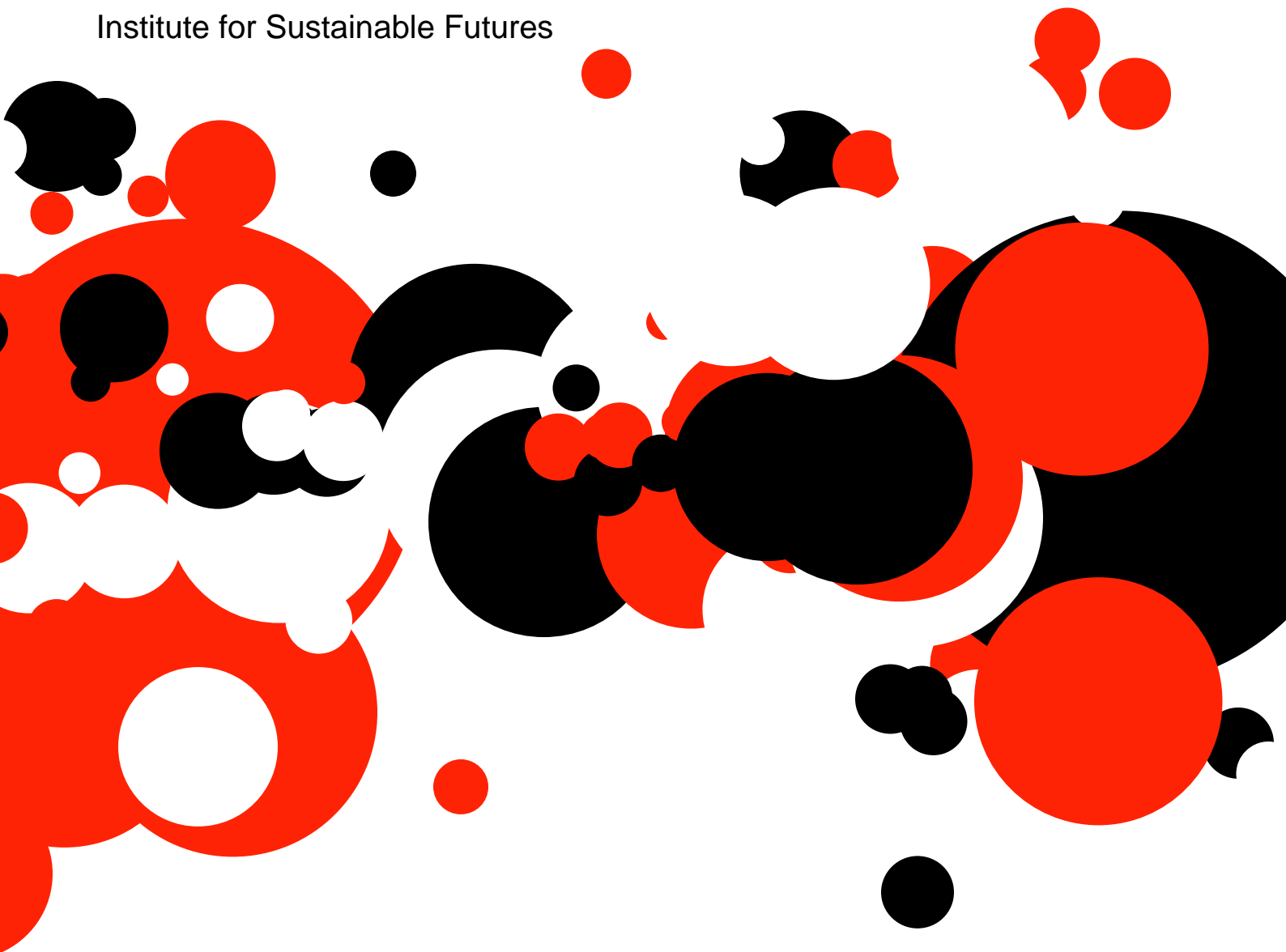




Evaluation of NSW Environmental Trust Education Grant Programs

Institute for Public Policy and Governance
Institute for Sustainable Futures



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List of Abbreviations

EOI	Expression of Interest
EE	Environmental Education
EES	Environmental Education for Sustainability
EFS	Education for Sustainability
ESD	Education for Sustainable Development
IPPG	Institute for Public Policy and Governance
ISF	Institute for Sustainable Futures
KEQ	Key Evaluation Question
M&E	Monitoring and Evaluation
NSW	New South Wales
OEH	Office of Environment and Heritage
SDG	Sustainable Development Goals
TLFS	Transformative Learning for Sustainability
Trust	New South Wales Environmental Trust
UTS	University of Technology Sydney



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Executive Summary

Background

The NSW Environmental Trust's Environmental Education Program aims to address specific environmental problems through education, behaviour change and environmental learning. The program provides competitive grants to community organisations and government agencies for a range of projects that increase the community's environmental knowledge and skills, enhance commitment to protecting the environment, and promote sustainable behaviour.

Specifically, the Environmental Education and Eco Schools grant programs are contestable grants that contribute towards this over-arching aim. In 2015-2016, the Trust awarded just over \$1 million for Environmental Education grants and \$273,000 for Eco Schools grants. These grants programs were last evaluated in 2010.

Purpose

The University of Technology Sydney (UTS) Institute for Public Policy and Governance (IPPG) and Institute for Sustainable Futures (ISF) evaluated the Environmental Trust Education Grants Programs in line with its comprehensive independent evaluation framework. The evaluation concentrated on program delivery between 2010 and 2016. The findings from this evaluation will inform future program design and decision-making at the NSW Environmental Trust.

The evaluation focused on the following four objectives:

- the operating and policy context, need and demand for the program
- the extent to which the program has achieved environmental and educational outcomes
- the extent to which customer experience and governance standards have been met
- the cost effectiveness of the grants.

Methodology

The following method assessed the effectiveness, implementation, governance, and efficiency of the grant programs through the:

- Development of a monitoring and evaluation framework for evaluating the Environmental Trust's grants programs based on key evaluation objectives
- Review of progress and final reports of acquitted and active grants between 2010 and 2016
- Review of literature to evaluate trends in environmental education policy and practice in Australia and overseas
- Qualitative interviews with internal stakeholders, successful grant recipients, and environmental educators
- Site visits to observe the key program outcomes on ground
- Online surveys: successful and unsuccessful grant recipients; and program participants
- An options workshop to validate preliminary findings, and prioritise recommendations.

Evaluation findings

Overall the Education Grants Programs' focus on prevention and education is critical in the sector at a time that it is absent from the policy context. There is high recognition and visibility for both Environmental Education and Eco Schools grants, and both enjoy a good reputation in the market. They are very efficiently and adaptively managed within the Trust. Together the grant programs have resulted in some unique and positive educational and capacity building outcomes for grant recipients and program participants.

The key evaluation findings for each of the four evaluation objectives have been presented below.

Program design, operating and policy context

The Education and Eco Schools grants address an important need in the market, as there is no other grants program like this in NSW. The current demand for grants is higher than the number of grants that can be awarded from the current funding pool. However the actual number of applications that get accepted is dependent on their quality.

Both Eco Schools and the Education Grants are critical in the sector at this time, given there is currently limited strategic direction or guidance for environmental education or active policy development for environmental education in NSW. The previous plan – Learning for Sustainability: NSW Environmental Education Plan 2007-10 (NSW Council on Environmental Education 2006) – finished in 2010. A clearer framework for how environmental education leads to environmental outcomes, incorporating transformative learning theories and social practice theories would be of value in improving program outcomes. Such a framework would consider realistic assessment of what outcomes are both achievable and measurable within the life of a grant.

Customer experience and governance

Overall evaluation findings suggest that there has been strong adaptive management of both individual projects and the entire Environmental Education grants program over time. While the overall perception of the application and assessment processes amongst applicants is positive, a few report that the process of completing an application is onerous for small sized grant projects. The introduction of the Grants Management System in 2018 will address this to some extent.

Capacity issues in relation to navigating Expression of Interest (EOI) processes, grant management and monitoring and evaluation were reported as a barrier for applying for funding for some potential grant recipients. For Eco Schools grants the time lag between preparing an application, announcement of success and preparation of a funding agreements impact on program design and the delivery of planned activities. Despite these, the overall demand for grants programs is high and qualitative evidence suggests that projects are largely delivered as planned. Generally, both Education and Eco School grant recipients believed the funding level provided by the grants was adequate.

Both Education and Eco Schools grants are efficiently administered within the Trust. However, it is reported that there would be value for the Trust to deliver workshops/webinars and/or mentor applicants and/or grantees around disseminating and sharing learnings, knowledge transfer, and evaluation. Grant recipients would value Trust support to build the evaluative capacity of grantees. Encouraging applicants to make explicit the link between transformative learning theories and related theories in environmental education and desired or expected environmental outcomes could be provided as useful guidance for applicants.

Achieving environmental and educational outcomes

Since overall project reporting has been output focused instead of being outcomes focused, currently there are limited opportunities to measure long-term outcomes. Project measures currently depict a better picture of how well projects were managed instead of how well the projects have achieved educational and environmental outcomes. In terms whether projects contributed to an increase in environmental literacy, there is self-reporting of knowledge creation however, but little by way of evidence of actualisation. There is stronger evidence for education and social outcomes, but their link to achieving environmental outcomes remains unclear. A key reason for this is that while projects are able to deliver the intended project outputs during the duration of their projects, they may not have sufficient time to report any behavioral changes after a project concludes. Tangible environmental outcomes have been particularly difficult to articulate and measure in the grant context. Finally, transfer of knowledge and capacity building of individuals and organisations has been reported as the key achievement of the program irrespective of the type, size and duration of the grant.

Cost effectiveness

Achieving cost-effective outcomes from grantees ensures that the Trust will maximise its overall contribution to environmental education in NSW. For the Trust to advance cost-effectiveness as an objective, funding allocations could include criteria for assessment of one or both of the following:



- Relative likelihood of grantees to earn additional co-contributions
- Which grantee generates greater value for money while achieving its intended outcomes?

An analysis of the capacity for grantees to earn additional co-contributions revealed that Eco Schools tend to earn comparatively higher per dollar rates of external co-contributions relative to the value of the grant. However, the quantum of co-contributions is typically higher for education grants (especially community grants) as they are of higher dollar value. Similarly, an analysis of the relative cost-effectiveness of grant types demonstrated that for a small investment, Eco Schools deliver high transactional values – meaning that for a small dollar amount they provide considerable engagement across a range of participants and high local profile. The scope and nature of project objectives differ from Education Grants, so cost effectiveness comparisons may be generally appropriate for some but not all Trust objectives.

The achievement of cost-effectiveness varies depending on the measure being evaluated in the project. In terms of product development and attendees at awareness events, Government Education grants are more cost effective than Community Education grants. However, in terms of individuals reached and number of organisations involved, Community Education grants are more cost-effective than Community Education grants

Recommendations

Both Eco Schools and the Education Grants are critical for improving environmental education outcomes at this time, given there is limited strategic direction or active policy work for environmental education in NSW. The following recommendations presented in Table 1 provide a range of opportunities to the Environmental Trust for further improving its overall program design to generate greater environmental outcomes while maximising economic efficiency. The table describes the key issues identified by the evaluation, response options, potential implications or challenges arising from these responses, and specific recommendations for the Trust to implement.



Table 1: Summary of recommendations

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
General Recommendations				
1	The NSW Government does not have a current environmental education policy framework. The previous plan – Learning for Sustainability: NSW Environmental Education Plan 2007-10 (NSW Council on Environmental Education 2006) – finished in 2010. As a result, policy guidance is lagging behind contemporary knowledge on effective environmental education.	<ul style="list-style-type: none"> Advocate for a revised and updated NSW Government plan for environmental education in NSW Develop a strategic framework for environmental education specifically within the realm of the Environmental Trust 	While a whole of government plan is beyond the control of Environmental trust it would be preferable to have clear objectives established at the NSW Government level	Advocate for a revised and updated NSW Government plan for environmental education in NSW, taking account of contemporary knowledge on effective environmental education.
2	Contemporary knowledge on learning and behaviour challenges the assumed connections between environmental education, awareness, behaviour change and tangible environmental outcomes that are embedded in program aims, objectives and principles. The grants programs could be more effective if guiding documents were updated to take into account new knowledge on transformative learning for sustainability (TLfS), social practices and values.	<ul style="list-style-type: none"> Revise the program aim and objectives to better reflect contemporary knowledge (Appendix 2 provides suggested text) Develop and document a program logic for the grants that reflects contemporary knowledge 	The legislation establishing the Trust uses specific terminology referring to ‘environmental education’ and ‘public awareness of environmental issues’ which could make revision of program aims and objectives problematic. A new program logic, available to grant applicants, could retain the existing aim and objectives but provide guidance on interpretation that is consistent with contemporary knowledge. Developing a new program logic would likely require specialist advice.	Engage a consultant to develop a publicly available program logic for each of the grant programs that incorporates contemporary knowledge on TLfS, social practice theory and values theory. This could be included in the Program Guidelines.
3	As above, but noting that there is currently very little experience in the NSW environmental education sector (and beyond) with activities that draw on transformative learning, social practice theory and values theory. Applicants will need new guidance to respond to this new approach.	<ul style="list-style-type: none"> Develop new principles, criteria and supporting guidance material for grant applicants and recipients to assist them to incorporate contemporary knowledge on learning, social practices and values into their projects. Build experience with these new learning frameworks by setting aside a portion of the Education 	<p>Applicants and projects will vary in their ability to implement these ideas due to varying backgrounds and experience. A staged approach to build up experience is preferable, in which guidance material initially provides ideas for drawing on these frameworks without requiring their use. As experience grows, effective approaches could be embedded more strongly in the guidance material.</p> <p>The larger Education grants provide more scope to apply these new approaches but Eco Schools</p>	<p>Engage a consultant to develop new principles, criteria and supporting guidance material to assist applicants to incorporate contemporary knowledge on learning, social practices and values into their projects. The guidance material would include:</p> <ul style="list-style-type: none"> - Primer for applicants about Transformational Learning for Sustainability, social practice theory and values theory - Practical ideas for learning activities that draw on these frameworks

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
		grant funding for innovation in 4transformative learning (see Recommendation 5 below).	<p>applicants could still benefit from a simple list of practical ideas that draws on these approaches.</p> <p>Developing new guidance material for applicants would require additional specialist advice, but some initial suggestions are provided in Appendix 2.</p>	<ul style="list-style-type: none"> - Resource list - Examples / case studies of relevant or successful TLfS projects. <p>The guidance material would be incorporated into Program Guidelines.</p>
4	A stronger focus on transformative learning, social practice theory and values theory in guidance for applicants and assessment criteria places new demands on the Technical Review Committees. The existing committee members are unlikely to have the knowledge and experience needed to assess application of these theories, at least initially.	<ul style="list-style-type: none"> • Add members to the Education and Eco Schools Technical Review Committee with knowledge and experience of transformational learning and related theories. • Contract specialist advice to assist with grant assessment. 	A suitable addition to the Technical Review Committees would need to have a good working knowledge of contemporary learning theories. They would most likely be an academic or learning practitioner. This kind of person may not be in a position to volunteer their time for a substantial evaluation process so will probably need to be contracted.	<p>Actively seek members for the Education and Eco Schools Technical Review Committees with knowledge and experience of transformational learning and related theories, and understanding of the opportunities for links between environmental education and tangible outcomes. New members could come from academic, education or sustainability / environment sectors.</p> <p>If difficult to find new members, consider contracting in this expertise.</p>
Program design, operating and policy context recommendations				
5	<p>The transformational learning literature points to the role of cognitive dissonance or disorienting dilemmas in changing values or worldviews, and helping participants to 'see differently'. Educational interventions that help participants to 'see' their own values and worldviews may have a role in creating such dilemmas and could be tested through grant activities. Social practice theory also draws attention to the ways that learning happens collectively and the role of supportive infrastructure and social norms in embedding new practices.</p> <p>However, the body of evidence demonstrating how to effectively implement education programs based on these ideas is still limited.</p>	Dedicate a portion of each Education grant funding round to piloting transformative learning interventions that draw on contemporary learning and social theory. Embed stronger research and evaluation requirements in these pilots to build up a body of knowledge on what works.	<p>Dedicating some funding to pilot innovative approaches will reduce funds available to 'standard' projects, require development of separate guidelines for applicants and may create a greater assessment burden due to need to consider separate criteria.</p> <p>Applicants will need to incorporate more intensive research, monitoring and evaluation in order to capture and share learnings. This may discourage applications, so a higher funding limit may be needed to draw applications.</p> <p>By its nature, funding pilot proposals of an innovative nature increases the risk of not achieving desired outcomes. This can be offset through the learning benefits.</p>	<p>Allocate 25% of Environmental Education grant funding to an Innovation sub-program with additional funding criteria aimed at piloting, building experience with and learning from contemporary learning and social theory. Aim to fund 1 project each year in the government and community streams under this sub-program. This will require:</p> <ul style="list-style-type: none"> • Development of an additional assessment criterion for the sub-program to encourage innovative application of these theories • Development of additional research and reporting requirements to ensure that the innovation is thoroughly evaluated and outcomes are shared • Increasing the funding limit for these grants to \$125,000 to encourage applications and allow for the extra work. <p>After three years, review outcomes and update the guidance materials for all participants based on what has been learned. Decide at this point whether to continue the</p>

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
				Innovation sub-program or revise the assessment criteria for all applicants.
6	<p>Transformative learning and values theories indicate that sustained behaviour change is more likely when specific values and worldviews are changed or reinforced. Working with such theories requires a baseline assessment of audience values and may require a post-intervention assessment to evaluate value changes. Value assessment tools are not in widespread use.</p>	<p>There are multiple tools available for assessing values, including various versions of the Schwartz Values Survey (SVS), the World Values Survey (WVS) and an online worldview assessment tool developed by Annick de Witt. The guidance material proposed in Recommendation 3 could include suggestions on suitable tools to use for values assessment.</p>	<p>Implementation of these tools can be time consuming and requires specialist expertise. It may be more effective to limit initial application to the Innovation sub-program proposed in Recommendation 5.</p>	<p>Include a list of resources for values assessment in the guidance material for applicants (Recommendation 3) and particularly encourage their use in the Innovation sub-program (Recommendation 5).</p>
7	<p>Some evidence that small and (lower) medium sized grants may be effective.</p> <p>However, the scope and nature of project objectives differ between the Education and Eco Schools grants, so cost effectiveness comparisons cannot be the only deciding factor to evaluate the achievements of the grant programs.</p> <p>Trust wants to ensure funds go to projects most likely to be successful in achieving program objectives.</p>	<ul style="list-style-type: none"> Adopt a staged approach to larger Environmental Education grant delivery so that instead of committing \$100k up-front for a project the Trust can commit a smaller amount (e.g. \$20k - \$30k) to a pilot or detailed research and planning for a larger project and evaluate before committing the full amount. Adopt the above approach only for the new Innovation sub-program (Recommendation 5). 	<p>The options reduce the risk of supporting applications from unknown / smaller grant applicants, but will increase the proportion of funding / time dedicated to measuring and reporting rather than implementing. This has both positive and negative implications. As risks are higher for the proposed Innovation sub-program, applying a staged approach specifically for those grants has merit. It also means that learnings will be fed back to the Program more rapidly.</p>	<p>Implement a staged approach for the new Innovation sub-program (Recommendation 5) that would involve:</p> <ul style="list-style-type: none"> Initial stage of up to one year with stronger focus on piloting innovative ideas, learning about effective approaches, establishing a theory of change, building a community of practice between grant recipients, and planning for the full project (Grant value for this stage capped e.g. \$20k - \$30k) Second stage if the first stage goes well of actual project delivery, using the remaining funds.
Achievement of educational and environmental outcomes, and cost-effectiveness recommendations				
8	<p>Some small and medium grant project recipients revealed that they have or are still struggling to provide the required accuracy with respect to the program measures in their reporting to the Trust.</p> <p>The evaluation found that many projects had difficulty demonstrating</p>	<ul style="list-style-type: none"> Relax the requirement for grants to demonstrate tangible environmental outcomes, given that it is difficult to measure such outcomes from education activities. Reduce the number of measures of environmental outcomes on 	<p>There is a significant focus throughout the Trust program literature on achieving tangible environmental outcomes which may conflict with any attempt to reduce the need to show these outcomes. The first option is problematic from this perspective.</p> <p>The third option has implications for Trust resources as applications for longitudinal</p>	<ul style="list-style-type: none"> Reduce the number of measures of environmental outcomes on which grant recipients are asked to report so that they can focus their efforts on those areas where outcomes are most measurable and likely (see Recommendation 9). Allow and encourage grant applications that would undertake longitudinal evaluation of

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
	<p>tangible environmental outcomes within the grant timeframe, given the lag between educational activities and environmental impacts of changed behaviours becoming evident. Contemporary learning and social theory indicates that the links between environmental education and tangible outcomes are loose, complex and may not be rapidly evident.</p> <p>Grant recipients indicated a desire to continue to monitor and measure the outcomes of their projects after grants were acquitted but lacked resources to do so.</p> <p>Some stakeholders belonging to the Eco School s grant programs, expressed that they actually struggled to expend grant fund appropriately because they were able to arrange for an overwhelming amount of donations and in-kind contributions.</p>	<p>which grant recipients are asked to report so that they can focus their efforts on those areas where outcomes are most measurable and likely (see Recommendation 9)</p> <ul style="list-style-type: none"> Allow and encourage grant applications that would undertake longitudinal evaluation of previous Trust-funded projects 	<p>evaluation projects need to be reviewed and administered. However, if funded from the existing pool of funds, these grants would replace others.</p> <p>There is therefore a strong rationale for both the second and third options.</p>	<p>previous Trust-funded projects. This will require amendment of Program Guidelines to support and draw attention to this opportunity.</p> <ul style="list-style-type: none"> Accuracy in expenditure data collection is of high importance for Trust to know how funding has been utilised and observe cost-effectiveness amongst different projects.
9	<p>Currently reporting from grant recipients takes place to fulfil compliance requirements as compared to taking place for program improvement.</p> <p>This makes it difficult to evaluate the achievement of projects on the basis of actual outcomes achieved.</p> <p>Between 2010 and 2016, the grantees have been provided an extensive list of measures in up to seven categories from which they have to report the actual and</p>	<ul style="list-style-type: none"> The current suite of project measures needs to be reduced and revised to reflect learning outcomes that go beyond awareness and literacy to values and behaviour, incorporating transformative learning and/or social practice theories. Create benchmarks between similar projects so that projects can be compared on the basis of 	<ul style="list-style-type: none"> Current reporting requirements are more output focused instead of outcome focused. The Trust realises this and notes that they use outputs as indicators of progress towards the intended outcomes. Even though the qualitative sections of progress and final reports allow stakeholders to report outcomes, most of them due to a lack of understanding of monitoring and evaluation terminology report outputs in those sections as well. Moreover, currently, it is only mandatory for stakeholders to report stakeholder and 	<p>Conduct a review of existing listed project measures and categories. Aim of the review is to create measures that improve the project outcomes through:</p> <ul style="list-style-type: none"> Allowing room for innovative responses to meeting project measures Incorporating principles from transformative learning and / or social practice theories Reducing the number of measures to ensure they are 'meaningful' to stakeholders and participants. <p>Examples of outcomes oriented measures:</p>

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
	projected values for the relevant measures to their projects (see Appendix 7.3 for a complete list of project measures obtained from project measures data). The categories include economic, environment quality, land management, research, resource conservation, stakeholder and community, and water management measures. Even though project measures have been considerably reduced since 2013 for Education and Eco Schools grants over the years, the reporting requirements have dampened the passion for many project managers who believe that it has led to their projects becoming less innovative to achieve compliance.	factors other than cost-effectiveness as well. If a project focuses on environmental outcomes as well, it should be mainly evaluated on the basis of achieving environmental outputs instead of just stakeholder and participation measures.	community education and participation measures which makes comparison of projects across other outcomes areas challenging. <ul style="list-style-type: none"> • Creating benchmarks can be challenging as projects differ in scale and objectives. • The Trust has continued to refine project measures over time and it should continue to be an area that requires continued attention as the grant programs evolve. 	<ul style="list-style-type: none"> • The 'number of participants at a workshop' is a good measure for good project planning, but it cannot indicate much about actual behavioural change. By counting the number of participants to a workshop who later join that particular community network or pledge to take environmental action could perhaps better indicate the possibility of a behaviour change for a community environment project. • The 'number of times an online resource is downloaded' would be a better outcome measure instead of 'number of online resources developed' for an environmental research project.
Customer experience and governance recommendations				
10	For Eco Schools the time lag between preparing an application, announcement of success and preparation of a funding agreement impacts on program design and the delivery of planned activities	Revise the timing of Eco Schools grant application process to fit in with planning for school year.	This change has previously been proposed and not yet implemented, indicating potential program management challenges internal to the Trust	Revise the timing of Eco Schools grant application process to fit in with planning for school year.
11	Applicants may require additional guidance and training in order to make explicit the link between transformative learning theories and related theories in environmental education and environmental outcomes. Proposed new Program Guidelines (Recommendation 3) may not be sufficient to improve grant outcomes.	Develop capacity-building opportunities for grant applicants that helps potential grant recipients to learn about transformative learning theories and monitoring and evaluation.	Grant applicants from community-led / volunteer organisations may have difficulties attending capacity building workshops during work-hours. Similar issues would be faced for remote / regional organisations. Pre-grant roadshows and workshops have previously been conducted, however no longer occur due to resourcing issues.	Run capacity building activities for grant applicants that have successfully made it past the EOI stage. This could take the form of workshops run by an internal or external expert with advice on grant priorities, describing theory of change, how to pitch etc in a similar fashion to FACS Liveable Communities grants or OEH Sustainable Communities grants, or through a more flexible, multi-modal form of delivery and learning.

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
12	There are limited opportunities to create linkages between related grant projects, or between previous and current projects, in order to share knowledge and learnings and leverage the breadth of experience within the Trust-funded projects to promote successful project outcomes. Grant recipients expressed a desire for more contact and knowledge sharing across projects.	Facilitate knowledge sharing workshops and online communities to promote outcomes and learning from successful projects and encourage the creation of communities of practice.	This will require additional allocation of resources from the Trust.	<p>Fund a buddy system linking previously successful project coordinators with commencing projects where relevant linkages exist.</p> <p>Bring members of previously successful projects to capacity building activities (e.g. post-EOI workshops, Recommendation 11).</p> <p>Hold regular (annual / biennial) conferences / showcases for recently completed Trust funded projects – the OEH AdaptNSW annual forum could provide an example.</p> <p>Facilitate an online knowledge-sharing portal for grant recipients, e.g. a LinkedIn group.</p>
13	The Environmental Trust has limited resources to allocate to implementing a number of the recommendations. Some of the recommendations would require allocation of additional resources either temporarily (2, 3, 5, 6, 9) or permanently (4, 11, 12). Others could be managed within existing resources but will take resources away from current practice (5, 7, 8, 10). There is a case for at least temporarily increasing the funds available for the Environmental Education grants while transitioning to a program with a stronger basis in contemporary learning and social theory.	<ul style="list-style-type: none"> • Use external consultancy to provide temporary increases in available resources • Piggyback the capacity building (Recommendation 12) on existing environmental education events to reduce resource requirements. • Seek a temporary increase in funding from the NSW Government to fund the transition to a program with a stronger basis in contemporary learning and social theory. • Seek a permanent increase in funding from the NSW Government to support capacity building and knowledge sharing activities. 	Arguing for additional funds is always challenging as there are many competing demands. Nevertheless, there is good evidence that the grants programs will be more likely to deliver tangible environmental outcomes if additional resources are allocated towards the needs identified in these recommendations. While some recommendations can be implementing without an increase in funding, they will reduce funds available for grant applicants in a program that is already perceived as extremely competitive.	<ul style="list-style-type: none"> • Use external consultancy to provide temporary increases in available resources • Piggyback the capacity building (Recommendation 12) on existing environmental education events to reduce resource requirements. • Seek a temporary increase in funding from the NSW Government to fund the transition to a program with a stronger basis in contemporary learning and social theory. • Seek a permanent increase in funding from the NSW Government to support capacity building and knowledge sharing activities.

1 Introduction

The NSW Environmental Trust is an independent statutory body established by the NSW government to fund a broad range of organisations to undertake projects that enhance the environment of New South Wales (OEH 2017). The Trust is empowered under the *Environmental Trust Act 1998*¹, and its main responsibility is to make and supervise the expenditure of a wide range of *contestable grant programs to deliver positive environmental outcomes for NSW. Included in this portfolio are a number of programs that focus specifically on environmental education.*

Accordingly, one of the objectives of the Trust is:

(c) to promote environmental education and, in particular, to encourage the development of educational programs in both the public and the private sectors that will increase public awareness of environmental issues of any kind, (Environmental Trust 2016)

The Trust is administered by the Office of Environment and Heritage (OEH) and is chaired by the NSW Minister for the Environment. Members of the Trust are the Chief Executive of OEH, and representatives from local government, the Nature Conservation Council of NSW and NSW Treasury.

The vision of OEH is that 'Our environment and heritage are valued, protected, enjoyed and support a prosperous and healthy New South Wales'. The various roles of OEH in achieving this vision are outlined on their website. The Environmental Trust aids OEH / NSW Government in fulfilling the role to 'advise, support and educate communities, regions, industry and landholders on the environment and heritage'.

