisms for Social Engagement
- Post-fire native flora

TABLE 8. AVERAGE RANKING OF THEME IMPORTANCE

Trust Theme	Average ranking of theme importance		
	Grantees (n=15)	Unsuccessful applicants (n=21)	TRC and Peer Reviewers (n=5)
Biodiversity	2.1	3.1	2.4
Climate Adaptation	3.2	2.7	5.0

Landscape Management	3.1	4.7	4.2
Wetlands and river systems	5.3	5.4	6.4
Marine, Coastal and Estuarine Ecosystems	6.2	5.9	6.4
Resource Management	6.0	6.2	6.6
Contaminants and Pollution	7.7	6.2	5.6
Eucalyptus dieback	8.3	7.7	6.0
Mechanisms for Social Engagement	6.9	7.3	6.8
Post-fire native flora	6.8	7.9	6.4
Other (please specify)	10.4	8.7	9.4

Source: ERG Grantee Survey 2023. ERG Unsuccessful Applicant Survey 2023. ERG University Research Office Survey 2023.

Survey participants were also asked to provide a ranking for any 'other' research theme that is not covered by ERG research themes. This area ranked the lowest across applicants and TRC/Peer reviewers, further supporting that the ERG research themes are well aligned with environmental priorities.

Responses for 'other' themes included:

- Indigenous knowledge and sovereignty (n=2)
- Groundwater dependent ecosystems and salinity (n=1)
- Fire ecology (n=1)
- Soil science (n=1)
- Sustainable behaviours/ factors increasing environmentally friendly decisions (n=1)

An additional comment in an interview identifies inland/dryland areas as a gap.

Also notable in applicant survey responses to a question about whether they would apply to the ERG again were comments about the ERG being an important, well-respected and rare source of funding for environmental research in NSW, including for novel research; and that there was alignment between the grant themes and current research activities:

"[The grant] has allowed us to explore themes that we would otherwise not have been able to explore, yet the research could (and had to be) conducted with a firm grounding in end user demands and expectations" - Grantee, survey

"Provides a greatly needed and timely injection of funds to address key issues" - Unsuccessful applicant, survey

The importance of the ERG grants to the research community were re-iterated in interviews.

"I think they're (environmental research grants) really important and I think there's a real need for them... it's not just about answering questions but about mobilising research... and I think having it at the state level is critical" – Program stakeholder, Interview

"They [priority research themes] were very useful...that's what motivated me to apply. If it had been a much more general thing I probably wouldn't have bothered...my overall impression is that they really are targeting critical issues" – Grantee, Interview

A TRC member also noted in their survey response that the grants are often given to research that would miss out on other types of funding. There were other indications in interviews that the ERG fills an important niche in environmental research funding in that it funds applied research. This was reiterated by the comparative analysis.

Comparative analysis

Our desktop review of similar grants available showed that while there are a number of government and philanthropic sources of funds for community-led environmental projects, there is a relatively limited pool of grants funding specifically for environmental research in Australia – and especially so for applied environmental research.

Most of the grants we looked at had environmental themes, with the exception of a few (such as the Australian Research Council Grants and Advance Queensland Industry Research Fellowship) which allow applications in a broad diversity of research areas. Two focused specifically on threatened and critically endangered species (Queensland Threatened Species Research grants and Prince Bernhard Nature Fund). Earthwatch Research Funding was the most similar to ERG in terms of funding scientists to work with citizen-scientist participants. It requires that the project be led by a Principal Investigator (PI) with a PhD in the area of proposed research, and an affiliation with a university, government, tribal agency (equivalent of an Aboriginal Land Council) or science-focused NGO. The Environmental Research Grants by comparison do not specify education requirements of the PI and in the Guidelines, emphasis is placed on the eligibility of the institution applying (rather than the PI). However, the assessment criteria does ask for evidence that the people delivering the research are appropriately qualified and experienced.

2.1.3 ARE ASSESSMENT PROCESSES SUFFICIENTLY ROBUST AND TRANSPARENT TO RESULT IN THE SELECTION OF PROJECTS THAT ALIGN WITH THE PROGRAM'S OBJECTIVES, OFFER VALUE FOR MONEY, AND HAVE THE HIGHEST POTENTIAL TO DELIVER RESEARCH IMPACT?

ERG PROCESSES SUPPORT TRANSPARENCY

The Trust has numerous best practice processes in place to ensure transparency of the Environmental Research Grants (Figure 1).

FIGURE 1. ERG PROCESSES THAT SUPPORT TRANSPARENCY



Written instructions on how to assess the grants were minimal in 2017-2021 rounds, however a scoring spreadsheet was provided to TRC members with a score to be given for each of the criteria, along with Guidelines which clearly state the research priorities and assessment criteria. The TRC members surveyed and interviewed felt they were given clear instructions in assessing and ranking applications, and generally felt they had a good sense of what was important to the Trust to fund. This is supported by administrative data. We assigned all applications a theme, and compared the number of applications received versus the number funded in each theme. At the high level theme, the number of applications received and number funded follow the same trend— suggesting that applications are given equal consideration by the TRC panel.

Trust staff and TRC members interviewed mentioned processes that encourage transparent decision making about applications and probity such as having a maximum length of time people can be TRC members for, and having to provide justification in meetings for scores – as well as deferring to others' expertise in making judgements where an application wasn't in their area of expertise. TRC members also verbally declared conflicts of interest in assessment meetings, or absented themselves from providing scores where appropriate.

It has been a regular practice for TRC feedback on process improvements to be provided by the Chair to the Trust after each round and one TRC member interviewed said that for the most part, where feasible this feedback was taken up.

“Each year we'd go through and say we could do this better, make this change to the application form and focus better on what we want. There have been minor changes each year. Generally over the years we're getting to a stage where the process is being refined.” - TRC

One grantee interviewed said that they felt the processes of the grants worked to ensure probity and transparency, noting that it was a standardized application process which required the same thing of all applicants.

THERE ARE SOME NEGATIVE PERCEPTIONS OF TRANSPARENCY BASED ON UNFAMILIARITY WITH THIS MODEL OF GRANT FUNDING

The Environmental Research Grants are different from many other research grants available in that they allow government bodies to be grant holders or co-applicants. Most academic researchers are used to applying for grants with a strict requirement that the grant-holder be a university or research institution, and may be unfamiliar with the model of grants funding that the ERG provides. It is likely this which has informed a perception among some applicants (below) that there are issues of integrity/ conflicts of interest in the grants chosen.

One unsuccessful applicant thought – inaccurately – that most of the funding goes into government bodies², so wanted to see more information about the outcomes produced by the funding.

"Most of the money hasn't gone to universities and other bodies like that, it's gone into other government bodies. That needs to be explained a bit more. Seems a bit fishy. I like to track where research grants have gone and what their outputs are. I can't access the final reports of any projects that have been funded through the ET. I'd like to get the report and the raw data, it's been funded publicly so should be made public." - Unsuccessful applicant, Interview

As evidenced by the previous section, this is a misperception based on a misunderstanding of the context in which the ERG is made and its purpose (to support translation of research to improve NSW environment and environmental management, which is in large part the responsibility of the NSW Government). To improve this perception, it may be helpful in future iterations of guidelines to add wording to the effect that a key desired outcome of the grants program is to increase the use of research in the NSW Governments' management of and response to environmental issues, and to increase collaboration with the academic sector, and that appropriate agencies would therefore ideally be included as collaborators/end users (i.e. that funding of government agencies is by design).

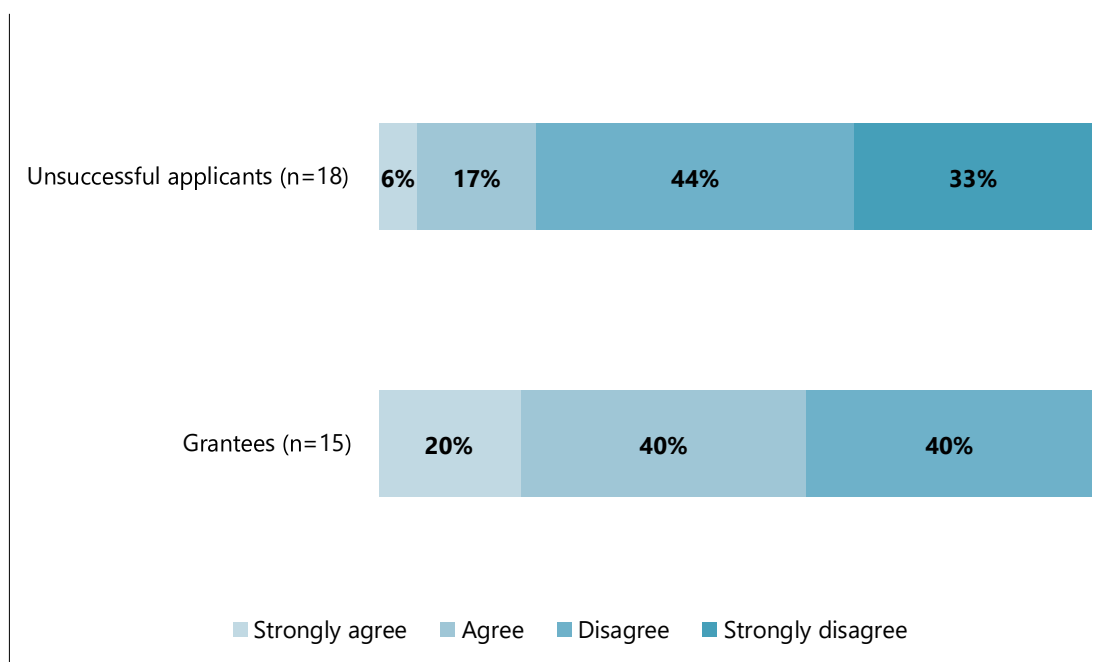
When asked whether they thought the application process was transparent some interviewees also mentioned that they did not know the composition of the TRC, who was on it and their expertise.

"The criteria and how it will be scored is transparent. I'm not sure how much they said about the panel and who is on it. They could add a paragraph to the website on who the panel is, how they assess and composition (academics/government etc) so you know who you are writing for." – Grantee, Interview

² On average in the years under evaluation, 71% of grants were distributed to universities, with the remainder divided between government agencies and statutory authorities, non-profit and Aboriginal organisations.

Most applicants responding to the survey (61%, n=20) did not feel they had a good understanding of who would be assessing their application and what criteria would be used for this assessment. Grantees were much more likely than unsuccessful applicants to have felt they understood this process. It is likely that those applicants who submit winning applications are those who are more attentive to the Guidelines, criteria and assessment processes.

FIGURE 2. APPLICANTS UNDERSTANDING OF THE ASSESSMENT CRITERIA AND PROCESS



Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

TABLE 9. APPLICANTS UNDERSTANDING OF THE ASSESSMENT CRITERIA AND PROCESS (=N)

	Grantees (n=15)	Unsuccessful applicants (n=18)
Strongly agree	3	1
Agree	6	3
Disagree	6	8
Strongly disagree	0	6
Prefer not to answer	0	0
NA	0	0
Total	15	18
Missing	1	10

Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

While grantees may desire to know who is judging their application, it is also important that the TRC members and peer reviewers retain anonymity to ensure they are not contacted by applicants and influenced unduly. While some interviewees were unsure on who would judge their application, an overview of the TRC selection process and general qualifications, and about the peer reviewers, and their involvement in the assessment process is detailed in the assessment process timeline infographic in the Guidelines.

2.1.4 IS THE CURRENT FUNDING STRUCTURE THE MOST APPROPRIATE TO DELIVER HIGH IMPACT ENVIRONMENTAL RESEARCH AND TRANSLATION?

AMOUNT AND LENGTH OF FUNDING

Stakeholders from different groups commented that the grant amount is low for what it is expected to achieve.

"Overall it felt like the program was expecting a great amount from the project despite limited timeframe and funding, considering that combining robust scientific research and community engagement with real world end-user benefits would usually take considerably more time and money." – Grantee, Survey

"\$200K is not enough to employ someone to work on the project. I did it because I believe the project was very important and works well with our collaborators." – Grantee, Survey

"Environmental projects are labour intensive. \$200,000 is only half a person per year and that's all the money gone." – Grantee, Interview

"Funding is fine for employing a PhD student to do a half day a week. If you want more you go to Linkage" – Unsuccessful applicant, Interview

This sentiment was echoed by members of the TRC and staff – who suggested that in order to increase the number of high-quality applications and potential for research impact, the grant amounts would need to be larger. Stakeholder comments are supported by salary figures for the different levels of academics (right).

There was also a suggestion that the time and money was suited to scaling up a project already piloted but not to achieve larger scale change:

Academic salaries (2022, UNSW)

- Level A (Associate Lecturer) - \$80,000 - \$107,000
- Level B (Lecturer) - \$113,000 to \$133,000
- Level C (Senior Lecturer) - \$137,000 to \$157,000
- Level D (Associate Professor) - \$164,000 to \$180,000
- Level E (Professor) - \$210,000

Source: <https://www.unsw.edu.au/human-resources/our-pay-conditions/academic-staff>

"Someone applying for this project and saying they're going to change the way it's done in NSW ...there's not enough time and not enough money to do that in this program currently. But saying you're gonna take an idea that you've trialed somewhere else at a very small scale and roll it out to that middle scale 'we're gonna now do this over a larger area, but when this project finishes, it will be on the cusp of becoming something really, you know, usable across the state'. It [ERG] bridged the gap for us a little bit in that way. " – Grantee, Interview

"There aren't a lot of grants in the \$100-200k range over a few years. I see these as a good stepping stone to a larger, longer-term program." – Grantee, Interview

When asked how they'd structure the grants in an ideal world, most applicants said they'd like more funding.

"...even that [amount of \$200,000] was considered quite a lean operation compared to some of the other research grants offered by the Federal Government and other areas"
– Trust Staff member, Interview

This was reiterated by grantees who mentioned environmental research is often labour intensive, and that the grant size allows only for minimal staffing of the project, even when some of the research is undertaken by PhD students on a lower wage.

Some grantees noted that the timeframe of the grant was fine but only because they were able to get extensions. Most projects funded in the rounds covered by this evaluation (2017-2021) were affected by COVID-19 disruptions, bushfires and floods, so it is unclear whether the proportion of grantees who required extensions to the funding period is the norm or not. Nearly all (87%, n=13) of grantees surveyed said that they sought a variation to their ERG-funded projects. One grantee also noted that projects in biodiversity, conservation and climate science are difficult to complete and see results from in three years.

"Those studies are 10-year projects. It's so hard to fund a 10 year project." – Grantee, Interview

"Funding duration is on the short side. The types of projects I've had success with have involved planning, consultation, on ground works and then evaluation of on ground works. So... you spend the first year making sure you have the right permits and permissions, and doing your stakeholder onboarding. If you're lucky you get the on ground works started in year 2, so it leaves little time to do the evaluation. Five years is a better timeline. For both grants I've had extensions. They've been relatively flexible with granting extensions for things beyond your control." – Grantee, Interview

There is an interesting trend in the survey data which also points to the funding amount being too low for the timeframe. More than half (60%, n=9) of grantees surveyed, were able to attract additional funding independent of any co-funding named in their ERG applications (Table 13). Interestingly, all respondents who stated they did not attract additional funding

(n=6) also sought a variation. This may be suggestive that additional funding is necessary from other sources in order to complete the project on time. While low response numbers mean this explanation holds little certitude on the survey data alone, it was also reiterated in the interview data. One grantee said in an interview that they had received advice (from a source external to the Trust) to apply for a lower amount than the maximum from the Trust to maximise chances of success, and that when extenuating circumstances occurred during the grant this meant that there were no grant funds left to draw on, additional funding from collaborators took up the shortfall.

TABLE 10. PROPORTION OF GRANTEES THAT NEEDED VARIATIONS TO THEIR ERG-FUNDED PROJECTS

Variations	n	%
Yes – DID apply for a variation	13	87%
No – DID NOT apply for a variation	2	13%
Total	15	100%
Missing	1	

Source: ERG Grantee Survey 2023.

Comparative grants programs

We looked at 16 grants with similarities to ERG.

These ranged from a minimum of **\$5000 up to \$600,000** per year. Ten of the 16 grants (63%) were for a period of **3 years**, with Earthwatch's Research Funding eligible for renewal after 3 years and averaging between 10-11 years of support.

All grants delivered **annual rounds**, except for the National Environmental Science Program (NESP), which doesn't have open granting rounds or a traditional grant program structure.

The grant with greatest similarity in intent to produce better collaborative research with industry partners is the Advance Queensland Industry Research Fellowship, which provides different amounts for researchers at different career stages:

Early Career Fellowships: \$160,000 over two years, or \$240,000 over three years (ex. GST)

Mid-Career Fellowships: \$240,000 over two years, or \$360,000 over three years (ex. GST)

FUNDING ALLOCATION FOR ENVIRONMENTAL RESEARCH GRANTS

In four of the five years of this evaluation, the funding allocation was exceeded by an average amount of \$220,400 per year. Data from the 2022 round shows the majority of applicants (83%) apply for \$200,000, with 14% applying for \$150,000, and 3% for \$100,000. If the same proportions of applicants applied for these amounts in earlier rounds, requests in 2018 would represent \$18 million, and around \$15 million for the 2019 round³. While not all of these applications will be feasible, well aligned with ERG priorities or worthwhile funding, if we apply the same proportions of applicants applying for each amount to the Invited Applications, we can estimate around \$4 million to \$6 million in promising applications. All of this suggests that the funding allocation is low with regard to the funding need in the

³ These rounds offered \$200,000 and had broad research priorities so are most alike to the 2022 round.

research community, and the number of projects that the TRC assesses as worthy of funding. TRC members and Trust staff noted in interviews that they felt total funding pool available should be *at least* \$1.5 million, and that even this was a small amount for a grant of this nature.

The 2021 round was anomalous, as it had highly specific species of interest and departed from the standard grants program. It underspent the allocated funding by \$307,866 (Table 11).

TABLE 11. AMOUNTS APPROVED COMPARED TO TOTAL FUNDING ALLOCATION

Funding	2017	2018	2019	2020	2021
Total funding available	\$1M	\$1M	\$1m	\$1m	\$500k
Total approved amount	\$1,266,428	\$1,352,125	\$1,065,033	\$1,197,911	\$192,134
Total over/under-allocation	\$266,428	\$352,125	\$65,033	\$197,911	-\$307,866

PRIORITY RESEARCH THEMES

The Priority Research Themes provide clarity for researchers and assessors on what is most important to fund, creating transparency. Most applicants appreciated the priority research themes and felt that they helped them to decide whether applying for the grant was worth their time or not.