Environmental Education and Eco Schools Grants Program

The Environmental Education and Eco Schools Grants Programs are contestable grants designed to contribute towards the overarching aim of the Environmental Trust.

Ultimately both programs seek to improve the environment of NSW through targeted engagement of the community. Eco Schools seeks to create high quality student learning outcomes through curriculum-linked school education, whilst the Education program focuses on broader community engagement, capacity building and participation. Both programs seek to enhance civic engagement and environmental stewardship, leading to a more efficient use of resources and improved local environments through on-ground action or improved knowledge to allow for informed decision making. (Environmental Trust 2016)

Uniquely for Trust funded projects, the programs deliver outputs and outcomes focused specifically on addressing the human impacts on the environment through education, rather than focusing on the direct on ground outputs and outcomes that the majority of the Trust's other grant programs deliver (Environmental Trust 2016).

The **Environmental Education Program** aims to address specific environmental problems through education, behaviour change and environmental learning. It provides competitive grants to community organisations and government agencies for a range of projects that increase the community's environmental knowledge and skills, enhance commitment to protecting the environment, and promote sustainable behaviour (OEH 2016). The Program funds projects that meet the following objectives (OEH 2016):

- **Objective 1:** Facilitates changes in behaviour of individuals and groups that will affect specific environmental problems
- **Objective 2:** Develop and promote education projects that improve the environment.

The **Eco Schools** Program aims to provide environmental learning opportunities for students, teachers and the school community. Eco Schools projects provide hands-on curriculum-based environmental education focusing on strong student participation (OEH 2016). The Eco Schools program objectives are:

- **Objective 1:** Environmental Benefits

¹ http://www5.austlii.edu.au/au/legis/nsw/consol_act/eta1998263/s7.html



Enabling schools to promote more efficient resource use and improve the quality of the local environment.

- **Objective 2:** Student Participation

To promote the development of knowledge, values and behaviour in students that supports environmental sustainability.

- **Objective 3:** Teacher Engagement

To assist teachers to access targeted professional learning, and to assist with integrating environmental management into curriculum delivery.

- **Objective 4:** Managing for Sustainability in School and the Community

To encourage schools and the community to explore opportunities for working together for sustainability outcomes.

The Environmental Trust Education program allocates \$500,000 to each of the Community and Government streams, for a total program funding of \$1 million. In 2017 the minimum grant amount (for both) was \$10,000 and maximum was \$100,000. Funding duration for both is minimum of 2 years and maximum of 3 years. This was a change from previous years, with minimum grant amount and duration increased to help ensure traction and longer-term outcomes.

The Eco Schools program grant allocates \$3,500 to each successful school application, with up to 80 schools receiving grants in 2017/18.

Table 2 outlines the average grant value and duration for each of the grant streams in 2016/17 as well as the organisations that are eligible under each of the streams.

Table 2: Grant size and duration by funding stream (2016/17)

Funding streams / grants	Funding (\$) 2016/17	Duration	Eligible organisations
Education Community	Up to \$500,000	2- 3 years Average project duration: 23.6 months Average project funding: \$56K	<ul style="list-style-type: none"> • Community organisations • Community groups • Incorporated associations • Incorporated non-profit organisations • Non-commercial cooperatives
Education Government	Up to \$500,000	2- 3 years Average project duration: 22.1 months Average project funding: \$62K	<ul style="list-style-type: none"> • State government agencies and/or statutory committees • Councils • Regional organisation of councils • Other local government controlled organisations • Universities
Eco Schools	Up to \$280,000	24 months Amount: \$3.5K	<ul style="list-style-type: none"> • NSW Registered Schools

Evaluation of the Environmental Education and Eco Schools Grants Program

To inform future program design and decision-making, UTS undertook an evaluation of the Environmental Trust Education grant programs between November 2017 and March 2018, in line with a comprehensive independent evaluation framework. The evaluation concentrated on program delivery between 2010 and 2016, with a primary focus on the operating context, effectiveness, need and demand for the program.



Table 3 below outlines the key objectives and evaluation questions for the evaluation.

Table 3: Key evaluation questions

Key evaluation question (KEQs) for the Evaluation of the Environmental Trusts Education Grants Program	
To explore the operating context, effectiveness, need and demand for the program to provide guidance for future funding and program design	<ol style="list-style-type: none"> 1. What should each program's focus be to best service environmental education in NSW in the current climate? 2. Are there alternative ways of delivering the programs that would improve short, medium and long term outcomes (provide an options analysis)?
Determine the extent to which the current programs have achieved environmental and educational outcomes	<ol style="list-style-type: none"> 1. Are projects appropriate and effective in addressing environmental issues 2. Have projects contributed to an increase in environmental literacy (consider knowledge, attitude and behaviour change)? 3. Have projects facilitated measurable environmental and educational outcomes in the short, medium and/or long term 4. What are the social and economic outcomes? How important are these in achieving environmental and educational outcomes? 5. Is there a 'transfer of knowledge', and if so, what is the current reach of the education programs? Are there better opportunities for greater local community involvement/dissemination/shared learnings? 6. Has the program built capacity of individuals and organisations as environmental educators and grant/project managers?
Determine the extent to which customer experience and governance standards have been met, and identification of how they could be improved	<ol style="list-style-type: none"> 1. Is current demand at an acceptable level? Are the average success rates appropriate? 2. Are the application and assessment processes accessible and appropriate? 3. What are the barriers to applying for funding? 4. Is the current make-up and skill set of the Technical Review Committee appropriate in assessing and recommending applications for funding? 5. How well do planning, monitoring and reporting requirements support grantees in their project delivery? Can processes be streamlined further? 6. Are the communication activities employed by the Trust appropriate and effective? 7. Should Trust Administration deliver workshops/webinars and/or mentor applicants and/or grantees? If so, what should the focus be? 8. To what extent are projects delivered as planned? 9. Should projects be managed more adaptively?
Assess the cost effectiveness of the programs and areas for improvement	<ol style="list-style-type: none"> 1. Is the current budget allocation to the Environmental Education programs and individual grants appropriate to achieve short and medium term environmental and educational outcomes? For Eco Schools, consider the breakdown of funding for infrastructure versus professional development. For the Education program, consider differences in performance based on grant value. 2. Is the current budget allocation to the Environmental Education and Eco Schools programs and grants appropriate for the level of demand and capacity of applicants? 3. Is the current program funding allocated to Trust administration/staffing commensurate with the programs resourcing needs?



2 Evaluation methodology

This section presents the steps undertaken by UTS to evaluate the NSW Environmental Trust Education Grant Programs.

Monitoring and Evaluation Framework

UTS developed a monitoring and evaluation framework for the evaluation of the NSW Trust's Environmental Education Grants. The framework drew on the key evaluation objectives discussed in Table 2, Section 1 to:

- Determine a list of evaluation questions aligned to the evaluation objectives, that have been addressed in this evaluation
- Guide the indicators for evaluating the effectiveness, efficiency and appropriateness of the grants, that have been measured and analysed to answer the evaluation questions
- Identify the data sources for these indicators
- Identify and describe the methods to analyse the data sources
- Provide a detailed plan for implementing the evaluation.

Document and data review

UTS analysed **all** of the progress and final reports for environmental education grant programs between 2010 and 2016. The challenges and enablers described in each of the reports were grouped in key themes and were matched with the qualitative data obtained through interviews with key internal and stakeholder interviews. This document review contributed to the overall outcomes analysis.

The document review and the design of the evaluation methodology was also informed by a review and analysis of the following documents:

- Food Gardens in Schools Review
- Environmental Education Discussion Paper
- Online guides, and web information on application and reporting processes
- Internal meeting minutes

Literature review

A detailed desktop literature review was conducted to evaluate the appropriateness and effectiveness of the existing program design of the Environmental Trust Education grants. It involved a review of government programs and priorities as well as a review of trends in environmental education practice and policies in Australia and overseas. The findings of the literature review were complemented with the findings from the interviews with environmental educators and key internal stakeholders. Together it forms the basis of our recommendations on how to align the current environmental grant processes with good practice in environmental education programs. A detailed list of similar environmental education grants reviewed have been incorporated in Appendix 4.

Data review

UTS obtained data on grant funding and project measures for all grants between 2010 and 2016. A descriptive analysis was carried out for data on grant funding and non-grant funding for different grant types. This was followed by separating data on project measures into program input, output and outcomes data to conduct a cost-effectiveness analysis between the different types of grants in.

For comparability reasons, all project measures and funding data used for cost-effectiveness analysis in Section 3.4 only was further converted into monthly equivalents and monetary values were deflated to



2016 dollars. More detail on data organisation and transformation for cost effectiveness analysis can be found in Section **Error! Reference source not found.** and in Appendix 7.1.

All qualitative and quantitative data has been analysed across different types of grant size as well by differences in size and duration of the grants.

In terms of size of funding, grants have been characterised as:

- Small (if less than \$30k)
- Lower-mid (if between \$30k and \$60K)
- Upper mid (if between \$60k and \$90K)
- Large (if greater than \$90k)

Similarly, in terms of duration grants have been characterised as:

- Short (if less than 13 months)
- Lower mid (if between 13-18 months)
- Upper mid (if between 19-24 months)
- Long (if more than 33 months)

These definitions have been arbitrarily selected and used for the purpose of qualitative and quantitative analysis throughout the evaluation.

Online survey of successful and unsuccessful grant recipients

All successful and unsuccessful grant applicants and recipients between 2010 and 2016 were invited to participate in a 12-15 minute online survey that focused on:

- Perceptions on the appropriateness and effectiveness of the grant application and feedback process
- The extent of the overall level of environmental literacy amongst successful and unsuccessful applicants
- Effectiveness and appropriateness of the grant management process for successful recipients
- Environmental outcomes achieved by successful grant recipients
- Social, economic and learning outcomes achieved by the successful grant recipients for their respective organisations and target audience
- Methods used by successful grant recipients to promote their funded projects
- The extent to which the grant increased the individual capacity of successful grant recipients and their organisations

UTS received 256 responses to the online survey of successful and unsuccessful grant recipients. The key demographics of the survey respondents have been presented in Appendix 5. The small sample size for the online survey relative to the total number of grants awarded between 2010 and 2016 implies that results may not be reliable, and need to be interpreted with slight caution. The survey respondents are also not representative of the total number of grant recipients. This has been noted in our analysis. All quantitative and qualitative data has been triangulated throughout the evaluation so as to overcome this limitation.

Online survey of program participants

Program participants from all grant programs between 2010 and 2016 were invited to participate in a 5-10 minutes survey. This survey focused on:

- Participant expectations from programs
- Overall satisfaction with the program delivery



- The extent to which participants have been able to improve their environmental literacy and/or behaviour
- Relationships established as a result of participating in a program

This survey was active online for only two weeks. Despite the short amount of time, UTS received 82 responses in total. As in the case of the online survey of successful and unsuccessful grant recipients, the data obtained from this survey is also not representative of the total number of participants that have engaged in grant projects between 2010 and 2016. Nonetheless, it provides important insights on the program participants' perceptions on the grant programs. The key demographics of the respondents are presented in Appendix 5.

Stakeholder consultations

Consultations with key internal stakeholders involved in implementing and managing the environmental education grants were held to investigate the process and stakeholder satisfaction with the outcomes of the environmental education grants achieved so far. A total of 15 internal stakeholders representing state government, local government, Technical Review Committee and independent environmental organisations involved in the administration and processing of the grants were interviewed by our team of consultants either by phone or face-to-face.

In-depth interviews with 40 successful grant recipients were also conducted by phone. The grant recipients were interviewed about:

- The extent to which their funded programs achieved their aims and objectives
- Most significant outcomes from their grant projects
- How grant recipients measured and reported outcomes
- Whether there were any overall organisational learnings through the grant process and implementation
- Key barriers and drivers to achieving their project objectives
- Perceptions on the appropriateness of the application process, grant length and overall funding
- Possible improvements to the environmental education grant programs

The key demographics of the grant recipient interviews have been presented in Table 4 below.

Table 4. Key demographics of grant recipient interviews

Classification	Attribute	%
Project year	2010	10
	2011	5
	2012	7.5
	2013	25
	2014	17.5
	2015	20
	2016	15
Project status	Active grant	42.5
	Grant acquitted	55
	Grant awarded	2.5
Program code	Eco Schools	20
	Education community	30
	Education government	37.5
	Food gardens in schools	12.5
LGA classification	Metro	57.5
	Regional	30
	Rural	12.5



Three additional interviews were conducted with environmental educators to understand the appropriateness and effectiveness of the overall program design of the environmental education grants.

Finally, UTS conducted five site visits with government and community environmental education grant recipients. The main aim of these site visits was to observe the key program outcomes from the grant projects on ground according to principles of environmental learning best practice, as well as monitoring and evaluation of project outcomes. It also provided an insight into the grant recipient's satisfaction with the grant management and governance process.

Options workshop

Once UTS completed its preliminary analysis of the evaluation findings for the environmental education grants, a workshop was organised with key internal stakeholders from NSW Environmental Trust to support a collaborative and participatory approach to undertaking analysis. The workshop was an opportunity for those directly involved in the implementation of the grants to review the preliminary evaluation findings, and to discuss and prioritise the opportunities for the environmental education grants in future.



3 Evaluation findings

3.1 Program design, operating and policy context

Key findings

- The Education Grants program addresses a need in the market, as there is no other grants program like it in NSW.
- The current demand for grants is higher than the number of grants that can be awarded from the current funding pool, particularly in the Education program. However the actual number of grants rewarded each year is dependent on the quality of grants received.
- Both Eco Schools and the Education Grants are critical in the sector at this time, given there is limited strategic guidance or active policy for developing environmental education in NSW. The previous plan – *Learning for Sustainability: NSW Environmental Education Plan 2007-10* (NSW Council on Environmental Education 2006) – finished in 2010.
- A focus on curriculum delivery in Eco Schools aligns with schools' core business and increases likelihood of long-term alignment of curriculum with Eco Schools projects.
- The lack of a current NSW Government environmental education policy framework means policy guidance is lagging behind contemporary knowledge on effective environmental education.
- Contemporary knowledge on learning and behaviour challenges the assumed connections between environmental education, awareness, behaviour change and tangible environmental outcomes that are embedded in program aims, objectives and principles. There needs to be a clearer framework, or articulated theory of change, for how environmental education leads to environmental outcomes, incorporating transformative learning and/or social practice theories.
- The grants programs could be more effective if guiding documents were updated to take into account new knowledge on transformative learning for sustainability (TLfS), social practices and values.
- Grant recipients have sought more opportunities for disseminating and sharing learnings.
- An opportunity exists for the Trust to identify and fund projects relating to particular thematic areas, or environmental issues, or methods in particular years to facilitate building a community of practice around that specific area. In the first instance, a sub-program theme focused on transformative learning interventions could be implemented.
- There are opportunities to improve the effectiveness of grant funding by implementing a staged approach to funding larger Education grants to increase the potential for long-term outcomes, by building on the successes of previous grants and putting more resources to follow up and measuring longer-term project impact. This approach could be particularly suitable for an innovation sub-program focused on transformative learning projects.
- Many stakeholders suggested setting aside some funds for longitudinal evaluation, delivered as a stand-alone grant for projects that want to return to their participants and measure environmental outcomes.
- Gateway, or a staged approaches to grant delivery was also suggested with a stronger focus on planning in the initial stage, followed by a program implementation phase, and then a final stage for longitudinal evaluation of learning and environmental outcomes.

3.1.1 Policy context and sector capacity

The NSW Government, as of 2016, does not have an active policy specific to environmental education. The previous plan – *Learning for Sustainability: NSW Environmental Education Plan 2007-10* (NSW Council on Environmental Education 2006) – finished in 2010, although individual government agencies are described as continuing to implement activities consistent with its intent, including the Trust's Education stream programs (Environmental Trust 2016). This plan created a strategic framework for developing environmental education in NSW, one that was 'effectively integrated with other environmental



management tools, fostered collaborative learning and reflective practice, and had the capacity to progress society towards a sustainable future' (Environmental Trust 2016).

In order to understand the need for the Trust Education Grant Programs and whether they are addressing funding gaps, other environmental funding streams operating specifically in NSW and nationally were reviewed and analysed for cross-over with the Trust Programs. These other funding streams are listed and described in Appendix 4.

The Environmental Trust Education Grants Programs differ from the majority of other funding streams in its specific focus on education related programs, focus on changing human behaviour and impacts on the environment, and also for its relatively large funding amount both in terms of the total pool of funding available for the program and funding available for individual grants..

The review of alternative grant funding identified some other government grant funding schemes that included some element of eligibility for funding education-related initiatives. The amount of cross-over seems small however, as these other schemes have quite specific focuses i.e. threatened species preservation or reducing food waste and so exclude many other potential initiatives.

Some local governments have specific environment or sustainability focused grant schemes, however these are limited to their own LGA region, and are of comparatively small funding amounts..

There exist some private funding sources that support environmental initiatives (The Ian Potter Foundation, the Reichstein Foundation and the Sid Myer Foundation). These were open to a wide variety of environmental initiatives, not limited, or focused, on education related field.

There was some grant funding that had direct cross-over with the Eco Schools funding, namely the Yates (formerly Coles) Landcare Garden Grants and the Teachers Environment Fund. These grants were national, and smaller in scale and value than the Eco Schools program.

There is potential to increase the overall pool of funding available for Education and Eco School grants. The Education Grants program addresses a need in the market, as there is no other grants program like it in Australia. There is also a high demand for grants in the market as demonstrated by EOIs received for Education Grants and applications received for Eco schools grants– see Section 3.3.1 for further details.

However, internal stakeholders interviewed for the evaluation are satisfied with the ratio of current demand for grant programs versus the number of applications that get funded.

Stakeholders also noted that sector capacity to run the types of projects funded through the Education grants stream has diminished over the past decade. They commented that Environmental Education roles have reduced in local councils, so the ability for state and local governments to contribute to collaborative projects, like those funded through the Education Grants program, has declined. Council amalgamations has played a major role in this issue as sustainability officer roles were amongst the ones that were collapsed.

Similarly, stakeholders also noted that lead environmental community and non-government organisations have less access to core funding to run these types of projects, and rely heavily on grants to support these activities.

There is definitely behaviour change in the audience, but little in the organisation itself. Everything is dependent on me here [Council]. Many people in the Council tell me that I am doing the State government's job.

Education (Government) grant recipient

3.1.2 Trends and best practice principles in environmental education

The evaluation process explored the literature around best-practice principles of environmental education. Over time, best practice has shifted from environmental education to Education for Sustainable Development (ESD) and, more recently, to the theory and practice of Transformative Learning for Sustainability (TLfS). This section summarises key points of this literature relevant to the recommendations from this evaluation. Further detail has been included in Appendix 3.

Environmental Education (EE) emerged internationally in the 1960's and 1970's, as a response to the environmental crises of that period. The focus was largely on getting people to recognise the general degradation of ecosystems, with the end goal of preserving biodiversity (De la Sienna, E, 2018). EE initiatives were built upon a simple linear approach, in which it was assumed that behavioural change was a direct result of knowledge about environmental problems. This simplistic understanding was critiqued because it focused too much on ecological conditions and too little on the human activities provoking the

ecological depletion (Wals et al. 2014; Shove 2010). In the 1990's, this critique led to the emergence of a new approach called Education for Sustainable Development (ESD)². This approach still had immediate environmental improvement goals, but also focused on educating and training people to contribute to long-term sustainability. In fact, integration of key sustainable development issues into teaching and learning at all levels became a global priority (United Nations 1992; De la Sierra, 2018).

The ESD approach became widespread in the following two decades with policymakers, researchers, practitioners and all sectors of society aiming to implement their interpretations of ESD. Activities, plans and strategies were developed and adopted in primary, secondary, tertiary and non-formal educational systems globally (Dale 2005 cited by De la Sierra, 2018); furthermore, the United Nations declared 2004 – 2014 the Decade for Education for Sustainable Development. **Table 18** in Appendix 3 outlines key changes in thinking that accompanied the shift towards ESD.

Transformative Learning for Sustainability (TLfS)

ESD raised awareness about the need for change, but it has not been successful enough in making that change happen (Stables 2013). The pace of environmental destruction, including both the social and natural dimensions, is increasing 'at an alarmingly accelerating rate' (Saylan 2011). Since the conclusion of the United Nations Decade for ESD another educational shift is becoming apparent with the emergence of Transformative Learning for Sustainability (De la Sierra, 2018).

This most recent shift in global conceptualisation of environmental education calls for a deep transformative approach to learning. Instead of merely increasing knowledge, it works with values, mind-sets, worldviews and identity to trigger shifts in behaviours and practice.

In January 2016, the international ESD community, with support from the United Nations, decreed the Ahmedabad Plan of Action (UNESCO 2016). In this policy, hundreds of ESD researchers, practitioners and policymakers recognised that the transformation required by the Sustainable Development Goals (United Nations 2015) will require an in-depth rethinking of education itself. The need to reconceptualise education was specifically acknowledged through the following statement:

Dominant education systems have tended to impose a narrow conception of rationality at the expense of emotional understanding, learning acquired through life's experiences and traditional knowledge systems. Additionally, the transformative education that is now called for is not amenable to easily defined outcomes or measurement. Education must be reconceived in a way that allows space for diverse ways of knowing and new ways of being and becoming that reflect inclusivity in the true sense of the term (UNESCO 2016).

Transformative learning theory describes the process 'by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive' (Mezirow 2000, p.7) TLfS therefore aims to create and encourage these processes of transformation to support more sustainable ways of being.

Sterling (2010), drawing on the work of Mezirow and many others, describes three orders of learning and change, as illustrated in Table 5. First-order learning, or 'doing things better', second-order learning, or 'doing better things', and finally third-order learning, or 'seeing things differently', which is described as transformative learning.

Table 5: Levels of learning (Sterling 2010)

Orders of change/learning	Seeks/leads to:	Can be labelled as:
First order change cognition	Effectiveness/Efficiency	'Doing things better" Conformative
Second order change meta-cognition	Examining and changing assumptions	'Doing better things' Reformative
Third order change	Paradigm change	'Seeing things differently'

² Also sometimes referred to by the similar, though not necessarily identical, terms of Education for Sustainability (Efs) and Environmental Education for Sustainability (EES)



The evolution in environmental education practices can be seen as a gradual movement towards higher order learning in response to the slow pace of change on major environmental problems.

Questioning and transformation of values and worldviews occurs rarely in the spontaneity of life but can be facilitated through intentional learning experiences (De la Sierra, 2018). There are recognisable phases that people experience when undergoing a personal transformation, discussed further in Appendix 3. A transformational learning experience seeks to take people through these phases by encouraging:

“a deep structural shift in the basic premises of thought, feelings and actions. It is a shift of consciousness that dramatically and permanently alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-location: our relationships with other humans and with the natural world (Morrell & O’Connor, 2002, p.xvii)”

Importantly, this transformation makes participants more likely to feel an intrinsic motivation to act on environmental issues in a sustained way.

In more practical terms that could be applied in the work of the Environmental Trust, Rogers (1994), cited by (Sterling 2010), suggests transformative learning can involve the following dimensions:

- **cognitive** dimension (which is traditionally seen as the core of teaching) which involves the intellect;
- **affective** dimension, when intellectual knowing moves to a personal and connected knowing involving the emotions;
- **existential** dimension where students are faced with questioning their values and ways of living and with the challenge of the reconstruction of their own sense of self;
- **empowerment** dimension, which helps the participant to develop a sense of responsibility, commitment, agency and direction; and
- **action** dimension, which, if the questions raised by the first four dimensions have been resolved, involves the development of informed choices at personal, social and political levels (p. 26).

The types of experiences that are typically associated with transformative learning are those that ‘are direct, personally engaging, and stimulate reflection upon experience’ (Taylor, 2007, p.182). There are relatively few documented examples of educational settings in which transformative learning is central (Sterling 2010). To deliver transformative learning experiences properly would require transformative experiences, or new ‘meaning making’, for designers/teachers/educators before they can facilitate the transformative experiences of others. This suggests a key role for Trust funded grants in supporting innovative learning experiences that facilitate the spread of transformational learning practice.

Two additional theoretical frameworks offer practical guidance on current best practice for environmental education: social practice theory; and values theory. Both are discussed in Appendix 3. In summary, they offer the following principles:

- Education needs to go beyond changing what is inside people’s heads. It also needs to facilitate environmental action by providing supportive infrastructure and practical know-how. Learning through doing the desired environmental action, in a supportive group, is more effective than just talking about it.
- Human behaviour is heavily influenced by social norms. We look to what others do to work out how to behave. Education that establishes groups and uses social norms to support behaviour is more effective. Practical actions include establishing communities of practice to provide ongoing support, getting people to commit publicly to the desired behaviours and positioning the desired behaviour as normal.
- Values are a key driver of human behaviour. Some values – known as intrinsic values – are closely associated with lasting behaviour change on environmental issues. These values include self-direction, universalism and benevolence. Education that stresses or ‘primes’ these values through appropriate communication frames will be more effective.

The recent emergence of concepts of Transformative Learning for Sustainability and the theoretical perspectives above suggests new principles of best practices in environmental learning that could inform the program logic and structure of the grants programs.



3.1.3 Application of ESD and TLfS principles to Grants Program

The above review raises two questions in relation to Environmental Trust Education Grant programs:

- i. Firstly, have the program objectives and grant evaluation processes of the Environmental Education and Eco Schools grants been applying the best practice principles of Education for Sustainable Development (outlined by Wals et al (2014, p. 583)) over the period of the evaluation?

The program objectives of the Environmental Education and Eco Schools programs, previously introduced in Section 1, are as follows:

- Environmental Education objectives: i). Facilitates changes in behaviour of individuals and groups that will affect specific environmental problems, ii). Develop and promote education projects that improve the environment.
- Eco Schools objectives: i). Environmental benefits, ii). Student participation, iii) Teacher engagement and iv). Managing for sustainability in school and community.

The grant evaluation criteria for both programs are described in Appendix 1, along with the guiding principles of environmental education projects. These are taken from the respective 2017/18 Program Guidelines provided for potential applicants and available on the Environmental Trust websites.

The Environmental education program criteria indicate a need for tangible environmental benefit, identification of a clear community need, collaboration with a range of stakeholders, capacity building for project organisations and participants, as well as value for money.

The Eco Schools program criteria closely align with the four objectives of the program, and indicate the emphasis placed by the Trust on achieving tangible environmental outcomes, student learning, teacher capacity building, community engagement and value for money.

Wals et al (2014) discuss the use of edible gardens in schools as a way to improve the quality and relevance of their education, transform the relationship with the local community and develop a sense of place. Food gardens, native plantings and associated curriculum development is a common application of the Eco Schools grant program run by Environmental Trust. The emphasis within Eco Schools placed on experiential learning, deeper linkages to the wider curriculum and capacity building for teaching staff would appear to indicate that this grant category is designed and assessed in a manner that competently applies the principles of Education for Sustainable Development.

The objectives, guiding principles and assessment criteria of the Environmental Education program tend to emphasise behaviour change through education, as well as capacity building through collaboration with multiple stakeholders. This would indicate that the program is incorporating the principles of ESD to some degree, though there is little that emphasises building the capacity of individuals to think critically and creatively about the environment (Wals et al 2014). In the absence of an active policy or strategic framework for developing environmental education in NSW, there is little background to understand the logic behind the specific objectives and principles of the two grant programs. This is particularly relevant given the overall findings of this evaluation demonstrate that clear links between the current type of education and capacity building and tangible environmental outcomes was difficult to find.

In summary, for both Environmental Education and Eco Schools there needs to be a clearer articulation of how learning and education leads to environmental outcomes to support the program objectives. The existing frameworks are dated and do not respond to contemporary knowledge on learning and social theory. The 2007-2010 NSW Education Plan incorporated the latest thinking regarding ESD principles when it was written, however, is no longer active. Currently there is no framework that outlines articulated environmental needs, but there is a requirement that grant recipients focus on achieving tangible environmental outcomes. Further guidance is required from the Trust to allow grant recipients to determine whether what they have delivered in terms of social capital or education (for example) is on a pathway to achieving the environmental outcome that is linked to an identified need or strategic priority area. In this way the trigger for the grants may be environmental, but the mechanism may be, for example, increased social capital or psychological changes.

This requirement to develop a clearer articulation of the guiding framework leads to the second question to emerge from the review of the literature.



- ii. Secondly, given the greater focus now being given to the principles of Transformative Learning for Sustainability, should future grant funding rounds seek to move from ESD to TLfS approaches.

While it is appropriate to assess the grants program against the principles of ESD during the evaluation period, the emerging focus on TLfS indicates that a new focus may be appropriate for the future. The literature discussed above identifies a need for learning practitioners to increase engagement with the public through individual critical self-reflection and increased participatory action that collectively reflects on the underlying assumptions shaping our unsustainable existence.

The Trust has an excellent opportunity to do more to incorporate principles of transformational learning into the grants program in order to increase the impacts of the projects funded. These ideas could be incorporated within the existing program objectives (or the objectives could be modified), through changes to the grant guiding principles and assessment criteria, and providing practical guidance material for grant applicants and recipients. Specifics regarding changes that could be made are detailed in Section 4 of this report. The application of TLfS principles to the Environmental Trust Grants Program could be based on the bodies of theory discussed above.

First, the grant guidelines and criteria could help applicants to think about how they will change collective social practices rather than just raise awareness of individuals. This could involve asking applicants to specifically outline how they will build the skills as well as provide the supportive social and material context for social practices to change within their project design. More likely, for most grants, the Program Guidelines would suggest practical educational activities that are consistent with social practice theory, which applicants could incorporate into their projects.

Second, the grants could encourage a more explicit focus on working with and activating values. This is a very new area and more research would be needed to develop specific practical guidance for grant applicants and recipients. As one illustration of the need for further research, while there is emerging agreement on the importance of working with values, there are diverse opinions on how exactly to do that. The Common Cause framework argues that the best approach is to use communication framing that activates and strengthens intrinsic values (Crompton, 2010). This approach is being applied with some success by environmental and social NGOs, including the Australian Conservation Foundation and Common Cause Australia. In contrast, others argue for working with whatever values are strongest in the audience to achieve the desired results (Rose, 2011). Despite this diversity of views, some possible directions include:

- A stronger focus on measuring values pre and post-intervention. This would help to build an evidence base for activities that can shift values, as well as giving grant recipients a values baseline to guide their activities. There are several values surveys available, including the Schwartz Values Survey (SVS), a short version of the SVS used in the World Values Survey, and an online worldview assessment tool developed by Annick de Witt (<https://annickdewitt.com/>).
- Development of a values-based theory of change for the program to help applicants to identify activities they could incorporate that could use values to achieve desired outcomes.
- Piloting interventions designed to work with or shift values to add to the body of evidence for what works. The transformational learning literature points to the role of cognitive dissonance or disorienting dilemmas in changing values or worldviews, and helping participants to 'see differently'. Educational interventions that help participants to 'see' their own values and worldviews may have a role in creating such dilemmas and could be tested through grant activities.
- Working with the Worldviews-based Learning Framework described in Appendix 3 which provides detailed guidance regarding learning design specifically in the context of TLfS.
-



Developing and integrating these ideas further would require work that goes beyond the scope of this evaluation but could help to develop a stronger link between the education delivered through the grants and the environmental outcomes that are ultimately sought. Again, an effective approach would be to suggest practical activities for working with values in revised Program Guidelines.

There should be some scope to fund outliers because that's where the innovation is going to come from. Otherwise you're just going to fund the same sort of suppliers.

Stakeholder

Given that value change takes a long time and multiple attempts, internal stakeholders suggested there is potential to create a category within the existing Education Grants Program to fund projects for innovation in transformational learning for sustainability. This could provide a pool of success stories and greater experience with transformative learning frameworks that could be shared with other grant applicants.

3.1.4 Size and length of grant

Across the evaluation grant recipients were generally happy with the value of their grant. In both the qualitative interviews and online survey with grant recipients, the vast majority reported that their projects met their planned budget, and that grant amount was sufficient to achieve its intended aims.

While many grant recipients struggled to demonstrate outcomes within the life of the grant (see Section 3.2) this was a function of limited capacity to measure or follow up program outcomes within the current grant context, and is not a function of insufficient time to deliver the project as intended. Opportunities to follow up longer term project impacts are discussed in Section 4.

The evaluation did not find evidence for substantially changing the grant length or value (for example there was no evidence to suggest that average grant sizes should be longer in duration and larger in amount in order to deliver better outcomes). Among Eco Schools grant recipients, the \$3.5K value was considered appropriate, as was the length of grant. The Eco Schools program in particular relies heavily on the passion and commitment of individuals to apply for and implement the grant. Hence the short time frame ensures that key individuals do not move on to other schools or roles and disrupt program delivery.

The issue with these things is often teachers move on to different schools unless the project is embedded in the curriculum – it is very person driven.

Eco Schools grant recipient

3.1.5 Opportunities to follow up and measure longer term project impacts

Throughout consultations with grant recipients, a key theme was the lack of opportunities to continue to monitor and measure the outcomes of their projects after grants were acquitted. Several stakeholders suggested setting aside some funds for longitudinal evaluation, delivered as a stand-alone grant for projects that want to return to their participants and measure environmental outcomes, or a gateway stage in a staged approach to grant delivery. It was suggested that a staged approach to grant delivery might include an initial stage with stronger focus on planning piloting

The Trust is quite didactic and output orientated, but the outcomes have been quite organic and taken a number of years to generate, in really surprising, yet productive ways.

Education government grant recipient

innovative ideas, learning about effective environmental education approaches and working on a theory of change. Actual project delivery would not be approved without sufficient progress at the initial stage. A final stage for longitudinal evaluation of learning and environmental outcomes was suggested. This has been discussed in detail under the Recommendations in Section 4.



3.2 Achieving environmental and educational outcomes

Key findings

- Reporting of actual environmental outcomes is limited. There are currently limited opportunities to measure long-term outcomes.
- In terms of whether projects contributed to an increase in environmental literacy, there is self-reporting of knowledge creation, but little by way of evidence of actualisation.
- There is limited evidence to demonstrate increased environmental awareness and literacy or changes in behaviour.
- There is stronger evidence for education and social outcomes, but the link to environmental outcomes is unclear.
- As tangible environmental outcomes difficult to achieve and measure in the grant context better articulation of the theory of change that the project is working to will assist in articulating outcomes.
- The transfer of knowledge is reported (but not recorded) as a key achievement of grants program. This should be explicitly incorporated in reporting requirements for grant recipients.
- Reporting of capacity building of individuals and organisations as environmental educators and grant/project managers is reported by grant recipients a key achievement of the program, but this outcome is missing from current project measures.

The Program outcomes were analysed using a combination of project documentation, a survey of successful and unsuccessful grant applicants, a survey of grant program participants, site visits and internal and external stakeholder interviews. The outcome analysis was further split by synthesising what overall outcomes do programs report using interviews and project progress and final reports as well as comparing them with the with the most significant outcome grant recipients highlighted in their interviews.

Evidence from evaluation findings reveals that projects have achieved a range of outcomes beyond the intended educational and environmental outcomes. Specifically they are most likely to achieve and report their intended outcomes in the domains of:

1. Educational outcomes
2. Social capital outcomes
3. Capacity building outcomes
4. Environmental outcomes

Document analysis and most significant outcome interviews reveal that the majority of programs do achieve their intended program objectives. However existing project reporting is primarily focused on outputs instead of project outcomes. Due to this reason together with a lack of understanding of monitoring and evaluation amongst many grant recipients, most projects actually report program outcomes as outputs. As a result, the evaluation has found poor recording of outcomes particularly in the area of environmental outcomes. Moreover, it has also been noted that while most projects do achieve their intended objectives within their proposed time frame (usually between one to three years), this timeframe is not enough to observe tangible environmental and behavioral change.

As discussed in Section 3.1, project measures that more clearly align with the evidence of how environmental education leads to environmental outcomes, incorporating transformative learning theories and social practice theories, may address this reporting gap. Such a framework should consider realistic assessment of what outcomes are achievable within the life of a grant.

For example the Trust could introduce a set of meaningful short-term outcome oriented measures that are similar across the same type of projects. This will not only allow project comparison in terms of achievement of outcomes and cost-effectiveness but also encourage greater reporting. For example the 'number of participants at a workshop' is a good measure for good project planning, but it cannot indicate much about actual behavioural change. By counting the number of participants to a workshop who later join that particular community network or pledge to take environmental action could perhaps better indicate the possibility of a behaviour change for a community environment project. Similarly, the 'number of times



an online resource is downloaded' would be a better outcome measure instead of 'number of online resources developed' for an environmental research project.

The issue of redefining program outputs to become more meaningful short term outcomes was discussed in detail during an options workshop with the Environmental Trust. The workshop attendees agreed that defining new meaningful measures that are consistent across similar projects is a separate piece of research work itself. It was discussed that if the main objective of a program is building capacity or social capital, then that program would not be required to report as many environmental outcome measures. Similarly if the main objective of a program is actually achieving a tangible environmental outcomes, it must be mainly evaluated using environmental outcome measures instead of wide range of other outcome measures.

Possible ways to improve outcome reporting and evaluation could also include:

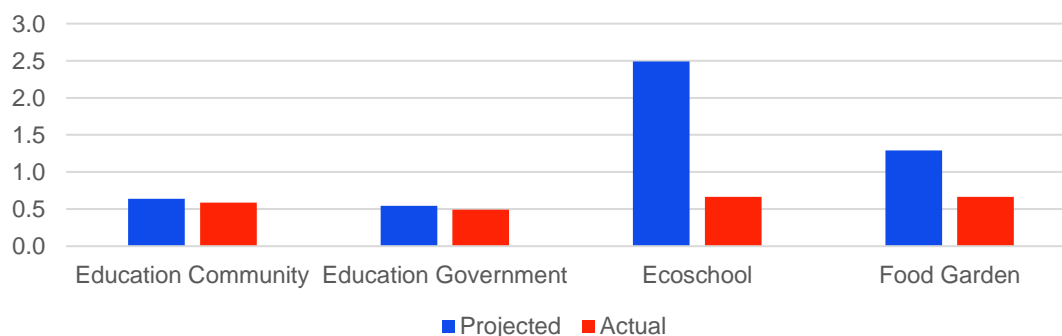
- Setting aside some evaluation funds that projects can use to evaluate their outcomes once their project has been acquitted
- Partnering with organisations such as universities who would have students interested in undertaking monitoring and evaluation as part of their research work or theses.

It is also desirable that grantees are able to identify, estimate, and report on outcomes throughout and at the conclusion of their project. In qualitative interviews, grant recipients repeatedly expressed that since current project reporting is predominantly asking for quantitative output data, current reporting did not allow them to accurately document the outcomes of their grant. This is besides the fact that currently progress and final reports do allow grant recipients to qualitatively report the enablers and barriers to their intended objectives as well.

As part of the evaluation we analysed data relating to the achievement of outcomes provided by grant recipients to the Trust as part of their reporting obligations, assessing the number of projected and actual measures that grantees provide over the reference period. This was complemented with an analysis of the qualitative sections of the progress and final reports that describe key program outcomes and barriers in detail. These outcomes were divided into two broad domains: environmental outcomes and stakeholder engagement/education outcomes.

The quantitative analysis of project measures data found that a relatively low number of environmental measures are actually recorded across each of the grant types (see Figure 1), and this is particularly low for the Education grants. As seen in Figure 1, on average Education (community) grant projects only report 0.6 environmental projected measures and 0.59 of actual environmental measures. While Eco Schools were more likely to report expected (projected) environmental outcomes for their projects, the qualitative analysis revealed that the environmental outcomes described by Eco Schools were almost exclusively related to perceived increases in biodiversity and habitat improvement through the building of gardens and other green spaces. A key reason for this is that most Eco School projects are unable to effectively measure other program outcomes and hence most reporting on educational, social or capacity building outcomes is based on anecdotal evidence. This finding was supported by qualitative reporting on program outcomes in the progress and final reports as well. By contrast, Education grants that do list environmental measures, were more likely to report actual achievement toward measures.

Figure 1: Number of average environmental project measures reported per grant type

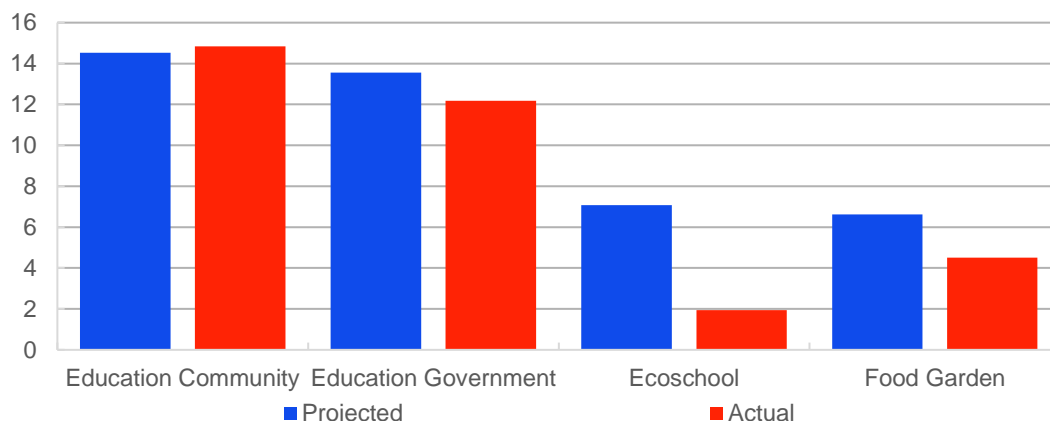


Source: Environmental Trust - Project measures data



In terms of stakeholder, community education and research measures depicted in the Trust’s project measures data, both Education and Eco School grant recipients reported higher numbers of stakeholder, community education and research measures (see Figure 2) than environmental measures. Grant recipients have acknowledged that there is a tendency to overestimate projected social and educational outcomes whose actual achievement is highly dependent on good project planning and management. Overall, while the reporting of actual outcomes against projected was lower for both grant types, evaluation findings reveal that grant both types of grant programs find it easier to report non-environmental outcomes.

Figure 2: Average number of projected and actual stakeholder, community, education and research participation measures reported by grant type (2010 to 2016)



Source: Environmental Trust - Project measures data

The relatively higher reporting of measures for stakeholder engagement/education measures than for environmental outcome measures is not particularly surprising given that the objectives of projects are more closely linked to engagement and education outcomes than tangible environmental outcomes.

Other data limitations include:

- Poor organisation of Trust’s project measures data makes it difficult to make comparisons across similar projects
- Overlapping project outputs and activities
- Since grant recipients have the liberty to report the measure that they think mostly accurately reflects their achievements, results in several zero values in the actual data set. Interviews with grant recipients revealed that while they may have carried out some activities or outputs, they may not have reported them. Hence, it is not possible to determine at this stage whether an activity was not carried out or was it not reported.

Given the existing data caveats, trends identified solely through a statistically analysis of the project measures data do not give a true picture of what grant programs have achieved over the years. While the long term environmental impacts of projects funded under grant programs remains unclear, there is substantial qualitative evidence which highlights educational and social outcomes of many projects.

To overcome these gaps in outcome reporting by grant recipients to the Trust, we triangulated the data from grant recipients’ progress and final reports with the qualitative data collected as part of the evaluation in relation to what grant recipients report as the most significant outcomes of their grants, to provide a richer picture of the outcomes achieved by grants.

The remainder of this section provides this analysis for education, environmental, social capital, and capacity building outcomes. Given the differences in scope and scale of the projects funded by the Education grants (Government and Community) and Eco Schools, these outcomes are reported separately. The scale and size of the reported outcomes for Eco Schools grants relative to reported outcomes for Education grants are commensurate with the size and scale of grants available under these two grant programs.

Both Education and Eco Schools grant recipients perceived the projects funded through the grants program had the most impact in terms of education and social capital outcomes, rather than the achievement of tangible environmental outcomes. In addition, Education grant recipients were much more



likely than Eco Schools grant recipients to cite capacity building (individual, community and organisational) and influencing policy and guidelines as a key outcome of their grant.

3.2.1 Education outcomes

Education outcomes - Education Grants (Government and Community)

Most education grant recipients tended to discuss education outcomes in terms of:

- perceived increases in knowledge and awareness of their target audience around certain environmental issues
- the development of physical and online resources

Many participants spoke about the knowledge and awareness raising potential of their grants, for example increases in awareness about the importance of water quality, sustainable household practices (waste and energy reduction), value of reduced packaging, etc. It is important to note that the literature around environmental education suggests that increases in awareness do not necessarily lead to changes in environmental practices. However, it appears that many grant recipients believe that environmental outcomes result as a logical consequence of increases in knowledge and awareness relating to environmental issues of their target audience.

Many grant recipients discussed conducting awareness raising workshops on a variety of topics, for example weed identification, feral animal control, waste and energy reduction, composting, etc. The number of attendees and/or whether they received 'positive feedback' about the workshops was more often the outcomes measure for workshops. A number of grantees also talked about value of workshops as a platform for making connections to engage people in an ongoing way. There were however, examples of grant recipients conducting pre and post surveys to measure changes in workshop attendees' understanding and attitudes as a result of participation. These grant recipients acknowledged however, that this did not ensure that a program had actually resulted in a behaviour change.

There were some examples of Education grant recipients applying more evidence based approaches to education interventions. For example, in response to high levels of daily PM2.5 pollution in Armidale from wood heaters an Education grant (Government) project built on research that found an education intervention involving prompts, modelling and health information led to moderate reductions in wood smoke emissions. The project identified that only a minority of homes using wood heaters contributed the majority of smoke pollution. The 300 homes that produced excessive smoke were targeted by an enhanced education intervention based on Social Norms Theory. The success of the project was measured by a pre-post program design with a control group, measuring emissions data along with weather data from the meteorology website of Bureau of Meteorology. While the results were just trends and not significant, a key reason for this was that the sample size was not large enough to support a result. However, the local council's environmental policy was also informed by the research, which built Council capacity by advocating for implementation of a policy that was based on a scientific methodology on what's working and what's not in terms of wood smoke pollution.

The Education grant recipients and in particular those in the Government stream were more likely than Eco Schools to produce physical or online resources as part of their project funded under the Education Grants program. Examples include:

- Booklets and complementary workshops designed to educate the community on a range of issues e.g. EDO NSW delivered the 'Mining and Law: A guide for the community'. It was reported that the development of the guide and its accompanying workshops built the capacity of 1,400 people who attended the workshops and of over 4,000 people who read the booklet and shared its information.
- Apps and online tools, for example a free smart phone app that provides spatially relevant information to educate absentee rural land holders who lived in Sydney in sustainable land management practices, local resources, natural resource management advice about rural living, and Landcare networks and support agencies. The success of these types of resources are more often described in terms of number of downloads, hit rates etc., rather than by longer terms measures such as actions taken as a result of accessing resources. While it is difficult to determine their actual impact, a key advantage of disseminating environmental educational programs through online sources such as e-books, webinars and videos is that they provide a potential platform for reaching out to people beyond their intended audiences.



- Environmental education kits, for example the Protecting Our Planet Kit (PoP Kit) that can be shared between families and early and middle education services delivered by Sutherland Shire Council's Children's Services Unit. The contents of the kits include interactive play-based experiences, stories and other resources that educators and families can share and enjoy with children whilst promoting pro-environmental behaviour within the home setting and early childhood and school aged services. Each service is able to utilise the kit within their curriculum and also lend it to families to engage in environmental experiences at home providing a collaborative approach towards sustainable living practices. This project is intending to measure the outcomes for these kits with a pre/post survey of parents about what environmental practices they are involved with at home, and what they would play with at home with their children
- The development of curriculum material – for example a teachers' handbook developed to take students on a guided walk through the GreenWay urban bush corridor on Sydney' Inner West. Level of participation by schools, and enhanced local area knowledge amongst students, families and staff are the key measures of success for this project. The program is now a recommended best practice resource for teaching aspects of the NSW stage 2 Geography curriculum and has the potential to be taken up and used by many primary schools across Sydney and in regional NSW. Findings such as these present an opportunity to the Environmental Trust to align other similar projects to projects that have demonstrated best practice.

Education outcomes: Eco Schools

Many Eco Schools grant recipients spoke and/or report about the educative value of their grants in terms of increases in awareness and knowledge around waste and energy reduction, land practices, sustainable food production, healthy food choices, food security, biodiversity and weed identification, etc.

The literature presents a case for measuring learning outcomes that go beyond awareness and literacy to values and behaviour (see Appendix 2).

Despite the high number of grant recipients citing changes in knowledge and awareness around sustainability and environmental issues as a key outcome of the grant, many also articulated richer outcomes relating to experiential learning aligned to the role of social practices and values with long-term behaviour change and environmental outcomes. There is still a case for furthering enhancing the exiting project measures by making them more outcome oriented. However, that would also require a greater understanding of M&E amongst stakeholders. Internal stakeholders have expressed that within the boundaries of \$3,500 and pressures on school staff, the existing of amount of reporting on outputs and outcomes from Eco Schools grant projects is adequate.

The experiential learning opportunities afforded by the Eco School grants (for example seed saving, composting, aquaculture, sustainable garden practices) were valued as enabling student participation in authentic learning opportunities that develop students sense of wellbeing. A few grant recipients felt some Eco School grant funded projects increase the confidence of students to make reasoned, evidence-based decisions about the current and future use and influence of science and technology, including ethical considerations. They also felt that students show a willingness to engage in finding solutions to science-related personal, social and global issues, including shaping sustainable futures. All this evidence, however, was anecdotal based on the inherent difficulties in measuring educational and behaviour change outcomes in the short-term.

Many grant recipients stated that an outcome of the grant funding was embedding environmental learning outcomes in the curriculum material. For example, an Eco Schools funded project was to work with Year 7 students, teachers and parents to remove weeds and plant 600 trees and 600 lomandra as part of an integrated project that made a lesson to incorporate into a practical block on bush regeneration in the curriculum. Another grant recipient noted that the activities associated with the Eco Schools grant allowed the school to introduce and run environmental science as a subject for the first time. Other projects cited working with environmental specialists to help incorporate Aboriginal education, sustainability and environmental education into a range of curriculum based units of work.

Prior to this project our science programs had just been written by each of the teachers. They were a bit ad hoc. They weren't the programs they are now. Now they are all aligned and have all have gardening or environmental positions within them.

Eco Schools grant recipient



Increased engagement by students at risk and students with special needs in learning was also anecdotally associated with Eco Schools grants. Another grant recipient reported connecting Aboriginal students to carry out leadership roles and pushed their academic achievement through their participation in Eco Schools projects.

3.2.2 Social capital outcomes

Social capital outcomes: Education grants (Government and Community)

Qualitative data from program outcomes in progress and final reports as well as most significant outcome interviews reveals that Education grant recipients frequently cited social capital outcomes when they shared their view on the most significant outcome of their project. Several grant recipients stated that the grant programs provide them with new opportunities to enhance partnerships and collaborate on environmental issues with other organisations. Many stakeholders even stated that this was an unexpected outcome for them as they mainly expected that their main project outcomes would be either educational or environmental in nature. This finding suggests that the grant programs provide an additional advantage to successful grant recipients in the form of enhanced partnerships or providing new opportunities for collaborations with other organisations.

Every step has been consultative. We have really tried to follow the essence of sustainability principles in the way it was developed and delivered...because we want the project to have impact and longevity. We wanted to develop connection and relationships so we can foster conversations.

Education community grant participant

Grant recipients and program participants provided numerous examples of collaborations, partnerships and networks that emerged from grant-funded projects. This included collaborations with local environment groups, Universities, special interest groups, Councils, industry groups, schools and early childhood centres to develop resources, engage communities and stakeholders and deliver programs. For example, a grant recipient described working with Councils and Local Land Services (LLSs) to develop regionally targeted educational materials to improve organisational understanding and ability to effectively implement relevant environmental laws. Collaborations with or support from Councils was also described as a key factor that has ensured the sustainability of many grant programs.

Following continuing popularity among our Suburb's families and our excellent working relationship with our Council, the Council has offered to run our program in conjunction with its own Bush Kids program every year.

Education community grant participant

Several grant recipients credited the development of effective networks, partnerships and communities of practice to the grant funded project. For example the Marine Incident Response Training for Wildlife reported to have established an effective network of agencies and personnel that are specifically trained in how to manage incidents. The project expects its network development to continue even further. The Landscapes for Urban Wildlife Project is another similar project that is increasingly forming partnerships with other similar programs in its area. The development of such networks was also cited by many stakeholders as a key factor in enabling the sustainability of their programs.

The partnerships established with the University of Western Sydney, Brewongle Environmental Education Centre and many environmental groups and organisations have enabled the work of our project to be far more wide-reaching and deeper than anticipated.

Education community grant participant

Education grant recipients also cited examples of social enterprises arising out of grant funded projects, for example disability services and Men's Sheds uptake in the structure and making of bee hotels and selling them in the third economy. The role of local Mens Sheds was also appreciated by several Eco Schools/food garden grant programs as well.



Social capital outcomes: Eco Schools

Many Eco School grant recipients reported increased engagement by parents and the wider community with schools as a key outcome of the grants.

Grant recipients provided numerous examples of the Eco Schools grants facilitating greater involvement from parents as volunteers, or as Eco Schools-funded green spaces being used as gathering and meeting places for students, parents and the wider community. Some also provided examples of local businesses providing plants, building materials and in-kind support for Eco Schools activities.

Many grant recipients believed that Eco Schools activities contributed to an increased sense of belonging and ownership of the school among students (although this was not measured). Examples of social outcomes reported by Eco Schools grant recipients included:

- opportunities for children with behaviour issues or disabilities to engage in school projects
- opportunities for students to act as role models for other students;
- opportunities for students to take up leadership roles
- opportunities for students to participate in ideas sharing and decision making about how to use and manage the space.

Eco Schools grant recipients reported the value of collaborations and partnerships that were created as a result of the Eco Schools grants, and this outcome is supported by the significant amount of co-funding and in kind support associated with the grants.

The fact that it is an Aboriginal garden is a point I haven't dwelled on enough. One of our P&C goals was to get our Aboriginal parents involved in the school more. The aboriginal parents can see we are wanting to connect students with land and culture. Last year following the launch of the program we had a 'Join the Mob' morning tea which focused on Aboriginal food and this was the first time our aboriginal parents had hosted/led any activity.

Eco Schools grant recipient

The educational and environmental objectives were the intended objectives, but I think the most significant outcome has been social as people are really using the garden a lot. We are all very proud of this outcome...it is continuously being used, it's a meeting place, used for flag hoisting, Anzac Day... everyone is constantly involved in maintaining and cherishing it.

Eco Schools grant recipient



3.2.3 Capacity building outcomes

Among Education grant recipients (both Government and Community), capacity building was frequently cited as one of the most significant outcomes of their grant. Grant recipients described capacity-building outcomes across a number of areas, including:

- Capacity to deliver environmental education and to embed sustainability practices in their teaching and their services. For example one project recognised that while educators might be “really good at worm farming and composting” there was a need to inspire behaviour change. They developed training that extended educator’s knowledge to how ecosystems work; what is global warming, climate change, biodiversity, etc. They also upskilled educators to have conversations with staff and parents, not just conversations with children – which is where their comfort was.
- Capacity for advocacy and policy change. For example Advancing Sustainability Leaders (ASL) is a program for managers and emerging leaders in NSW local government to develop their capacity to become effective sustainability leaders and catalysts for change within their council and community to increase the delivery of leading practice water projects. The program included training; individual coaching; personal capacity assessments and feedback; guest speakers; professional development planning; mentoring and peer learning as they implement their water sustainability projects. Anecdotally the project has allowed participants to progress Council initiatives they previously had not been able to progress, and increased their confidence to take on roles outside of their comfort zones.
- Organisational capacity building. For example, one grant recipient described mapping and capturing data and photos of over 500 hollow bearing trees in the landscape. The project provided a spatial record which has been shared with Albury City Council and developers, and provided new insights into the characteristics of the hollow bearing trees and the species that use these as their habitat. Council acted on the data and made a hollow bearing trees overlay which is now used in planning in relation to any development application they receive for building projects.
- Community capacity building. A few grant recipients reported project outcomes that related to value-change or an increased sense of stewardship for the environment among their target audience. For example one program participant felt the Education grant project they were involved in provided a genuine platform/network for children and young people to be voices in climate change. Similarly, the ‘Mind our Mangroves’ project is working to address vandalism and poor public perception of mangroves in Canada Bay through education of local residents and community members. The interim outcome of the project includes reduced reported incidents of vandalism by 10%, maintained for over 2 years by fostering stewardship of mangrove habitats and creating two resident interest groups to help to deter and monitor further incidents of vandalism.

The success of this project helped us get through a special rate variation process – we now have biodiversity levy to help fund our rural landholder project costed out until 2035. We can use that money to leverage more funding for restoration and on the ground action.

Education government grant recipient

Landholder champions came up with the idea of a mentoring program where we basically match previous champions with new landholder or landholders wanting to get involved e.g. weeds in regrowth areas, which was an added bonus. We’ve created a community of landholders to go beyond their actual property and mentor others. We are really seeing a new culture of land stewardship with a big focus on riverbank land.

Education government grant recipient

The online survey of grant recipients further probed grant recipients about two types of capacity building that emerged consistently from the qualitative outcomes reported in progress and final reports as well those expressed in the most significant outcome interviews. These included the extent to which their grant program:

- Benefitted the target audience



- Increased their confidence to deliver environmental learning and engagement

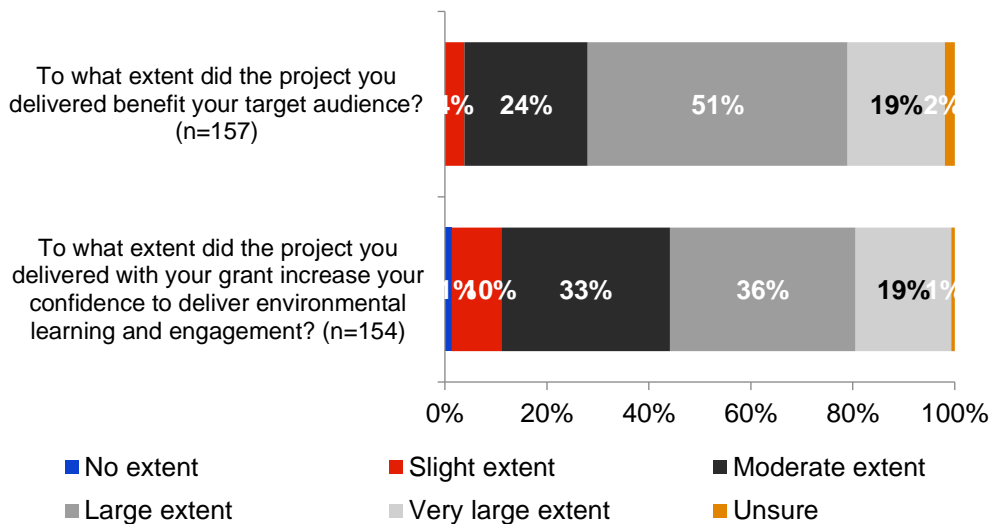
For each of these statements a series of Pearson’s chi-square tests of contingencies were used to test whether recipients of different grants (Environmental education grant vs. Eco schools/Food gardens grant) differed in their ratings against the three above mentioned statements, and none of these were found to be significant³, indicating that recipients of both types of grant programs had consensus on the these three outcomes related to capacity building.