"You don't have a lot of time as a researcher and you want to find the types of funding opportunities that will likely result in your research being funded." – Unsuccessful grantee, survey

Most felt that they were fairly general so managed to encompass most types of research, but this wasn't always a good thing for the people we spoke to. Some suggested that having a specific pool of money for things outside the set themes would be useful to avoid excluding research that doesn't fall into the standard environmental science categories, but which still addresses environmental needs (this may have been addressed in rounds with a social science/policy focussed category: 'Mechanisms for Social Engagement'). Others felt that the priority research areas were too unfocussed.

"You gotta focus it... you are literally just throwing money away if you don't have it focused. It's gotta be of a certain scale and it's gotta be focused on a succinct knowledge gap... you've got to be very clear about the objective you're trying to get... and you gotta monitor it" – Program stakeholder, interview

Comparatively, the themes in the 2021 Post-Fire Flora Research and Recovery round were extremely narrow – to the point of having named species for survey. This limited the number

of eligible applications to a point where the grant round was no longer cost effective. Only 5 applications were received in this round, and only two were approved. This round was more intensive to run, with greater cross-departmental collaboration on the theme setting and reviewing, and because named threatened plant species had to be changed as new information came in from applicants about what was being done in the field already and what the survey gaps were. Only 38% of the available funding amount (\$500,000) was distributed in 2021.

While the 2020 round also had a more specific theme (Eucalyptus Dieback) and subsequently received less than a quarter of the number of EOIs of previous years, it had both the same number of grants approved as 2019, and a higher total approved amount (Table 12). Because this theme is specific, without being too prescriptive, it was noted by stakeholders that grantees in this round were highly collaborative with each other. This group of grantees has also benefitted from a researcher holding one of the Trust's Major Grants in the same research area, as well as one of the ERG grantee organisations, who have spearheaded group meetings and information sharing. This is likely to lead to greater value for money and better disseminated and more widely used research.

TABLE 12. APPLICATIONS, GRANTED AMOUNTS AND PRIORITY THEMES BY YEAR

	2017	2018	2019	2020	2021
Total funding available	\$1M	\$1M	\$1m	\$1m	\$500k
Maximum per grant	\$150k	\$150k	\$200,000	\$200,000	\$200,000
Duration of project	3 years	3 years	3 years	3 years	1 year
EOIs received	146	95	80	20	NA (no EOI held)
Full applications invited	27 (18%)	24 (25%)	31 (39%)	12 (60%)	5
Grants approved	9 (33%)	10 (42%)	6 (19%)	6 (50%)	2 (40%)
Total approved amount	\$1,266,428	\$1,352,125	\$1,065,033	\$1,197,911	\$192,134

	2017	2018	2019	2020	2021
Priority research themes	Contaminants and pollution; biodiversity; climate adaptation; mechanisms for social engagement	Resource Management; Wetlands and River systems; landscape management; Marine, coastal and estuarine ecosystems	Mechanisms for social engagement; Resource Management; Landscape Management; Wetlands and River systems	Eucalyptus Dieback: investigating management interventions; Investigating historical relationships; Investigating species resilience and vulnerability; investigating soil factors	Post-Fire Flora Research and Recovery - survey work (100 high priority species could be nominated from); Supporting threatened species recovery; addressing climate change impacts
Priority setting	Office of Environment & Heritage Knowledge Strategy; 2016 outreach to stakeholders; DPI research areas.	Office of Environment & Heritage Knowledge Strategy; 2016 outreach to stakeholders; DPI research areas.	Office of Environment & Heritage Knowledge Strategy; 2016 outreach to stakeholders; DPI research areas.	Major Projects Prospectus 2018-2020 (brought together 140+ stakeholders and SMEs to identify priority issues and projects)	Strategic Plan overarching priorities and immediate funding priorities

2.2 EFFECTIVENESS

2.2.1 TO WHAT EXTENT DOES THE PROGRAM DELIVER ON ITS THREE OBJECTIVES ?

The ERG's three objectives are to:

- increase knowledge and advance techniques to solve priority environmental problems in NSW
- assess and test the application of innovative solutions to decrease environmental degradation
- discover new methods of operation for NSW industry that are less harmful to the environment and enhance the public good.

From review of 16 available final reports, it's clear that the ERG is delivering on the first two of these objectives well.

- In 75% of final reports, more effective or efficient methods and techniques for restoration and/or rehabilitation were tested, refined and shared. These included (but are not limited to) modelling, algorithmic and mapping technologies, sampling/ survey procedures, animal husbandry procedures, enclosure construction methods, support for decision-making (e.g. density of planted trees).
- 69% of final reports showed evidence that the collaboration with end-users had encouraged faster use of results
- In 31% of final reports a greater understanding of ecosystem functions and/or processes was developed, which improved (or would be likely to improve) the effectiveness of environmental management.
- Knowledge produced from funded projects was generally well disseminated. Journal publications resulted from projects in most cases (81%), and findings were shared by more than half (56%) through presentations of some kind. Nearly 30 presentations were held among nine of the grantees. Conference/ symposium presentations were the most common (n=22), followed by workshops (either at conferences or delivered to specific stakeholders) and panel/ roundtable discussions. More than half (56%) shared findings through other means, including:
 - Online blogs, training videos/ workshops
 - Social media
 - Documentary films
 - Publicly available databases, models and/or software/ tools (e.g., on GitHub)
 - Shared directly with stakeholders (e.g. NSW government, Australian Museum)
 - Flyers and other collateral

The interviews also make it clear that the ERGs are creating and testing knowledge and techniques and advancing solutions – particularly through the collaboration and end user requirements.

"Filled a key knowledge gap in our research area and tested some pre-existing paradigms in our field that have been uncritically assumed as fact." – Grantee, Interview

"I think by this time next year, the project team will be able to make clearer statements about why and where dieback is happening. We may even have a method in place to deploy an approach to protect tree stands that are clear at the moment." – Grantee, Interview

"Best outcomes was enhancing and adding technical elements to the version we'd trialled before the grant. We've achieved that, not by creating a physical document but by working with them [collaborators] over the 2-3 years." – Grantee, Interview

There is, however an obvious appetite among program stakeholders from other parts of Government to have a more structured means of input into the priority research themes, and potentially work could be done to align themes more closely with the priorities of other parts of government, which would help to ensure the knowledge gaps being filled are environmental priorities.

The objective for which there is less evidence is discovering new methods of operation for NSW industry. The focus of most of the funded projects is addressing issues once they have reached the environment, rather than necessarily targeting the industries, products or methods of operation which are the greatest drivers of environmental degradation (namely energy, transport, manufacturing and construction, agriculture, food retail, fashion, technology).⁴ To increase the number of applications the Trust is getting which focus on these areas and the policies and regulations which impact them, the Trust could consider:

- collaborating with Investment NSW to get an understanding of priority research gaps and potential for distribution of grant opportunities through their networks
- ensuring it is clear in the guidelines that applicants from areas other than environmental sciences can apply, and provide examples (biotechnology, chemistry, material and chemical engineering, social sciences etc)
- calling research offices to discuss this focus area of the grant and which schools may therefore need to know about the opportunity.

⁴<https://eponline.com/articles/2022/10/14/the-7-biggest-polluters.aspx>

2.2.2 WHAT IMPACT DOES THE GRANT HAVE FOR SUCCESSFUL APPLICANTS IN THE CONTEXT OF THEIR OTHER FUNDING? (E.G. THEIR ABILITY TO CONDUCT THE PROJECT, ATTRACT OTHER FUNDING, FURTHER THEIR CAREER IN ENVIRONMENTAL RESEARCH, ATTRACT HIGH CALIBRE RESEARCHERS, CAPABILITY TO CONDUCT FUTURE ENVIRONMENTAL RESEARCH)

"I'm very grateful, it helped us build the team and launch as a team. It allowed our work to progress and helped us apply for further money." - grantee (interview)

It was a privilege to have been awarded our ET funding. It has allowed us to explore themes that we would otherwise not have been able to explore (we do mostly contract research), yet the research could (and had to) be conducted with a firm grounding in end user demands and expectations. – Grantee, Survey

VALUE FOR GRANTEES

Surveys and interviews indicate that the ERG has a clear impact for grantees on their research record, their ability to create and sustain a functioning research group, and in helping them to attract more funding.

For 60% of grantees surveyed, receiving the ERG allowed them to attract additional funding independent of any co-funding named in their applications (Table 13).

TABLE 13. PROPORTION OF GRANTEES WHO USED THE GRANT TO ATTRACT ADDITIONAL FUNDING

Use of the grant to attract additional funding	n	%
Yes – I used the grant to attract additional funding	9	60%
No – I did not use the grant to attract additional funding	6	40%
Total	15	100%
Missing	1	

Source: ERG Grantee Survey 2023.

Other named funding to expand on the work conducted in the ERG project included:

- NSW, interstate, international and local developer contracts/consultancies (>\$1 million)
- City of Sydney Innovation Grants (\$20,000)
- NSW Recreational Fishing Trust Grants (large, \$160,000)
- NSW DPI Habitat Action Grants (large, \$40,000)
- \$50,000 research contract from DPE
- ARC Future Fellowship (worth between \$650,000-\$930,000 over 4 years)
- ARC Linkage (worth between 100,000 and \$1.5 million over two to five years)
- Indigenous Fire and Land Management Grant (\$20,000 to \$200,000)
- DFAT (\$240,000)
- Saving our Species Co-investment grant

"Any grant success is great for the next grant success" – Grantee (interview)

One respondent noted that while not directly tied to the project they had been funded for under the ERG Program, that they were able to attract more funding because the ERG allowed them to grow their track record.

"Being the lead CI on the grant contributed to my research record. My research record, together with that of my team members led to two ARC Linkage grants; an ARC Discovery Grant, Landcare Australia and Local Land services funding [totalling \$1.8 Million]" Grantee, survey

Several grantees we interviewed talked about their grant as a 'jump off point' or a 'launchpad' for their work and their project team.

"It was really a jump off point. We've gone international now. We didn't have any installations before ET. It gave us the ability to establish sites and get M&E data. And people could see (visibility). Support for something a bit more experimental. "– Grantee, Interview

"I'm very grateful, it helped us build the team and launch as a team. It allowed our work to progress and helped us apply for further money." – Grantee, Interview

University Research Office survey respondents provided a list of other funding opportunities available to environmental researchers, which helps to provide an understanding of the funding landscape ERG grantees operate within.

- Australian Academy of Science (honorific awards that recognise outstanding contributions in early, mid and life-long achievement levels and conference funding, generally under \$20,000)
- Australian Flora Foundation (amounts up to \$60,000 for projects on biology and cultivation of Australian Grants)
- Australian Research Council (highly competitive, has a range of grants programs for all career stages, generally larger multi-year funding including salaries for non-medical research)
- Commonwealth Department of Agriculture, Fisheries and Forestry (various forestry and wood processing funding programs)
- Commonwealth Department of Climate Change, Energy, the Environment and Water (Saving Native Species Grants of up to \$500,000 over 2 years tackling 22 several species-specific targets)
- Ecological Society of Australia (Small grants under \$10,000 and conference grants)
- Forest and Wood Products Australia (Industry partnership style funding)
- Grains Research and Development Corporation (Industry partnership style funding)
- Hermon Slade Foundation (grants up to \$30,000 per year for up to 3 years)
- Ian Potter Foundation (amounts up to \$100,000 per year generally for multi-year grants, excludes renewable energies and sustainable materials as well as research for undergraduate, masters or doctoral students)

Grants which are specific to the environment are generally small, with the exception of Commonwealth funding and the Ian Potter Foundation. In order to get larger grants, it's generally necessary for applicants be able to provide evidence of their experience in delivering funded projects at a similar scale, so it's very difficult to go from something of the size of a Hermon Slade Foundation grant (\$30,000) to an ARC grant, for example. As was noted by grantees, the ERG is a 'stepping stone' – of a size between the smaller funding opportunities – and larger, longer-term grants.

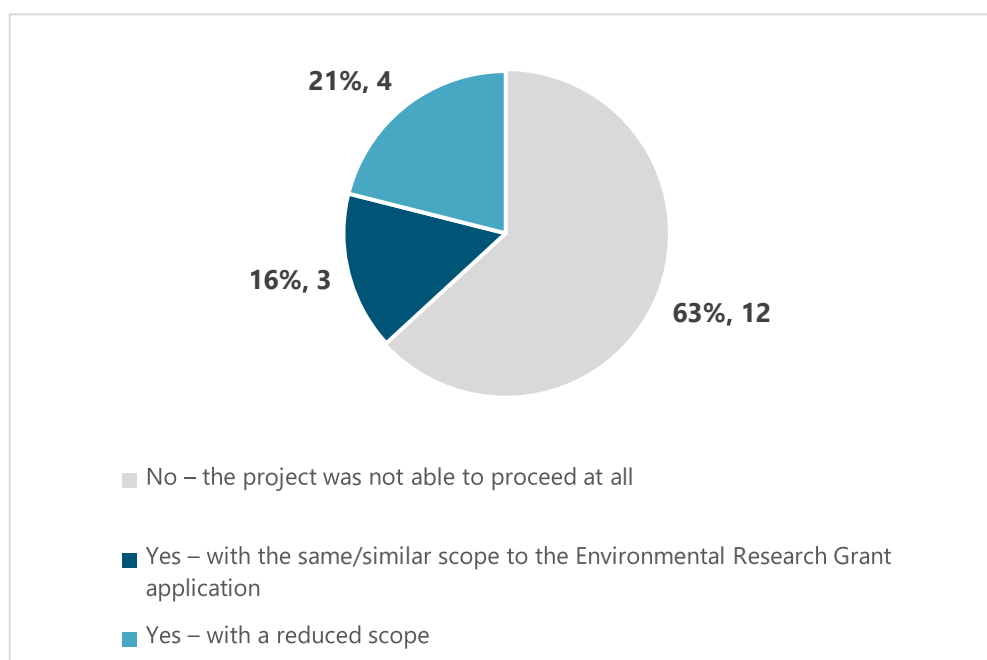
"It allowed us to really step up our engagement having a dedicated project with dedicated funding for a couple of years, instead of just \$20,000, \$30,000, \$50,000 rolling in just in sort of small bundles, which is what I normally do for DPI." – Grantee, Interview

"Really appreciate that it exists, and the funding is one of the few remaining opportunities for early career researchers to obtain funding for short to medium term projects of benefit to their careers and the Australian environment." – University research office, Survey

PERCEPTIONS OF VALUE AMONG UNSUCCESSFUL APPLICANTS

About a third (37%) of the unsuccessful applicant survey respondents were able to undertake the project they applied to the Environmental Research Grant for, in some capacity. Only 16% were able to do so with the same or similar scope, while the remaining 21% were able to do so at a reduced scope.

FIGURE 3. WAYS IN WHICH UNSUCCESSFUL APPLICANTS (N=19) WERE ABLE TO UNDERTAKE THEIR PROPOSED PROJECTS



Source: ERG Unsuccessful Applicant Survey 2023.

The majority (63%) were not able to undertake their research at all. This, along with the qualitative feedback from diverse stakeholder groups, suggests that the ERG fills a niche in funding for environmental research, and is seen as valuable by stakeholders.

"Well respected scheme, and one of the few sources of non-linkage funding" – Unsuccessful applicant, Survey

"While we do have other things like ARC funding, there are differences to state and commonwealth way of doing things. I think it's good to have some state-bound research, to answer state specific research questions" – Program stakeholder, interview

"Neat program, it has fostered cross disciplinary collaboration. Those who didn't come to me about ARC grants have come to me to contribute on this. So I think it is a filling a space where there aren't other grant programs." – Unsuccessful applicant (collaborator), Interview

2.2.3 WHAT UNINTENDED OUTCOMES (POSITIVE AND NEGATIVE) WERE PRODUCED AND HAVE ANY UNEXPECTED BENEFITS BEEN GENERATED BY THE SELECTED PROJECTS (E.G., CULTURAL, ECONOMIC, SOCIAL)?

An unintended benefit of the collaboration requirement of the grant is that post-graduate students working on the project are provided with networks, mentoring and a chance to prove their skills to potential employers (the collaborators/end users) which in some cases has resulted in direct employment. This is evidence that the grants are working to help build NSW's knowledge economy.

"The nature of the problems we're trying to solve are so wicked, they're inherently multidisciplinary... I think there is an increasing importance we need to be putting on – how do you work with others? How do you... enable future research by virtue of teaching people how to work together or skill sharing across disciplines and across generations, but also across generations" – Program stakeholder, Interview

In half (n=8) of the projects with reports available for review (n=16), there was evidence of a contribution to the careers of early and mid-career environmental researchers. Research projects more commonly supported postgraduate researchers (n=7) than undergraduate researchers (n=2 Honours students; n=1 TAFE student). Postgraduate researchers included:

- Master's students (three of whom completed internships as part of 1 research project) (n=4)
- PhD researchers (n=8)
- Post-doctoral researchers (n=2)

Anecdotally, postgraduate researcher contributions were critical for the success of many projects. While PhD and Post-doctoral researchers were paid (employed) for their contributions to the research projects, there was no data on any employment outcomes available in reports. However, one grantee noted in an interview that through being involved

in the ERG funded project that one junior research assistant had transitioned to a PhD, and a post-doctoral student is now employed with the project collaborator.

One project built the capacity of Aboriginal researchers/ project managers. More specifically, this project supported their Aboriginal collaborators to:

- establish an Aboriginal Corporation
- apply for grants to support activities focussed on caring for Country and strengthening Culture
- establish a youth skills development space.

Another unintended benefit is that because applicants have already invested in pulling together collaborators around a project idea, unsuccessful applicants may be more likely to apply with the same collaborators for funding elsewhere (16% of unsuccessful applicants responding to the survey said they were able to undertake their projects with the same/similar scope which suggests the same level of collaboration/partnership). There is some indication that ERG's collaboration requirement may be encouraging collaborations even for unsuccessful researchers. One unsuccessful grantee we spoke to got Federal funding for a scaled down version of the project they applied to the ERG for, which then had over 10 publications and cemented linkages to community groups. Another applicant said the grants were good practice for ARC applications.

2.3 EFFICIENCY

To answer questions about efficiency and value for money of the ERG, we conducted a value for money (VfM) analysis. Final reports from 2020 were not available for this evaluation, so this year has been excluded from the VfM. Table 14Table 13 presents the results of the value for money analysis for each of the specified metrics, using data for the program as at 22 November 2023.

Given the amount of staffing required per round remains fairly stable, we see greater value for money in the years in which more grants were made (2017 and 2018). There is considerable variability across rounds, likely reflecting the changes in how the grant was run, as well as the number of grants made in each year. Table 14 shows that there were some outliers in the data with high and low in-kind funding that skewed average values.