The overall ratings are presented in Figure 3 and indicate that:

- A high number of grant recipients indicated that the project benefitted their target audience to a large or very large extent (70%). This highlights the confidence of grant recipients in raising the awareness levels of their target audience on several environmental issues. This was also confirmed by the findings of the Online Survey of Program Participants (See section 3.2.6).
- A little over half of all grant recipients indicated that their projects have indeed increased their confidence to deliver environmental learning and engagement to a large or very large extent (54%), with approximately one-third indicating that a moderate influence on confidence (33%). As with the knowledge item, this may be because grant recipients were already confident in delivering environmental learning and engagement.

A synthesis of these findings from qualitative data also confirms the achievement of these two grant recipient outcomes.

Figure 3. Grant recipient ratings of benefits associated with grants



Source: Online survey with successful and unsuccessful grant recipients

As part of the online survey grant applicants (both successful and unsuccessful) completed a measure of their confidence in delivering environmental education projects on a scale of 1 (Not Confident) to 10 (Very Confident). A Pearson’s chi-square test of contingencies indicated that applicants for Environmental Education Grants and Eco Schools grants differed in their confidence ratings. This applied to successful applicants, but not to unsuccessful applicants⁴.

3.2.4 Tangible environmental outcomes

Tangible environmental outcomes: Education grants (Government and Community)

Many grant recipients interviewed struggled to report tangible environmental outcomes within the grant context. Grant recipients expressed the view that project measures should reflect a clearer framework for

³ (a) $X^2(4, N = 157) = .78, p = ns$; (b) $X^2(4, N = 157) = .48, p = ns$; (c) $X^2(5, N = 154) = 8.53, p = ns$,

⁴ Successful applicants: $X^2(4, N = 149) = 20.94, p < .001$; unsuccessful applicants: $X^2(3, N = 94) = 6.17, p = ns$.

how environmental education leads to environmental outcomes, and that such a framework should consider a realistic assessment of what outcomes are achievable and measurable in the short run (i.e. within the life of a grant).

Grant recipients are also looking for clarity about the scale of environmental benefits expected within the grant context, for example what proportion of the grant value should be focussed on achieving on the ground environmental benefits.

Despite this, a few Education grant recipients were able to articulate the achievement of measurable environmental outcomes during an interview. These included:

- Measurable reductions in energy consumption: For example pre and post utility data for 50 buildings targeted through the Building Community Sustainability project involving building sustainability performance assessment of 50 community buildings in the Eurobodalla Shire
- Habitat creation: For example creation of green spaces, weed reduction, plant propagation
- Increase in biodiversity: For example measurable increases in frog population; success rate and number of pairs of breeding owls and fledging chicks; confirmed presence and return of threatened species, e.g. squirrel gliders
- Waste reduction: For example measurable removal of marine debris and litter from beaches as part of *Take 3 Surf Life Saving Initiative: Sand Soldiers program* that introduced a campaign to educate and inspire surf lifesaving clubs (SLSC) to be proactive on the issue of marine debris. Training, support and resources were provided to 23 SLSCs, with young Take 3 Ambassadors responsible for ongoing Take 3 actions and education of members - particularly juniors - becoming leaders in their clubs
- Land management: For example changes in behaviour of commercial graziers in order to address the environmental impacts of current grazing practices.

Tangible environmental outcomes: Eco Schools

Evaluation findings from qualitative and quantitative data suggest that Eco Schools grant recipients are more likely than Education grant recipients to report environmental outcomes. However the scale and size of these environmental outcomes were commensurate with the size of the Eco Schools grants and almost exclusively related to increasing bio diversity (unmeasured) through garden and green space building and restoration/rehabilitation. For example, Eco Schools grant recipients reported outcomes like 'improve habitat for small birds through planting of understory shrubs', 'different types of animals running around', etc.

The general consensus among Eco Schools grant recipients was that tangible environmental outcomes were extremely difficult to both measure and attribute to grants, and that the value of their Eco School funded projects should be considered in relation to their capacity to contribute and measure to education and social capital outcomes. A key contributing factor for this is the output delivery focus of Eco schools grants instead of being outcome focused. This presents an opportunity to integrate post project evaluations for Eco-school programs as well.

We believe in change that is sustained and maintained so it becomes embedded practice. Our students learning curriculum has been changed to support our students in their school, this has seen growth in student interests and these interests are going home to change or add to home practices. Then home practices and interests are coming to school and we are building capacity and awareness in both our students, teachers and community.

Eco Schools grant recipient



3.2.5 Key barriers and drivers to the achievement of grant recipients' objectives

Despite the low reporting of actual outcomes, grant projects have demonstrated achievements in the form of increasing awareness and knowledge amongst program participants, increasing their own organisation's capacity to deliver environmental education projects and building/extending relationships or networks on environmental issues. The key difference between different sized grant projects in terms of these achievements is mainly that longer running and larger grant projects have, on average, created more educational products (e.g. online resources, videos, conducting video conferences or webinars) or have established larger networks and engaged a larger number of people. Due to lack of long term post project evaluations, the question of whether they have necessarily resulted in an actual environmental behavioural change amongst their target audience (as compared to smaller/shorter projects) still remains unclear. However, despite the size or duration of the projects, a synthesis of qualitative findings from program document review and most significant change interviews reveals that grant recipients have reported similar drivers and challenges to achieving intended project objectives.

The key drivers that consistently emerged from projects that had achieved most of their intended objectives include:

- Well planned project plans and budgets
- Clear monitoring and evaluation frameworks
- Effective collaboration with local government or environmental organisations
- Growing environmental concerns in the general public

On the other hand, some common barriers to successfully delivering projects frequently reported by grant recipients include:

- Lack of adequate human resources particularly volunteers or administrative staff
- Lack of understanding on monitoring & evaluation
- Poor project planning
- Lack of technical expertise to deliver projects e.g. IT issues, issues with gaining access to softwares, lack of knowledge on how to use technology to engage participants etc.

It was noted that these drivers and challenges were also similar across Education and Eco Schools/food garden projects.

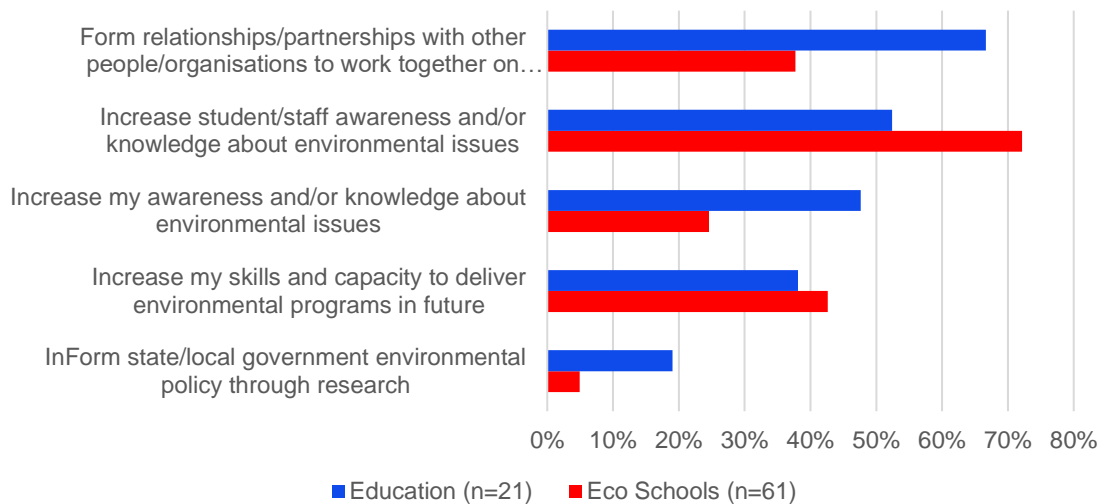
3.2.6 Program participant expectations

In the online survey with program participants we asked participants to reflect on what they expected to achieve from participating in the grant-funded program. While it is important to take the results with caution given the size of the sample, Figure 4 below indicates that Education grant participants were more likely to cite social capital outcomes (forming relationships and partnerships to work together on environmental issues) than Eco Schools participants (who were predominantly staff of schools). Education outcomes (increasing knowledge and awareness of environmental issues of either self or others) were a strong expectation of both Education and Eco Schools program participants, as was increasing their capacity to deliver environmental programs in the future.

Significantly, when we asked program participants to what extent the program met their expectations, in almost all cases they stated they were either 'completely' or 'mostly' met.



Figure 4: Program participants' expectations



Source: Environmental Trust - Project measures data

Similarly, a vast majority of program participants expressed that they were satisfied and/or extremely satisfied with the way in which their program was delivered. This was confirmed with findings from the most significant interviews, in which grant recipients who had carried out post project surveys expressed that their target audiences had expressed high satisfaction with their project delivery. Moreover, a vast majority (73 percent) stated that they have not only changed their environmental behaviour after participating in a grant program project, but have also been able to sustain their behaviour change.

Most program participants appreciated their grant programs by reporting that the projects have:

- Enabled them to develop leadership skills in environmental projects
- Improved their environmental behavior or increased awareness and knowledge of environmental issues
- Increased interaction with other community members in their areas over the environmental issue their program focused on e.g. habitat restoration, recycling, water quality, air quality
- Increased motivation to share the knowledge gained from the grant program with other colleagues and family member

I'm making better decisions about products I purchase and services I use. I have made definite changes in minimizing my food waste and general waste, more knowledgeable about what items I can reuse and recycle.

I am also definitely better at educating others and getting others on board in making behaviour changes that are not as hard as they think. I have been able to develop more community bonds and initiatives and get 'buy-in' from others.

Education community program participant



3.2.7 Site visits Program

Case study 1

Bee Aware of Your Native Bees (2014 – 15)

University of Western Sydney



The University of Western Sydney received a grant worth \$59,000 in 2014 for the 2 year Bee Aware of Your Native Bees project. Based at 5 sites in the Greater Western Sydney region over two years, this project aimed at increasing awareness and knowledge of native bees by:

- Increasing community awareness of the existence of native bee species and their importance in the environment through education
- Identifying indigenous species in each site and assess the diversity and distribution and habitat preference via a Bee Aware of Your Native Bees resource pack
- Sharing the knowledge and build future projects and networking through a Bee Aware of Your Native Bees Symposium at UWS

Hawkesbury campus

A member of the evaluation team visited the site of a number of the project activities to meet with one of the program coordinators (7th March 2018). The active Facebook group was identified as the best location to understand participant involvement so recent activity within the group was reviewed.

Key achievements

The Trust evaluation of this project noted that it met all objectives and exceeded expectations in some areas. The symposium exceeded expectations with its turn-out, however the facet of this project most worth highlighting is the lasting legacy that it was able to establish. A national Pollinator Week to raise awareness of Native Bees and other pollinators that was established with remaining funds from the program is an ongoing national event. The project was also able to create a Facebook group in 2015 with ~800 members. It has now grown to over 4,000, with evidence of continued engagement and membership.

Drivers of success

The design of the project had a considerable amount of inbuilt resilience that helped it achieve the broader project aims of raising awareness, encouraging conservation and sharing knowledge. There were multiple stages to the project – bee hotel and garden installation, bee ID events, symposium and pollinator week events – and many of these stages were carried out at multiple (5) sites. This gave the project leaders numerous opportunities to practice, learn and improve upon their processes throughout the project. It also meant that low turn-outs at some events were compensated for by having other events at different sites, or later events at the same site (e.g. low turnout in Lithgow, but exceeded expectations at Katoomba). The project effectively harnessed the usefulness of social media, despite being self-confessed novices upon commencement of the project. The Facebook group was established relatively early on (prior to the citizen science events). This meant that it was ready for people to join once they were in contact with the project, and each event provided new content to be added to the group, which helped in stimulating engagement. A key aspect the success of the group was the strategic use and management of the Facebook page. The presentations given in workshops were repacked into a form that could be presented on the social media platform (i.e. introducing one new native bee per day) to give group members some value from the page without overwhelming them. One of the organisers has maintained a continuous



presence in the group as well, responding to questions when required but also allowing answers to be generated organically.

How does this project align with good practice?

This program included a number of facets which allowed the direct personal engagement of participants: building of bee hotels and planting pollinator gardens, the citizen science aspects of native bee identification, and ongoing engagement with new or existing participants in the network through the native bee Facebook group. The positioning of the project as focusing attention on the plight of native bees after a wider spread of awareness of the importance of non-native honey bees had the potential to generate deeper reflections amongst participants, however this was not a key objective of the project, and wasn't something that the recipients sought to monitor.

Sustainability of the project

This project has been particularly successful in establishing an ongoing legacy past the period of grant funding, in the form of the National Pollinator Week and the Bee Aware of Your Native Bees Facebook page. Review of the Facebook page in March 2018 found continuing engagement by members, with 216 posts in the past 30 days. Approximately 50% of posts were from group members asking for help identifying bee/wasps in their backyard, or sharing information about an unusual species they had identified. These posts were receiving upwards of 20 comments on them, indicating strong activity amongst group members. The other 50% of posts were photos of native bees taken by members, which had a limited response from group members



Suggestions for future projects

The success with the social media of the project came despite the limited experience of the participants prior to the project. Given the benefits from the well-constructed use of social media, a starter guide for future grant recipients (ideas for best practice, how to generate engagement, pros and cons of various platforms) could prove beneficial



Case study 2

Coonamble Power Savers Program (2016-2018)

Coonamble Neighbourhood Centre



The Coonamble Neighbourhood Centre received a grant for \$100,000 in 2016 for the Coonamble Power Savers Program. This program aimed to reduce household energy usage in the Coonamble Shire region on an ongoing basis, focusing specifically on low income households, indigenous households and tenants. The overarching objectives were:

- 1) Enable and support 100 participating households in Coonamble, Gulargambone and Quambone to reduce their energy use by an average of 15% across these 100 households, while improving the participants' self-reported comfort levels.
- 2) Provide an enduring legacy for the Coonamble district communities by

increasing energy efficiency knowledge through mentoring and training of local energy assessors, exploring prospects for improving local energy infrastructure and conducting a technical review during the home energy assessments to inform long-term strategy for residential buildings in the region.

A member of the evaluation team undertook a site visit to the Coonamble Neighbourhood Centre (CNC) and two participating households, speaking with the former and current CNC coordinators (8th March) and interviewing the grant program manager (5th April). Qualitative feedback from the site visit discussions indicated that the project found that whilst issues related to energy cost were faced by participants, many of the participant low-income households faced hardships in other areas of their lives which were more urgent or significant than the power saving goals of the program. This limited the ability of many participants to engage with the program in a meaningful way. Coordinators found that whilst most households in the program were willing to participate in the project stages, they estimated that only around one-fifth of participants were really engaged and diligent in implementing audit recommendations.

Key Achievements

At the time of this evaluation the project was in the process of completing the 12-month post energy assessment follow-ups. The project had completed its first objective of completing 100 home energy audits with low-income households, and undertaken 2, 6 and 12 month follow-ups with as many households as possible to track and encourage uptake of the post-assessment retrofits. Three separate awareness raising events were held: two small household energy workshops (~12 attendees each) and a larger *Coonamble Energy Future Forum* (~65 attendees)

The project encountered difficulties with measuring any reduction in energy usage within the allocated time-frame, as the low level of service provided by the energy companies in the area meant most households received estimated, and frequently inaccurate, energy bills, with an actual meter reading sometimes only occurring once a year. This caused difficulties in measuring changes in energy usage, but also identified major issues in residents being inappropriately billed based on poor utility estimates or other inaccuracies. The identification of these issues was highlighted as one of the most significant impacts of the program, although it was not one of the original objectives.

Feedback from participants indicated that some of the benefit gained from the assessments was in the form of reinforcing existing energy efficient behaviours, whilst also providing new ideas. Participants were



also enthusiastic about the vouchers for energy saving products that were provided in conjunction with the assessments.

Home energy assessment and retrofit training was completed for a number of local residents (~10), although this was largely funded by funding obtained from a separate source.

Drivers of success

A key driver in the success of this project was the involvement of the local organisation to coordinate. The Coonamble Neighbourhood Centre (CNC) coordinator said they spoke to practically every one of the 100 participants in the program to convince them to sign-up. This was particularly important in a program of this kind, based in a small rural community and involving many elderly participants having strangers in their home to conduct the energy assessments. The fact that the CNC representative could reassure them of the legitimacy and trustworthiness of the program and assessors was important.

A counterpoint to this however, was the energy assessors. The project had difficulties with undertaking all energy audits with local auditors, with availability and lack of back-ups a key issue. The coordinators also emphasised that the experience and diligence of the Sydney-based auditor they later brought in was a key factor in uncovering many of the major issues with billing practices experienced by the households.

How does this project align with good practice?

The program sought to provide participants with both knowledge of how to save energy in the home and equipment (gadgets) or subsidies for new equipment that would help them improve energy efficiency. However, the coordinators noted the low percentage of households that had used their subsidies or gadget vouchers. The primary motivator for many of the project participants was saving money. There may have been greater success with the later follow-through if the program had been able to target a greater intrinsic motivation for participation with more emphasis on activating the core values of participants.

Sustainability of projects

The combination of knowledge and providing or encouraging the purchase of energy saving equipment, as well as multiple follow-ups with participants would all appear to be effective mechanisms for increasing the likelihood that households would adopt and maintain their power saving behaviours over the longer term. A notable finding from talking to both coordinators and participants during the site visit was the emphasis participants attached to reducing power bills and saving money. It was clear that energy prices were very high, and cost was a significant concern for low-income households, so this is understandable. However, this focus on extrinsic motivations of saving money, rather than intrinsic environmental values is often associated with less sustainable behaviour change.

Suggestions for future projects

The coordinators noted that the project involved a significant degree of program design and setup, including developing specific management software, which could easily and efficiently be transferred to different geographic locations.

The apparent lack of focus participants gave to pro-environmental values (i.e. saving money rather than reducing resource usage) identifies a specific area of improvement that could be developed for this type of project in the future.

A key learning from the project was the variety and severity of hardships faced by the low-income households within the project which reduced their ability to engage with the project goals. This points to issues larger than the scope of the project, but highlight the importance of considering wider factors regarding the target community in program design. These learnings would be relevant to many future grant applicants.



Case study 3

AHC (2014-2016)

Australian Hairdressing Council – Sustainable Salons

The Australian Hairdressing Council was awarded a \$54,000 Environmental Education grant in 2014 for a two year project to engage hairdressing salons across NSW. The project objectives were to identify optimum strategies to reduce energy and water usage and improve waste recycling within salons, then develop educational resources to share with AHC member salons across NSW and improve sustainability practices. The identification of strategies involved pilot audits of salons.

Case study process

A member of the evaluation team visited one of the participating salons on the 5th of April 2018, and interviewed the program coordinator. The salon visited was identified by the coordinator as one of the stand-out urban salons (Toni&Guy Newtown) that had been extremely successful in adopting and promoting the project.

Key Achievements

Both coordinator and participant identified the adoption of sustainable operative procedures (SOP's) as a key achievement. These take the form of documented procedures for participating salons, and also implementation of collection systems to divide waste streams. This includes separating hair, colouring chemicals, razors and tools to be collected and reused or repurposed. The coordinator noted that relatively few salons had even basic operating procedures for safety etc at the start of the program so the uptake of SOP's has been striking.

The grant program appears to have been particularly successful in creating a lasting legacy with the project. Two instructional videos were created to be used for awareness raising and training others coming through the industry. The two videos are on StyleIcons TV, an industry media platform with 25000 subscribers as well as being available online. The videos have been used by many RTOs to train new entrants into the industry. Along with the videos, there is now a community of practice within the hairdressing industry focused on sustainability in salons. This was described as going from 'strength to strength'. Since the completion of the grant the nurturing of this community of practice has been driven by a commercial entity – Sustainable Salons – whose founder was involved in the grant project and has been able to continue the work of the grant.

The participating salon visited noted that the changing culture of the staff and customers was one of the biggest changes they had observed throughout the program.





Drivers of success

The project was embedded in the industry, and coordinated by an appropriate peak body – Australian Hairdressing Council – which meant the existing networks, access and voice were strong for the project. There was also a sense that the project was well timed to address a need in the industry, given the rapid uptake and spread of the sustainable salons message. The coordinator described ‘green’ as ‘the new cool in our industry now!’, with a healthy aspect of competition noted amongst salons to adopt sustainable practices. The participating salon in the case study noted the benefits of signage regarding the program in prompting conversation between salon staff and customers regarding sustainability. This appeared to create positive reinforcement for staff with generally positive and interested responses from customers.

The initial engagement strategies with salons were through Facebook groups and newsletters (email). They have also introduced the ‘Green’ accreditation which is sought after by many salons and drives them to seek out information from the AHC. This indicates the value in having a peak body involved which is well known within the industry.

How does this project align with good practice?

This project appears to have been particularly effective in influencing multiple elements of sustainable practice for the participating salons. The awareness raising videos and communications initially provided information to interested salons, and there is now a detailed description of the process for salons to follow to obtain ‘Green’ accreditation. The project was also successful in promoting sustainability as ‘cool’ within the industry, motivating salons to make changes either through a sense of ‘healthy competition’ or as a way to attract customers. Finally, the project not only motivated participants to change and helped to provide the skills to do so, but through the commercial Sustainable Salons organisation (which was founded by an AHC board member and project contributor) were able to provide participants with the physical infrastructure and systems to act to change waste practices. There are links between this approach adopted and the social practice theory ideas of focusing on the roles of elements of skills, motivations and material infrastructure in creating and maintain practices.

Sustainability of projects

The AHC Salon Select has developed a ‘GREEN’ accreditation that salons can achieve by meeting certain criteria which continues the momentum generated by the program.



The commercial Sustainable Salons organisation operates a system for collecting waste from salons and appears to be a self-sustaining enterprise which means that the infrastructure to collect and recycle salon



specific waste has continued to exist beyond the life of the project. The brand recognition of sustainable salons is also strong, providing a continued incentive for salons to become aware of and involved in the sustainability initiatives. Sustainable salons is well positioned to nurture the continued growth of the sustainability community of practice within the hairdressing industry. For instance, up-keep of the Facebook page (which other case studies identified as a key asset for ongoing impact of projects) is now handle by a Sustainable Salons employee.

Suggestions for future projects

The grant recipient strongly suggested changes should be made to the monitoring and evaluation, and reporting process for the Environmental Education grants. They found the process inflexible and time consuming, making it difficult to adapt the project as lessons were learnt throughout the grant period. This almost prevented the development of the training videos which were some of the most successful project outputs



Case study 4

Take 3 Surf Life Saving Initiative - 'Sand Soldiers' Program (2014-2016)

Take 3

Take 3 were awarded \$84,000 in 2014 for the Take 3 Surf Life Saving initiative, called 'Sand Soldiers'. This program sought to introduce a simple, accessible and easily rolled-out campaign to educate and inspire surf life saving clubs (SLSC) to be proactive on the issue of marine debris. The program involved education and awareness raising activities, as well as organised beach clean-ups to remove rubbish from the SLSC's local beaches. Take 3 partnered with Surf Life Saving clubs and branches in the NSW (particularly Sydney and the Central Coast) to provide training, support and resources, as well as supporting a Take 3 Ambassador in each club. The Ambassadors were largely responsible for ongoing Take 3 actions and education of members, particularly juniors. The key objectives of the program were:

1. Equip SLSC with the information, incentive and expertise to remove marine debris from beaches/waterways and identify local/regional actions to address this ever-escalating problem. Establish an ongoing commitment to this cause within SLSC.
2. Broaden the understanding of SLSC members of their own role as environmental citizens by providing training that will increase awareness of the consequences of consumption and pollution behaviours. SLSC Ambassadors bring about systemic change within the wider community through their operating as change agents at a local level.



Members of the evaluation team held two interviews with the program coordinator.

Key Achievements

The program achieved significant tangible environmental benefits in terms of rubbish removal, as well as establishing a project with strong community links and momentum to continue beyond the grant funding period. They exceeded initial expectations in terms of rubbish removal. The clubs involved cleared 1.7 million square metres beach area, removing 10 tonnes of litter. Recruitment of partner surf lifesaving clubs was initially slow as Surf Lifesaving Australia (SLSA) is a large and bureaucratic organisation, however they gained momentum throughout the program and by the end had engaged with 23 NSW surf lifesaving clubs and were talking to clubs in QLD, Victoria, and Western Australia, as well as Surf Lifesaving Israel. They estimate that around 2,500 kids participated in the Sand Soldiers education program.

Drivers of success

The program coordinator highlighted the choice of partner organisation – SLSA – as a key driver of the success of the program. There are obvious synergies between Take 3's aims of cleaning up beaches and waterways and the SLSC members who are based on the beaches and in the water. This meant the program wasn't just about education, but engaging with the volunteers on a topic area that they already were very familiar with.

The program model was quite successful with Take 3 being the driving force behind the idea, providing resources, training, and support, but the ambassadors and beach cleaning volunteers were all SLSC members incorporating the Sand Soldiers ideas into their regular volunteering. This program model along with the aligned aims of the two key organisations were major drivers of the program success.

Finally, the promotion and marketing around the Take 3 initiative, combined with use of social media (Instagram) and celebrity ambassadors (professional iron woman and surfer) meant that by the end of the program surf clubs were approaching Take 3 to be involved, rather than Take 3 approaching surf clubs as

was the case in the beginning. Whilst the Take 3 organisation has a large Instagram profile (50k+ followers), the Take 3 SLSC Instagram account is only small with 109 followers, yet the coordinator noted that the starting of this specific account appeared to provide a way for surf club members to share images and stories that lead to clubs approaching Take 3 to be involved.

How does this project align with good practice?

The Take 3 project worked on all the elements that theory suggests are important when trying to increase the uptake of new social practices. It targeted the motivating values of the participants through a range of stories and images of the impacts that debris can have on marine wildlife, it provided any materials needed to collect rubbish from the beach (gloves, bags etc), and got the target audience (SLSC members) involved in beach clean ups to learn the appropriate skills through doing the activities. Another element of good practices could be seen in the way the desired behaviour change was linked to an existing practice of going to the beach. (i.e. you're already at the beach, there is no conflict to pick up some rubbish as you leave).

The coordinator noted an example of the program causing 'disorienting moments' for participants, which are a key stage in transformative learning. A number of parents watching the kids clean up would say they thought it was a waste of time as the beaches were clean already, and were therefore shocked at the amount of rubbish collected from beaches that at first glance were empty and clean. Whilst may not have been a deliberate aspect of the program, it is interesting to note the common effect.

Sustainability of projects

The coordinator indicated there was significant interest in this project with more clubs regularly approaching Take 3 to be involved. It requires some work to train up new clubs and monitor the project, but there appeared to be possibilities for corporate funders to be found to allow the projects to continue to grow beyond the end of the Trust funding. The successful completion of the grant funded project would appear to have acted as a useful (large scale) pilot that proved the viability and interest in the program.

Suggestions for future projects

As with other case study projects, this one highlighted the benefits of engaging with social media. This suggests an area that the Trust could work with future grant recipients to maximise impacts of projects.



Case study 5

Sustainable Grazing in the Tweed

Tweed Shire Council



Tweed Shire Council was awarded a \$14,900 Environmental Education grant in 2014 for an 18-month project which engaged 16 commercial livestock farmers who manage more than 1000ha of Tweed farmland. The project aimed to facilitate behaviour change among producers through their involvement in a training program delivered by Tweed Shire Council's Sustainable Agriculture Program, with support from North Coast Local Land Services and grazing industry experts. The program included workshops, information fact sheets, field days at local farms, soil test analyses and soil health advice.

A member of the evaluation team undertook a site visit to the Tweed Shire Council and a nearby farm on 16 March 2018. Four training program participants contributed to the evaluation site visit, along with the coordinator of the project. Qualitative feedback on the project suggest Tweed Shire Council has been successful in delivering essential skills for education for sustainability, particularly those related to envisioning, critical thinking and building partnerships.

Key Achievements

This project demonstrated an excellent understanding of the need for community engagement to achieve long term environmental benefits within local communities.

Participant feedback on the program was overwhelmingly positive. The program gave participants an opportunity to share with others their experience of the changes they have made to their grazing systems. Connecting like-minded people increased the confidence of a group of people within the community who often feel judged for their adoption of alternative practices.

An additional highlight of the program was the opportunity it gave participants to sample and test soil from their own property. While participants acknowledge that the cost of soil testing is not prohibitive, it is a something that often gets marginalised as a result of financial pressures. Aside from the tangible benefit of the cost of soil testing, its inclusion of helped participants develop realistic objectives and encouraged a practical and emotional engagement with the program.

It has fostered a mindset of sustainability that will change the way participants make decisions on their farms. Making decisions based on more than just economics is essential for a sustainable farming future for individuals and the whole community.