The average Benefit Cost Ratio (BCR) of 1.75⁵ shows the program provides good value for money.

⁵ A BCR greater than 1.0 shows the benefits outweigh the costs.

TABLE 14. VALUE FOR MONEY METRICS

Indicator	Description	Numerator (all rounds)	Denominator (all rounds)	All Rounds	2017	2018	2019	2020	2021
1	Cost per publication/ conference/ presentation	\$3,516,394	181	\$19,428	\$11,162	\$31,415	\$136,830	No data	-
2	Cost per employed staff supported	\$3,516,394	25	\$140,656	\$90,474	\$188,490	-	No data	\$208,095
3	Cost per employed staff hour supported	\$3,516,394	25,768	\$136	\$112	\$116	\$263	No data	\$181
4	Cost per postgraduate student supported	\$3,516,394	25	\$140,656	\$78,136	-	\$205,245	No data	\$416,191
5	Cost per postgraduate student hour supported	\$3,516,394	30,745	\$114	\$59	\$576	\$1,066	No data	\$17,341
6	Cost per volunteer supported	\$3,516,394	237	\$14,837	\$9,342	\$16,755	-	No data	\$52,024
7	Cost per volunteer hour supported	\$3,516,394	3,530	\$996	\$543	\$4,166	\$2,737	No data	\$13,006
8	Cost per individual reached	\$3,516,394	84,207	\$42	\$22	\$218	\$181	No data	-
9	Cost per partnership established	\$3,516,394	50	\$70,328	\$41,927	\$83,773	-	No data	-

Indicator	Description	Numerator (all rounds)	Denominator (all rounds)	All Rounds	2017	2018	2019	2020	2021
10	Program Benefit Cost Ratio (upper and lower bounds)	\$4,068,141	\$2,981,252	1.75 (2.54; 0.38)	1.25	3.83	1.04	No data	0.51
11	Ratio of grant to Trust operational costs	\$2,486,191	\$1,030,203	2.41	8.04	2.90	0.90	No data	0.95
12	Trust administrative and support costs per Grant	\$1,030,203	\$16	\$64,388	\$21,128	\$48,361	\$216,001	No data	\$106,923
13	Trust administrative costs as percentage of total spending	\$1,030,203	\$3,516,394	29%	11%	26%	53%	No data	51%
14	In-kind contributions as a percentage of total project expenditure	\$6,315,550	\$8,927,414	71%	57%	87%	63%	No data	20%
15	Cash contributions as a percentage of total project expenditure	\$125,674	\$8,927,414	1%	3%	0%	0%	No data	0%
16	Trust contributions as a percentage of total project expenditure	\$2,486,191	\$8,927,414	28%	40%	13%	37%	No data	80%
17	Ratio of Trust/non-Trust contributions	\$2,486,191	\$6,441,224	0.39	0.66	0.15	0.60	No data	3.92

Unsurprisingly, cash contributions provided less than 10% of expenditure across all projects.

TABLE 15. VALUE FOR MONEY ANALYSIS METRICS BY PROJECT (AVERAGE, MINIMUM AND MAXIMUM)

Indicator	Description	Average	Minimum	Maximum
14	In-kind contributions as a percentage of total project expenditure	49%	0%	96%
15	Cash contributions as a percentage of total project expenditure	2%	0%	7%
16	Trust contributions as a percentage of total project expenditure	49%	4%	100%
17	Ratio of Trust/non-Trust contributions	1.57	0.04	9.74

2.3.1 DOES THE PROGRAM PROVIDE VALUE FOR MONEY WHEN COMPARED WITH SIMILAR PROGRAMS?

This evaluation is unable to definitively answer this question, as there was not enough available data on the outcomes achieved by other programs to provide a benchmark against the value for money metrics identified here. However, it is clear that the ERG creates value far beyond the funding provided by the Trust, encompassing in-kind and cash contributions on the projects themselves, the impact of the research, the contribution to NSW's research economy through employment of post-graduates on projects, and the evident further grant and contract funding which has followed from many of the ERG funded projects. The benefit-cost ratio of 1.75 shows that investment in the program creates positive economic benefits for NSW through the combination of innovation benefits and the leveraging of external investment which would not have otherwise been made.

Comparative analysis

Similar to the Environmental Research Grants, collaboration, partnership or involvement of end users was a preference or requirement on 9 (64%) of the grants programs reviewed. Four of these required co-funding and one preferred applicants with co-funding. Only the Advance Queensland Industry Research Fellowships (AQIRF) specified matched cash funding of at least 1:1.

2.3.2 TO WHAT EXTENT DOES USING RESEARCH THEMES SUPPORT BETTER VALUE FOR MONEY?

Given that in the years between 2017 and 2021 there were numerous changes to the grant structure – length and amounts of funding, type of research funded, and available pool of funding – it is difficult to draw conclusions about the extent to which priority research themes contribute to driving value for money. **The data does indicate, however, that having predictable and not overly narrow priority research themes supports stronger value for money. The 2017, 2018 and 2019 rounds all had rotating and broad themes.**

Table 14 shows that across most indicators, the **2021 round delivered less value for money**. It is clear from interviews that this round was more intensive to run, with greater cross-departmental collaboration on the theme setting and reviewing, and because named threatened plant species had to be changed as new information came in from applicants about what was being done in the field already and what the gaps were. Only 38% of the available funding amount (\$500,000) was distributed in 2021. We can conclude that if the priority research themes devised are too narrow or specific, such as in the 2021 round (Post-Fire Flora Research and Recovery), this can limit the number of eligible applications to a point where it is no longer cost effective to run the grant round.

While the 2020 round had a single focus (Eucalyptus Dieback) and subsequently received less than a quarter of the number of EOIs of previous years, the same number of grants were approved in this round as in 2019, and there was a higher total approved amount than in 2019. Compared to other rounds, there has been much greater inter-grantee collaboration with the Eucalyptus Die Back round, spearheaded by a major grant holder. This has involved regular symposiums and sharing of resources. While **the final reports of this cohort were not available for this evaluation, these are expected to yield useful insights about the additional value created through grantee collaboration in future.**

Program stakeholders noted the need for the Trust to look at the ERG within the context of the overall research system and grants funding, to assess where the ERG can best add value. It was clear from interviews that the ERG could benefit from greater collaboration with other areas of NSW Government in setting the priority research themes, and that this would also likely enhance value for money provided by the grants (by increasing potential for partnerships or ongoing funding from other departments; ensuring what's funded is a priority knowledge gap; increasing research use etc). Input into priority research themes is currently managed in an ad hoc way, however program stakeholders noted that there was an appetite for a more formal way for them to have input into the themes. Trust staff noted that there were numerous opportunities to collaborate more but they lack the staffing resources to do so. This was reiterated by a program stakeholder.

"Trust resourcing seems to be barely adequate. People are very hardworking but it's difficult for them to be strategic when so focused on managing workloads. It's not that resources could be better utilized, just that more resources are needed." – Program stakeholder, Interview

Another program stakeholder noted the need for a more strategic approach across the Trust's grants programs to increase value for money, suggesting that the Trust incorporate research into its current restoration operations or turn restoration projects into experiments, as increasing knowledge in these areas will help to deliver better outcomes and allow for continual improvements.

"[The Trust] invests a lot of money in ecological restoration... If you're doing a restoration project, it should have a research element.... The research institutions I'm working at are crying out for this sort of stuff... If you really want to demonstrate or if you really want to get bang for your buck, you don't just want trees in the ground, you want to get some sort of continual improvement, some understanding... a real demonstration [of what] you've learnt" – Program stakeholder, Interview

While it may not be feasible within the resources of the Trust to facilitate this level of integration between grant holders, this may be achieved to some degree by raising visibility of projects of other Trust grant holders and prospective ERG applicants and providing opportunities for connection (such as at an annual conference or webinar).

2.3.3 HOW CAN INTERNAL AND EXTERNAL SYSTEMS AND RESOURCING BE OPTIMIZED TO SUPPORT BETTER VALUE FOR MONEY?

The Environmental Research Grants are run by the Project Officer and overseen by the Senior Project Officer, with around 1.15FTE to 1.25FTE to resource the program (staff levels and FTE estimates provided by Trust below). The Trust also has a Monitoring and Evaluation Officer who collates high level data on project outputs (from the project measures) for Annual Reports.

TABLE 16. STAFF LEVELS AND FTE ESTIMATES PROVIDED BY TRUST

Year	Grants administration Position Level	Estimated FTE	Manager position level	Estimated FTE
2017	SPO8	65%	SPO10	50%
2018	SPO8	65%	SPO10	50%
2019	SPO8	65%	SPO10	60% (introduction of themes)
2020	SPO8	65%	SPO10	60% (significant stakeholder engagement for single theme program design)
2021	SPO8	65%	SPO10	60% (significant stakeholder engagement for single theme program design)

Grantees and university research offices responding to the survey mostly agreed that they were able to receive support from the Trust.

"NSW Environmental Trust grants team have been constructive and supportive" - Grantee, Survey

"I reached out to the Trust a number of times for support and they were very helpful" Grantee, Interview

Feedback from grantees in interviews indicate that the Trust staff are easy to contact, helpful and in most cases responsive. During the period under evaluation (2017-2021), the ERG was one among other contestable grants which were moved onto the online Grants Management System, in which the then grants administrator was involved. This meant the administration of the ERG was under-resourced for a period, and interviews with staff suggest that this created additional administrative work. There were some comments in interviews from grantees about changes to government or the contact person at the Trust causing delays.

There were also some stakeholders who felt the ERG is under resourced. While a great deal of data is collected in applications and reports, which could be used in monitoring and improvement, other than the project measures (count of outputs) it does not appear to be being collated, analysed or used by the Trust, which is likely to be in part related to resourcing, and in part because until very recently no Monitoring and Evaluation Framework has been in place for the Trust.

"It's difficult for the Trust team to be strategic when they are so focused on managing to day workloads...they need more resources." – Program stakeholder, Interview

"They don't monitor it." – Program stakeholder, interview

The data suggests that while grantees experience of the Trust's administration of the grant is generally smooth and they feel well supported, , there are areas that would improve if greater resourcing was available. This includes:

- applicants' access to support and training
- connectedness and collaborative capacity of grantees
- analysis and use of data collected in application forms to inform improvements to the grants process, equitability and administration
- improved transparency through enhanced feedback for unsuccessful applicants and greater communication of the outcomes of funded projects
- collaboration with other parts of government on priority research areas
- strategic thinking and use of monitoring data to improve application and administration processes
- improved impact of research and opportunities which may benefit NSW Government and public through dissemination of research outputs and outcomes.

Additionally, increasing the amount of total funding available and the number of grants made will increase the value for money of the program. The level of staffing required is similar whether 2 grants are made or 10, however there is much greater value for money from a program that funds 10 programs.

Comparative grants programs

Resourcing for The Ian Potter Foundation's Environmental funding stream

By comparison, The Ian Potter Foundation's (TIFF) Environmental funding stream is run by a Senior Program Manager, supported by a Program Officer (who supports all 6 of TIFF's streams of funding), a Research and Evaluation Manager, a Research Evaluation and Major Grants Development officer, as well as a range of administration assistants. They delivered 32 grants in their environment program area over the 2017-2021 period, totalling \$13,622,321.

USING MORE PREDICTABLE PRIORITY RESEARCH THEMES TO INCREASE VALUE FOR MONEY

The priority research themes provide better value for money where:

- they are **not too narrow or specific**
- they are **relatively predictable/ similar to previous years**.

This allows applicants to prepare earlier and gives them more time to reach out to collaborators for co-funding, and enables a larger cohort of applicants to apply, providing the TRC with a larger pool of applications to select from. It also means that grant materials and processes can be largely repurposed year on year, reducing the amount of time required to spin up a new grant round, and to onboard new staff into the role.

However, it is also valuable to government stakeholders and the research community that the grant is able to be responsive to emerging threats to the environment, and that as government priorities change, that the ERG priorities reflect government knowledge needs.

One solution is to have rotating set themes each year, as was done in the 2017-2019 rounds, but to reserve one of these themes for an emerging threat or a knowledge or funding gap identified in collaboration with other areas of government, such as the Science, Economics and Knowledge division, but also other relevant bodies such as the office of the Chief Scientist, and Industry NSW.

“Have traditional focus grant rounds, but then have a pot of money reserved for blue sky research with an environmental focus.” – Program stakeholder, Interview

STANDARDISE GRANTS ADMINISTRATION PROCEDURES AND SIMPLIFY FORMS

While grantees appreciate having a relationship with the project officer responsible for the ERG, there are administrative processes for grants which can be standardised to reduce the amount of back and forth on variations. Ideally, this would free up both the time and mental energy of project officers to spend on things that create greater value such as more relational check ins with grantees and creating opportunities for grantees to network and collaborate.

There are also a number of ways to reduce the complexity of current application and reporting forms, to make these are more user and reader friendly, which will reduce the amount of time required for peer reviewers to review.

These items are discussed further in the recommendations.

OPPORTUNITIES FOR GRANTEE COLLABORATION FOR GREATER IMPACT

Providing the opportunity for cross-pollination and knowledge sharing with other grant holders working in similar areas is likely to create greater impact and value for money. The data suggests that there is a large appetite among grantees and program stakeholders for networking, collaboration and knowledge sharing between grantees and other interested parties. Creating one networking opportunity per year would require relatively minimal

resources from the Trust. There is appetite for this among staff, government stakeholders and grant holders.

"There are heaps of opportunities if we had the resources...we could get together and create a community of practice" – Trust staff (interview)

"I think it would be cool to make it more prominent and to figure out how to foster a research community, the value is not just the research output but also the inputs that come from collaborations and how to support and harness early-career researchers." – program stakeholder (interview)

"I would have loved the Environmental Trust's support to help communicate outputs and findings. You know...maybe it was cancelled or maybe it never happened with COVID and flooding and other things...but having like a little Environmental Trust mini conference or something, where past, present and future environmental trust grant holders and people connected to the program could actually get together, and you could see what other people's outcomes and outputs were like. That would really help deliver yours [project] in a way that was useful or beneficial, you know?" – Grantee (interview)

SHARING MORE ABOUT FUNDED RESEARCH

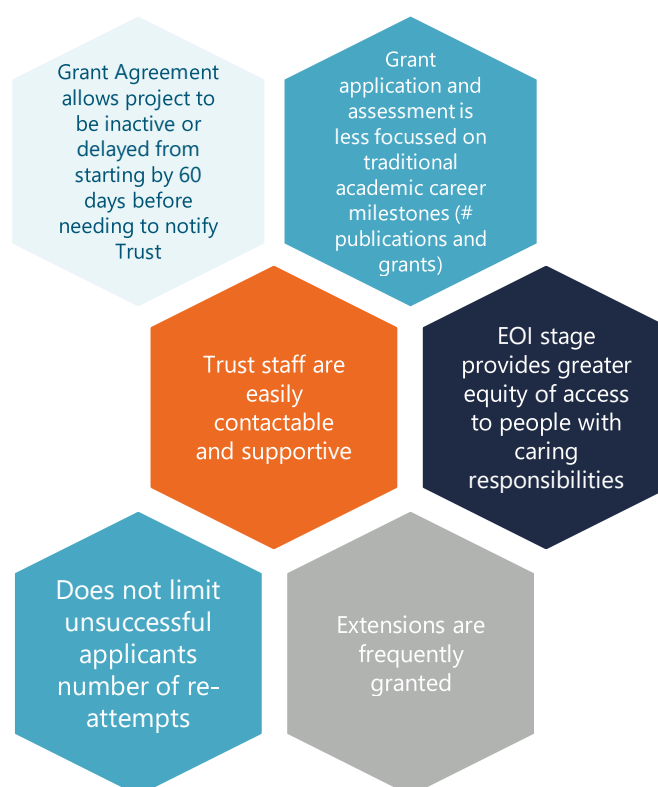
Another means of ensuring greater use of the research that gets funded, thereby increasing its value for money, is to increase the amount of communication to other departmental areas and via other external channels about research findings. One program stakeholder noted that if they want to know anything about the research they have to go to the Trust website to look at summary reports to learn about research outputs. They suggested that the Trust could have an internal presence on DPE website, send email newsletters or use platforms like twitter, yammer or multimedia to communicate about the grant-funded research. Networking opportunities with grantees or online presentations of grants projects at their conclusion would also support this.

2.4 EQUITY

2.4.1 TO WHAT EXTENT DOES THE PROGRAM ADDRESS BARRIERS TO EQUITABLE PARTICIPATION THROUGH ALL STAGES OF THE GRANT LIFECYCLE? (E.G. ACCESSIBILITY OF INFORMATION AND SYSTEMS; PROMOTION OF GRANTS; GEOGRAPHIC CONSIDERATIONS; PARENT/CAREGIVER CONSIDERATIONS).

The Environmental Research Grants program has several processes and elements in place which support equity (Figure 4).

FIGURE 4. ERG PROCESSES THAT SUPPORT EQUITY



All 5 University Research Office survey respondents agreed (n=4, 80%) or strongly agreed (n=1, 20%) that the application guidelines and eligibility criteria allow for equitable participation. One expressed that limiting the number of applications per organisation can disadvantage academics working in larger organisations who have more researchers applying.

Three grantees interviewed felt their success was a result of having access to the support of past grant-holders, which helped them get a sense of the level and types of details that the Trust would expect from a strong application. This suggests holding a pre-round webinar inclusive of a Q&A with a grant-holder would be one way of increasing both the quality of applications and also the equity of the program given not all institutions have past grantees available to mentor new applicants. This could be included as an expectation of grantees in the Grant Agreement.

Comparative analysis

Five grants of the 16 examined explicitly provided specific considerations for, or provided opportunities to explain career breaks (such as time away from research for caring duties/illness etc).

THERE IS A FAIRLY EVEN DISTRIBUTION BETWEEN METROPOLITAN AND NON-METROPOLITAN APPLICANTS AND GRANTEES.

The administrative data shows 169 (46%) of the 366 applicants between 2017-2021 were from non-metropolitan areas, and 13 (40%) of the 33 active grants were from non-metropolitan areas. While this distribution suggests location is not a barrier to applying or holding an ERG grant, researchers noted greater costs to doing work in remote areas:

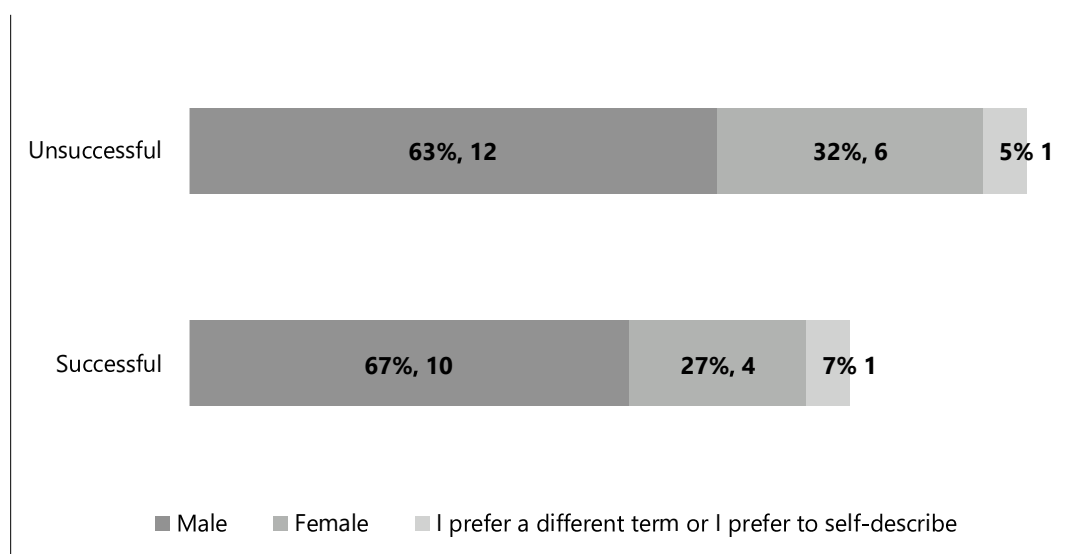
"The Outback projects in general might fall through the gaps a little bit...I can only afford two [field trips], so I've got much less scope [in budget] to be there and doing things...than someone near Newcastle who could do 10 trips a year if they wanted to..." – Grantee, Interview

GENDER EQUITY

"It's good to know what priorities are. But what's a little bit tricky is you don't know what the priorities are until funding is announced. So from that point in time you maybe only have a month to get the project together and that's great if you have something that's half lined up and ready to roll, but from a planning perspective it might be more difficult if you're initiating truly new collaborations if you're only getting a month lead time...if there was any opportunity to publish a year in advance that might give people a bit more time...I have a young family so I appreciate having the EOI stage because I might not have the time within a month to put together a full proposal, the EOI is something that if push comes to shove I can pull an all nighter...so I think that's good..." - Grantee, Interview

The survey responses include a greater proportion of people identifying as male than female or other genders. This data should be taken as indicative only, as it is a small dataset (total N=34), and people with greater caring responsibilities may also opt out of filing in a survey. However, the gender breakdown is very similar across both successful and unsuccessful respondents.

FIGURE 5. SURVEY RESPONSES TO GENDER (N=34)



There are elements of the ERG that support equitable participation by all genders (Figure 4). These were identified by grantees in interviews. There are also things that the Trust can improve on to support gender equity.

One grantee liked that there was less emphasis on academic track record (how many grants the researcher had held or papers they had published) than some of the other schemes, which allows earlier career researchers – especially those who have focussed more on applied research and collaboration and therefore may have fewer grants and publications in their career than others – to be more competitive.

One grantee noted that the EOI process helped allow them to participate in the grant opportunity.

"I have a young family so I appreciate having the EOI stage because I might not have the time within a month to put together a full proposal, the EOI is something that if push comes to shove I can pull an all nighter...so I think that's good." – Grantee, Interview

Holding the grant consistently at the same time of year as the Trust does is helpful to allow people to plan workloads and make care plans ahead of time. To improve equity, the priority research themes could be published earlier to give people with caring responsibilities ample time to pull together a strong project proposal and find collaborators.

"What's a little bit tricky is you don't know what the priorities are until funding is announced. So from that point in time you maybe only have a month to get the project together and that's great if you have something that's half lined up and ready to roll, but from a planning perspective it might be more difficult if you're initiating truly new collaborations if you're only getting a month lead time...if there was any opportunity to publish a year in advance that might give people a bit more time." – Grantee (interview)

One grantee experienced some personal challenges dealing with family needs while trying to maintain research outcomes (both at the University and ERG project). They felt they would have benefitted from some sort of carer's leave or extension made available through the ERG. They couldn't remember seeing anything about carer's leave in the ERG guidelines. The Grant Agreement does not mention this either.

"That [carer's leave] would've helped this year. It would have taken a lot of pressure off and a lot of pressure that's still there." – Grantee, Interview

Reports on equity in research funding

The Equity and Inclusivity in Research Funding report⁶ provides a series of recommendations for funders on how to reduce gender-specific barriers to accessing research funding, including: minimising complexity and increasing flexibility of selection processes; minimising ambiguity in scoring systems; rebalance assessment from past achievement towards potential to deliver the project; incorporate accounting for structural inequality into review and assessment; fund a broad range of accessibility project costs; create research funding opportunities targeted at researchers in marginalised groups; develop events to support researchers with networking (online and offline).

The Global Call to Action for Mothers in Science Action Plan for Funding Agencies⁷ provides further suggestions and examples of funders who promote gender equity in their application process. This includes: providing deferments to start dates and grant extensions for parental/caregiving or medical leave; provide flexible funding to hire technical support to conduct research or field work during pregnancy, parental, caregiving or medical leave; provide flexible childcare subsidies and supplements to conference travel grants to award recipients who are parents and double supplements for single parents; monitor success rates for men and women; implement gender quotas to correct gender bias and encourage women to apply.

ABORIGINAL ORGANISATIONS AND COMMUNITY ORGANISATIONS

There is a very low success rate for non-profits and Aboriginal Community organisations (Table 17). Interviews and TRC comments on application reviews indicate that a lack of academic/expert involvement (e.g. community-led projects/citizen science projects) is often viewed as a risk or a low priority for funding.

"Applicants ranged from community groups in many cases people without expertise. Usually these applications didn't go so far. There are other areas where they can get funding." – TRC member, interview

Given the onerousness of the application, and the rigour reviewers require in terms of the research, there's a low likelihood of community groups/ nonprofits and Aboriginal Community Organisations applying or being successful in their application. The Trust could consider whether to make explicit in Guidelines that they must partner with an academic researcher. This is also likely to reduce the amount of grant applications that must be reviewed which have a very low likelihood of success.

⁶ <https://researchsupport.admin.ox.ac.uk/equity-and-inclusivity-in-research-funding>

⁷ <https://www.mothersinscience.com/action-plan-funding-agencies>

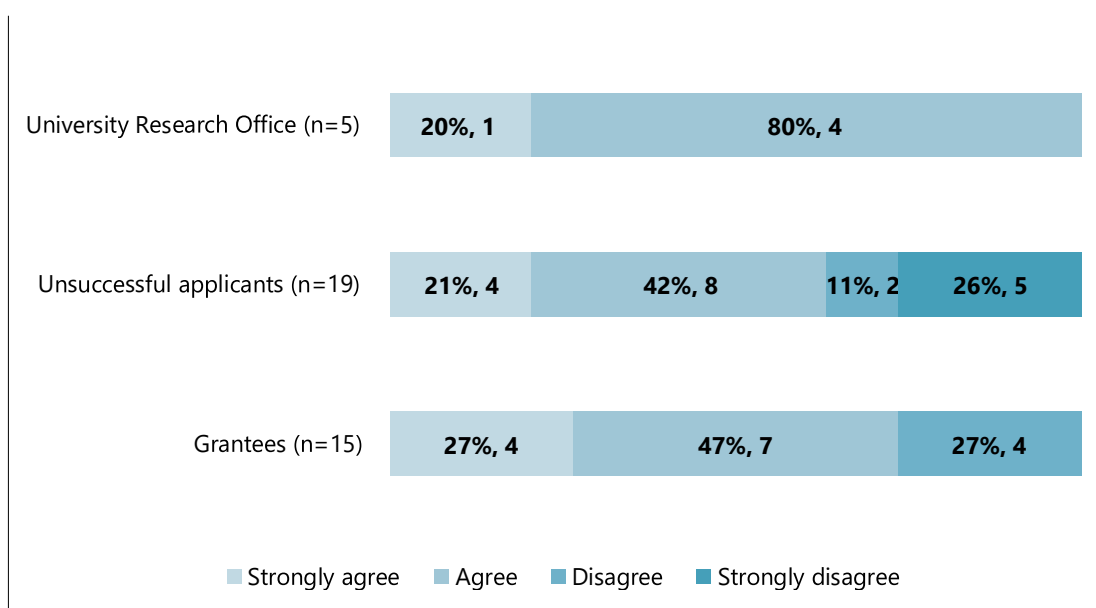
TABLE 17. 2017-2021 APPLICANTS AND SUCCESS RATE BY ORGANISATION TYPE

Type of applicant	EOIs submitted	Number of awarded grants	Success rate by applicant group type %
Aboriginal Community Organisation, Community Group, Discretionary Trading Trust, Incorporated Association	16	1	6%
Local Government	12	1	8%
State Government	33	3	9%
Federal Government	26	4	15%
Universities	278	20	7%
Research Institute	5	1	20%
Ineligible (individuals, Public Companies, private businesses)	8	0	0%

2.4.2 ACCESSIBILITY OF INFORMATION AND SYSTEMS

Stakeholders largely felt **that guidelines and forms were easy to access and understand** (72% or 28 of 39 agreed or strongly agreed). Answers varied between stakeholder groups with 37% (n=7) of unsuccessful applicants disagreeing or strongly disagreeing that the application documents were accessible (Figure 6). It is important to give more weight to the answers of unsuccessful applicants because people who don't find the application documents accessible are unlikely to be successful. There is likely also another cohort who never applied at all if they found the guidelines inaccessible, however it was not possible within this evaluation to identify a sample to provide insights into this.

FIGURE 6. ACCESSIBILITY OF APPLICATION GUIDELINES



Source: ERG Grantee Survey 2023, ERG University Research Office Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

The Equity and Inclusivity in Research Funding report⁸ provides a list of examples of inaccessibility, including:

- Documents and forms not complying with web accessibility standards
- Unclear/ contradictory documents, often text heavy
- Complex, difficult to understand processes and requirements
- Deadlines shortly after school holidays or religious festivals, coupled with short lead times.

The ERG generally does well on all these items. Running the Guidelines through a PDF accessibility checker shows Guidelines are largely compliant with web accessibility standards, and dot points, infographics and text boxes are used to break up dense text and improve comprehension. There are no complex requirements for eligibility. The ERG EO round generally runs in April/May after the April school holidays, with Invited Applications in June, prior to July school holidays, and there is generally a lead time of 4-5 weeks between the round opening and closing.

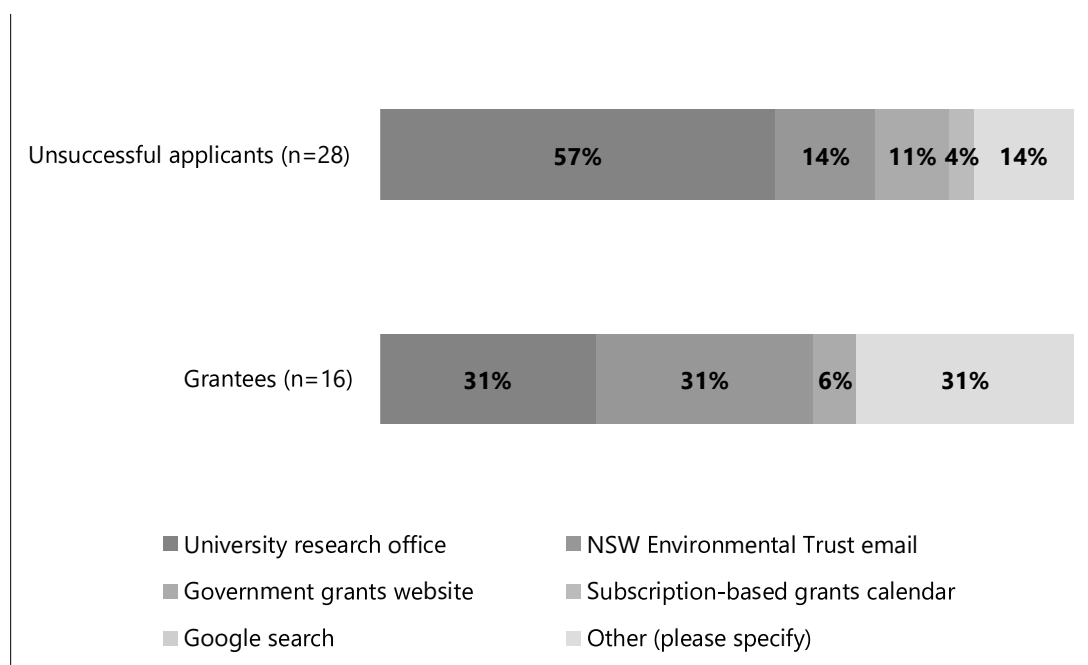
The project budget and project measures and their correlation with the application form are the only process or requirement that could be considered reasonably complex, and based on feedback from interviews and surveys is difficult to understand.

Having information about the grant opportunity shared in different places helps to ensure the information is disseminated equitably across the different types of organisational applicants. Most applicants found out about the ERG through their University Research Office (48%, n=21). It was also common among applicants to have found out about the ERG through an email from NSW Environmental Trust (20%, n= 9) or through some 'other' means

⁸ <https://researchsupport.admin.ox.ac.uk/equity-and-inclusivity-in-research-funding>

(20%, n= 9). Several respondents who selected 'other' noted they had found out through colleagues or word of mouth.

FIGURE 7. HOW APPLICANTS FOUND OUT ABOUT THE GRANT



Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

TABLE 18. HOW APPLICANTS FOUND OUT ABOUT THE GRANT (=N)

	Grantees (n=16)	Unsuccessful applicants (n=28)
University research office	5	16
NSW Environmental Trust email	5	4
Government grants website	1	3
Subscription-based grants calendar	0	1
Google search	0	0
Other (please specify)	5	4
Total	16	28

Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

2.4.3 ARE THE APPLICANT AND GRANTEE REQUIREMENTS PROPORTIONATE TO THE FUNDING AMOUNT, COMPARED WITH OTHER GRANTS?

"Other people who have had grants have said they won't apply again [because reporting requirements were too onerous]" – grantee (interview)

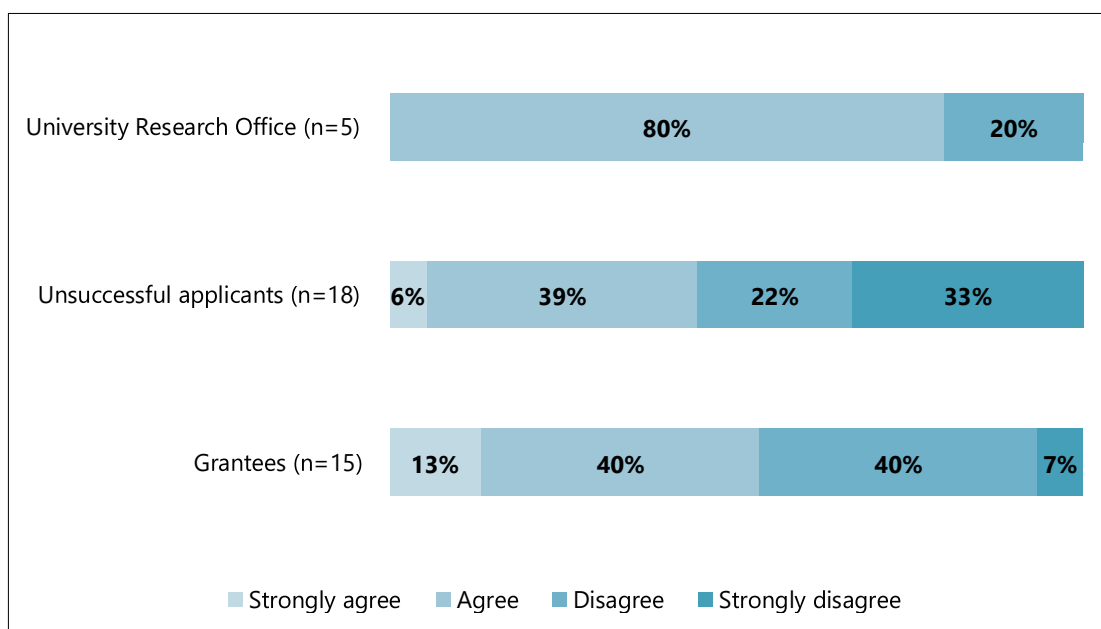
My line management would not support engagement due to significant time burden on reporting - Grantee, Survey

APPLICANTS' EXPERIENCE OF THE PROCESS

Applicants we interviewed were generally very positive about the EOI stage of the ERG's two-stage grants process, and felt it saved them a lot of effort in writing up a full application for a highly competitive grant. Two applicants mentioned the materials provided by the Trust were very helpful. One noted applying for the ERG was good practice for ARC applications.

However, more than half of applicants surveyed (52% or 17 of 33) felt that the **application requirements were not appropriate for the size of grant**. University Research Office respondents were more likely to agree that the requirements are appropriate but none strongly agreed.