Participants however, saw the key factor to the success of the program was the coordinator, Eli Szandala, without whom "the program would go nowhere". Eli was praised by participants for his knowledge, approachability and understanding of their needs. This was seen by participants as crucial to the delivery of a practical and succinct program that has encouraged new ways of thinking.

Tweed Shire Council has shown commitment that it will continue to explore opportunities to deliver these kinds of initiatives building on the network and good will established through this project. It is also expected that the current group of participants will be an important mechanism for sharing information and promoting the benefits of the project more widely.

Suggestions for future projects

Despite the networking strengths of the program, there has been no regular communications between participants since the project ended. To improve on this, participants recommended ongoing field days to local farms, as well as the provision of funding for an expert speaker once per year to continue the knowledge exchange.



3.3 Customer experience and governance

Key findings

- The Education Grants program is efficiently administered within the Trust and reflects good governance principles.
- The Trust provides clear guidelines to grant applicants and for grant reviewers
- There has been strong adaptive management of both individual projects and the entire Education grants program over time.
- While the overall perception of the application and assessment processes amongst applicants is positive, a few reported that the process of completing an application can be onerous for small grant projects. It is anticipated that the introduction of the Grants Management System in 2018 will ease this process to some extent.
- For Eco Schools grants the time lag between preparing an application, announcement of success and preparation of a funding agreement impacts on program design and the delivery of planned activities.
- Despite this, some small and medium Education grant project recipients revealed that they have or are still struggling to provide the required accuracy with respect to the program measures in their reporting to the Trust. Many even questioned the honesty with which measures are reported back to the Trust.
- Capacity issues in relation to navigating Expression of Interest (EOI) processes, grant management and monitoring and evaluation were a barrier for applying for funding for some potential grant recipients. Respondents reported keenness for the Trust to deliver workshops/webinars and/or mentor applicants and/or grantees around disseminating and sharing learnings, knowledge transfer, and evaluation capacity building.
- Qualitative evidence suggests projects are largely delivered as planned. However, there are opportunities to review internal auditing of projects given low recording of actual outcomes.
- There is a strong case for more constrained and targeted project measures. The evaluation found that grant recipients neither find the current project measures useful for measuring the achievements of their projects, nor helpful for guiding continuous improvement of their projects.
- There were mixed reviews about the appropriateness and effectiveness of communication activities relating to applications and grant management employed by the Trust, however, there was acknowledgement that support for Eco Schools has greatly improved.
- Encouraging applicants to make explicit the link between transformative learning theories and related theories in environmental education and environmental outcomes could be provided as useful guidance for applicants.

3.3.1 Current demand for grants

The education grants program has a two stage application process. The first round invites EOI's from interested organisations while the second round invites only the organisations with successful EOI's to submit a detailed grant application. This creates an efficiency for both the Technical Review Committee and applicants whereby detailed applications are only sought from high quality proposals that have demonstrated the understanding of the issue in context to environmental education.

Based on feedback from applicants and the Technical Review Committee, both the EOI forms and the actual applications have undergone several rounds of changes over the years to make them easier to understand and respond to. This two staged application process has been unanimously appreciated by internal and external stakeholders of the program. It not only reduces the administrative workload of the applicants but also of the Technical Review Committee.

Many internal stakeholders feel that by trying to make the application process as easy and logical as possible for potential applicants, the demand for grants in both streams (Education & Eco Schools) has been persistently high since 2010 (see number of EOI's received). Similarly, between 2010 and 2016, 829 applications have been received for Eco Schools grants out which on average 50 percent of the applications have been funded. Qualitative findings revealed that not only has the demand for Education



and Eco Schools grants increased over time but also the methodological sophistication of applications. A major reason for this is the application process has considerably improved over time and guidelines have been tailored to become as user friendly as possible.

Table 6. Distribution of successful Education EOIs and applications between 2010 and 2016

	2010	2011	2012	2013	2014	2015	2016	Total
EOI's received	173	226	184	185	182	176	140	1266
Applications invited	35	32	33	38	35	29	27	229
Successful applications	19	15	15	17	20	15	12	113

However, a few stakeholders have noted that the demand may have been slightly affected by the following barriers to the application process in the recent past:

- Lack of knowledge and skills in project management which leads to difficulties in anticipating project timelines and budgets
- Lack of evaluative capacity in organisation leads to difficulties in developing effective engagement methods
- Small organisations are not experienced in acquitting state grants and may feel that the funding is not substantial enough to cover the cost of rigorous administration and reporting required by the grants. This leads to difficulties in getting 'buy in' from within their organisations.

Nonetheless, the number of applications received for both grant types by the Trust have been persistently high as the grants fund unique environmental education projects across NSW which have no alternative sources of funding.

3.3.2 Perceptions on the current make-up of the Technical Review Committee and the appropriateness of the application process

The majority of the internal stakeholders interviewed have expressed satisfaction with the current makeup of the Technical Review Committee and consider the experience and skills of its members to be adequate for reviewing and assessing applications. They agreed that collectively the Committee brings useful insights and experience from several organisations. However as most of them are volunteers, it should be noted that the system relies heavily on the goodwill of the people to put in time.

Understanding of learning theories and social practice theories, and understanding of the opportunities for links between environmental education and outcomes is a required skill for the Technical Review Committee. Given the education shift toward a transformative agenda opportunities may need to be explored to increase the knowledge and experience with transformative learning for sustainability in the Technical Review Committee, particularly for the Education grants.

In context to the application process, the online survey and in-depth interviews with grant recipients revealed that previous organisational or individual experience with Environmental Trust grants appears to be the key push for most applicants to apply for these grants.

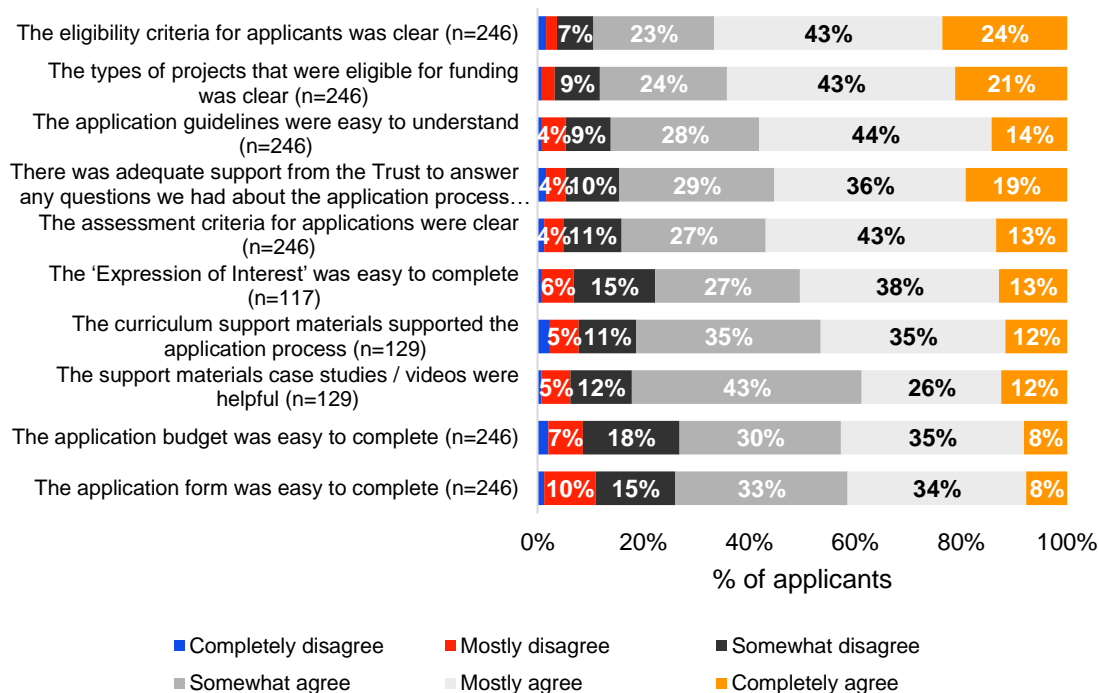
The overall perception of the grant application process is also positive. Many grant recipients have appreciated the rigour required in submitting the actual application and have stated that it has contributed to their capacity building in applying for and managing grants.

In the online survey of successful and unsuccessful grantees, grant applicants answered a series of questions about their satisfaction with the application process, on a scale from 1 (completely disagree) to 6 (completely agree). High satisfaction was found overall, with more than 70 per cent of applicants agreeing with all of the statements. Applicants were most satisfied with the clarity of the eligibility criteria, and least satisfied with the ease of completion of the application form. These scores did not differ according to the



type of grant applied for. An examination of applicants' average satisfaction scores across all items found similar means for those who applied for an Environmental Education grant⁵.

Figure 5. Applicant satisfaction with different aspects of the application process



Data source: Online survey of successful and unsuccessful grant recipients

Most internal stakeholders interviewed, stated that they are aware of perceptions about the application process for Education grants being arduous. This is particularly true for small to medium sized grant projects who have no prior experience in acquitting government grants. There is potential for the process to be made easier once the new Grants Management System (GMS) is adopted by the Trust in July 2018. The GMS is expected to bring about a balance between transparency and quality of applications while letting the overall process be adequately agile and flexible for grantees as they apply for and manage their projects. It is also expected that the new system will provide the grant administrators at the Trust an enhanced understanding of how grant recipients spend each tranche of their funding.

3.3.3 Grant project planning and delivery

Many grant recipients who were managing small to medium grant programs found the creation of detailed project plans early on in the project enhanced their overall project management skills. This was particularly true for those who were applying for a grant for the first time. The online survey of grant recipients confirms that a majority of active and acquitted grant programs have been able to deliver the programs while remaining within their expected budgets.

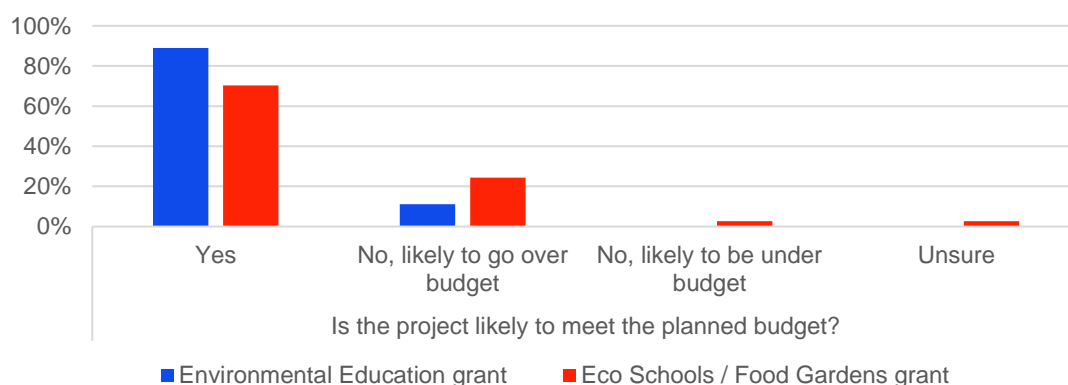
Evaluation findings confirm that most acquitted Education and Eco Schools/food garden grant recipients met their planned budgets. At least 79 percent Education grant recipients and 82 percent Eco Schools/food garden grant recipients have met their planned budgets for their projects. Similarly, out of the grants programs that are still active 89 percent programs and 70 percent Eco Schools programs foresee that they their programs will most likely meet the planned budget. Grant recipient interviews reveal that

⁵ Education grant: *Mean*=4.38, *Standard Deviation*=.91; Eco Schools grant: *Mean*=4.67, *Standard Deviation*=.87 All aspects of satisfaction were further analysed by type of grant program, however the results did not change between Education and Eco Schools grant recipients.



Eco Schools that went over budget were able to easily arrange additional funding through donations raised by the P&C Committees or in kind donations from organisations such as the local Council or RSL.

Figure 6. Percentage of active grants that will meet their proposed budget



Data source: Online survey of successful and unsuccessful grant recipients

While grant recipients acknowledge the importance of rigorous project planning, the key learning outcome for most grant recipients who had applied for a grant for the first time, was to be realistic about how they cost the time of the project team. Many of these had not costed for project management time which presents an opportunity for the Trust to provide the basic project management support to new applicants. This was particularly true for Eco Schools and small Education grant recipients.

It was a big bucket of money for us. I guess I was a bit naïve... I haven't applied for that amount of money before and completely forgot to allocate money that we needed to cost project management time as well...In retrospect I should have costed more money for my time.

Education government grant recipient

With this learning from past experience, it has been noted that most projects have continued even after the grant program concluded. Despite the issue of volunteer burnout in the long run, at least 80 percent successful Education grant recipients and 67 percent Eco Schools/food garden grant recipients have stated that they have continued or built on their respective projects beyond the duration of their grants. Similarly, at least 86 percent of acquitted Education grant programs and 92 percent acquitted Eco Schools/food garden grant programs have continued to deliver environmental education after their grant program concluded (N=99). This highlights the importance of the grant as a catalyst for most projects in different organisations.

I grossly underestimated how much time the project would take...I was not aware of the financial issues of organising deposit or even getting in touch with different team members was time consuming—there were many follow ups with principals, issues with spam, so much micromanaging that I didn't expect.

Eco-schools grant recipient

3.3.4 Reviews on the appropriateness and effectiveness of communication activities

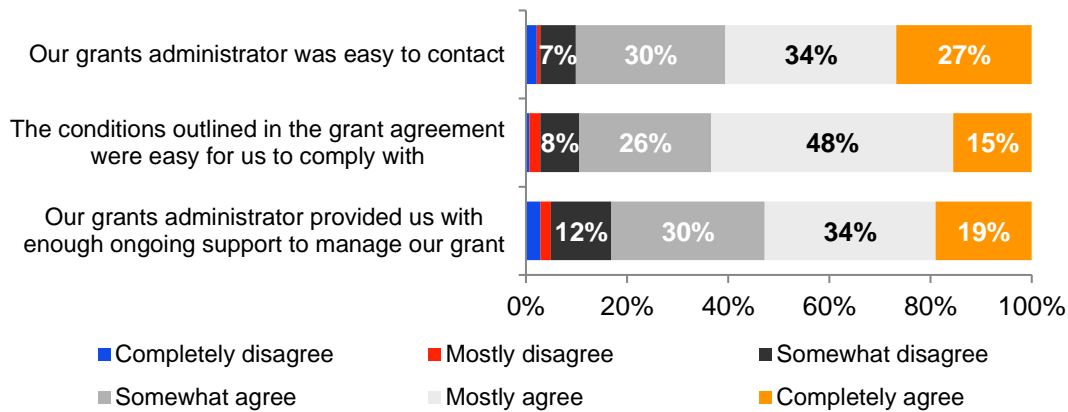
Overall, evaluation findings suggest that the grants program are well administered. Grant recipients have appreciated the support from the Trust in the form of flexibility in granting project extensions and useful suggestions for improvement during the course of their projects. They also acknowledged that the Trust staff is responsive to enquires and always found them to be understanding during any informal communications. This adaptive support process has been appreciated by internal stakeholders as well and was noted as an enabling factor by some grant recipients to achieve their intended objectives on time.

In the online survey of grant recipients, respondents were asked a series of questions about the quality of their relationship with the Trust. As with satisfaction with the application process, respondent ratings were



high, indicating that successful and unsuccessful grant recipients were generally satisfied. A comparison of the mean scores for successful and unsuccessful recipients of either Education grants or Eco Schools grants revealed no differences in overall satisfaction⁶.

Figure 7. Grant recipient perceptions on the ease of managing their grants (N=142)

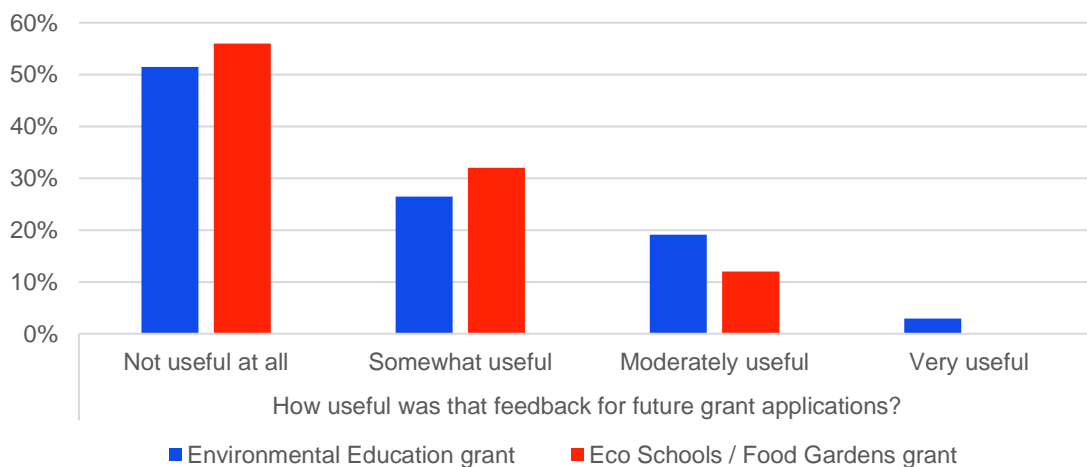


Data source: Online survey of successful and unsuccessful grant recipients

It has been noted that most grant recipients have had low engagement with the Trust once their applications were successful. Once the grant is active, the only interaction most grantees have is in the form of e-mail exchanges when asking for a clarification or submitting a progress or a final report for their projects. While most of them were satisfied with the clarification or feedback they got from the Trust when required, they also expressed that they would like more recognition of the achievements of their projects while they are active.

This view is contrary to the opinion held by unsuccessful grant applicants. The majority of the unsuccessful applicant grant recipients reported that they did not find the feedback provided to them on their unsuccessful applications useful. At least 80 percent unsuccessful education grant applicants and 84 percent unsuccessful Eco Schools applicants did/do not apply for another grant. It should be noted that having an applicant not apply again may be an appropriate outcome if they do not have the necessary skills and experience. However, it is still important that the Trust to review the feedback provided to ensure that feedback is not discouraging commendable unsuccessful grant applicants from re-applying in future.

Table 7. Percentage of unsuccessful applicants who found feedback from Trust useful

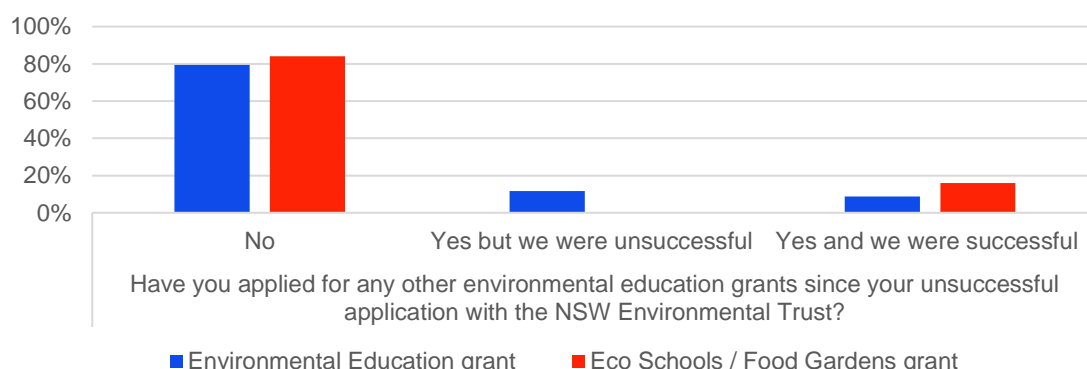


Data source: Online survey of successful and unsuccessful grant recipients

⁶ Education grant ($M=4.27$, $SD=.88$); Eco Schools grant ($M=4.49$, $SD=.80$)



Table 8. Percentage of unsuccessful applicants who re-applied for another grant



Data source: Online survey of successful and unsuccessful grant recipients

Internal stakeholders generally find the feedback process to be appropriate. At the same time they have also acknowledged the need for additional support and feedback to grant applicants and recipients. In-depth interviews have revealed that resources available to the Trust to support and manage grant applications and recipients have reduced over time. Previously, pre-grant roadshows and workshops were regularly conducted to inform applicants and successful grant recipients on project planning, monitoring and evaluation. However, due to resourcing issues, this support is no longer present and there is an expectation that grant applicants will read and utilise information available to them on the Trust’s Education Grants program website. Most internal stakeholders expressed that similar sort of support on project management should be re-introduced particularly for organisations without any experience in managing grant projects or in monitoring and evaluation. This resonated with the views expressed by small and medium grant recipients who had no prior experience in managing government grants.

The timing of grants was another widely discussed topic that consistently emerged during our interviews and in qualitative sections of the grant recipient and participant surveys. The timing of the announcements and the actual funding has been questioned by not only the grant recipients but also by the internal stakeholders of the program itself. This is a particularly greater problem for Eco-school projects. Many stakeholders from Eco Schools reported that they would prefer to know the funding decision well before the end of the school year to aid their internal planning.

I do have one significant concern about how the program is managed. From customer perspective, applying in May for \$3500 that you don't receive for another 9 months is not an appropriate expectation of the program

Environment education stakeholder

When we look at a guideline with x announcement date, you have built a plan around the school year and the community calendar. Then what you have is an 'add on' model, not an integrated one as originally planned. This has a big impact on the proposed engagement and outcomes. We may miss the very best people we can get involved.

Education government grant recipient

3.3.5 Planning, monitoring and reporting requirements—a barrier to achieving efficiency and innovation in the program

Reporting on project outcomes and good project management is essential for any grant program. The requirement to develop a monitoring and evaluation (M&E) plan in the beginning of a project, provides grant recipients a benchmark to evaluate their performance against. The current reporting requirements of the education grant programs are based on this understanding and place high emphasis on reporting program inputs, outputs and outcomes for all programs in the form of program application, progress reports and final reports. A key finding from our qualitative and quantitative analysis is that currently reporting from grant recipients takes place to fulfil compliance requirements as compared to taking place for program improvement. While most stakeholders feel that M&E and reporting requirements are at an appropriate level for large education grants, they have expressed that these requirements may be too



onerous for smaller grants (i.e. grants less than \$30k). This is despite the fact that small and medium grant recipients already have much lesser reporting requirements than larger grants.

Recipients who have managed large projects expressed greater understanding of the importance of rigorous reporting for handling large grants. Many of these have independently also carried out independent post-program evaluations of their individual projects.

Many Eco School grant recipients appreciate that the reporting process has been substantially simplified for them since the program first started. The trust provides reporting and monitoring support through materials such as an M&E template, definitions for possible projected measures, guidance on effective M&E methods and through feedback on progress and final reports.

There is pressure to make the grant look worthwhile and achievable. Everyone is trying to inflate what they can do in order to get the money which means that outcomes are quite unrealistic.

Education government grant recipient

Despite this, most small and medium Education grant project recipients revealed that they have or are still struggling to provide the required accuracy with respect to the program measures in their reporting to the Trust. Many even questioned the honesty with which measures are reported back to the Trust.

Currently, there are two different types of reporting templates for environmental education (government or community) grants and for Eco School grant programs. The report form for Eco School programs requires a discussion on the key program activities and outputs achieved in the each of the four program domains namely: environmental outcomes, student learning outcomes, school and community partnerships, and teacher professional development. It also allows grantees to qualitatively express the key barriers and enablers for success in their respective projects. While the form is brief and self-explanatory to most extent, many stakeholders from Eco Schools projects have stated that noting each and every measure is quite a painstaking task due to the following reasons:

- The time lag between grant approval and actually obtaining the funds makes planning difficult
- The vast number of teachers, students and other community members involved, makes recording particularly difficult to note and report
- Grant recipients do not have adequate knowledge or skills on how to measure program outcomes

The reporting form for Education grant projects is a detailed monitoring and evaluation template. For each objective that a grant recipient had proposed to accomplish, they are required to document activities, project measures, projected and actual project outputs, and projected and actual completion dates. They are also provided an opportunity to qualitatively discuss the achievements or failures of each project activity carried out and report how they think they could improve the overall delivery of their respective program. Between 2010 and 2016, the grantees have been provided an extensive list of measures in up to seven categories from which they have to report the actual and projected values for the relevant measures to their projects (see

We had an external evaluator who developed a really useful M&E Framework for us...however it had to be tailored to fit the Trust's framework which actually took away from it a bit. Each activity we did...we had to make sure we could tweak and change.

Education government grant recipient

Appendix 7.3 for a complete list of project measures obtained from project measures data). The categories include economic, environment quality, land management, research, resource conservation, stakeholder and community, and water management measures. Even though project measures have been considerably reduced since 2013 for Education and Eco Schools grants over the years and it is only mandatory for them to report stakeholder and community education and participation measures, the reporting requirements have dampened the passion for many project managers who believe that it has led to their projects becoming less innovative to achieve compliance. This sentiment is felt equally not only by large grant projects but also by the small-medium sized grant projects who expressed that the stress on measures makes most of them report tangible outcomes only.



I feel when grantees carried out surveys of their target audiences, the community in general felt a part of the overall project. It also led to increasing their knowledge on monitoring and evaluation.

Internal stakeholder

In light of this stakeholder feedback on reporting requirements, there is a clear desire amongst grant recipients to reduce the existing number of measures to a few 'meaningful' measures. This will not only reduce the overall workload of the grant recipients but it will also encourage them to regularly report their projected and actual measures.

Grant recipients in particular Education (community and government) have repeatedly expressed that they often overlap in the project measures components for each objective in their M&E plans. There is also a misconception amongst grant

recipients that the Trust would like to see extensive quantitative measures being reported. As previously noted in Section 3.2, project reporting currently focuses on outputs instead of outcomes. Our consultations with stakeholders at the Trust revealed that the Trust understands this and uses output data as an indication for the likelihood of achieving outcomes. Despite this there is an opportunity exists for the Trust to improve the existing project measures to make them more effective indicators for project outcomes. A discussion on types of such outcome oriented measures has been provided in Section 3.1 and in Section 4.

Some grant recipients have also stated that there is a need for reporting requirements to be more flexible once a project is active. Being unable to modify their initially proposed M&E frameworks made grantees question the Trust's understanding on how programs operate in a political environment and that strictly adhering to initially proposed project plans may be difficult as a project evolves. This is particularly true for first time grant recipients, small-medium sized grant projects and projects that involved multiple partner organisations.

Recipients with an understanding of the importance of monitoring and evaluation reported that since the key purpose of reporting in the context of the grants is to observe any behavioural change in the target audience, the adoption of longitudinal programs would be more appropriate. There was also emphasis on giving more importance to the quality of the relationships formed through a program as compared to the quantity of people involved.

In light of these concerns, the majority of the stakeholders agree that there is opportunity to enhance existing support to grant recipients however, it would require additional resources as well.

Additional support could include:

- Providing an understanding of project management: This is particularly important for grant recipients who have never applied for or managed government grants before. Since grant recipients are expected to have some understanding of project management if they have to successfully execute their grant programs, it creates unnecessary burden for small and medium grants. While the reporting requirements for Eco Schools grant programs are considerably less than the requirements of the Education grants, many stakeholders belonging to the Eco Schools stream suggested that they too have struggled with reporting in terms of not only understanding it but also in terms of the time it requires to be captured and noted.
- Building capacity to develop M&E plans: Support to develop M&E plans in a way that does not place excessive reporting burden on grant recipients. The Trust may also provide monitoring and evaluation support in a way that makes the reason for collecting monitoring data clearer to grant recipients.
- Making the processes online: Many stakeholders expressed that if the application and reporting process is carried out online, it would make project managing of the grant not only easier for the recipient but also for the Trust. Currently, the process involves exchange of several e-mails over the length of the grant which makes it cumbersome to file several attachments and carry out an analysis. It is expected that with the introduction of the *Grants Management System* in 2018, the grant application and management process will become easier.
- Further increasing flexibility and communication from the Trust: Many grant recipients felt that they are unable to capture the changes to their program as it progresses because their initial M&E plans did not incorporate this possibility and would like to have more flexibility. A casual follow-up chat between the Trust and the grant recipient at least two to three times over a year could address this issue.

3.4 Cost effectiveness of grant programs

Key findings

- An analysis of the relative cost-effectiveness of grant types revealed that:
 - There is little evidence that larger funded and longer running grants consistently offer superior value for money for the Trust. Generally, relatively small education grants and low-mid length projects appear capable of regularly delivering cost-effectiveness objectives.
 - For a relatively small investment, Eco Schools deliver high transactional values. As a result, this makes them appear to be relatively cost effective in achieving outcomes.
 - Cost-effectiveness comparisons may be generally appropriate for some but not all Trust objectives. In particular, given that the scope and potentially unique nature of project objectives of some Education Grants, particularly larger scale projects, do not necessarily suit cost-effectiveness comparisons. For smaller scale and projects expected to deliver relatively homogeneous results and more comparable units of analysis, cost-effectiveness may be well suited as an objective.
- An analysis of the capacity for grantees to earn additional co-contributions revealed that:
 - Eco Schools and food gardens in schools tend to earn high rates of external co-contributions.
 - However the average quantum of co-contributions is typically higher for education grants (especially community grants) given their larger scale.
- The achievement of relative cost-effectiveness varies depending on the measure being evaluated in the project.]
 - In terms of product development and attendees at awareness events, Education (government) grants are more cost effective than Education (community) grants
 - In terms of individuals reached and number of organisations involved, Education (community) grants are more cost effective than Education (government) grants.
- Some stakeholders belonging to the Eco Schools grant programs, expressed that they actually struggled to expend grant fund appropriately because they were able to arrange for an overwhelming amount of donations and in-kind contributions. Hence, accuracy in expenditure data collection is of high importance.
- A range of opportunities may exist for the Trust to further develop its measurement and data collection to better facilitate Trust decision-making and monitoring in future.
 - A more constrained set of measures, which are outcome oriented and tightly aligned to the level of education and engagement (rather than simply counting units) may be of value.
 - Because some outcomes may extend into the future, some measurement of achievement beyond the period of project duration could make reporting of outcomes more accurate.