FIGURE 8. APPROPRIATENESS OF APPLICATION REQUIREMENTS FOR GRANT SIZE



Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

TABLE 19. APPROPRIATENESS OF APPLICATION REQUIREMENTS FOR GRANT SIZE (=N)

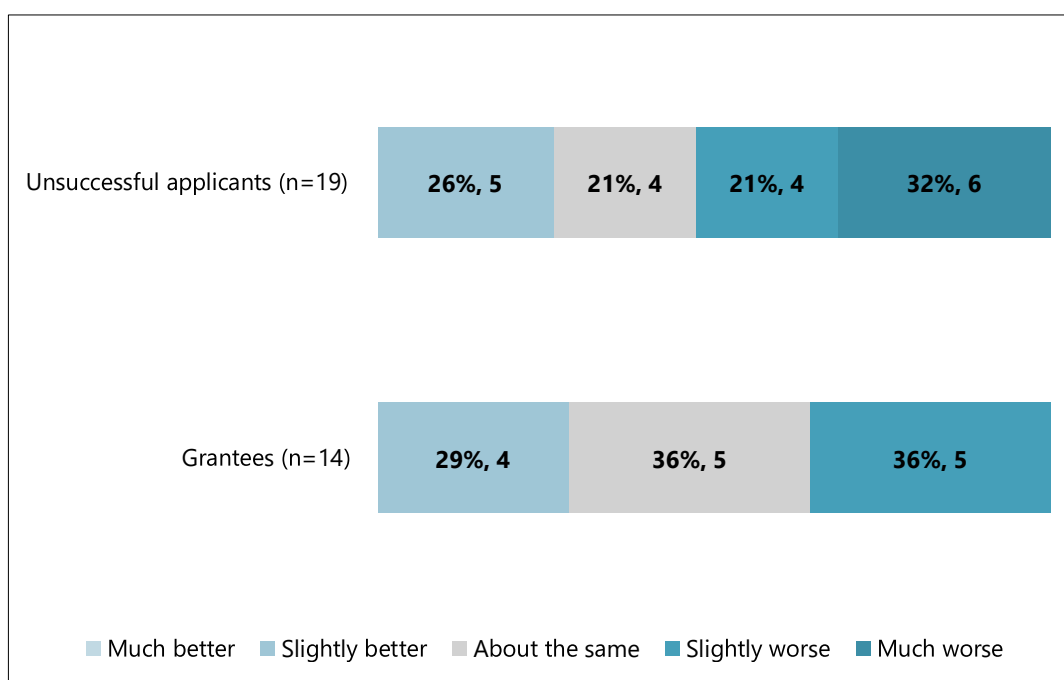
	Grantees (n=15)	Unsuccessful applicants (n=18)	University Research Office (n=5)
Strongly agree	2	1	0
Agree	6	7	4
Disagree	6	4	1
Strongly disagree	1	6	0
Prefer not to answer	0	0	0
NA	0	0	0
Total	15	18	5

Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

Three University Research Office respondents added further explanation to their responses. One respondent felt the guidelines were well written and clear, while another felt the application and reporting requirements were laborious and complex considering the amount of funding received and when compared with similar funding schemes. The other respondent felt the application requirements were on par with requirements from similar grant programs but would be a challenge for inexperienced project leaders to comply with. Suggestions given to improve this included having a more simplified EOI and a shorter, more streamlined full application.

Applicants were also asked to compare their experience of applying to the ERG with applying other grants programs. Just over half of respondents (54%) indicated that their experience applying to ERG was 'about the same' or 'slightly better' than applying for other grant programs, and 46% indicated having a 'slightly worse' or 'much worse' experience. No respondents said it was 'much better' than other grants. Unsuccessful applicants were more likely to respond that their experience was slightly or much worse. No grantees found their experience much worse than other grant programs.

TABLE 20. COMPARING THE APPLICATION EXPERIENCE TO OTHER RESEARCH GRANTS



Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

Among grantees and unsuccessful applicants who rated their experience as 'slightly better', common reasons included:

- the availability of highly detailed supporting information to support writing and clarify the basis for funding (2021 round)
- the 2-step application process (EOI followed by an invitation to submit the full proposal)

Among grantees and unsuccessful applicants who rated their experience as 'slightly worse' or 'much worse', common reasons included:

- difficulty navigating the application form
- parts of the application were too onerous or asked for excessive levels of detail (e.g. itemisation of project measures, repetitive questioning)
- project measures are inflexible, overly metric-focused and/or don't align well with activities/projects (e.g. quantitative measures may be inappropriate for some social science research projects).

"The grants are very small, important yes, but it is unreasonable to ask for such a large amount of paperwork with such stringent rules for \$200k. It is not viable as a researcher to spend such time for such small funds" - Unsuccessful applicant, Survey

"The project measures tables and sections within the forms were difficult to navigate and complete, and onerous considering the relatively small amount of money offered by this program." - Grantee, Survey

For unsuccessful applicants who rated their experience as 'slightly worse' or 'much worse', common reasons included:

- Lack of feedback provided on unsuccessful applications
- Perceived lack of integrity and transparency around the assessment process (e.g. feeling that the assessment criteria wasn't transparent, perceived bias towards specific organisations)⁹.

"The process is completely unpredictable, random what is funded and funds usually go to someone/entity related to the organisation providing the funds (massive conflict of interest)" - Unsuccessful applicant, Survey

"Political, subjective, no or little feedback" - Unsuccessful applicant, Survey

The two areas with the most negative sentiment from interviews were the invited application and reporting forms. On both, the program measures and budget were noted as particularly difficult for applicants/grantees as they didn't align with the way research projects are run or the terminology used by researchers, and created duplication of effort.

"Application process is the most difficult part – and reporting with the detail of the project measures. I had a lot of help and I had to learn through the grants process. The terminology around reporting is very strange for a scientist. They sent a worked example but even that didn't make it clear what the terms meant." – Grantee , survey

The **difference between collaborators and end users was also mentioned by applicants as difficult to differentiate**, which made it challenging for them to understand how the Trust wanted them to fill out the application and reporting forms (which have separate sections to fill for end users vs collaborators – some of whom are the same organisations/people).

The invited application consists of open text boxes, tables for data input and an excel budget spreadsheet, and allows for attached documents including letters of support and CVs. Once accepted, grantees are then required to provide some of this information in another format, in a project measure document (Excel). There are several opportunities in the form to reduce the amount of duplication of information required, and to reduce information that is not required to assess feasibility.

Some of the information requested (who is involved in each activity and communication, the communications messages for each group) seems more designed to lead applicants through

⁹ As noted earlier in this report, there is no evidence that there is actual lack of transparency or issues of integrity, however it may be that academic researchers are unused to grants which allow government bodies to apply and hold grants. The comments are also made in the context of very high competition for grant funding in the research space, and the more limited opportunities for funding in the environmental research and management space in particular.

good project planning processes which the Trust sees as key to delivering on these projects, rather than necessary for assessment of a grant application.

A rating of the application process is requested at the end of the EOI and Full Application forms. **Ratings of difficulty and time taken to fill the application were generally at the difficult and high end of the scales** for the applications we reviewed. The sample of 26 applications (6 EOI, and 20 invited applications) shows that projects tend to take more than 40 hours to prepare (n=15, 57%), the application form takes more than 10 hours to complete (n=17, 65%). A conservative estimate of the real cost to researchers of 50 hours would be between \$2000 to \$4300¹⁰. This represents between 1% and 2% of the \$200,000 available, which seems reasonable, particularly given that the project preparation time may be likely to result in some collaboration or be used in other applications. However, given that responses tend to be in the 'more than' range, this estimate is unlikely to provide an accurate picture of the time being spent preparing the project and application. A clearer estimation of time applicants spend on application forms could be gained from a change to the answer scale provided.

FIGURE 9. HOURS TAKEN TO DEVELOP THE PROJECT

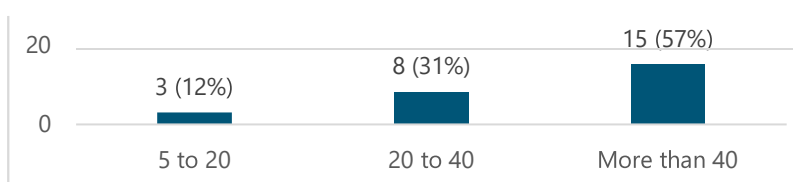
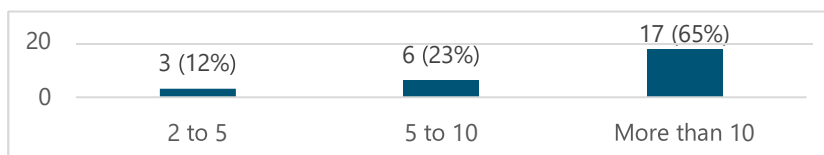


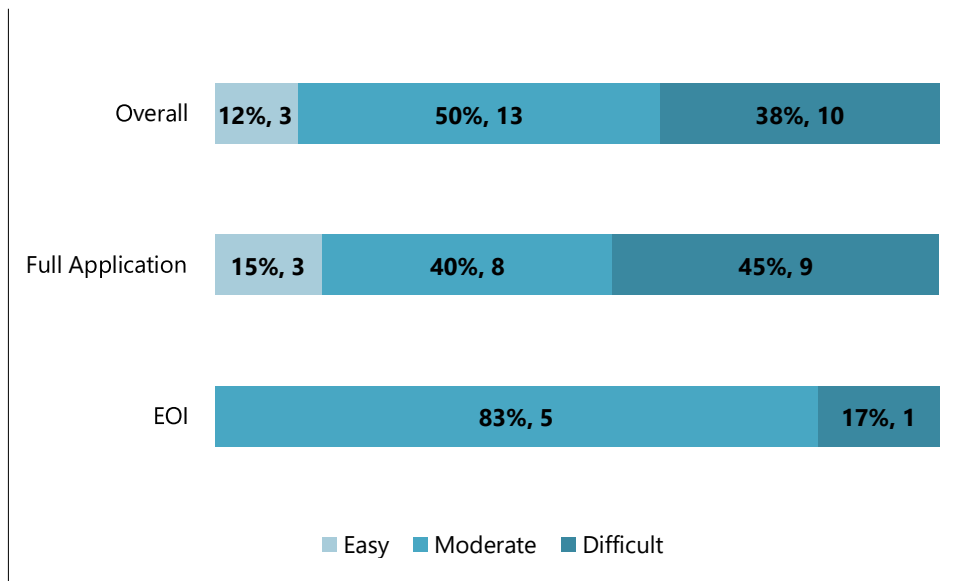
FIGURE 10. HOURS TO COMPLETE THE APPLICATION FORM



On a five point scale from very easy to very hard, most applicants found the EOI form moderate (n=5, 85%), and the full application difficult (n=9, 45%) and moderate (n=8, 40%).

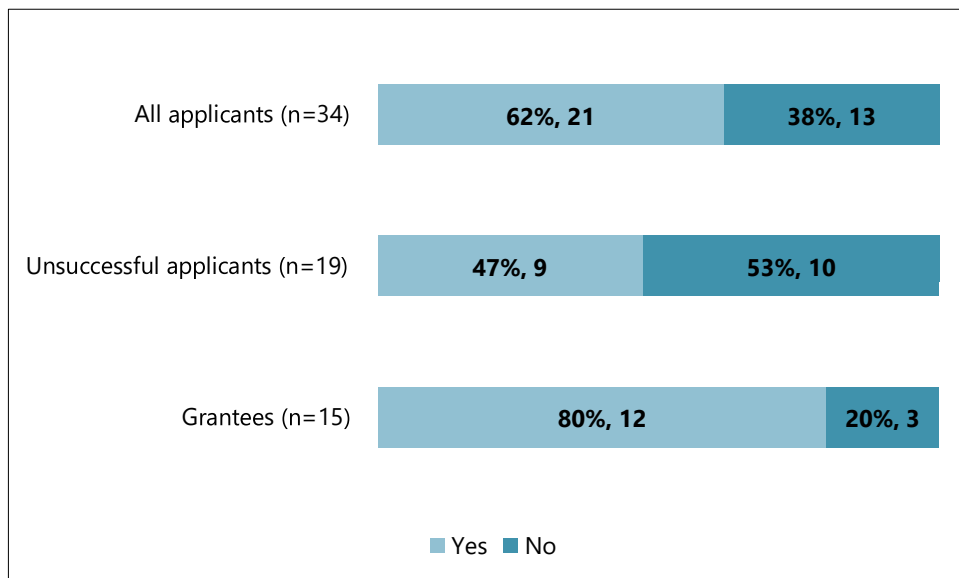
¹⁰ Level A academics have a salary starting at \$80,000. Level D academics are paid up to \$180,000. These were divided by 52 weeks and multiplied by 1.25.

FIGURE 11. RATING OF DIFFICULTY OVERALL AND BY TYPE OF APPLICATION



Several interviewees and survey respondents noted that they or their colleagues would not apply again due to the onerousness of the applications/reporting.

FIGURE 12. PROPORTION OF APPLICANTS THAT WOULD OR WOULD NOT APPLY TO THE ERG AGAIN



Source: ERG Grantee Survey 2023 and ERG Unsuccessful Applicant Survey 2023.

Grantees were more likely respond that they would apply again, which is perhaps indicative of the amount of support they get from the Trust with crafting their monitoring and evaluation plan, and reporting.

"The Trust were very responsive. They were really awesome when we wanted to put in any particular variations and we had COVID, fires and floods...Karen Wakely was so great. Once we got the grant they were really fantastic in supporting us. but I think you've gotta get in and have those relationships to know that and maybe some people are quite put off initially. " - Grantee, Interview

The continual reduction in EOIs received year on year provides additional evidence that fewer researchers are seeing it as worth their time to apply, or re-apply (which may also reflect on the onerousness of reporting).

TABLE 21. NUMBER OF EOIS RECEIVED 2017-2021

2017	2018	2019	2020	2021
146	95	80	20	NA (no EOI held)

VARIATIONS

Nearly all (87%, n=13) of grantees said that they sought a variation to their ERG-funded projects. Interviews and survey data indicate that variations for extensions, technical methodological changes, and changes to budgets are the most common.

One grantee described their experience as 'smooth' and said that the Trust staff were consistent with their communication. Another described funding variations as 'easy but annoying'. Variations seem to be sought relationally, rather than through any standard documented process, which grantees seemed to appreciate.

"That that was really straightforward because we had done someone that we could just contact directly... someone in the Trust that you've talked to directly or email and they knew the project ... I think that personalized way of doing it worked really well...we never got turned down for any extensions. " – Grantee, interview

Types of change for which a variation is required are not covered in the Grant Agreement except budget change of over 10% (added in 2021).

The Grant Agreement contains minimal information about variations. Earlier Grant Agreements required a variation for any changes to details of workplans. An addition was made in 2021 which enables grant holders to make minimal changes to their budget without requiring a variation.

2021 Grant Agreement: budget variations

For changes to the Budget, you do not need a variation for minor changes where: (a) the cumulative value of the changes between the individual line items are less than 10% of the total funding amount; and (b) the total funding amount remains unchanged. However, at all times: (c) administration costs cannot exceed 10% of the total funding amount; and (d) the salary on-cost item (e.g. superannuation, workers compensation, payroll tax, leave loading) cannot exceed 26.5% of the salary item in the budget.

One University Research Office survey respondent commented on this issue:

"Having more flexibility in funding spending without needing a variation. This was particularly challenging during the pandemic as activities often had to change and a variation submitted. Also, some variation forms were finicky to use." – University Research Office, Survey

Managing variations can also be administratively burdensome for Trust staff, especially for methodology variations which require some technical knowledge to assess, and where one type of staff member was being swapped out for another.

"Most of the money is spent on salaries but how do I know if a research assistant and PhD student value is different or better value? It's large changes in hourly salary that's a trigger. X salary went up by \$20 per hour. How are you delivering the same project with \$20 an hour more?" – Trust staff, Interview

Adding additional wording around variation processes and expectations to Grant Agreements may help to reduce workload for Trust staff, and uncertainty for grantees. It can also help to improve equity (when it is made explicit how PI carers/parental leave etc will be managed).

One of the ARC's listed items for when a variation is not required is if funding is spent differently from the proposal budget, but where the intention is the same, and includes an example 'A Research Associate was planned to be hired but now a Research Assistant or PhD/HDR will undertake those tasks'¹¹.

The Trust could list a similar list of examples where variations are not required in the Grant Agreement. This would likely reduce the amount of administrative workload on both the grantee/University Research Office and Trust staff.

REPORTING

The area about which grantees shared the most negative experiences was reporting. Generally there was understanding of the need for reporting, and that the Trust needs to collect certain types or a certain level of detail of data to be able to transparently report on what is being achieved with public funds. However, numerous grantees found the multiple spreadsheets to be difficult, requiring duplication of effort and a lot of cross checking. They did not feel the format was well suited to highlight what their research had achieved. Some said they or their colleagues would not apply again because of the burden of reporting. The level of detail required in budget tables also makes it difficult for researchers to correctly fill, as central finance offices at universities produce reports only on high level categories. In order to correctly fill the budget report in therefore, they need to be keeping copious records and updating the budget throughout, which is time consuming without contributing

¹¹ Australian Research Council. 2018. Variations of ARC Agreement: Research Office Instructions for completing and submitting a Variation and/or POACR. p. 11
https://www.arc.gov.au/sites/default/files/ro_variation_and_poacr_instructions_.pdf

to achieving the end goals of the research. The point was also made that the progress reports are almost the same length as the final report.

A few grantees also mentioned not hearing anything back on their final report or knowing what gets done with them. One TRC member felt that in most cases it was a token report and no one saw it beyond the Trust staff, however noted that the Trust was good at publicising when there was a breakthrough as a result of a grant.

"The woman from the Trust was absolutely amazing but I had to call her all the time for support and I am a smart person. The administrative burden for reporting took us longer than the application and I needed to know this cost before setting my budgets" – Grantee, Interview

"This reporting is much more detailed. It just feels completely over the top and the micromanagement of the quantitative measures. I'm not saying there shouldn't be quantitative measures at all, but the degree to which they are mapped and named and categorized is very stifling. " – Grantee, Interview

"Administrative burden was excruciatingly time consuming, with applications and reporting taking up to 160 hours (4 weeks full time) per year for <\$200,000 revenue support. Project measures and budget tables are clunky." – Grantee, Survey

"The administrative burden of this grant is unlike any other funding scheme in the sector. All researchers know it, and many would not even consider applying for that reason" – Unsuccessful applicant, Survey

"My line management would not support engagement [reapplication] due to the significant time burden on reporting" – Grantee, Survey

"You've got all these codes which you can't remember what they are. You've got numbers and then at every stage when you said when you were going to do it by category...and the financial reports you've got all these extra things, and then you've got people, contractors, funders, volunteers, organizations, engaged partnerships...I have grey hair because of that. You're manually doubling up but you're not even doubling up the same thing. Like the key good stuff is in the writing, why am I giving you all these numbers? my only assumption is so you can show it off in a report to a minister somewhere." – Grantee, Interview

"Project measures are very hard to deal with for academics. I don't know that it achieves what it's set up to achieve. The rationale is that it's to help keep us on track but really it seems more of a hurdle than something that is helpful in managing the project. The most helpful in keeping on track is the milestones and setting some deliverables and reporting against those. You don't need a table of metrics to do that. We do that anyway on top of the project measures. " – Grantee, Interview

"I felt there's a massive amount of bureaucracy. I just thought there was so many milestones like they had to report against so many different line items that I said the I think they would have been forever just, you know, ticking boxes rather than actually doing things. I would have thought for a research project, you know, you probably only want three or four milestones throughout three year project that and that should be enough to determine whether the project was successful or not. But there were pages and pages of these things. The progress report... were about the same length as the final reports...the amount of detail required in those reports was probably too much for the money available" – Report reviewer, Interview

"One part that's difficult is linking the project measures part that links to the budget –no university spits out a report with summaries in those [budget] categories. So the official financial summary I got was three categories from the UNI, 'salaries, on costs and other' and it's so broad and that that's not what the Environmental Trust wants. Central finance don't

know how to do this – [ERG] budget has categories that aren't normal ones in our system.” – Grantee , Interview

While most (4 of 5) of the university research office survey respondents agreed that reporting requirements were appropriate for the size of grant, none strongly agreed. One disagreed.

“The reporting requirements are quite complex given the amount of funding received, compared with other funding bodies/schemes of similar nature...progress reporting seems to require a lot of additional documentation, which other funders generally do not require for similar amounts of funding.” – University research office, Survey

Another university research officer suggested that while the administration of this grant is appropriate for an experienced project leader, most applicants to the ERG are likely to be early career researchers wanting to use the grant to build project management skills. They suggested streamlining the workplan and reporting requirements would improve this.

Comparative analysis

Most comparable programs require a final report at the completion of the project, as well as some level of progress reporting. The frequency of progress reporting differs between grant programs. Advance Queensland Industry Fellowships and ARC Discovery Projects (relatively large grants) require progress reporting on an annual basis. Queensland Threatened Species Research Grants (\$150,000) requires progress reporting bi-annually. Smaller grants, such as the Nature Foundation research grants, also require progress reports on an annual basis. The Environmental Research Grants had annual progress reporting requirements until the 2021 round (which funded projects of 1 year duration) which required quarterly reports. From the 2022 round onwards, grantees will submit milestone reports at the end of each milestone, where 2-3 milestones are set by the researcher but guidance is that they be 12 months in duration.

ARC reports generally include the below fields:

- Project summary (autopopulated from application)
- Named participants (autopopulated from proposal and variations)
- Financial contributions (autopopulated from proposal and variations)
- Research Activities – each objective as per the proposal; was it met or not; write up to 500 characters to summarise each.
- Details of any variations requested and how this affected the project
- Any additional collaborations other than those listed in the application
- How many students/personnel were funded and whether part or full time
- Project outputs
- Project outcomes
- Research impacts (multi choice about specific impacts and expectation of them occurring)
- Output attachments
- Budget and financial statement

2.5 LEGACY

2.5.1 TO WHAT EXTENT DID PROJECTS DELIVER SUSTAINABLE IMPACTS AND RESOURCES THAT CONTINUE BEYOND THE PROJECT LIFETIME?

"It filled a key knowledge gap in our research area and tested some pre-existing paradigms in our field that have been uncritically assumed as fact." – Grantee, Survey

Research impact is conceived as the "contribution that research makes to the economy, society, environment or culture, beyond the contribution to academic research¹²." The ARC's Research Impact Pathway¹³ includes the following as examples of the outcomes and longer-term benefits of impactful research:

- Job creation
- Integration into policy
- Implementation of programs and policy
- New companies/spin offs, start ups or joint ventures
- Commercial products, licenses and revenue
- Economic, health, social, cultural, environmental, national security, quality of life, public policy or service benefits
- Higher quality workforce
- Risk reduction in decision making
- Citations.

The ERG's focus on applied research, and collaboration and end use requirements increase the chances that funded projects deliver tangible and sustainable impacts beyond the life of the grant. Some program stakeholders and Trust staff interviewed noted the state-specific nature of the grant as beneficial and unique in that grantee research then helps to answer state-specific research questions. Several applicants interviewed mentioned the collaboration requirement of the grant and its focus on applied science as important to facilitating research impact. Others mentioned the grant plays a niche role in allowing researchers to pilot at a medium scale approaches or applications for which they already have some proof of concept.

A review of 16 Final reports and interview data show ample evidence of several of the above impacts.

TABLE 22. EXAMPLES OF RESEARCH IMPACT FROM FUNDED PROJECTS

Impact type	Data from Final Reports
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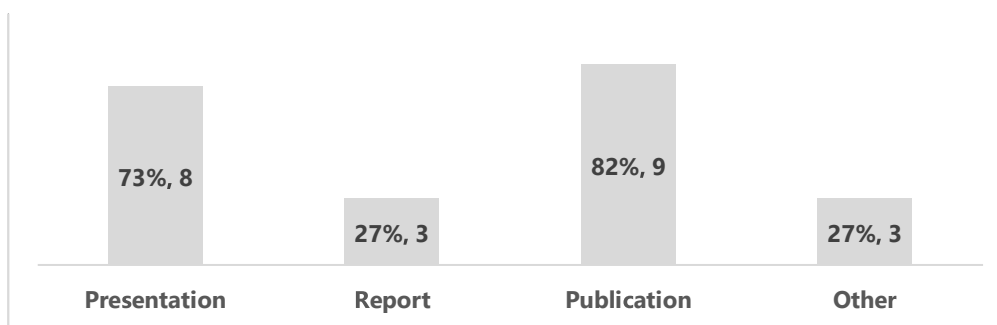
¹² <https://www.arc.gov.au/about-arc/strategies/research-impact-principles-and-framework>

¹³ https://www.arc.gov.au/sites/default/files/media-assets/policy_research_impact_pathway_table.pdf

Job creation	Numerous examples of employment of post-graduate students on projects
Integration into policy	- Integration of an indicator into the Biodiversity Indicator Program (tracks biodiversity in NSW) - Listing of a species as endangered - Recommendation of the use of an index in a review of the Biodiversity Conservation Act
Economic, health, social, cultural, environmental, national security, quality of life, public policy or service benefits	- Built capacity, governance structures and community wellbeing of Aboriginal groups as well as relationships between those groups and government agencies - Integration of projects into teaching material in undergraduate and postgraduate units - Improved survival of frog species
Higher quality workforce	- Numerous examples of training and mentoring for early career researchers and students - Numerous examples of enhanced networks with collaborators, and improved collaboration capacities due to having a dedicated project to work on, as well as of collaborations continuing after funded period. - Improved capabilities of field investigators for pollution incidents - Solidified a network of researchers in Eucalyptus dieback
Risk reduction in decision making	Implementation of multi-million dollar physical infrastructure using decision making tool created through funded project
Citations	We reviewed the citation of 19 publications that were outputs from grants within 2017-2021 rounds. There was a range from 0 to 24 citations, with an average of 8 (note: some publications are too new to have citations yet -generally these are measured after 2 years- however most do have some citations).

Eleven respondents to the grantee survey provided additional instances of communicating findings and publications, which shows that the research outputs (and collaborations on outputs) continue beyond the life of the grant. Dissemination of findings is an important indicator of potential impacts, as it increases opportunities for findings to be used.

FIGURE 13. WAYS IN WHICH GRANTEES (N=11) COMMUNICATED FINDINGS FROM ERG-FUNDED PROJECTS



Source: ERG Grantee Survey 2023.

Given the long lead-times for publication and also uptake into policy of any new knowledge, it may be useful to the Trust in tracking impact of the grants to consider adjusting the way it requests reports:

- Progress reports each year (short updates on progress against milestones, and any changes or barriers etc)
- End of project report on milestone/objective achievement and updated budget
- Final report and financial statement 6 months after the final date of project delivery to report on dissemination and community engagement activities, publications, and other impacts. This could include prompts about different types of impact as above.

2.5.2 WHAT ELEMENTS OF THE PROGRAM'S DESIGN COULD BE IMPROVED TO ENSURE IT IS RESEARCH THAT PUTS NSW IN A STRONG POSITION TO ANTICIPATE AND RESPOND TO EMERGING AND FUTURE ENVIRONMENTAL THREATS AND PRIORITIES?

The key area to improve with regard to emerging threats is to clarify how proposals that don't fall into named priority research areas should be dealt with – both for assessors and prospective applicants reading the Guidelines.

The Guidelines state: *"there may be research proposals tackling emerging issues not covered in the program priorities. Applications outside priorities set for each year will be considered if strong justification from the applicant is provided."*

However, review of the TRC comments on applications indicated that it was not necessarily clear to reviewers that applications which fell outside the prescribed themes could be considered on their merits. During the 2017, 2018, 2019 years, no assessment guide was given to reviewers; rather they are asked to score on the key criteria (significance, merit of research, collaboration and potential for success). Future advice to reviewers should include some consideration of emergent environmental problems that lie outside the priority themes and how these should be considered (if the Trust is unable to take up the recommendation that there be a specific category for emerging issues).

Additionally, applicants have said they use the priority research themes to help them decide on whether it will be worth the effort it takes to apply. This suggests that the 'emerging issues' clause is not inviting to applicants, as well as not playing much part in TRC members' decision making.

"The problem of having very tight priority areas is that you miss out on emerging issues that are not easy to predict. Disease outbreaks etcetera. If they were wanting to be more nimble they could have three key priorities and an emerging issues category."
- Grantee, Interview

Another way to encourage applicants working on emerging threats and priorities to apply is to **ringfence a certain amount of the funding for emerging issues** (this is the approach taken by the National Environmental Science Program where a small component of funding is available to address emerging priorities). This was also suggested by one program stakeholder.

"Have traditional focus grant rounds, but then have a pot of money reserved for blue sky research with an environmental focus. Seed grants could also be made available as a stepping stone into a larger grant - might get a one year relatively low budget grant, but if grantees meet clear measures of success, there is potential to develop into a bigger project." - Program stakeholder, Interview

One unsuccessful applicant noted in their survey that they felt the ERG rarely funds 'innovative' research that is needed to enable transformative change in the face of climate change.

3. RECOMMENDATIONS

There are several key areas in which the Trust can improve the impact, administration and value for money of the ERG program. The rationale for the recommended changes are covered in detail in this chapter, but at a high level, include:

- increasing the length of funding to 3.5 years and offering a larger amount of up to \$360,000
- increasing the funding pool to \$2 million per year if feasible
- in each round, ensuring predictability in priority research themes offered, while retaining responsiveness to emerging threats and making this explicit in themes
- stipulating that applicants from non-research bodies must apply in partnership with an academic researcher as the PI
- simplifying application process and forms
- simplifying reporting and standardising and providing more detailed documentation on variation processes
- providing more documented advice to grant assessors
- encouraging inclusion of post-graduate students in projects to increase value for money.

CONSIDER INCREASING FUNDING LENGTH AND AMOUNT

The **three-year structure is in alignment with other grants reviewed**. However, data and feedback suggest that **adding a further 6 months after project activities are completed** to evaluate and disseminate results, finalise publications and allow time for other indicators of impact to be visible would be useful to researchers— as well as to the Trust in understanding the impact of the grants. The Trust could consider making a change to the grant whereby **all project activity needs to be completed within 3 years**, but allowing expenditure on communication and publication activities for a further 6 months. The **final report could then be requested at the end of 3.5 years**.

All other grants for comparative analysis also held an **annual round**. An annual round provides an opportunity to applicants to learn from their application experience and improve unsuccessful applications and strengthen collaborations to resubmit in subsequent years, which is an important part of equity.

There was general consensus that an **increase to the grant amount** would make projects and the scale of impact the Trust seeks to be more feasible. A few interviewees felt that the grant amount currently skews applications towards earlier career researchers. This is supported by the fact that environmental research tends to be personnel intensive, and by the salary levels of mid-career researchers of between \$113,000 to \$157,000 per year, and a PhD (paid at Level A) salary of between \$80,000 and \$107,000. To make it worthwhile for more experienced researchers at a higher level in their career to apply, and enable more impactful projects, the Trust should consider increasing the maximum amount offered by the ERG to **\$360,000 for up to 3.5 years**. This would provide project funds of \$115,000 per year,

and \$15,000 for dissemination and community engagement activities, compared to the \$66,666 per year currently provided by the \$200,000 over 3 years.

Increasing the funding pool to \$2 million per year would reflect number of applications worthy of funding, and would allow the TRC to fund a similar number of projects to current at the higher maximum amount (\$360,000).

REVIEW PRIORITY THEMES TO IMPROVE RESPONSIVENESS TO EMERGING THREATS

The data suggests that some **regularity and broadness in themes is useful** in allowing applicants to plan ahead, and allowing applications from diverse fields of research, however that it is **also valuable to be flexible and responsive**. Further collaboration with other government areas on emerging threats and priority areas will help to identify where the ERG can add the most value.

Having relative **stability in grant structure and themes** would likely reduce the amount of time Trust staff must spend on re-working grant materials such as Guidelines and Application forms. It is also likely that having predictable themes would allow applicants to put in stronger applications, as they will know the general areas of research the ERG targets, allowing them to prepare and reach out to potential collaborators earlier, prior to the round being opened and themes officially announced.

The Trust could consider presenting the **below structure of themes in Guidelines** to make it more explicit to applicants that emerging threats identified by the research community are a priority theme to be considered alongside the other named themes. Industry-identified priorities should also be included in order to strengthen performance against the ERG's third objective 'to discover new methods of operation for NSW industry that are less harmful to the environment and enhance the public good'.

TABLE 23. PROPOSED STRUCTURE OF THEMES IN GUIDELINES

Theme 1-3	Theme 4	Theme 5
Any three of the below or other similar categories aligned with the objectives: - contaminants and pollution - biodiversity - climate adaptation - mechanisms for social engagement - resource management - wetlands and river systems - marine, coastal and estuarine ecosystems - landscape management	Knowledge gap or emerging threat identified in collaboration with other areas of government	Emerging environmental threats or priorities as identified by the environmental research community or industry

SIMPLIFY APPLICATION PROCESS AND FORMS

Review what can be removed from the EOI and Invited Application forms. If the information asked for doesn't get used at that stage in the assessment checks and processes, it can be removed. Suggestions for areas to simplify are provided in the table below.

TABLE 24. OPPORTUNITIES TO IMPROVE APPLICATION FORMS

Information currently requested	Recommendation
Detailed information on each objective, including a breakdown of activities to meet each objective, project measures, ¹⁴ total projected outputs, in which stage it will be undertaken, team members or collaborators responsible, and how the activity will be evaluated.	Suggest this is simplified, and combined with requests for research team breakdown. A suggested redesign is provided in Table 25.
The form asks for a communications strategy, with a breakdown by target audience, target message, communication method, evaluation method, and who is responsible and stages in which it will be undertaken.	Suggest this is removed and replaced with a free text question: <i>How do you intend to engage collaborators/end users and disseminate knowledge generated throughout the life of this project?</i>
A breakdown of the research team, by individual and organisation, job/function, and who they will be paid by.	Suggest research team breakdown is combined into objective table (see Table 25), and integrate who will pay for their time into the budget spreadsheet.
A breakdown of the communications team by individual and organisation, job/ function, and who they are paid by.	Suggest this is removed and added as a line item to budget spreadsheet.
A breakdown of collaborators, including name, position and organisation, and anticipated roles and responsibilities in delivering the project. A separate table with the same items is provided for end users.	Suggest this is combined into a objective table (see Table 25Table 25), and integrate who will pay for their time into the budget spreadsheet.

¹⁴ The project measures are a series of codes that correlate with types of outputs expected from the grants. Some of the same measures are used across the Trust's other grants programs, and some of which are specific to the Environmental Research Grants program. These measures are used to report on the aggregate outputs of the Environmental Research Grants Program (for example, in the Annual Report).

Information currently requested	Recommendation
A question <i>'What selection criteria will you use to employ project staff and who will be making the selections?'</i>	Employment policies are generally handled by the institution, and this information is ancillary to what's needed by assessors. This could be removed from the application, and a clause could be added about the requirements for employment procedures and policies to the Grant Agreement.
The budget form requires details on expected expenditure under different categories, including salaries. It includes a section to detail other sources of income and to describe what is being provided.	Suggest this is redesigned around Milestones rather than stages, to align with suggested redesign of objectives table (below), and that the budget categories align as closely as possible with university cost centres for ease of financial reporting: • Salaries • Consultancy • Equipment • Consumables • Travel • Other expenditure An example of a simpler budget for a grant project with multiple contributors is the AQIRF budget (0).
In applications researchers generally indicate the application form takes more than 10 hours to fill in. The high end of the answer option scale is 10+ hours.	Consider changing the scale on this question responses so the answers provide a more accurate snapshot of the length of time it's taking to: • 2-5 hours • 5-10 hours • 10-15 hours • 15-20 hours • 20+ hours

To simplify the application for both applicants and assessors, some of the information requested across several different sections in the Invited Application could be repackaged into one table, which allows for both free text input and quantitative answers (outputs).

TABLE 25. SUGGESTED REDESIGN OF OBJECTIVES TABLE

Milestone 1*			
Date by which this will be achieved			
Outcomes (what will success look like if you achieve this milestone)			
How will the milestone be achieved?	Brief research methodology/ experimental design overview)	Activities to achieve milestone	
Who will be involved and how will they contribute to meeting this milestone? (project team members, collaborators, end users)			
What are the expected outputs of this milestone?	Project measures (dropdown)	Total projected outputs for this milestone	Description of output
How do you intend to disseminate findings or knowledge from this milestone?			

*repeat for number of milestones

CLARIFY GRANT ASSESSMENT PROCESSES

Consider providing **explicit documented guidance for TRC members and peer reviewers on how to make assessments** – especially about applications which do not fit into funding priorities but should be considered on their merits. If a specific priority research theme is created for researcher or industry-identified emerging priorities, this makes it more apparent to reviewers how to consider these applications.

Equity considerations can also be built into guidance. Suggest that TRC look at the mix of genders, types of research funded and geographic distribution of their shortlist, especially where deliberating between lower ranked applicants to include. Equity considerations should also be conscious to try and select for diversity, after accounting for strength and feasibility of application and research.

Consider also providing current TRC members with data on past rounds and assessment decisions and grantee reports to better inform their decisions, and implementing a post-round reviewer debrief/ feedback session to improve assessment processes.

SIMPLIFY AND STANDARDISE GRANTS MANAGEMENT AND REPORTING

While the frequency of reporting is in line with other grants, the format and types of information requested could be less onerous, better fit for purpose and better used by the Trust. The data suggests a need to **review the usefulness of the project measures and discuss standards for financial reporting/common financial reporting categories with university finance offices/research offices to find a satisfactory level of financial reporting** that is not overly burdensome. This is an important aspect of fully meeting the criteria for the DPC Grants Administration Guidance around ensuring grants administration is designed and implemented to enable grantees to focus on achieving outputs, outcomes and benefits.

Adding additional wording around variation processes and expectations to Grant Agreements may help to reduce workload for Trust staff and uncertainty for grantees. It can also help to improve equity (when it is made explicit how PI carers/parental leave etc will be managed).

Suggested variation types to include (based on ARC variation documentation) are:

- Budget change (changes between line items over 10%)
- Budget carryover (request to carry over unused amounts to next milestone)
- Commencement date (if more than 2 months)
- Project end date
- Project suspension (for example for PI maternity/parental/carer's leave where the work cannot reasonably continue with out that person)
- Relinquishment of grant project
- Personnel (withdrawal of key named personnel/change to level of employed personnel)
- Collaborators (withdrawal of collaborators contributing cash or in-kind)
- Scope change (if there is a significant change in scope from original proposal. i.e. due to budget constraints; methodology changes; to avoid duplication of funding; natural disaster impacts on fieldwork or opportunities to expand scope).