For the Trust to achieve cost-effectiveness as an objective, funding decisions should be guided by one or both of the following:

- Relative likelihood of grantees to earn additional co-contributions.
 - When grantees earn additional co-contributions toward projects this results in multiplier effects arising from of each dollar funded by the Trust.
 - Grantees capable of earning additional co-funding may be associated with enhanced prospects for longevity and sustainability of achievement of grantee outcomes beyond the duration of Trust funding.



- Relative cost-effectiveness of grantees in achieving expected outputs and outcomes.
 - Grantees’ projected measures signal to the Trust potential capacity and prospective expectations to deliver outcomes cost-effectively.
 - When evaluating the prospective cost-effectiveness of grantees it may be appropriate to compare prospective achievement toward engagement and educational outcomes rather than on-ground environmental outcomes. This is because economic comparisons of diverse environmental outcomes may not always be possible or appropriate.

As the achievement of outcomes for individual grantees tends to vary, since the respective grant types may vary in their scope, ultimate objectives, and target demographic, there are several comparable units of measurement that are suitable to support a relative analysis of cost-effectiveness of grant type. This may be instructive for the Trust in considerations of allocation of its funding between grant types.

Given that there are scarce funds available to the Trust, it is, in principle desirable that grants are on average (and to the best of Trust’s knowledge) allocated to those grantees who are relatively cost-effective in achieving expected outcomes. Moreover, because of the Trust’s responsibility as steward of public funds, contributed by taxpayers of New South Wales, it is incumbent upon the Trust to identify and understand how, and to what end, Trust funds are actually delivered toward prescribed outcomes in a transparent and timely manner.

This means that the Trust may be encouraged to ensure that its limited resources are allocated to grantees – and its overall allocation mix between grant types – that typically deliver outcomes utilising relatively few resources. We consider one grantee to be relatively more cost-effective than another if it delivers the same quantity of outcomes while using fewer resources, or inputs.

In the case of Trust grantees, the primary measure for inputs (from the Trust perspective) is the amount of dollars of funding received by the grantee. To analyse whether there are differences in expected (average) outputs and outcomes across grant types, and across the range of measurable outcomes⁷, we have undertaken a cost-effectiveness analysis. Given the existing data limitations, we attempt to identify potential areas in which the Trust could better target its funding of grantees in order to maximise cost-effectiveness in achieving outcomes.

In order for the Trust itself to maximise cost-effectiveness, this would imply that funding allocations are distributed to those grantees who are capable of delivering the highest level of outcomes at the lowest possible cost (in terms of resources). Of course, it is difficult to know *a priori* the relative cost-effectiveness of grantees’ actual outcomes (as opposed to demonstrated past achievement). However, since grantees are asked to provide projected outputs and outcomes during the grant application process, this offers an opportunity to guide grant decision making.

Improvements in cost-effectiveness allocations of Trust funding would result in delivering the equivalent environmental outcomes but requiring the employment of fewer resources. Put differently, improvements in cost-effectiveness of the Trust’s allocations or achieving greater environmental outcomes for the equivalent level of resources.

If tangible, measured environmental outcomes were fully available within the project time period, an analysis of cost-effectiveness toward environmental outcomes would offer a complete insight as to the contribution of OEH grants to environmental improvement. However given that the current emphasis of reporting is on project outputs instead of outcomes:

- Long term environmental outcomes are not being fully measured during the project period
- Even if they were measured, they would not truly account for changes in environmental behaviour. This is because actual changes in behaviour and actions which contribute to environmental change may only appear after respective projects conclude.

Given these issues along with data caveats discussed in Section 3.1, a statistical analysis of project measures does not provide an accurate picture of the actual achievements of the grant programs. Nevertheless as a cost-effectiveness analysis was amongst the four key objectives of this evaluation, UTS has utilised available data in the best possible way to present current trends in reporting of measures and

⁷ It bears reminding that reference made to ‘measurable outcomes is made with respect to the tangible range of project measures generally. These may be reasonably considered as outcomes in a sense. Say, for educational products developed, these can be counted in a tangible sense, however when we consider ‘outcomes’ more generally we are typically interested in the influence or impact resultant upon the production of the educational products in question – namely because the educational aspect may be considered a means toward some end in which the participants are attempting to be influenced toward.



cost effectiveness of different types of grant programs. This is followed specific recommendations on how the Trust can improve its data collection in future.

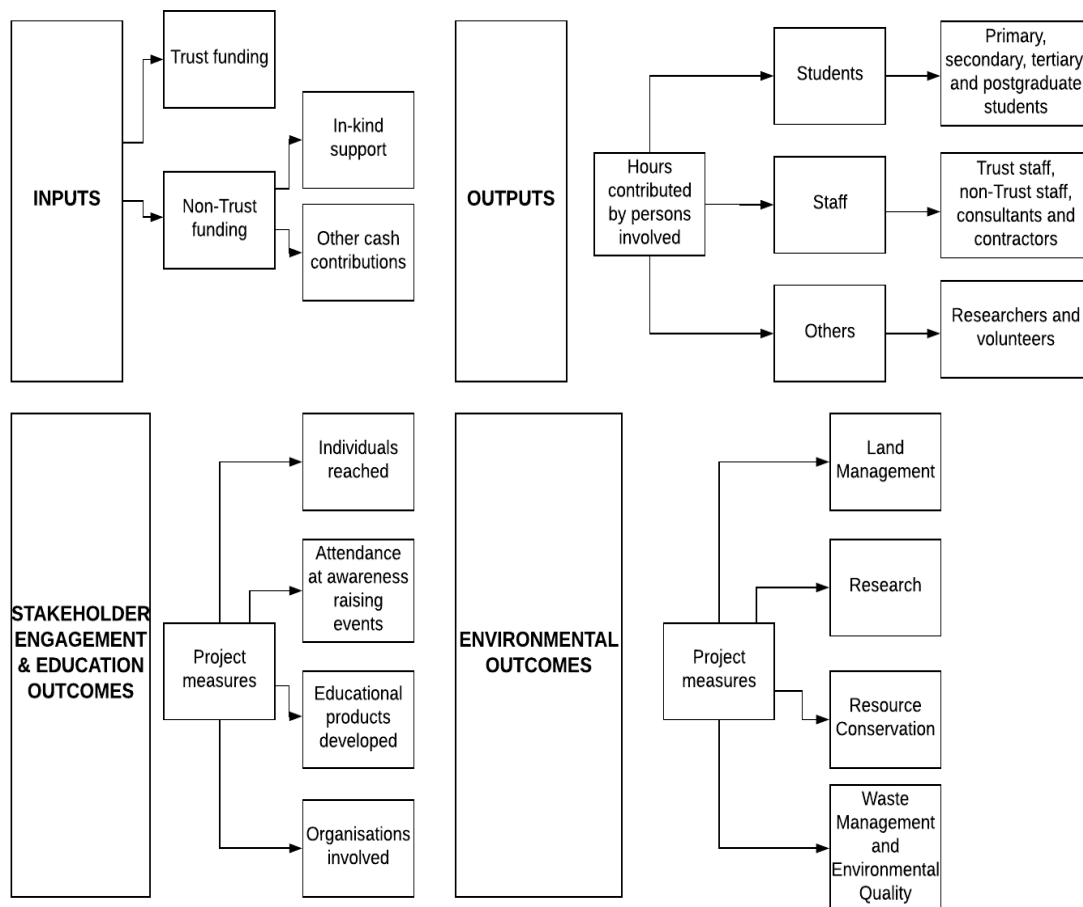
3.4.1 Data organisation and transformation

For the purpose of the analysis presented in this section, we separate inputs, outputs, and outcomes from the range of project measures recorded by grantees (see Figure 9) and collated by the Trust. We chose to retain both projected and actual recorded data for two reasons. First, the reporting of projected measures is much more complete than is the recording of actual measures – this means that only with the inclusion of projected measures were we provided sufficient data to make any generalisations. Second and more importantly, since Trust funding decision-making takes place with knowledge only of projected project measures, so the relative connection between projected and actual achievement of measures may be instructive for the Trust in consideration of future grantee assessment. Given the available data, it should be noted that this helps to provide the Trust an analysis on the extent to which project outputs and outcomes are recorded and must not be confused with the extent to which measures are achieved.

In the analysis, we further split stakeholder engagement and education outcomes from environmental outcomes. This distinction is made in order to highlight that stakeholder engagement and education outcomes – the most common result from the Trust’s environmental education grants – serve typically as a means towards the end which is the achievement of, or progress toward, environmental outcomes. For this reason, by conducting our cost-effectiveness analysis, we are principally interested in the conversion of inputs (funding) into tangible measures of i) outputs, in the form of the number of hours contributed by those involved in project delivery (staff, students, researchers, and volunteers), and ii) stakeholder engagement and educational outputs (individuals reached, organisations involved, attendees at awareness raising events, and educational products developed). Other things being equal, this analysis assumes that increases in engagement and education may be positively associated with the achievement of environmental outcomes of various kinds, even though this may be difficult to capture through quantitative measurement. This assumption is supported by the finding that not all measures are discreet. Qualitative evidence suggests that similar measures tend to be correlated and some outputs have further impact on other outputs. For example, grant recipients who conducted surveys of their projects have stated that evidence shows information shared by people at one workshop is further passed on to other people such as friends and family.



Figure 8. Inputs, outputs and outcomes in OEH Environmental Education



Following this, project measures data was linked to economic data in order to allow for cost-effectiveness analysis. In particular, Trust and non-Trust funding data collected by the Trust was merged in order to allow for matching with project measures data. In addition, we choose to analyse across grant types only by way of comparison – the programmes themselves (education and Eco schools) are ultimately different schemes although they employ similar measures in some instances.

Finally, following an examination of the project measure indicators employed by the Trust, a number of composite measures (aggregating similar measures) were employed in order to rationalise the range of indicators and support our analysis.

3.4.2 Trends in grant funding arrangements

To examine the trends in the funding of grants over the period 2010 to 2016, we disaggregated grant-allocated funding and non-Trust funding separately.

Grant funding

In recent years, the allocation of Trust funding has tended to fluctuate, which may be associated with variable number and quality of applicants in respective years. It is evident from Figure 10, for instance, that:

- The share of Trust funding allocated to Community Education grantees was highest in 2011 and 2015. It should be noted that the 2016 year presents an anomaly in the case of community education grant funding allocations and the general trend from 2010 to 2015 is more appropriate to consider.



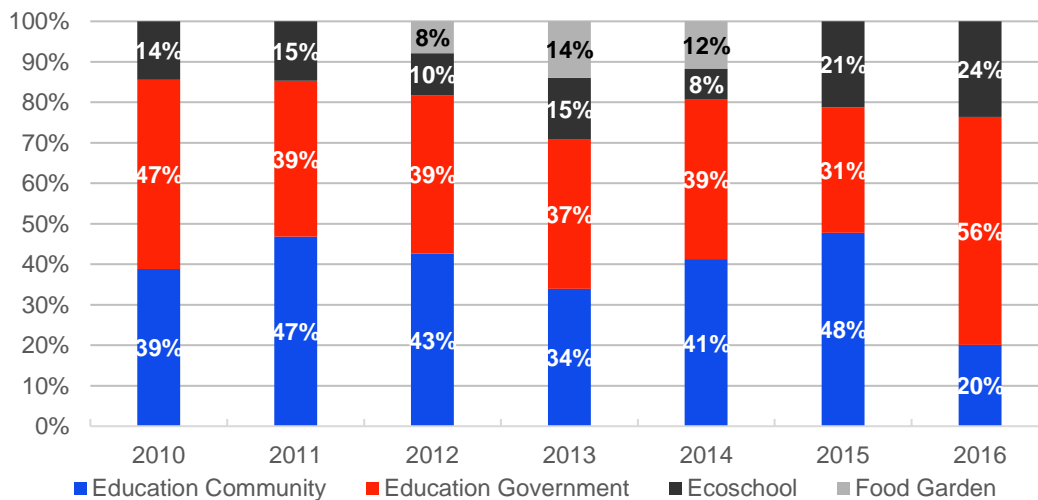
- The share of Trust funding allocated to Government Education grantees has fluctuated over time. This share was highest in 2016 and 2010 and lowest in 2015.
- The share of Trust funding allocated to Eco Schools grantees has generally been progressively increasing over time. Internal stakeholders reveal that there are two key reasons:
 - Grant administrators have regularly observed that Eco schools grants act as seed funding and hence over the years it has become common for schools to actually deliver much more than what they originally intended to achieve. For example, the Croydon Public School who received an Eco Schools grant in 2011 were funded to build four garden beds and have instead delivered twelve. Donations raised by school P&Cs and local nurseries played a major role in this.
 - Eco school grant applicants have increasingly aligned their projects with curriculum delivery. This ensures the Trust that the project may have longer environmental outcomes.

However, over the course of the period 2010 to 2016, the overall share of funding allocated between government (41 per cent) and community (39 per cent) education grantees is split relatively evenly.

Non-grant funding

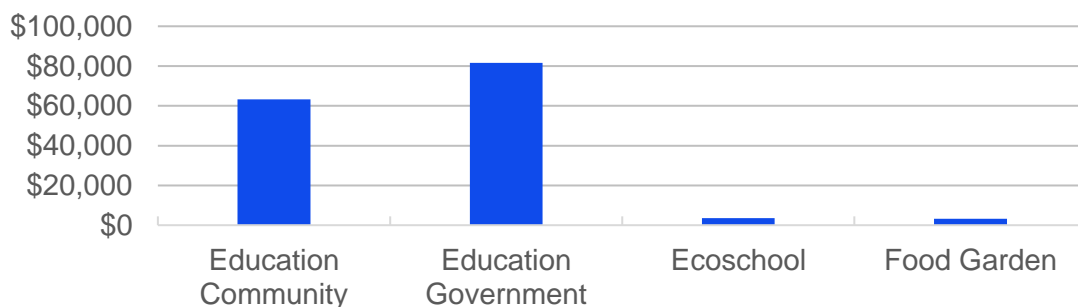
For some, but not all, years the Trust has collected data related to non-Trust funding of grantees – made up of in-kind contributions as well as other cash contributions. Taking into account both grant funding and additional contributions, the average grantee recipient is around 3.4 per cent higher for Education (government) grants than Education (community) grants.

Figure 9: Distribution of grant funding (2010 to 2016).



Data source: NSW Environmental Trust

Figure 10: Average total funding per grant type (grant and non-grant funding) (\$A 2016)



Data source: NSW Environmental Trust



It is important to account for external co-contributions (both cash and in-kind) when comparing the funding of grantees. Because co-contributions reduce the reliance upon the Trust to fund environmental projects, it would be desirable to identify and prioritise those projects with the potential for Trust funding to serve as a catalyst for additional contributions to further commit. Moreover, capacity for earning co-contributions would appear likely to serve as a strong indicator for future sustainability of projects, beyond the allotted duration of projects.

In terms of capacity to earn co-contributions, while Education grantees have earned larger quantum of co-contribution on average, Eco Schools and food gardens have earned relatively high co-contributions ratios, given their relatively lower overall average funding quantum (see **Error! Reference source not found.**, while Appendix 7.2 describes how average co-contribution has been calculated for each grant program). To this end, a significant multiplier effect would seem to apply to each dollar of Trust funding allotted to Eco schools grants in particular. Interviews with Eco Schools grant recipients further support this finding as it has been observed the potential number of people indirectly reached through Eco Schools projects is quite high. This evidence of community buy-in is reflected in the fact that share of Trust funding allocated to Eco Schools is progressively increasing over time.

Table 9. Average non-grant funding co-contribution (\$A 2016)

	Average co-contribution	% of Grant funding
Education community	\$ 16,410	22 %
Education Government	\$ 13,229	17 %
Eco-schools	\$ 3,298	53 %
Food Gardens	\$ 3,372	48 %

Data source: NSW Environmental Trust

In absence of consistently recorded equivalent expenditure data from grantees, it was not possible here to consider the relative cost-effectiveness based upon a breakdown of funding for infrastructure versus professional development for any grant program.

3.4.3 Cost effectiveness between different types of grant programs

In order to examine relative cost-effectiveness across grant types, we divided observed stakeholder engagement and education outcome measures by dollars of funding. This is to determine which grant types might be relatively more or less cost-effective in delivering a set of education and engagement outputs⁸. This is principally performed for the following reasons:

- Engagement and education represent a significant function of the grant programme, so achieving bang for the buck from the Trust's perspective in achieving such objectives may be an important consideration. This analysis here is intended to help guide decision-making in the allocation of Trust resources between grant types in future.
- Because there is relative comparability between some engagement and education measures broadly (despite some limitations, as discussed throughout) compared to environmental outcome measures – which may be especially complex and diverse in scale, scope, and nature.
- It may be difficult to make generalisations from any individual grantee's achievements. By grouping grantees according to the type of grant, this allows for comparisons to be made generally about Trust expectations for cost-effectiveness of grantees across its grant programmes.

⁸ Note that due to data restrictions, slightly different methodologies are employed for the projected and actual hours per \$1000, and projected and actual *average* hours per \$1000.



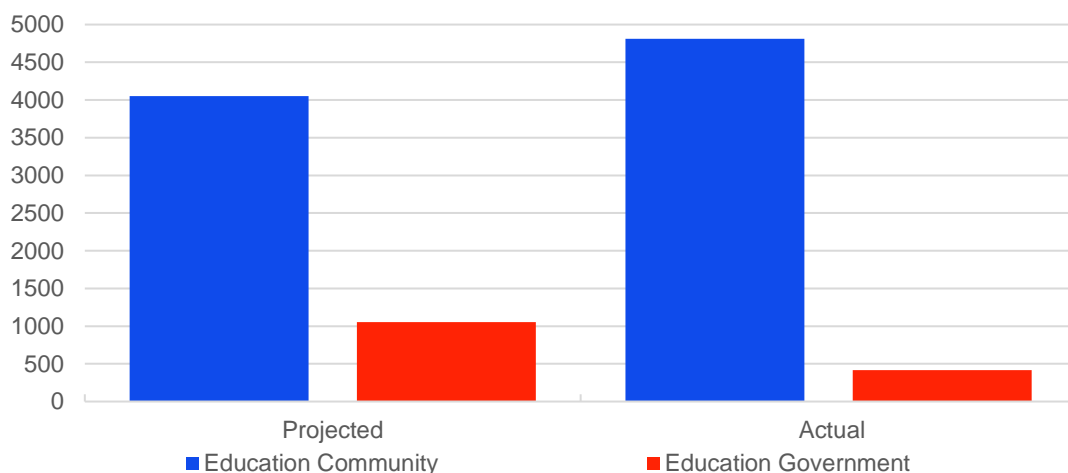
We compared the average cost-effectiveness across grant types for the following measures:

- Number of individuals potentially reached per \$1000
- Number of organisations involved per \$1000
- Individuals in attendance at awareness-raising events per \$1000
- Number of educational products developed per \$1000

In terms of individuals reached by each grant type, Figure 11 indicates that Education (community) grantees on average reached considerably higher involvement of individuals per \$1000 compared to Education (government) grantees. This means that if the Trust is particularly interested in expanding the reach of environmental education to the greatest number of individuals, the most cost-effective strategy would appear to be to fund Education (community) grants accordingly.

It is also apparent that for Education (community) projects, the actual achievement of individuals involved per \$1000 was higher than what was projected. This means that when the Trust is evaluating prospective grantees on the basis of their potential to reach individuals, it may be useful to bear in mind that Education (community) grantees tend to reach more individuals per \$1000 than they originally project and the opposite is true for Education (government) grantees.

Figure 11. Cost effectiveness of individuals reached (per \$1000, \$A 2016)



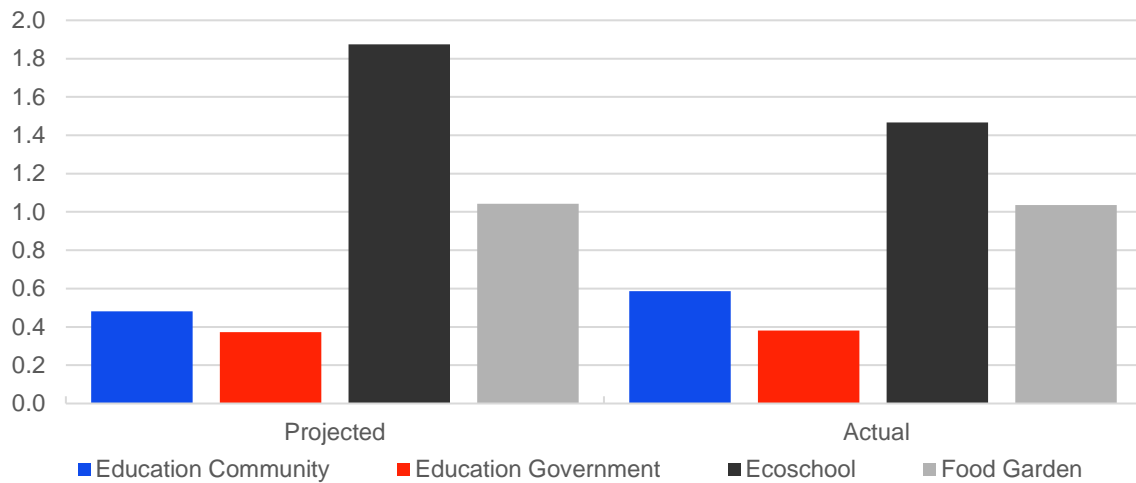
Data source: NSW Environmental Trust

In terms of the number of organisations in delivering a project per grant type, the average organisations involved per \$1000 was typically a little higher in actual terms than expected (projected) for Education (community) grants and lower than projected for Eco Schools. As indicated in Figure 12, Eco Schools typically delivered particularly high involvement of organisations per \$1000. On average, Education (community) grantees recorded higher organisation involvement per \$1000 than Education (government) grantees. Examples of organisations that have been typically involved grant funded projects include other environmental organisations besides the grant recipient, an environmental education centre, other state and local government organisations, local businesses, local sports or community clubs, community organisations such as the Rotary Club, the local RSL or an art gallery, consultancies, universities and schools.

Since Eco schools and Education grants target different demographics and have different objectives, this finding should not suggest that Eco Schools should get maximum funding as compared to Education grants.



Figure 12. Average organisations involved (per \$1000, \$A2016)

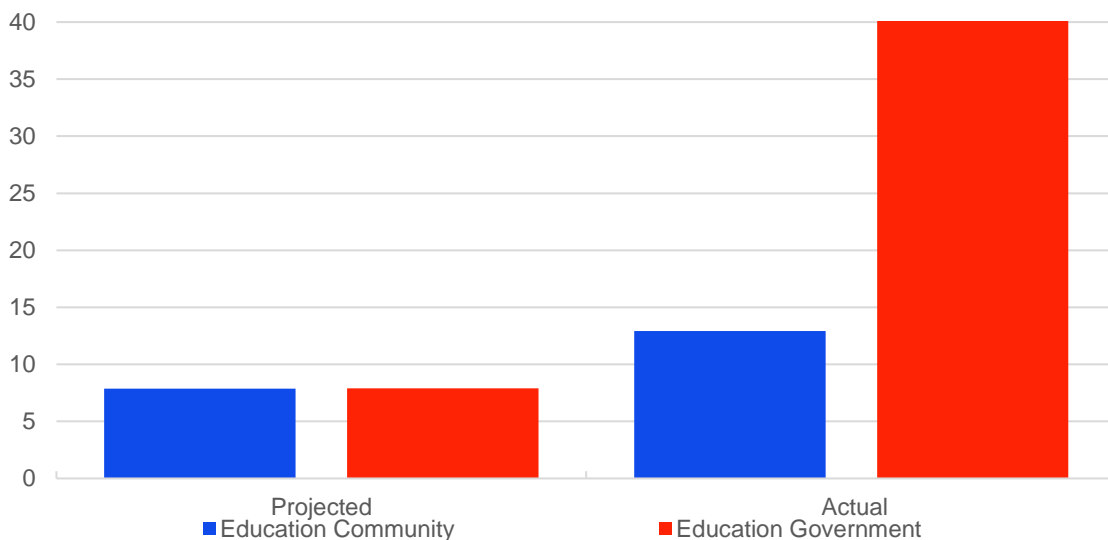


Data source: NSW Environmental Trust

Awareness raising events are a regularly reported environmental education outcome. Figure 13 indicates that, per \$1000, Education (government) grantees tend to deliver 44.06 attendees. This is much higher than what Education (community) grantees typically project. It is also around 3.4 times higher than is typically achieved by

Education (community) grantees per \$1000. The Trust may be able to maximise the achievement of attendance at awareness-raising events through relative expansion of Education (government) grant funding.

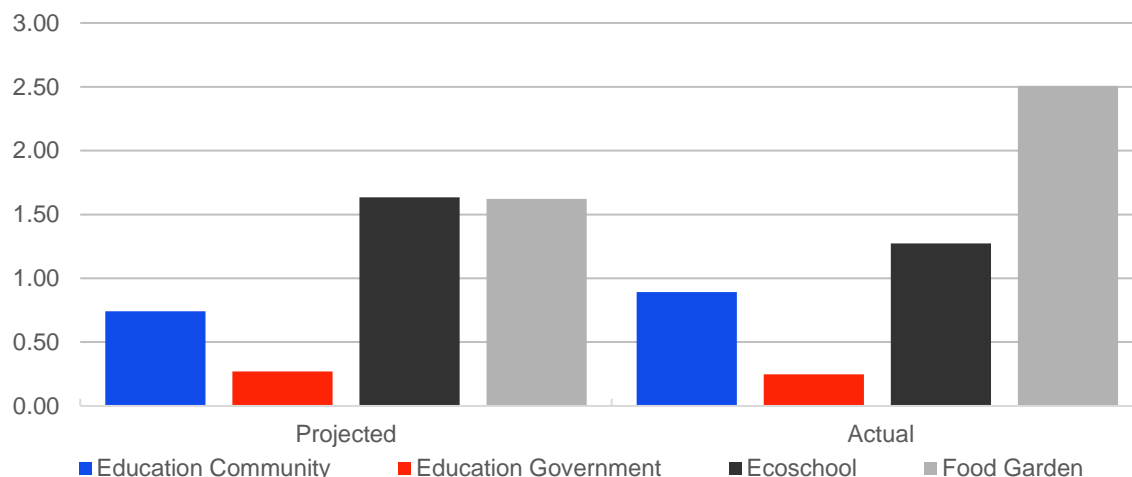
Figure 13. Average attendance at awareness raising events (per \$1000, \$A2016)



The development of educational products was reported relatively widely by grantees. Eco schools and food gardens, in particular, tend to project relatively high expected development of educational products per \$1000. These educational products were referred to as 'learning units developed/modified' in the case of Eco Schools and books, pamphlets, online resources, videos, and handbooks by Education grant projects. In the case of food gardens this also translated into relatively high actual development of educational products per \$1000. To this end, projected and actual development of educational products per \$1000 was substantially high for Eco schools and food gardens. In addition, Education (community) grant projects typically project and achieve somewhat higher educational product development per \$1000 when compared with Education (government) grant projects.



Figure 13. Average educational products developed (per \$ 1000, \$A 2016)



3.4.4 Comparison of average grant value for money for each grant program

To investigate which size of grants deliver the best value of money for the Trust on the basis of monetary considerations only, a quantitative analysis of funding and project measures data was conducted to compare the per dollar value of funding with the projected and actual stakeholder project measures achieved for all active and acquitted grants between 2010 and 2016. **Error! Reference source not found.** presents the results for educational and engagement measures of interest over all and per dollar for each grant size – *all amounts contained in this table are averages* (this is because total summed values would not be appropriate since the categories employed are not balanced).

There is little evidence that larger sized grants consistently offer superior value for money for the Trust.

- Individuals reached tends to deliver value for money for smaller sized grants (under \$30k).
- Value for money achievement is mixed for individuals involved.
- Organisation involvement tends to best deliver value for money for larger sized grants (over \$90k)
- Attendance at awareness-raising events tends to deliver value for money from small sized grants (under \$30k), excluding some outlying observations from some upper-mid-sized grants.
- Educational product development is most cost-effective from small sized grants (under \$30k).