Managing variations can be administratively burdensome for Trust staff, who may need to seek TRC or peer reviewer input to assess the more technical methodological variations. One way of managing this could be to implement a **standard variation form** (suggested format and types provided in 0) and clear expectations of what is required of the Trust's grants administrator as well as of the researcher. In cases of significant methodology change, variations could require a letter signed by School Head/Head of Research/ Line Manager stating that methodological changes are likely to achieve the same or greater outcomes for the project. This would help avoid additional administrative burden for the Trust grants administrator.

OPTIMISE RESOURCING AND ENCOURAGE USE OF POST-GRADUATE STUDENTS TO PROVIDE BETTER VALUE FOR MONEY

Increasing the maximum funding amount of the ERG will increase the value for money of the program, enabling greater impact by encouraging more senior researchers to apply for the grant, and allowing them to pay for the time of postgraduate students and research

assistants, and undertake greater community engagement and knowledge dissemination activities. This increases the contribution the ERG makes to NSW's knowledge economy, and the likelihood of impactful environmental management breakthroughs and improvements.

Increasing the funding pool to \$2 million per year would allow for a similar number of grants to be made at the suggested \$360,000 over 3.5 years level. A greater level of impact per administrative dollar spent could be expected from increasing the grant amount, as a larger grant is likely to attract a higher calibre of researcher, and allow for larger scope of projects.

Reducing some of the complexity of the grant application and reporting forms and standardising some of the administration of the grants is likely to help reduce the amount of time staff spend supporting grantees with paperwork. This is time they can then better spend in relational check-ins with researchers, providing collaboration and networking opportunities to grantees, communicating about outcomes and using monitoring data to inform program improvements.

An additional provision that the inclusion of PhD/ Masters students on projects will be highly regarded could be considered to build in greater capacity-building outcomes within the NSW environmental research community, as well as value for money.

More systematically publishing research outcomes on website/case studies in annual report, as opposed to just successful grantee abstracts would also increase potential impact of the grants.

MAKE SMALL CHANGES TO IMPROVE EQUITY

Offering equitable access is important, but equity can mean many things. It may not be feasible for the Trust to implement all equity considerations at once, or indeed some may be seen as less important than others (for example work in remote locations if the NSW Government's priorities are with coastal regions). The Trust needs to define what elements of equity are most important to achieve in what timeframes and why, in alignment with its objectives and strategic plan, to inform work on any actions to inform equity. The data and document review suggests the following are some areas of equity the Trust could address.

GEOGRAPHIC EQUITY

There are indications that geographic distances mean researchers working on projects in inland locations may be disadvantaged. The Trust could consider options such as offering an additional **travel stipend** for those undertaking work in remote locations.

EQUITABLE PARTICIPATION

- Continue to provide an EOI round. This allows people with more limitations on their time to participate as it does not require the same level of detail as a full application. Simplifying the application and reporting forms will also support greater accessibility.
- Providing a pre-application webinar with attendance by a previous grant-holder and a Q&A section will allow greater equity in accessing support, as having access to previous grantees was a key reason some grantees interviewed gave for their success.

- While the ERG application process doesn't have a section where PIs can explain career breaks, its focus on the substance and achievability of the research and the research team as a whole plays largely the same role. However, an additional note could be added to the ERG Guidelines that researchers can include career breaks or time away from traditional research roles in their CVs as a means of letting researchers know that the Trust is cognisant of and equally considers diverse research trajectories and experiences.
- Consider adding details to the Grant Agreement about what kinds of variations can be requested, including project suspension for significant periods of carers/parental leave.
- Consider a more systematised approach to providing feedback/ reasoning for decisions to unsuccessful applicants, so that feedback is provided more equitably/ is more transparent.

EQUITABLE ACCESS FOR DIFFERENT ORGANISATION TYPES

While the ERG is open for Aboriginal Community Groups, community organisations and nonprofits to apply, the application and assessment processes do not support the success of these applications. Consider adding a requirement to Guidelines that these organisations must collaborate with an academic researcher.

IMPROVE PERCEPTIONS OF TRANSPARENCY

- Add wording to Guidelines to the effect that a key desired outcome of the grants program is to increase the use of research in the NSW Governments' management of and response to environmental issues, and to increase collaboration with the academic sector, and that appropriate agencies would therefore ideally be included as collaborators/end users.

IMPROVE ALIGNMENT WITH THE GRANTS ADMINISTRATION GUIDE

Completing the **below recommendations would bring the ERG more in line with the Grants Administration Guide** and strong grants administration practice:

- Consider implementing processes for the Trust to manage and track risks (e.g. a conflict of interest/ fraud/ misconduct register).
- Consider tracking use of staff time more systematically, (e.g. time taken to process variations, time taken to review milestone reports, time taken to address reported risks), to help identify areas for process improvements.
- Consider adding reporting fields to capture economic benefits of funded projects (e.g. employment outcomes, other grants funding leveraged), and include these indicators in the program's monitoring, evaluation and reporting plan
- Grant guidelines include a step-by-step process for the EOI/application process. Consider including similar process in grant guidelines for reporting process (to ensure grantees budget for this work).
- Consider adding to TRC guidelines that ideally TRC applicants would have some knowledge/ expertise in research ethics

SURVEY TOOLS

INTRO TEXT

Environmental Research Grants Survey

Welcome to the **Environmental Research Grants Survey**.

ARTD Consultants have been contracted by the NSW Environmental Trust to complete an evaluation of the Environmental Research Grants program across 2017 to 2021 rounds.

The following set of questions should take about 5-10 minutes of your time to answer. You can save and come back to the survey later if you need to. Each time you navigate forwards or backwards, your responses will be saved automatically.

Your responses will be kept confidential, and no individuals or organisations will be identified in the final report. GRANTEES & REVIEWERS RECEIVED THE FOLLOWING TAILORED ADVICE - Once you have completed the survey, we will send you a reminder to schedule a short telephone or videoconference interview to further discuss your survey responses and feedback from your experience participating in the Environmental Research Grants program.

UNSUCCESSFUL APPLICANTS RECEIVED THE FOLLOWING TAILORED ADVICE – At the conclusion of the survey you will be invited to provide your details if you consent to being contacted for a short telephone or videoconference interview to further discuss your survey responses and feedback from your experience participating in the Environmental Research Grants program.

Should you have any questions about ARTD or their evaluation please contact Karen Wakely, A/Senior Project Officer, NSW Environmental Trust, via email (karen.wakely@environment.nsw.gov.au).

Should you have further questions about this stakeholder interview please contact Kate Sunners, Senior Consultant at ARTD, via email (kate.sunners@artd.com.au) or phone (02 9373 9908)

Thank you in advance for your time and feedback.

To start the survey, click on the right-hand arrow below.

GRANTEE SURVEY

#	Question	Notes
---	----------	-------

1 How did you originally find out about the Environmental Research Grants?

- University research office
 - NSW Environmental Trust email
 - Government grants website
 - Subscription-based grants calendar
 - Google search
-

	Other_____please name						
2	What is your primary area of research?	Free text					
3	To what extent do you consider the Environmental Research Grants themes (below) to be aligned to the priority needs of the environmental research community? - Biodiversity - Climate Adaptation - Contaminants and Pollution - Eucalyptus dieback - Landscape Management - Marine, Coastal and Estuarine Ecosystems. - Mechanisms for Social Engagement. - Post-fire native flora - Resource Management - Wetlands and river systems - Extremely well - Well - Moderately - Slightly - Not at all						
4	Please rank the themes in order of their importance to the environmental research community - Biodiversity - Climate Adaptation - Contaminants and Pollution - Eucalyptus dieback - Landscape Management - Marine, Coastal and Estuarine Ecosystems - Mechanisms for Social Engagement - Post-fire native flora - Resource Management - Wetlands and river systems - Other (please name)						
5	The following questions relate to your experience of applying for an Environmental Research Grant. Please rank each statement against the scale provided. <table border="1"> <tr> <td>Strongly disagree</td> <td>Disagree</td> <td>Undecided</td> <td>Agree</td> <td>Strongly Agree</td> </tr> </table>		Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
Strongly disagree	Disagree	Undecided	Agree	Strongly Agree			

The application guidelines and forms were easy to access and understand

The application requirements were appropriate for a grant of this amount

I was able to access support with the application process from the NSW Environmental Trust if I needed it

I understood who would be assessing the application and the criteria they would use

6

How would you rate your experience of applying for the Environmental Research Grant compared with other research grants you've applied for?

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse

7 Please provide some reasons for your answer?

8 Would you apply again?

Y/N

9 Please supply some reasons for your answer?

10 Did receiving the Environmental Research Grant have any impact on your ability to attract additional funding, other than any co-funding named in your application?

No

Yes – please provide details

Grant or funder name	Amount

11 Did you need to seek a variation on your grant project?

Y/N

12 Since your final report, have you had further opportunities to communicate your findings?

Please list

Type of communication (e.g. presentation/ report /publication etc)	Details

13 What is your gender?

Male

Female

Non-binary or genderqueer

Trans man

Trans woman

I prefer a different term or I prefer to self-describe

UNSUCCESSFUL APPLICANT SURVEY

#	Question	Notes
1	How did you originally find out about the Environmental Research Grants?	
	- University research office - NSW Environmental Trust email - Government grants website - Subscription-based grants calendar - Google search - Other_____please name	
2	What is your primary area of research?	Free text
3	To what extent do you consider the Environmental Research Grants themes (below) to be aligned to the priority needs of the environmental research community?	
	- Biodiversity - Climate Adaptation - Contaminants and Pollution - Eucalyptus dieback - Landscape Management - Marine, Coastal and Estuarine Ecosystems. - Mechanisms for Social Engagement. - Post-fire native flora - Resource Management - Wetlands and river systems	
	- Extremely well - Well - Moderately - Slightly - Not at all	
4	Please rank the themes in order of their importance to the environmental research community	
	- Biodiversity - Climate Adaptation - Contaminants and Pollution - Eucalyptus dieback - Landscape Management - Marine, Coastal and Estuarine Ecosystems - Mechanisms for Social Engagement - Post-fire native flora - Resource Management - Wetlands and river systems - Other (please name)	

-
- 5 The following questions relate to your experience of applying for an Environmental Research Grant. Please rank each statement against the scale provided.

	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
The application guidelines and forms were easy to access and understand					
The application requirements and forms were appropriate for a grant of this amount					
I was able to access support with the application process from the NSW Environmental Trust if I needed it					
I understood who would be assessing the application and the criteria they would use					

-
- 6 Were you able to undertake the proposed project in some capacity despite not receiving an Environmental Research Grant?

Yes – with the same/similar scope to the ERG application

Yes – with a reduced scope

No – the project was not able to proceed at all

7	How would you rate your experience of applying for the Environmental Research Grant compared with other research grants you've applied for?
	Much better
	Slightly better
	About the same
	Slightly worse
	Much worse

8	Please provide some reasons for your answer?
---	--

9	Would you apply again?
	Y/N

1	Please supply some reasons for your answer?
0	

1	What is your gender?
1	Male
	Female
	Non-binary or genderqueer
	Trans man
	Trans woman
	I prefer a different term or I prefer to self-describe

1	Do you consent to being contacted for an interview to discuss your experiences and insights on the Environmental Research Grants? (No interviewees or organisations will be named in any information provided back to the NSW Environmental Trust)
2	
	Y/N

1	Please provide your contact details if you would like to be contacted for an interview. Note, a random sample of those who provide consent will be contacted and invited to participate.
3	

Name

Organisation

Position

Email

Phone

TRC /PEER REVIEWER QUESTIONS

#	Question
1.	Which round(s) of the Environmental Research Grants, did you work in as a TRC Member? (Select all that apply) 2017 2018 2019 2020 2021
2.	How clear did you find the instructions and criteria for assessing, ranking and collectively considering the applications? Extremely clear Clear Somewhat unclear Not at all clear
3.	Please rank the below environmental research areas in order of how important you feel it is that they receive research funding. Biodiversity Climate Adaptation Contaminants and Pollution Eucalyptus dieback Landscape Management Marine, Coastal and Estuarine Ecosystems.

	Mechanisms for Social Engagement.
	Post-fire native flora
	Resource Management
	Wetlands and river systems
	Other (please name)
4.	How well do you feel these research themes reflect the most pressing environmental research needs for NSW?
	Extremely well
	Well
	Moderately
	Slightly
	Not at all
5.	What were your three major highlights of working as a TRC Member?
	1. [insert short text]
	2. [insert short text]
	3. [insert short text]
6.	What were your three major challenges/ difficulties working as a TRC Member?
	1. [insert short text]
	2. [insert short text]
	3. [insert short text]
7.	Did you have any involvement in reviewing milestone or final reports? Y/N

UNIVERSITY RESEARCH OFFICE

#	Question						
1	How many Environmental Research Grants has your institution received from rounds between 2017 and 2021?						
2	What is the total amount of cash co-funding received for all Environmental Research Grants (from 2017-2021 rounds)?						
3	What is the total amount of in-kind support received for all Environmental Research Grants (from 2017-2021 rounds)?						
4	How would you rate your agreement with the following statements?						
	<table border="1"> <tr> <td></td> <td>Strongly disagree</td> <td>Disagree</td> <td>Undecided</td> <td>Agree</td> <td>Strongly Agree</td> </tr> </table>		Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree		

The application guidelines and forms were easy to access and understand

The application guidelines and eligibility criteria allow for equitable participation

The application requirements are appropriate for a grant of this size (up to \$200,000 over up to 3 years)

The reporting requirements are appropriate for a grant of this size

We could access support with the application process from the NSW Environmental Trust as it was needed

We could access support with the administration of the grant from the NSW Environmental Trust as it was needed

5 Please provide some reasons for your ratings

6 What other funding opportunities are you aware of for researchers in environmental and ecological sciences?

(Please list the names of any you are aware of)

7	If you could change one thing about the guidelines or application forms or process for this grant what would it be?
8	Is there anything about the Environmental Research Grant that is a deterrent to researchers applying?
9	If you could change one thing about the administration of this grant (i.e. reporting; variations; budget management, workplan requirements etc) what would it be?
10	Are you aware of any impact stories about any of the projects funded by the Environmental Research Grants published by your institution?
	(Please provide links)
11	Do you have any other comments about the Environmental Research Grants to share with the Trust?

FINAL PAGE TEXT (ALL)

Thank you for completing the **Environmental Research Grants Evaluation survey**. We appreciate your feedback and time.

INTERVIEW GUIDES

SURVEY EMAILS

Note: We will not need to send a direct survey invitation email from ARTD's Qualtrics account as we will generate unique email links for each individual contact and include them in the initial engagement emails we send out (see Appendix 1). Even if we can schedule interviews with contacts, we will require them to have completed the survey prior to us speaking with them. If the interviewee has not completed the survey a few days prior to their scheduled interview time with us, we will gently remind them to please complete the survey. The survey is designed to capture elements of the project that may require reference to documentation including budgets and outcomes data - this will allow us to focus the interview on other questions and save time.

DISTRIBUTION EMAIL

Unique survey links for each individual will be generated by ARTD in Qualtrics and included in the contact emails (see Appendix 1) sent by ARTD to inform stakeholders about the pre-interview survey and follow up interview.

GRANTEES (LEAD INVESTIGATOR N=33)

Interviewer introduces themselves and position.

I appreciate the opportunity to talk to you as recipient of an Environmental Research Grant, and thanks for filling out our survey. This interview is focused on expanding more on some of the thoughts, experiences, and feedback you touched on in your survey responses.

This interview will last for up to 30 minutes.

Do you mind if I record the interview today? Doing so will allow me to focus on our discussion and allow me to update my interview notes at a later stage. We will not mention you or your institution by name in any of our reports.

Are you happy to proceed with the interview? Do you have any questions for me before I begin?

Thank you for your time today and for completing the pre-interview survey.

Introduction

1. Can you start off by briefly telling me a bit about your research areas and how they align with the Environmental Research Grants?

Application

2. How did you find out about the Environmental Research Grants and what motivated you to apply?
3. How did you find the application process?
 1. Was the time needed to fill in the application form proportionate to the amount of funding available?
 2. Differences/similarities to other grants?
 3. Did you seek any help from the Trust? Can you tell me about that?
4. How useful was it to you as an applicant to have set themes to apply under?
5. Are there important areas of environmental research which would help address issues in NSW which the Environmental Research Grants aren't addressing?

Equity

6. Do you think that the program was transparent and fair in terms of how it managed your application? Why do you say this?
7. Is there anything you think the Trust could do better to ensure more equitable participation in the grants program?

Appropriateness

8. How appropriate do you think the grant amount and length was to the type of research you were undertaking?
9. How appropriate do you think the reporting requirements for this grant were?
10. [Ask if they indicated they had a variation in their survey] How confident were you about approaching the Trust to seek a variation or to discuss any changes to your grant?
11. Were there any challenges specific to the management or administration of the Environmental Research Grant?

Effectiveness

12. What do you feel was the greatest achievement in terms of environmental knowledge, techniques or solutions from your project?
13. What impact did this grant have for your research group? (career/ opportunities to learn/try/collaborate/disseminate knowledge etc)
14. Can you tell me a bit about your experience of working with collaborators or research end-users on this project? (Benefits? Challenges? Risks? How were these managed?)

Wrap up - Instructions for staff carrying out the survey:

15. Cover off any other stand-out feedback from the survey
16. If you had the opportunity to structure funding to support environmental research into critical issues in NSW, what would it look like? (Consider – number of years for funding, maximum grant amount, regularity of grant rounds, eligible costs, focus areas/themes).
17. Is there anything else you would like to share with me today?

.....

Thank you for your time.

If you have any further feedback or questions, you can email me on *[insert interviewer's email address]*.

UNSUCCESSFUL APPLICANTS INTERVIEW GUIDE (N=30 ACROSS ALL ROUNDS)

Interviewer introduces themselves and position.

I appreciate the opportunity to talk to you as an applicant in the 2017-2021 rounds of the Environmental Research Grants, and thanks for filling out our survey. This interview is focused on expanding more on some of the thoughts, experiences, and feedback you touched on in your survey responses.

This interview will last for up to 30 minutes.

Do you mind if I record the interview today? Doing so will allow me to focus on our discussion and allow me to update my interview notes at a later stage. We will not mention you or your institution by name in any of our reports.

Are you happy to proceed with the interview? Do you have any questions for me before I begin?

Thank you for your time today and for completing the pre-interview survey.