Table 10. Estimated value of money by size of grant (averages)

GRANT FUNDING	AWARENESS RAISING EVENT ATTENDEES						EDUCATIONAL PRODUCTS DEVELOPED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
<\$30k	368	270	327	504	679	557	69	22	49	72	13	52
\$30k<\$60k	265	449	361	385	1094	758	7	11	9	7	15	11
\$60k<\$90k	466	1036	694	698	7230	3003	13	11	12	12	13	13
>\$90k	204	520	347	500	2043	981	13	15	14	10	20	14
<i>Per \$000</i>												
GRANT FUNDING	AWARENESS RAISING EVENT ATTENDEES						EDUCATIONAL PRODUCTS DEVELOPED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
<\$30k	20.95	12.12	17.27	30.75	21.82	28.07	3.05	1.04	2.19	3.18	0.52	2.29
\$30k<\$60k	4.65	10.66	7.80	8.20	25.17	17.13	0.13	0.18	0.15	0.15	0.21	0.17
\$60k<\$90k	5.97	12.70	8.66	10.33	99.15	41.68	0.16	0.11	0.13	0.14	0.14	0.14
>\$90k	1.84	3.86	2.76	3.93	19.10	8.98	0.12	0.11	0.11	0.09	0.14	0.11
GRANT FUNDING	INDIVIDUALS POTENTIALLY REACHED						INDIVIDUALS ACTIVELY INVOLVED					



	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
<\$30k	299430	170356	186472	351846	10801	220675	146	107	131	193	256	214
\$30k<\$60k	20451	18313	19153	25813	32180	29262	145	501	327	250	723	480
\$60k<\$90k	64611	231437	132858	121746	37498	90708	239	481	360	1064	349	694
>\$90k	7596	152150	74313	9688	28000	14266	1742	33	888	3436	29	2414
Per \$000												
GRANT FUNDING	INDIVIDUALS POTENTIALLY REACHED						INDIVIDUALS ACTIVELY INVOLVED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
<\$30k	16127	653	9937	19210	389	11971	9.8	2.8	7.3	12.1	5.0	9.7
\$30k<\$60k	534	292	387	564	393	471	2.4	9.0	5.8	4.5	15.7	10.0
\$60k<\$90k	821	2352	1448	1472	470	1103	3.3	4.0	3.6	15.3	2.9	8.9
>\$90k	59	1336	648	76	115	86	12.3	0.3	6.3	23.7	0.3	16.7
GRANT FUNDING	ORGANISATIONS INVOLVED											
	PROJECTED			ACTUAL								
	ED	EG	TOTAL	ED	EG	TOTAL						
<\$30k	17	18	18	20	15	18						
\$30k<\$60k	33	16	25	36	24	30						
\$60k<\$90k	24	44	33	28	38	33						
>\$90k	1153	17	585	3089	20	2168						
Per \$000												
GRANT FUNDING	ORGANISATIONS INVOLVED											
	PROJECTED			ACTUAL								
	ED	EG	TOTAL	ED	EG	TOTAL						
<\$30k	1.00	0.54	0.83	1.17	0.52	0.96						
\$30k<\$60k	0.65	0.26	0.47	0.67	0.39	0.53						
\$60k<\$90k	0.32	0.50	0.40	0.37	0.36	0.37						
>\$90k	7.68	0.15	3.91	20.41	0.15	14.33						

Data source: Collated using funding data from NSW Environmental Trust

Table 11 further highlights estimated value for money by duration of grant by recording the average values in respective categories. We find that there is little evidence that longer term projects consistently deliver cost-effective results for grantees. While generally the most cost-effective duration for grantees tends to vary depending on the measure of interest, there is generally a relatively strong record of achievement for projects that are 13-18 months in duration.

- Attendance at awareness-raising events is generally cost-effective for relatively short project durations (excluding some outlying observations for 19-24 months and 33+ months).
- Educational product development is generally most cost-effective from lower-mid length projects (13-18 months).
- Individuals potentially reached is generally most cost-effective for lower-mid length projects (13-18 months).
- Individuals involved is generally most cost-effective for upper-middle length projects (19-24 months).
- Organisations involved is generally most cost-effective for longer length projects (over 33 months).

Table 11. Estimated value of money by duration of grant (averages)

GRANT FUNDING	AWARENESS RAISING EVENT ATTENDEES						EDUCATIONAL PRODUCTS DEVELOPED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
1-12 months	878	160	486	831	360	574	9.1	4.0	6.6	4.0	11.1	7.6
13-18 months	186	412	291	217	713	382	59.5	21.2	39.4	76.4	16.2	44.5
19-24 months	251	1019	696	352	2274	1450	4.2	13.4	10.2	2.9	17.4	11.2
25-32 months	348	1000	441	848	4864	1422	11.3	18.5	13.4	8.1	23.8	12.9



33-48 months	258	283	266	535	11472	3518	13.4	9.6	11.7	17.9	5.0	13.6
Per \$000												
GRANT FUNDING	AWARENESS RAISING EVENT ATTENDEES						EDUCATIONAL PRODUCTS DEVELOPED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
1-12 months	22	2.7	11.5	21.4	6.3	13.2	0.21	0.06	0.14	0.13	0.17	0.15
13-18 months	2.8	10.6	6.4	3.6	17.3	8.2	2.40	0.62	1.47	3.02	0.29	1.58
19-24 months	8.3	16.7	13.2	12.8	41	28.9	0.08	0.17	0.14	0.06	0.20	0.14
25-32 months	6.4	10.6	7.0	14.7	51.4	20	0.16	0.17	0.16	0.11	0.22	0.14
33-48 months	4.9	3.4	4.4	15.6	161	55.2	0.18	0.11	0.15	0.34	0.07	0.25
GRANT FUNDING	INDIVIDUALS POTENTIALLY REACHED						INDIVIDUALS ACTIVELY INVOLVED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
1-12 months	10560	113356	61958	12098	47428	31725	138	101	119	157	230	193
13-18 months	290709	101058	195883	302922	1073	168767	398	581	493	1468	320	867
19-24 months	4418	69041	45541	5301	48507	29304	122	561	385	225	907	604
25-32 months	76297	35000	67120	176788	40000	159689	222	116	194	377	181	321
33-48 months	28364	113634	63475	32532	6679	25481	929	49	563	1960	56	1400
Per \$000												
GRANT FUNDING	INDIVIDUALS POTENTIALLY REACHED						INDIVIDUALS ACTIVELY INVOLVED					
	PROJECTED			ACTUAL			PROJECTED			ACTUAL		
	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL	ED	EG	TOTAL
1-12 months	322	2005	1164	382	878	657	6.99	1.76	4.37	7.86	3.98	5.92
13-18 months	14605	707	7656	15214	14	8459	5.52	5.18	5.34	21.16	2.68	11.48
19-24 months	163	901	633	506	542	526	5.95	10.1	8.42	8.57	18.5	14.06
25-32 months	1066	329	902	2173	384	1952	2.70	0.98	2.24	5.22	1.56	4.17
33-48 months	568	1100	787	633	92	486	7.39	0.67	4.59	15.39	0.87	11.12
GRANT FUNDING	ORGANISATIONS INVOLVED											
	PROJECTED			ACTUAL								
	ED	EG	TOTAL	ED	EG	TOTAL						
1-12 months	12	9	10	14	19	17						
13-18 months	26	8	17	34	15	25						
19-24 months	37	52	45	30	48	39						
25-32 months	30	11	25	34	24	31						
33-48 months	768	22	469	2166	12	1669						
Per \$000												
GRANT FUNDING	ORGANISATIONS INVOLVED											
	PROJECTED			ACTUAL								
	ED	EG	TOTAL	ED	EG	TOTAL						
1-12 months	0.67	0.21	0.42	0.81	0.38	0.58						
13-18 months	0.70	0.16	0.44	0.87	0.23	0.56						
19-24 months	0.88	0.64	0.75	0.78	0.60	0.69						
25-32 months	0.41	0.11	0.33	0.46	0.26	0.40						
33-48 months	5.19	0.34	3.25	14.44	0.20	11.15						



3.4.5 Limitations and opportunities for data collection improvement

There are at least two primary complications to conducting a complete quantitative analysis of the data collected by the NSW Environmental Trust. The first is that, as discussed in Section 3.2, relatively small proportion of grantees report expected outcomes beyond measures relating to consultation with stakeholders and community. Because community engagement is delivered not only for intrinsic purposes – that is, educational programmes and the like are a means to the end (environmental outcomes) –, it would seem to be desirable that grantees undertake to contribute to the achievement of at least some environmental outcomes, above and beyond community engagement. In any case, given scarce resources, grantees who identify a direct environmental outcome might, on average, be considered relatively desirable recipients of grants. The second is that there appears to be relatively low percentage of grantees who report back to the Trust on their achievement towards expected outcomes.

To this end, we have further provided information with respect to these complications emerging due to low levels of reporting, including:

- A summary of the measures recorded for expected and actual outputs by grantees over the reference period (2010 to 2016) – see Appendix 7.4. This includes the count of number of times that a grantee recorded respective measures and does not relate to their actual achievement.
- A discussion on reported actual outcome achievement against expected outcomes achievement – see Section 3.2 and Section 3.2.

Based on this evidence obtained from the quantitative analysis of funding and project measures, the low reporting of actual outputs indicates that there is little by way of auditing of output results obtained by grant recipients, at least on the basis of current data provided by the Trust. In order for higher levels of assurance, the Trust should prioritise increasing the reporting of results from grantees.

Through the course of examining and analysing Trust-provided data a number of observations for potential improvements to reporting may be worth consideration:

- In this section we have analysed relative cost-effectiveness in the delivery of 'units' of a number of indicators of engagement and educational outcomes. In order to better approximate the achievement of these outcomes it may be appropriate to consider alternative approaches to measurement, so as to better account for differences in the quality, intensity, and impact of engagement and educational activities of grantees. This could be achieved through such measurement approaches as outcome oriented measures for engagement and education.
- An objective from data collection should be to establish and monitor performance against benchmarks for achievement of outcomes of importance to the Trust. To this end, the Trust may consider indicating grantees that it believes to be similar in nature, so as to identify relevantly comparable grantees to monitor progress between.
- Data could be collected on grantees post-completion of the project, in order to assess the longer term outcomes of grants – this is generally appropriate for determining long term sustainability of projects.
- In line with above, data collected over a longer time horizon might better account for the lagged realisation of environmental outcomes which may accrue beyond the duration of individual projects.
- It will seem to be prudent for assurance that grant funding is actually utilised for purposes consistent with its objectives. As mentioned in a few interviews, some stakeholders belonging to the Eco School s grant programs, expressed that they actually struggled to expend grant fund appropriately because they were able to arrange for an overwhelming amount of donations and in-kind contributions. Hence, accuracy in expenditure data collection is of high importance.
- In similar vein, an option for grant funding could be to fund based upon expenditures incurred rather than arbitrary amounts that are predetermined in advance of undertaking respective projects.



4 Key findings & recommendations

Both Eco Schools and the Education Grants are critical in the sector at this time, given there is currently limited strategic direction or guidance for environmental education or active policy development for environmental education in NSW. The previous plan – Learning for Sustainability: NSW Environmental Education Plan 2007-10 (NSW Council on Environmental Education 2006) – finished in 2010. Other grant programs and environmental education capacity, for example in local government, have reduced over time, so that these grants remain as almost the sole option for funding environmental education in NSW.

This section of the report presents the key findings and recommendations. These are summarised in:

- Table 12: General recommendations
- Table 13: Operating and policy context recommendations
- Table 14: Achievement of educational and environmental outcomes and cost-effectiveness recommendations
- Table 15: Customer experience and governance recommendations

These tables describe the key issues identified by the evaluation, response options, potential implications or challenges arising from these responses, and specific recommendations for the Trust to implement.

There is clearly sufficient demand to increase the overall pool of funding available for Education and Eco School grants. The Education Grants program addresses a need in the market, as there is no other grants program like it in Australia.

The program would benefit from guidance to applicants as to how to articulate a theory of change to demonstrate clearer linkages between education and environmental outcomes. The idea that awareness-raising and capacity-building is sufficient to increase pro-environmental behaviours and outcomes is no longer supported by the available research evidence. Recent research supports a shift towards a TLfS approach based on the critical reflection of underlying assumptions about the unsustainable existence of the modern society. There is a need for new theories of change based on transformative learning theories and supporting frameworks such as social practice and values theories. Recommendations to incorporate these ideas into the Trust activities are shown in Table 12.



Table 12: General recommendations

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
1	The NSW Government does not have a current environmental education policy framework. The previous plan – Learning for Sustainability: NSW Environmental Education Plan 2007-10 (NSW Council on Environmental Education 2006) – finished in 2010. As a result, policy guidance is lagging behind contemporary knowledge on effective environmental education.	<ul style="list-style-type: none"> Advocate for a revised and updated NSW Government plan for environmental education in NSW Develop a strategic framework for environmental education specifically within the realm of the Environmental Trust 	While a whole of government plan is beyond the control of Environmental trust it would be preferable to have clear objectives established at the NSW Government level	Advocate for a revised and updated NSW Government plan for environmental education in NSW, taking account of contemporary knowledge on effective environmental education.
2.	Contemporary knowledge on learning and behaviour challenges the assumed connections between environmental education, awareness, behaviour change and tangible environmental outcomes that are embedded in program aims, objectives and principles. The grants programs could be more effective if guiding documents were updated to take into account new knowledge on transformative learning for sustainability (TLfS), social practices and values.	<ul style="list-style-type: none"> Revise the program aim and objectives to better reflect contemporary knowledge (Appendix 2 provides suggested text) Develop and document a program logic for the grants that reflects contemporary knowledge 	The legislation establishing the Trust uses specific terminology referring to ‘environmental education’ and ‘public awareness of environmental issues’ which could make revision of program aims and objectives problematic. A new program logic, available to grant applicants, could retain the existing aim and objectives but provide guidance on interpretation that is consistent with contemporary knowledge. Developing a new program logic would likely require specialist advice.	Engage a consultant to develop a publicly available program logic for each of the grant programs that incorporates contemporary knowledge on TLfS, social practice theory and values theory. This could be included in the Program Guidelines.
3.	As above, but noting that there is currently very little experience in the NSW environmental education sector (and beyond) with activities that draw on transformative learning, social practice theory and values theory. Applicants will need new guidance to respond to this new approach.	<ul style="list-style-type: none"> Develop new principles, criteria and supporting guidance material for grant applicants and recipients to assist them to incorporate contemporary knowledge on learning, social practices and values into their projects. Build experience with these new learning frameworks by setting aside a portion of the Education grant funding for innovation in 	<p>Applicants and projects will vary in their ability to implement these ideas due to varying backgrounds and experience. A staged approach to build up experience is preferable, in which guidance material initially provides ideas for drawing on these frameworks without requiring their use. As experience grows, effective approaches could be embedded more strongly in the guidance material.</p> <p>The larger Education grants provide more scope to apply these new approaches but Eco Schools applicants could still benefit from a simple list of practical ideas that draws on these approaches.</p>	<p>Engage a consultant to develop new principles, criteria and supporting guidance material to assist applicants to incorporate contemporary knowledge on learning, social practices and values into their projects. The guidance material would include:</p> <ul style="list-style-type: none"> Primer for applicants about Transformational Learning for Sustainability, social practice theory and values theory Practical ideas for learning activities that draw on these frameworks Resource list

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
		transformative learning (see Recommendation 5 below).	Developing new guidance material for applicants would require additional specialist advice, but some initial suggestions are provided in Appendix 2.	<ul style="list-style-type: none"> - Examples / case studies of relevant or successful TLfS projects. <p>The guidance material would be incorporated into Program Guidelines.</p>
4.	A stronger focus on transformative learning, social practice theory and values theory in guidance for applicants and assessment criteria places new demands on the Technical Review Committees. The existing committee members are unlikely to have the knowledge and experience needed to assess application of these theories, at least initially.	<ul style="list-style-type: none"> • Add members to the Education and Eco Schools Technical Review Committee with knowledge and experience of transformational learning and related theories. • Contract specialist advice to assist with grant assessment. 	A suitable addition to the Technical Review Committees would need to have a good working knowledge of contemporary learning theories. They would most likely be an academic or learning practitioner. This kind of person may not be in a position to volunteer their time for a substantial evaluation process so will probably need to be contracted.	<p>Actively seek members for the Education and Eco Schools Technical Review Committees with knowledge and experience of transformational learning and related theories, and understanding of the opportunities for links between environmental education and tangible outcomes. New members could come from academic, education or sustainability / environment sectors.</p> <p>If difficult to find new members, consider contracting in this expertise.</p>



Program design—operating and policy context

The Education Grants program addresses a need in the market, as there is no other grants program like it in NSW. Both Eco Schools and the Education Grants are critical in the sector at this time, given there is limited strategic guidance or active policy for developing environmental education in NSW. The previous plan – *Learning for Sustainability: NSW Environmental Education Plan 2007-10* (NSW Council on Environmental Education 2006) – finished in 2010.

Currently there is no framework that outlines articulated environmental needs, but there is a requirement that grant recipients focus on achieving tangible environmental outcomes. Further guidance is required from the Trust to allow grant recipients to determine whether what they have delivered in terms of social capital or education (for example) is on a pathway to achieving the environmental outcome that is linked to an identified need or strategic priority area.

Given that value change takes a long time and multiple attempts, internal stakeholders suggested there is potential to create a category within the existing Education Grants Program to fund projects for innovation in transformational learning for sustainability. This could provide a pool of success stories and greater experience with transformative learning frameworks that could be shared with other grant applicants.

An analysis of the relative cost-effectiveness demonstrated that for a small investment, Eco Schools deliver high transactional values – meaning that for a small dollar amount they provide considerable engagement across a range of participants and high local profile. However, the scope and nature of project objectives differ from the Education Grants, so cost effectiveness comparisons cannot be the only deciding factor to evaluate the achievements of the grant programs.

Key program design findings and recommendations are shown in Table 13.

Table 13: Operating and policy context recommendations

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
5.	<p>The transformational learning literature points to the role of cognitive dissonance or disorienting dilemmas in changing values or worldviews, and helping participants to 'see differently'. Educational interventions that help participants to 'see' their own values and worldviews may have a role in creating such dilemmas and could be tested through grant activities. Social practice theory also draws attention to the ways that learning happens collectively and the role of supportive infrastructure and social norms in embedding new practices.</p> <p>However, the body of evidence demonstrating how to effectively implement education programs based on these ideas is still limited.</p>	<p>Dedicate a portion of each Education grant funding round to piloting transformative learning interventions that draw on contemporary learning and social theory. Embed stronger research and evaluation requirements in these pilots to build up a body of knowledge on what works.</p>	<p>Dedicating some funding to pilot innovative approaches will reduce funds available to 'standard' projects, require development of separate guidelines for applicants and may create a greater assessment burden due to need to consider separate criteria.</p> <p>Applicants will need to incorporate more intensive research, monitoring and evaluation in order to capture and share learnings. This may discourage applications, so a higher funding limit may be needed to draw applications.</p> <p>By its nature, funding pilot proposals of an innovative nature increases the risk of not achieving desired outcomes. This can be offset through the learning benefits.</p>	<p>Allocate 25% of Environmental Education grant funding to an Innovation sub-program with additional funding criteria aimed at piloting, building experience with and learning from contemporary learning and social theory. Aim to fund 1 project each year in the government and community streams under this sub-program. This will require:</p> <ul style="list-style-type: none"> • Development of an additional assessment criterion for the sub-program to encourage innovative application of these theories • Development of additional research and reporting requirements to ensure that the innovation is thoroughly evaluated and outcomes are shared • Increasing the funding limit for these grants to \$125,000 to encourage applications and allow for the extra work. <p>After three years, review outcomes and update the guidance materials for all participants based on what has been learned. Decide at this point whether to continue the Innovation sub-program or revise the assessment criteria for all applicants.</p>
6.	<p>Transformative learning and values theories indicate that sustained behaviour change is more likely when specific values and worldviews are changed or reinforced. Working with such theories requires a baseline assessment of audience values and may require a post-intervention assessment to evaluate value changes. Value assessment tools are not in widespread use.</p>	<p>There are multiple tools available for assessing values, including various versions of the Schwartz Values Survey (SVS), the World Values Survey (WVS) and an online worldview assessment tool developed by Annick de Witt. The guidance material proposed in Recommendation 3 could include suggestions on suitable tools to use for values assessment.</p>	<p>Implementation of these tools can be time consuming and requires specialist expertise. It may be more effective to limit initial application to the Innovation sub-program proposed in Recommendation 5.</p>	<p>Include a list of resources for values assessment in the guidance material for applicants (Recommendation 3) and particularly encourage their use in the Innovation sub-program (Recommendation 5).</p>
7.	<p>Some evidence that small and (lower) medium sized grants may be effective.</p> <p>However, the scope and nature of project objectives differ between the Education and</p>	<ul style="list-style-type: none"> • Adopt a staged approach to larger Environmental Education grant delivery so that instead of committing \$100k up-front for a project the Trust can commit 	<p>The options reduce the risk of supporting applications from unknown / smaller grant applicants, but will increase the proportion of funding / time dedicated to</p>	<p>Implement a staged approach for the new Innovation sub-program (Recommendation 5) that would involve:</p> <ul style="list-style-type: none"> - Initial stage of up to one year with stronger focus on piloting innovative ideas, learning about effective

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
	<p>Eco Schools grants, so cost effectiveness comparisons cannot be the only deciding factor to evaluate the achievements of the grant programs.</p> <p>Trust wants to ensure funds go to projects most likely to be successful in achieving program objectives.</p>	<p>a smaller amount (e.g. \$20k - \$30k) to a pilot or detailed research and planning for a larger project and evaluate before committing the full amount.</p> <ul style="list-style-type: none"> • Adopt the above approach only for the new Innovation sub-program (Recommendation 5). 	<p>measuring and reporting rather than implementing. This has both positive and negative implications. As risks are higher for the proposed Innovation sub-program, applying a staged approach specifically for those grants has merit. It also means that learnings will be fed back to the Program more rapidly.</p>	<p>approaches, establishing a theory of change, building a community of practice between grant recipients, and planning for the full project (Grant value for this stage capped e.g. \$20k - \$30k)</p> <ul style="list-style-type: none"> - Second stage if the first stage goes well of actual project delivery, using the remaining funds.



Achievement of environmental and educational outcomes and cost-effectiveness

Tangible on-ground environmental outcomes are difficult to achieve and measure in the grant context. Not only is the pathway between environmental education and measurable environmental outcomes an uncertain one, it also can require considerable time for the effect of education to become apparent. The reporting timeframe of the grants may not be sufficient to identify these outcomes. Given that the NSW Government has a portfolio of grants programs, many of which do deliver measurable environmental outcomes, there seems to be scope to relax the requirement for these education-focused grant programs to demonstrate such outcomes. This would allow recipients to focus on delivering educational outcomes. At the very least, grant recipients are looking for clarity around what scale is expected around the achievement of measurable tangible environmental outcomes.

Grant recipients report (but do not necessarily measure) social capital and education outcomes as a key achievement of grants program. However, the link to environmental outcomes is unclear within the current grant framework, and will be assisted by supporting applicants to describe their theory of change.

Current reporting of actual outcomes is limited. In terms of whether projects contribute to an increase in environmental literacy, there is self-reporting of knowledge creation, but little by way of evidence of actualisation. The evaluation found limited evidence to demonstrate awareness and environmental literacy changes behaviour, and there are currently limited opportunities to measure long-term outcomes.

Grant recipients report building the capacity of individuals and organisations to deliver environmental education as a key achievement of the program, but this outcome is missing from current project measures.

Qualitative evidence suggests projects are largely delivered as planned. However, there are opportunities to review internal auditing of projects given low recording of actual outcomes against projected outputs. While many grant recipients struggled to demonstrate outcomes within the life of the grant this was a function of limited capacity to measure or follow up program outcomes within the current grant context, and is not a function of insufficient time to deliver the project as intended.

There is a strong case for more constrained and targeted project measures. The evaluation found that grant recipients do not find the current project measures useful for measuring the achievements of their projects, and Trust reporting requirements are not helpful in guiding their continuous improvement. Ideas such as narrative case studies are a strategy for moving away from the onerous indicators and allowing recipients report on what they think is most important achievement of their grant.

Key measurement and reporting findings and recommendations are shown in Table 14.

Table 14: Achievement of educational and environmental outcomes and cost-effectiveness recommendations

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
8.	<p>Some small and medium grant project recipients revealed that they have or are still struggling to provide the required accuracy with respect to the program measures in their reporting to the Trust.</p> <p>The evaluation found that many projects had difficulty demonstrating tangible environmental outcomes within the grant timeframe, given the lag between educational activities and environmental impacts of changed behaviours becoming evident. Contemporary learning and social theory indicates that the links between environmental education and tangible outcomes are loose, complex and may not be rapidly evident.</p> <p>Grant recipients indicated a desire to continue to monitor and measure the outcomes of their projects after grants were acquitted but lacked resources to do so.</p> <p>Some stakeholders belonging to the Eco School s grant programs, expressed that they actually struggled to expend grant fund appropriately because they were able to arrange for an overwhelming amount of donations and in-kind contributions.</p>	<ul style="list-style-type: none"> Relax the requirement for grants to demonstrate tangible environmental outcomes, given that it is difficult to measure such outcomes from education activities Reduce the number of measures of environmental outcomes on which grant recipients are asked to report so that they can focus their efforts on those areas where outcomes are most measurable and likely (see Recommendation 9) Allow and encourage grant applications that would undertake longitudinal evaluation of previous Trust-funded projects 	<p>There is a significant focus throughout the Trust program literature on achieving tangible environmental outcomes which may conflict with any attempt to reduce the need to show these outcomes. The first option is problematic from this perspective.</p> <p>The third option has implications for Trust resources as applications for longitudinal evaluation projects need to be reviewed and administered. However, if funded from the existing pool of funds, these grants would replace others.</p> <p>There is therefore a strong rationale for both the second and third options.</p>	<ul style="list-style-type: none"> Reduce the number of measures of environmental outcomes on which grant recipients are asked to report so that they can focus their efforts on those areas where outcomes are most measurable and likely (see Recommendation 9). Allow and encourage grant applications that would undertake longitudinal evaluation of previous Trust-funded projects. This will require amendment of Program Guidelines to support and draw attention to this opportunity. Accuracy in expenditure data collection is of high importance for Trust to know how funding has been utilised and observe cost-effectiveness amongst different projects.
9.	<p>Currently reporting from grant recipients takes place to fulfil compliance requirements as compared to taking place for program improvement.</p> <p>This makes it difficult to evaluate the achievement of projects on the basis of actual outcomes achieved.</p> <p>Between 2010 and 2016, the grantees have been provided an extensive list of measures in up to seven categories from which they have to report the actual and projected values for the relevant</p>	<ul style="list-style-type: none"> The current suite of project measures needs to be reduced and revised to reflect learning outcomes that go beyond awareness and literacy to values and behaviour, incorporating transformative learning and/or social practice theories. Create benchmarks between similar projects so that projects can be compared on the basis of 	<ul style="list-style-type: none"> Current reporting requirements are more output focused instead of outcome focused. The Trust realises this and notes that they use outputs as indicators of progress towards the intended outcomes. Even though the qualitative sections of progress and final reports allow stakeholders to report outcomes, most of them 	<p>Conduct a review of existing listed project measures and categories. Aim of the review is to create measures that improve the project outcomes through:</p> <ul style="list-style-type: none"> Allowing room for innovative responses to meeting project measures Incorporating principles from transformative learning and / or social practice theories

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
	<p>measures to their projects (see Appendix 7.3 for a complete list of project measures obtained from project measures data). The categories include economic, environment quality, land management, research, resource conservation, stakeholder and community, and water management measures. Even though project measures have been considerably reduced since 2013 for Education and Eco Schools grants over the years, the reporting requirements have dampened the passion for many project managers who believe that it has led to their projects becoming less innovative to achieve compliance.</p>	<p>factors other than cost-effectiveness as well. If a project focuses on environmental outcomes as well, it should be mainly evaluated on the basis of achieving environmental outputs instead of just stakeholder and participation measures.</p>	<p>due to a lack of understanding of monitoring and evaluation terminology report outputs in those sections as well.</p> <ul style="list-style-type: none"> • Moreover, currently, it is only mandatory for stakeholders to report stakeholder and community education and participation measures which makes comparison of projects across other outcomes areas challenging. • Creating benchmarks can be challenging as projects differ in scale and objectives. • The Trust has continued to refine project measures over time and it should continue to be an area that requires continued attention as the grant programs evolve. 	<ul style="list-style-type: none"> • Reducing the number of measures to ensure they are 'meaningful' to stakeholders and participants. <p>Examples of outcomes oriented measures:</p> <ul style="list-style-type: none"> • The 'number of participants at a workshop' is a good measure for good project planning, but it cannot indicate much about actual behavioural change. By counting the number of participants to a workshop who later join that particular community network or pledge to take environmental action could perhaps better indicate the possibility of a behaviour change for a community environment project. • The 'number of times an online resource is downloaded' would be a better outcome measure instead of 'number of online resources developed' for an environmental research project.



Customer experience and governance

There is evidence to suggest that there has been strong adaptive management of both individual projects and the entire Education grants program over time.

While the overall perception of the application and assessment processes amongst applicants is positive, a few report that the process of completing an application is onerous for inexperienced small and medium sized grant projects. The introduction of the Grants Management System in 2018 will address this to some extent.

For Eco Schools the time lag between preparing an application, announcement of success and preparation of a funding agreement impacts on program design and the delivery of planned activities

There were mixed reviews about the appropriateness and effectiveness of communication activities relating to the application and grant management process employed by the Trust. However, grant recipients acknowledged that support for Eco Schools has greatly improved. Capacity issues in relation to navigating Expression of Interest (EOI) processes, grant management and monitoring and evaluation were a barrier for applying for funding for some potential grant recipients.

While the Education Grants program is efficiently administered within the Trust, grant recipients wanted the Trust to deliver workshops/webinars and/or mentor applicants and/or grantees around disseminating and sharing learnings, knowledge transfer, and evaluation capacity building.

Encouraging applicants to make explicit the link between transformative learning theories and related theories in environmental education and environmental outcomes could be provided as useful guidance for applicants. For example, In Round 1 of FACS' Liveable Communities grants, there was an EOI and those who made it past EOI were required to attend a full-day workshop run by an external consultant with advice on grant priorities, how to pitch etc. Applicants then went away and prepared their full application. This resulted in such high quality applications that FACS sourced additional funding to allow them to fund all the applications.