Introduction

1. Can you start off by briefly telling me a bit about your research area/s?
2. And what kinds of funding or funding sources are there available to you in your research area that you know of?

Application

3. How did you find out about the Environmental Research Grants and what motivated you to apply?
4. How did you find the application process?
 1. Was the time needed to fill in the application form proportionate to the amount of funding available?
 2. Differences/similarities to other grants?
 3. Did you seek any help from the Trust? Can you tell me about that?
5. How useful was it to you as an applicant to have set themes to apply under?
6. Are there areas of environmental research which would help address environmental problems in NSW which are important but which you don't think the Environmental Research Grants are addressing through their themes?
7. What was your experience of working with collaborators or research end-users on this grant application (how easy was it to find collaborators, how did you involve them?)
8. How useful did you find the peer reviewer and Technical Review Committee comments on your EOI application?
9. Would you apply again? Why/why not?

Equity

10. Do you think that the program was transparent and fair in terms of how it managed your application? Why do you say this?

11. Is there anything you think the Trust could do better to ensure more equitable participation in the grants program?

Appropriateness

12. How appropriate do you think the grant amount and length was to the type of research you were undertaking?

Effectiveness

13. (If indicated yes in survey) You mentioned in the survey that you were able to proceed with the project without the Environmental Research Grant. Can you tell me a bit about that?

1. How did the scope change if at all?
2. Did you proceed with the same collaborators as proposed in your grant?
3. What have the outcomes been?

Wrap up - Instructions for staff carrying out the survey:

14. Cover off any other stand-out feedback from the survey

15. If you had the opportunity to structure funding to support environmental research into critical issues in NSW, what would it look like? (Consider – number of years for funding, maximum grant amount, regularity of grant rounds, eligible costs, focus areas/themes).

16. Is there anything else you would like to share with me today?

Thank you for your time.

If you have any further feedback or questions, you can email me on *[mail merge - insert interviewer's email address]*.

TRUST ADMINISTRATIVE TEAM AND TRUST LEADERSHIP TEAM

Interviewer introduces themselves and position.

I appreciate the opportunity to talk to you about the Environmental Research Grants. The focus of this interview is on the governance processes and administration of these grants, as well as their outcomes.

This interview will last for up to 30 minutes.

Do you mind if I record the interview today? Doing so will allow me to focus on our discussion and allow me to update my interview notes at a later stage. We will not mention any person by name in any of our reports.

Are you happy to proceed with the interview? Do you have any questions for me before I begin?

Thank you for your time today and for completing the pre-interview survey.

1. What do you see as the key goals of the Environmental Research Grants?
2. How important do you think the Environmental Research Grants are to improving environmental outcomes in NSW?
3. Can you tell me a bit about how the grants are publicised or the opportunity is communicated?
 1. Can you tell me about how this was done in the 2021 Flora Bushfire recovery round which funded survey work? Survey work was ineligible in previous rounds so we are interested to understand how this was communicated in that year?
4. As you understand it, what's the process of choosing research themes/priorities?
5. With regard to these grants, in what ways does the Trust collaborate or encourage collaboration with other NSW Government entities?
 1. On decisions about themes
 2. On the gaps in research
 3. On sharing research/ disseminating research
6. What kinds of research, discussions or considerations are there when making decisions about the structure of the grants – e.g. the maximum funding per grant, the amount of years a project can span, or application phases (EOI and invited vs just one phase)?
7. What kind of processes do you follow to make improvements to grant rounds and integrate feedback from various sources?

8. From your observations, have there been any grant rounds that have stuck out as having a greater degree of impact from funded projects? Why?
9. How well resourced do you think the Environmental Research Grants are in terms of administration personnel and systems?
 1. Are there ways in which these can be better utilised?
10. What kinds of promotional avenues are used to share information about the grant opportunities?
11. How are the outputs and outcomes of grants communicated by the Trust?
 1. Are there ways you can think of that this could be enhanced?
12. If you could wave your magic wand and have unlimited funding for environmental research grants, how would you structure them?

TECHNICAL REVIEW COMMITTEE INTERVIEW GUIDE INDEPENDENT REVIEWERS INTERVIEW GUIDE

Interviewer introduces themselves and position.

I appreciate the opportunity to talk to you as one of the reviewers of Environmental Research Grant applications. The focus of this interview is on the processes of assessing the Environmental Research Grants, and your views about how the grants are delivering outcomes for researchers and the NSW environment.

This interview will last for up to 30 minutes.

Do you mind if I record the interview today? Doing so will allow me to focus on our discussion and allow me to update my interview notes at a later stage. We will not mention any person by name in any of our reports.

Are you happy to proceed with the interview? Do you have any questions for me before I begin?

Thank you for your time today and for completing the pre-interview survey.

1. Can you tell me a bit about your area of expertise and how you bring this to bear when assessing Environmental Research Grant applications?
2. And what motivated you to apply to be a reviewer?
3. Cover off any other stand-out feedback from the survey

4. What level of experience and quality of researcher do the Environmental Research grants attract, in your view?
5. How relevant have you found the research themes to be in terms of the research needs and evidence gaps in environmental research in NSW?
6. Are there any bits of feedback to applicants you find yourself repeating that would be useful to add to the guidelines?
7. How well do you think the composition of the review committee and peer reviewers represents diversity? (prompts: types of expertise and sectors; gender; people with disability; Aboriginal and Torres Strait Islander; culturally and linguistically diverse; geographic distribution etc).
1. What could the Trust do to attract a greater diversity of reviewers?
8. Other than the assessment criteria - is there anything else routinely taken into consideration by reviewers? (e.g. when trying to decide between recommended grants for budgetary reasons?)
9. What kinds of processes does the Trust have to integrate reviewer feedback into grant program improvements that you've observed or experienced?
10. How important do you feel the Environmental Research Grants are to improving environmental outcomes in NSW?
11. What do you see as the emerging and future environmental threats, considerations and priorities in NSW?
1. How can the grants better encourage researchers and their collaborators to consider these when designing their projects?
12. *(If involved in reporting)* From your observations, have there been any grant rounds that have stuck out as having a greater degree of impact from funded projects? Why?
13. *(if involved in reviewing reports)* Is there anything about the frequency or requirements of grantee reports that you think needs to change?

ADVANCE QUEENSLAND INDUSTRY RESEARCH FELLOWSHIP BUDGET

Advance Queensland Industry Research Fellowships - Cash Budget (excluding GST)					
Data can only be entered in the white cells - all other cells are locked. Please enter the expenditure for each category and each year (whole dollars only). Please also enter the Applicant and Partner Organisation names. The Advance Queensland funding component must total: * \$160,000 (2 years) or \$240,000 (3 years) for early-career fellowships, or * \$240,000 (2 years) or \$360,000 (3 years) for mid-career fellowships. NOTE: The totals from this spreadsheet must be transferred to the Budget Summary section in the Application Form.					
Funding Provider	Type of Expenditure	Year 1 (\$)	Year 2 (\$)	Year 3 (\$)	Total (\$)
Queensland Government Advance Queensland Industry Research Fellowships Funding	Fellow's Salary				0
	Other Research/Technical Salaries				0
	Consumables				0
	Travel				0
	Other Expenditure				0
	sub-total	0	0	0	0
	Enter Applicant Organisation's Name	Fellow's Salary			
Other Research/Technical Salaries					0
Consumables					0
Travel					0
Other Expenditure					0
sub-total		0	0	0	0
Enter Partner 1 Name		Fellow's Salary			
	Other Research/Technical Salaries				0
	Consumables				0
	Travel				0
	Other Expenditure				0
	sub-total	0	0	0	0

STANDARD VARIATION FORM EXAMPLE

The below is based on the form in the ARC's Research Management System, tailored for the context and size of the ERG.

Project variation type

Select from:

- Budget change (changes between line items over 10%)
- Budget carryover (request to carry over unused amounts to next milestone)
- Commencement date (if more than 2 months)
- Project end date
- Project suspension (for example for PI maternity/parental/carer's leave where the work cannot reasonably continue without that person)
- Relinquishment of grant project
- Personnel (withdrawal of key named personnel/change to level of employed personnel)
- Collaborators (withdrawal of collaborators contributing cash or in-kind)
- Scope change (if there is a significant change in scope from original proposal. i.e. due to budget constraints; methodology changes; to avoid duplication of funding; natural disaster impacts on fieldwork or opportunities to expand scope)

Key dates

Current agreed project start date

Requested project start date (leave blank if no change)

Current agreed end date

Requested end date (leave blank if no change)

Justification (up to 300 words detailing the need or rationale for the variation)

Supporting documentation (allow researchers to upload)

- Updated budget (for budget change; and if relevant for: scope change if relevant; date changes; personnel; collaborators)
- HR approval of maternity/parental leave (email screenshots acceptable)
- Confirmation of additional sources of financial support (for budget change; scope change; Collaborators)
- CV of new personnel (Personnel; scope change)
- Financial report (budget carryover request; withdrawal of grant project)
- Institution letter of agreement to withdraw (Relinquishment)

RUBRIC ASSESSMENT AND COMPARATIVE ANALYSIS DATA

This is supplied in a separate Excel document.

VALUE FOR MONEY METHODS

OVERVIEW

Conducting a value for money (VFM) analysis is useful to understand how affordable and effective the program has been over time, and, where possible, to characterise performance in relation to similar programs. It is a useful tool for establishing the economic contribution of the program.

APPROACH

A cost-effectiveness analysis (CEA) compares the relative costs of activities to the outcomes (effects) of actions. CEA is particularly useful when the benefits of a program cannot be directly monetised, but the outcomes can still be counted and compared.

Input data and metrics for the cost effectiveness analysis came from budget data for the Environment Trust, including data on internal resourcing (staff levels and full time equivalent (FTE) loading), along with spending on grants and reported actual grant outcomes as budgeted and reported by grantees as part of acquittals.

A cost-benefit analysis approach, which looks at the impacts of the program in terms of savings as a result of the program, was considered as part of the evaluation. While direct benefits on a grant by grant basis could not be monetised, a benefit-cost ratio could be estimated based on existing literature relating to the economic value of research and innovation, and combined with reported data from grants and the stakeholder survey.

4E FRAMEWORK

The specific approach to categorising metrics for CEA used here is derived from the work of Barr and Christie.¹ This approach puts forward a diagnostic framework for analysis shaped by dimensions of Economy, Efficiency, Effectiveness and Equity. The framework classifies metrics by these dimensions, along with the type of indicator (Monetary, Quantitative or Qualitative) and the measurement type (Benchmark, Stand-alone or Comparative). The latter two dimensions are used to determine the strength of the metrics in terms of providing a robust indication of the value for money provided by the program. There is a further measurement type, 'quasi-benchmark', which enables an internal comparison of metrics by relevant program dimensions (such as grantee, program round or research type).

Analysis of the program identified 17 metrics for use as part of the VFM analysis. Table 11 provides a breakdown of each of the metrics identified for this analysis, based on the indicator typology and measurement type, while Table 12 shows the mapping of these metrics to indicators of the strength of VFM analysis, with the green areas representing the strongest metrics, yellow areas representing moderately strong metrics, and red areas representing weaker metrics.

1. VALUE FOR MONEY ANALYSIS METRICS

Indicator	Description	Indicator category	Indicator type	Measurement type
-----------	-------------	--------------------	----------------	------------------

1	Cost per publication/conference/presentation	Effectiveness	Quantitative	Trend; Quasi-benchmark
2	Cost per employed staff supported	Effectiveness	Quantitative	Trend; Quasi-benchmark
3	Cost per employed staff hour supported	Effectiveness	Quantitative	Trend; Quasi-benchmark
4	Cost per postgraduate student supported	Effectiveness	Quantitative	Trend; Quasi-benchmark
5	Cost per postgraduate student hour supported	Effectiveness	Quantitative	Trend; Quasi-benchmark
6	Cost per volunteer supported	Effectiveness	Quantitative	Trend; Quasi-benchmark
7	Cost per volunteer hour supported	Effectiveness	Quantitative	Trend; Quasi-benchmark
8	Cost per individual reached	Effectiveness	Quantitative	Trend; Quasi-benchmark
9	Cost per partnership established	Effectiveness	Quantitative	Trend; Quasi-benchmark
10	Program BCR (innovation as benefit)	Effectiveness	Monetary	Trend; Benchmark
11	Ratio of grant to Trust operational costs	Economy	Quantitative	Trend
12	Trust administrative and support costs per Grant	Efficiency	Quantitative	Trend
13	Trust administrative costs as percentage of total spending	Efficiency	Quantitative	Trend
14	In-kind contributions as a percentage of total project expenditure	Efficiency	Quantitative	Trend; Quasi-benchmark
15	Cash contributions as a percentage of total project expenditure	Efficiency	Quantitative	Trend; Quasi-benchmark
16	Trust contributions as a percentage of total project expenditure	Efficiency	Quantitative	Trend; Quasi-benchmark
17	Ratio of Trust/non-Trust contributions	Efficiency	Quantitative	Trend; Quasi-benchmark

FIGURE A1. MAPPING OF METRICS TO STRENGTH OF VFM FRAMEWORK

		Measurement type		
		Benchmark	Trend/ Quasi-benchmark	Stand-alone
Indicator type	Monetary	10		
	Quantitative		1-9; 11-17	
	Qualitative			

Based on this, we can see that the VFM analysis is moderately strong, largely due to there

being limited information on other programs that would enable benchmark comparisons to be made for many of the metrics. We note that no equity metric was available – breakdowns of grant distribution by gender and regionality were considered but found to be unfeasible.

ASSUMPTIONS

For the calculation of the metrics, a series of assumptions were made to inform models. In all cases, the principle of conservatism was followed to ensure that results minimised the risk of overstating actual benefits and outcomes of the program. These assumptions are outlined below:

- Inflationary corrections:
- All monetary values were converted to present (2023) values using CPI data supplied by the Reserve Bank of Australia
- Coverage:
 - The data reflect budgetary and outcomes data for the 16 funded projects across the 2017, 2018, 2019 and 2021 rounds of the program. It is noted that data from the 2020 round were not available, and that due to the timeframes for the development of outcomes such as publications, it is quite likely that the data provided are an underestimate of the actual outcomes.
- Administrative and operational costs:
 - Administrative and operational costs are included in metrics 1-9, as these represent the costs to the Trust of achieving the desired outcomes, independent of other leveraged funding.
 - An estimate of FTE was provided by the Trust for the 2017-2021 period:
 - 1 SPO8 at 0.65FTE
 - 1 SPO10 at 0.5FTE (2017, 2018)
 - 1 SPO10 at 0.6FTE (2019-2021)
 - Salaries have been estimated based on the Crown Employees Public Sector Salaries Award for given financial years, with salary amounts placed at the highest band within a level.
 - Values reported on a financial year basis were converted to calendar year bases for this analysis by halving and allocating across the relevant calendar years.
 - Superannuation costs were applied as 10% of salary
 - Administrative overheads (office facilities, IT, HR etc.) were applied at a flat rate of 25% of salary. This benchmark is consistent with office-based organisations.²
- To estimate benefits, a brief literature search was completed to identify existing models of measuring the economic impact of innovations delivered as a result of environmental research. The results of this search identified that in an Australian context, 62% of environment-related grants can be defined as innovative³, and that the benefit-cost ratio for innovative research in Australia is 2.2⁴. These were then moderated by the portion of benefits attributable to the Trust (Metric 16 above). A further benefit was identified in terms of funding leveraged (in-kind and cash) from the proportion of research that would not have been funded had the grant not been awarded. This was estimated indirectly based on the results of the survey of unsuccessful applicants, using the proportion that could not conduct their research as a result of not receiving the grant (63%). This is more robust than asking successful applicants, as this is based on real outcomes rather than hypothetical outcomes, and holds for grant programs where there is significant oversubscription

(more viable grant applications than grants awarded). Sensitivity testing was completed for this parameter between extrema of 100% and 0%.

- As the cost-benefit analysis draws upon an existing estimate where discount rates were not published (and only a single discount rate was used), the effect of variations in the discount rate could not be tested.
- While projects funded in 2020 are not counted in terms of outcomes as these projects are yet to be acquitted, the expenditure on staff and overheads by the Trust for 2020 is included in the overall analysis as this expenditure would have in part supported ongoing management of projects awarded in previous years. As it is not possible to apportion this expenditure, the full amount has been included.

APPLICATIONS AND SUCCESSFUL CODED BY RESEARCH THEME

ALL		Successful	
Environmental monitoring, management, conservation, rehabilitation, adaptation			
Ecosystem (land and water) monitoring, conservation, adaptation and rehabilitation	41	Ecosystem (land and water) monitoring, conservation, adaptation and rehabilitation	2
Flora - biodiversity and loss prevention (land)	16	Flora - biodiversity and loss prevention (land)	3
Fauna - monitoring (land)	14	Fauna - monitoring (land)	1
Flora - climate change impacts and adaptation (land)	13	Flora - climate change impacts and adaptation (land)	3
Fauna - biodiversity and loss prevention (land)	12	Fauna - biodiversity and loss prevention (land)	1
Flora - restoration & rehabilitation (land)	11	Flora - restoration & rehabilitation (land)	1
Aboriginal stewardship	8	Aboriginal stewardship	2
Soil and erosion	5	Soil and erosion	2
Fauna - habitat restoration (land)	4		
Flora - monitoring (land)	4	Flora - monitoring (land)	1
Fauna - climate change impacts and adaptation (land)	3		
TOTAL	131		16
HUMAN/ENVIRONMENT INTERACTION			
Environmental communication/education	26	Environmental communication/education	2
Community/citizen science	21	Community/citizen science	2
Urban environments	16	Urban environments	1
Environmental degradation impact on humans	9		
Food/crops	8	Food/crops	1
Policy, regulation and social research	10		
Fundraising	1		
TOTAL	91		6
WATER			
Water - quality and management	35	Water - quality and management	3
Water - aquatic biodiversity and loss prevention (plants and animals)	18	Water - aquatic biodiversity and loss prevention (plants and animals)	1
Water - aquatic flora/fauna climate change impacts and adaptation	11		
Water - aquatic flora/fauna monitoring	5	Water - aquatic flora/fauna monitoring	1
TOTAL	69		5
WASTE			
Waste - contamination and pollutant monitoring, prevention and management	29	Waste - contamination and pollutant monitoring, prevention and management	3
Waste - industrial waste recovery and use	5		
Waste - reduction and processing	5		
TOTAL	39		3
CRISIS MANAGEMENT			
Natural Disasters (bushfires, floods)	19	Natural Disasters (bushfires, floods)	3

Biosecurity and pest control	11	
Carbon capture	3	
TOTAL	33	3