Key program design findings and recommendations are shown in Table 15.

Table 15: Customer experience and governance recommendations

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
10.	For Eco Schools the time lag between preparing an application, announcement of success and preparation of a funding agreement impacts on program design and the delivery of planned activities	Revise the timing of Eco Schools grant application process to fit in with planning for school year.	This change has previously been proposed and not yet implemented, indicating potential program management challenges internal to the Trust	Revise the timing of Eco Schools grant application process to fit in with planning for school year.
11.	Applicants may require additional guidance and training in order to make explicit the link between transformative learning theories and related theories in environmental education and environmental outcomes. Proposed new Program Guidelines (Recommendation 3) may not be sufficient to improve grant outcomes.	Develop capacity-building opportunities for grant applicants that helps potential grant recipients to learn about transformative learning theories and monitoring and evaluation.	Grant applicants from community-led / volunteer organisations may have difficulties attending capacity building workshops during work-hours. Similar issues would be faced for remote / regional organisations. Pre-grant roadshows and workshops have previously been conducted, however no longer occur due to resourcing issues.	Run capacity building activities for grant applicants that have successfully made it past the EOI stage. This could take the form of workshops run by an internal or external expert with advice on grant priorities, describing theory of change, how to pitch etc in a similar fashion to FACS Liveable Communities grants or OEH Sustainable Communities grants, or through a more flexible, multi-modal form of delivery and learning.
12.	There are limited opportunities to create linkages between related grant projects, or between previous and current projects, in order to share knowledge and learnings and leverage the breadth of experience within the Trust-funded projects to promote successful project outcomes. Grant recipients expressed a desire for more contact and knowledge sharing across projects.	Facilitate knowledge sharing workshops and online communities to promote outcomes and learning from successful projects and encourage the creation of communities of practice.	Will require additional allocation of resources from the Trust.	Fund a buddy system linking previously successful project coordinators with commencing projects where relevant linkages exist. Bring members of previously successful projects to capacity building activities (e.g. post-EOI workshops, Recommendation 11). Hold regular (annual / biennial) conferences / showcases for recently completed Trust funded projects – the OEH AdaptNSW annual forum could provide an example. Facilitate an online knowledge-sharing portal for grant recipients, e.g. a LinkedIn group.
13.	The Environmental Trust has limited resources to allocate to implementing a number of the recommendations. Some of the recommendations would require allocation of additional resources either temporarily (2, 3, 5, 6, 9) or permanently (4, 11, 12). Others could be managed within existing resources but will take	<ul style="list-style-type: none"> Use external consultancy to provide temporary increases in available resources Piggyback the capacity building (Recommendation 12) on existing environmental education events to reduce resource requirements. 	Arguing for additional funds is always challenging as there are many competing demands. Nevertheless, there is good evidence that the grants programs will be more likely to deliver tangible environmental outcomes if additional resources are allocated towards the needs identified in these recommendations.	<ul style="list-style-type: none"> Use external consultancy to provide temporary increases in available resources Piggyback the capacity building (Recommendation 12) on existing environmental education events to reduce resource requirements.

ID	Issue	Response options	Implications / Challenges	Specific Recommendation
	<p>resources away from current practice (5, 7, 8, 10). There is a case for at least temporarily increasing the funds available for the Environmental Education grants while transitioning to a program with a stronger basis in contemporary learning and social theory.</p>	<ul style="list-style-type: none"> Seek a temporary increase in funding from the NSW Government to fund the transition to a program with a stronger basis in contemporary learning and social theory. <p>Seek a permanent increase in funding from the NSW Government to support capacity building and knowledge sharing activities.</p>	<p>While some recommendations can be implementing without an increase in funding, they will reduce funds available for grant applicants in a program that is already perceived as extremely competitive.</p>	<ul style="list-style-type: none"> Seek a temporary increase in funding from the NSW Government to fund the transition to a program with a stronger basis in contemporary learning and social theory. <p>Seek a permanent increase in funding from the NSW Government to support capacity building and knowledge sharing activities.</p>



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Appendix 1: Assessment criteria and guiding principles from 2017/18 Program Guidelines

The assessment criteria for both the environmental education and Eco Schools programs, along with the guiding principles of the environmental education programs are shown below, taken from the respective 2017/18 Program Guidelines provided for potential applicants and available on the Environmental Trust websites. The assessment criteria are reflections of the guiding principles for effective and impactful projects.

For the Eco schools program, they indicate the emphasis placed by the Trust on achieving tangible environmental outcomes, student learning, teacher capacity building, community engagement and value for money. The Environmental education program criteria indicates a need for tangible environmental benefit, identification of a clear community need, collaboration with a range of stakeholders, capacity building for project organisations and participants, as well as value for money.

<p>Criterion 1</p>	<p>The project has a proven need and tangible, measurable environmental outcomes.</p> <ul style="list-style-type: none"> • A clear description of the need for the project and how the project will make a difference • The project has tangible, measurable outcomes that will result in benefits for the environment
<p>Criterion 2</p>	<p>The project ensures measurable student learning.</p> <ul style="list-style-type: none"> • Students are involved in learning opportunities about environmental sustainability • The project delivers curriculum outcomes and is clearly linked to a range of Key Learning Areas
<p>Criterion 3</p>	<p>Project activities increase teacher capacity to deliver environmental education.</p> <ul style="list-style-type: none"> • Teacher knowledge and skills about sustainability education and engagement is increased • Integration of the sustainability education into the curriculum is increased
<p>Criterion 4</p>	<p>The school and the community work together for sustainability outcomes.</p> <ul style="list-style-type: none"> • The project delivers sustainability outcomes and contributes to the school's management plan • The project is actively supported by community organisations and increases community knowledge and awareness of sustainability
<p>Criterion 5</p>	<p>Value for money.</p> <ul style="list-style-type: none"> • The budget is appropriate for the proposed outcomes, particularly if funds are sought for infrastructure

Figure A1.1: Eco schools assessment criteria from 2017/18 Program Guidelines



Stage 1: EOI assessment criteria

Criterion 1 Environmental benefit	<ul style="list-style-type: none"> • Proven environmental and educational needs and tangible environmental benefits.
Criterion 2 Target audience	<ul style="list-style-type: none"> • Appropriateness and understanding of the target audience and proposed engagement methods. • Ability to build capacity of the target audience.
Criterion 3 Collaboration	<ul style="list-style-type: none"> • Relevant collaboration established, and collaboration has been actively involved in project scoping. • Appropriate mechanisms to engage collaborators established.
Criterion 4 Effectiveness	<ul style="list-style-type: none"> • Appropriateness of objectives to address the stated environmental issues. • Likelihood of success against project objectives.

Please refer to [How to complete your Expression of Interest](#) to see how questions in the EOI Form relate to the assessment criteria.

Stage 2: Full application assessment criteria (by invitation only)

Criterion 1 Tangible environmental benefit	<ul style="list-style-type: none"> • Clear explanation of the environmental issue to be addressed i.e. is there a need? • Likelihood the project will make a difference to this issue. • Demonstrated evidence that similar or existing programs/products are not duplicated. • Degree of originality or innovation of your approach (not essential).
Criterion 2 Target audience	<ul style="list-style-type: none"> • Clear specification and understanding of target audience. • Likely impact of target audience communication and engagement strategy. • Extent to which project activities build capacity of target audience.
Criterion 3 Project team and collaborators	<ul style="list-style-type: none"> • Strength and appropriateness of the collaboration. • Appropriateness of proposed engagement of collaborators. • Relevance of project team expertise. • Relevance of expertise of collaborators.
Criterion 4 Project planning	<ul style="list-style-type: none"> • Quality of the project plan to show how the proposed activities will enable the objectives to be met (including project evaluation). • Stated objectives and outcomes are measurable, either quantitatively and qualitatively. • Clear explanation of how outcomes will be evaluated and disseminated. • How well the project plan incorporates measures to monitor and address identified risk factors. • Feasible time frame for achieving proposed objectives and outputs.
Criterion 5 Value for money	<ul style="list-style-type: none"> • Extent to which the budget supports the proposed outputs and whether it will ensure the viability of the project overall. • The likely environmental impact of the proposal relative to the amount of program funds sought. • Appropriateness of the mix in the total budget for materials and other direct project costs and in-kind contributions to the project. • Demonstrated commitment of the applicant to continue to support and achieve the project's outcomes beyond the life of the grant. • Transferability for dissemination of project outcomes.

Figure A1.2: Stage 1 and Stage 2 assessment criteria for Environmental Education grants from 2017/18 Program Guidelines



Guiding principles of environmental education projects

EOIs and applications should incorporate the following principles for effective and impactful environmental education projects. These principles are also reflected in the assessment criteria (see page 8).

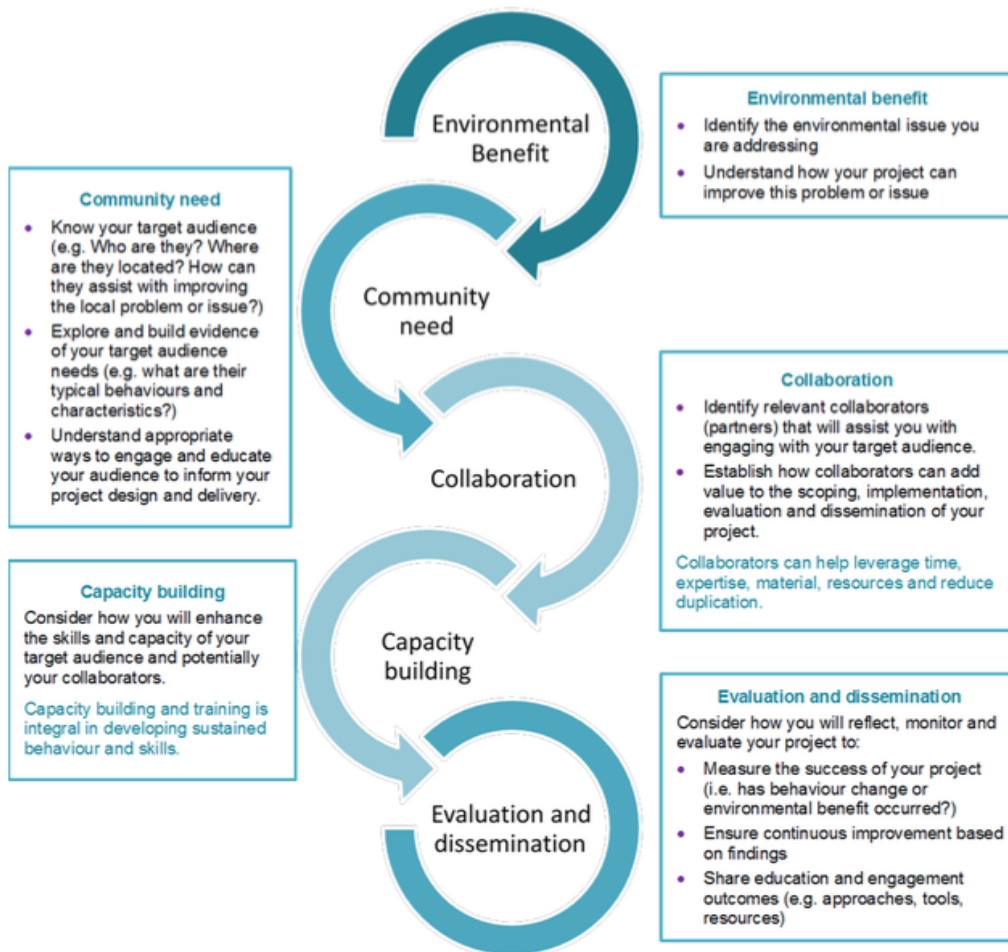


Figure A1.3: Guiding principles of environmental education projects from 2017/18 Program Guidelines

Appendix 2: Suggested changes to program aims, objectives, principles and criteria

A key theme of this evaluation is the incorporation of latest theories of transformational learning into the Grants program logic and design.

Establishing a clear program logic is a key component of program design. It captures the rationale behind a program, outlining the effective relationships between intended activities and processes; their outputs; and the intended program outcomes.

Currently the program logic is not explicitly outlined in project documentation for the Environmental Education or Eco Schools programs. As discussed in the recommendations, UTS proposes that the development of a program logic occur as part of a separate project developing these environmental educational theories into a program framework for the Trust that is transparently articulated and cohesively integrate all aspects of program design.

Based on the findings on the evaluation, some suggestions for changes to the Environmental Education and, to a lesser extent, Eco Schools program aims, objectives, principles and criteria are shown in **Error! Reference source not found.** and **Error! Reference source not found.** respectively.

Table 16: Current and suggested program objectives and principles for Environmental Education program

Environmental Education	
Current Program Design	Proposed Program Design
Program Aim	Proposed Program Aim
<p>The Environmental Education Program aims to address specific environmental problems through education, behaviour change and environmental learning.</p> <p><i>The aim of the Environmental Education program is to support educational projects or programs that develop or widen the community's knowledge of, skills in, and participation in protecting the environment and undertaking sustainable behaviour(s) (from Program Guidelines)</i></p>	<p><i>The aim of the Environmental Education program is to support educational projects or programs that develop, widen or transform the community's knowledge of, skills in, intrinsic motivation for, and participation in protecting the environment and undertaking sustainable behaviour(s) (from Program Guidelines)</i></p>
Program Objectives	Proposed Program Objectives
<p>Objective 1: Facilitate changes in behaviour of individuals and groups that will affect specific environmental problems.</p> <p>Objective 2: Develop and promote education projects that improve the environment.</p>	<p>Objective 1: Facilitate changes in the values and behaviour of individuals and groups to improve specific or broad environmental problems.</p> <p>Objective 2: Develop and promote education projects that improve the environment and address sustainability challenges.</p>
Program Principles	Proposed Program Principles
Environmental Benefit	Environmental Benefit
<ul style="list-style-type: none"> Identify the environmental issue you are addressing 	<ul style="list-style-type: none"> (no change)



<ul style="list-style-type: none"> Understand how your project can improve this problem or issue <p>Community Need</p> <ul style="list-style-type: none"> Know your target audience (<i>e.g. who are they? Where are they located? How can they assist with improving the local problem or issue?</i>) Explore and build evidence of your target audience needs (<i>e.g. what are their typical behaviours and characteristics</i>) Understand appropriate ways to engage and educate your audience to inform your project design and delivery <p>Collaboration</p> <ul style="list-style-type: none"> Identify relevant collaborators (partners) that will assist you with engaging with your target audience. Establish how collaborators can add value to the scoping, implementation, evaluation and dissemination of your project. <p>Capacity Building</p> <ul style="list-style-type: none"> Consider how you will enhance the skills and capacity of your target audience and potentially your collaborators <p>Evaluation and dissemination</p> <ul style="list-style-type: none"> Consider how you will reflect, monitor and evaluate your project to: <ul style="list-style-type: none"> Measure the success of your project (<i>i.e. has behaviour change or environmental benefit occurred?</i>) Ensure continuous improvement based on findings Share education and engagement outcomes (<i>e.g. approaches, tools, resources</i>) 	<ul style="list-style-type: none"> Understand and clearly demonstrate the theory of change underlying your project (<i>i.e. In what ways can what you propose to do improve this problem or issue.</i>) Look beyond traditional focus on behaviour change to consider more systemic and transformative approaches considering practices, values, worldviews, and systemic change. <p>Community Need</p> <ul style="list-style-type: none"> (no change) Explore and build evidence of you target audience needs (<i>e.g. what are their typical behaviours, characteristics, values, and worldviews.</i>) (no change) <p>Collaboration</p> <ul style="list-style-type: none"> (no change) <p>Capacity Building</p> <ul style="list-style-type: none"> (no change) <p>Evaluation and dissemination</p> <ul style="list-style-type: none"> Consider how you will reflect, monitor and evaluate your project to: <ul style="list-style-type: none"> Measure the success of your project (<i>i.e. has transformational learning or environmental benefit occurred?</i>) (no change) (no change)
<p>Program Criteria</p>	<p>Proposed Program Criteria</p>
<p>There are two levels of criteria – EOI stage and Full assessment criteria. This considers the full assessment criteria.</p> <ol style="list-style-type: none"> Tangible environmental benefit <ul style="list-style-type: none"> Clear explanation of the environmental issues to be addressed <i>i.e.</i> is there a need Likelihood the project will make a difference to this issue Demonstrated evidence that similar or existing programs/products are not duplicated Degree of originality or innovation of your approach (not essential) Target audience <ul style="list-style-type: none"> Clear specification and understanding of target audience Likely impact of target audience communication and engagement strategy Extent to which project activities build capacity of target audience Project team and collaborators 	<ol style="list-style-type: none"> Tangible environmental benefit <ul style="list-style-type: none"> Clear explanation of the environmental issues and sustainability challenges to be addressed <i>i.e.</i> is there a need Likelihood the project will make a difference to this issue. Clear description of the theory of change underlying the project and the inclusion of more systemic and transformative approaches (considering practices, values, worldviews, and systemic change). (no change) Target audience <ul style="list-style-type: none"> (no change) (no change) (no change) Project team and collaborators <ul style="list-style-type: none"> (no change) (no change) (no change) (no change) (no change) (no change)



<ul style="list-style-type: none"> • Strength and appropriateness of the collaboration • Appropriateness of proposed engagement of collaborators • Relevance of project engagement of collaborators • Relevance of project team expertise • Relevance of expertise of collaborators <p>4) Project planning</p> <ul style="list-style-type: none"> • Quality of the project plan to show how the proposed activities will enable the objectives to be met (including project evaluation) • Stated objectives and outcomes are measurable, either quantitatively and qualitatively • Clear explanation of how outcomes will be evaluated and disseminated. • How well the project plan incorporated measures to monitor and address identified risk factors • Feasible time frame for achieving proposed objectives and outputs <p>5) Value for money</p> <ul style="list-style-type: none"> • Extent to which the budget supports the proposed outputs and whether it will ensure the viability of the project overall • The likely environmental impact of the proposal relative to the amount of program funds sought • Appropriateness of the mix in the total budget for materials and other direct project costs and in-kind contributions to project • Demonstrated commitment of the applicant to continue to support and achieve the project's outcomes beyond the life of the grant • Transferability for dissemination of project outcomes 	<p>4) Project planning</p> <ul style="list-style-type: none"> • (no change) • (no change) • (no change) • (no change) • (no change) <p>5) Value for money</p> <ul style="list-style-type: none"> • (no change) • The likely environmental/sustainability impact of the proposal relative to the amount of program funds sought • (no change) • (no change)
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Table 17: Current and suggested program objectives and principles for Eco Schools program

Eco Schools	
Current Program Design	Proposed Program Design
Program Aim	Proposed Program Aim
<p>The Eco Schools Program aims to provide environmental learning opportunities for students, teachers and the school community.</p> <p><i>The NSW Environmental Trust Eco Schools Program provides funding for schools to create environmental learning opportunities for students, teachers and the school community. Eco Schools' projects provide hands-on curriculum-based environmental education focusing on strong student participation. (from program guidelines)</i></p>	No change – re-assess after three years of innovative sub-program experience.
Program Objectives	Proposed Program Objectives
Objective 1: Environmental Benefits	No changes required



<p>Enabling schools to promote more efficient resource use and improve the quality of the local environment.</p> <p>Objective 2: Student Participation</p> <p>To promote the development of knowledge, values and behaviour in students that supports environmental sustainability.</p> <p>Objective 3: Teacher Engagement</p> <p>To assist teachers to access targeted professional learning, and to assist with integrating environmental management into curriculum delivery.</p> <p>Objective 4: Managing for Sustainability in School and the Community</p> <p>To encourage schools and the community to explore opportunities for working together for sustainability outcomes.</p>	<p>Given this is a small grant amount with fairly tight goals, the scope for transformational learning opportunities is linked to school curriculum linkages which already addressed.</p> <p>Another suggestion would be to encourage some applications where funding goes entirely to teachers to undergo 'transformative training experiences' that could then be brought back to the students.</p>
<p>Program Criteria</p>	<p>Proposed Program Criteria</p>
<ol style="list-style-type: none"> 1) The project has a proven need and tangible, measurable environmental outcomes. <ol style="list-style-type: none"> a. A clear description of the need of the project and how it will make a difference b. The project has tangible, measurable outcomes that will result in benefits for the environment 2) The project ensures measurable student learning. <ol style="list-style-type: none"> a. Students are involved in learning opportunities about environmental sustainability b. The project delivers curriculum outcomes and is clearly linked to a range of Key Learning Areas 3) Project activities increase teacher capacity to deliver environmental education. <ol style="list-style-type: none"> a. Teacher knowledge and skills about sustainability education and engagement is increased b. Integration of the sustainability education into the curriculum is increased 4) The school and the community work together for sustainability outcomes. <ol style="list-style-type: none"> a. The project delivers sustainability outcomes and contributes to the schools management plan b. The project is actively supported by community organisations and increases community knowledge and awareness of sustainability 5) Value for money. <ol style="list-style-type: none"> a. The budget is appropriate for proposed outcomes, particularly if funds are sought for infrastructure. 	<p>As above, no change suggested but re-assess after more experience gained with transformative learning projects to make recommendations for small budget projects.</p>

Appendix 3: Detailed review of trends and Best Practice Principles of Environmental Education

The evaluation process involved exploring the literature around trends and best-practice principles regarding Environmental Education. This review included the evolution and emergence of Education for Sustainable Development and its most recent transformative trends based on the Transformative Learning Theory, which lead to the term used in this report: Transformative Learning for Sustainability (TLFS).

Environmental learning terminology varies across different contexts. In this document the term 'environmental education' is used in reference to any education that is related to the environment (environmental education – no capitals - as a general term) as well as describing early approaches to environmental learning (Environmental Education – with capitals - as a specific term). This section will outline the changing landscape of environmental learning and education, from the ideas of Environmental Education (EE) that emerged in the 1960's/70's, to the emergence of Education for Sustainable Development in the 1990's, and the recent shift towards Transformative Learning for Sustainability.

Environmental Education (EE) as a new discipline emerged internationally in the 1960's and 1970's, as a response to various emergent environmental crises of that period. The focus was largely on getting people to recognise the general degradation of ecosystems, with the end goal of preserving biodiversity (De la Sierra, E, 2018). EE initiatives were built upon a simple linear approach on behavioural change, being this a direct result from knowing. This simplistic understanding was critiqued because it was giving all attention to the Natural Sciences and failing to take sufficient account of the human activities provoking the ecological depletion (Wals et al. 2014; Shove 2010). In the 1990's, this critique lead to the emergence of the Education for Sustainable Development (ESD)⁹. This approach encompassed immediate environmental improvement goals, but also educating and training for long-term sustainability; indeed, the integration of the key sustainable development issues into teaching and learning at all levels became the priority (United Nations 1992) (De la Sierra, 2018).

Table 18: Shift from EE to ESD

Focus	Earlier Approach (EE)	Emergent Approach (ESD)
Problem	Pollution	Cause of unsustainable resource use
Solution	Environmental protection and conservation	Collaborative solutions for sustainable development
Connectedness	Humans separate from ecosystems	Humans part of ecosystems
Goals	Individual awareness, knowledge and behaviour	Sustainable lifestyle and societies
Methods	Predominately information based	Participatory and experimental, community development and capacity building
Time and scale	Short-term, local and national	Long term systemic
Learners	Audience and target groups	Participants, stakeholders and partners
Implementation	Mainly top and bottom	Through partnerships and networks
Legitimacy	Technical and scientific expertise	Multiple perspectives-based on different ways of seeing, knowing and doing

Source: NSW Council on Environmental Education 2006

⁹ Also sometimes referred to by the similar, though not necessarily identical, terms of Education for Sustainability (Efs) and Environmental Education for Sustainability (EES)



The ESD approach became widespread in the following two decades; policymakers, researchers, practitioners and all sectors of society formed multi- and interdisciplinary groups aiming to implement their particular conceptualisation of ESD. Activities, plans and strategies were developed and adopted in primary, secondary, tertiary and non-formal educational systems globally (Dale 2005 cited by De la Sienra, 2018); furthermore, the United Nations declared 2004 – 2014 the Decade for Education for Sustainable Development.

The NSW Environmental Education Plan 2007-2010 (NSW Council on Environmental Education 2006) – described by Fien (2012) as more comprehensive than any of the policy documents and frameworks examined in his review – refers to ESD (referred to in their terminology as EfS) as an ‘emerging reformulation of environmental education’, defined as follows:

Education for sustainability motivates, equips and involves both individuals and communities in reflecting on how they currently live and work. This assists them in making informed decisions and creating ways to work towards a more sustainable world. Learning for sustainability seeks to implement systemic change within the wider community (Tilbury et al 2005).

The characteristics of ESD as understood by the NSW Environmental Education Plan are described in Box 1.

CHARACTERISTICS OF EDUCATION FOR SUSTAINABILITY

(As outlined in the NSW Environmental Education Plan 2007-2010 (NSW Council on Environmental Education 2006)

Drawing on the guidelines put forward by the United Nations Implementation Scheme for the Decade of Education for Sustainable Development (UNESCO 2005), the following set of characteristics encapsulate the key elements of Education for Sustainability (EfS):

- promotes life-long learning
- based on the principles and values that underlie ecologically sustainable development, covering all three realms of sustainability – environment, society and economy
- is evidence based, locally relevant and culturally appropriate, simultaneously acknowledging that fulfilling local needs often has international effects and consequences
- action oriented – a continuous process of learning and reflection, developing motivations and abilities to be involved
- informed by different professional and stakeholder perspectives
- employs a variety of educational methods, mediums and techniques which promote participatory learning and higher-order thinking skills outcomes documented, learning demonstrated and experience shared accommodates the evolving nature of the concept of sustainability engages formal, non-formal and informal education
- builds social capacity for community-based decision-making, environmental stewardship across government and private sector organisations and institutions.

These characteristics can be implemented in many different ways across all spheres of influence to be reflective of unique environmental, social and economic contexts and appropriately target locally relevant issues.

Box 1: NSW government description of EfS

Tilbury and Wortman (2004) summarised the progression towards ESD. They describe traditional approaches to environmental education as focusing on ‘teaching and learning about, in and ‘for’ the environment’ (p. 9). ESD, however, goes further than this, seeing education as a transformative experience that exposes and engages people in new ways of ‘seeing, thinking, learning and working’ (p. 9).

According to Tilbury and Wortman (2004), the following elements are essential to ESD:



- Envisioning – being able to imagine a better future. The premise is that if we know where we want to go, we will be better able to work out how to get there.
- Critical thinking and reflection – learning to question our current belief systems and to recognize the assumptions underlying our knowledge, perspective and opinions. Critical thinking skills help people learn to examine economic, environmental, social and cultural structures in the context of sustainable development.
- Systemic thinking – acknowledging complexities and looking for links and synergies when trying to find solutions to problems.
- Building partnerships – promoting dialogue and negotiation, learning to work together.
- Participation in decision-making – empowering people.

As shown in Box 1, the NSW education plan has incorporated the key elements of ESD.

On the whole, ESD has become seen as a new and improved version of environmental education (Jickling & Wals 2008). However, it has also attracted critique. Whilst they are varied, the most consistent critique centres on the proscriptive and unquestioned (relatively) nature of the adoption of sustainable development as the goal of environmental education, with little if any space given to reflective consideration to whether that is an appropriate goal (Jickling & Wals 2008). Until recently, ESD (and the related approaches mentioned previously) has focused primarily on the analysis of how individuals and communities manage the environment, without exploring further what are the underlying dominant meanings (De la Sienra Servin 2017, unpublished thesis).

According to Wals et al (2014), there is a shift in focus from linking educational interventions to behavioural outcomes, instead concentrating on understanding the 'learning processes and the capacity of individuals and communities needed to help resolve complex socioecological issues' (p. 583). This means understanding the cognitive and emotional responses of people to environmental issues, which are influenced by their worldviews and belief systems, linked to identity (p. 583).

Wals et al (2014, p. 583) summarised the current state of the overall field of environmental education research as focusing on understanding the 'conditions and learning processes that enable citizen, young and old' to:

- i. *develop their own capacity to think critically, ethically, and creatively in appraising environmental situations;*
- ii. *make informed decisions about those situations; and*
- iii. *develop the capacity and commitment to act individually and collectively in ways that sustain and enhance the environment (Wals et al. 2014; Stevenson et al. 2013)*

In retrospect, it has been argued that ESD has been fruitful in raising awareness about the need to change, but it has not been successful enough in making that change happen (Stables 2013). The pace of environmental destruction, including both the social and natural dimensions, is increasing 'at an alarmingly accelerating rate' (Saylan 2011). Since the conclusion of the United Nations Decade for ESD another educational shift is becoming apparent, this is based on the integration of the Transformative Learning Theory into the conceptualizations and practices of ESD (De la Sienra, 2018). In January 2016, the international ESD community, with support from the United Nations, decreed the Ahmedabad Plan of Action (UNESCO 2016). In this policy, hundreds of ESD researchers, practitioners and policymakers recognised that the transformation required by the agreed upon Sustainable Development Goals (United Nations 2015) will require an in-depth rethinking of education itself. The need to reconceptualise education was specifically acknowledged through the following statement:

Dominant education systems have tended to impose a narrow conception of rationality at the expense of emotional understanding, learning acquired through life's experiences and traditional knowledge systems. Additionally, the transformative education that is now called for is not amenable to easily defined outcomes or measurement. Education must be reconceived in a way that allows space for diverse ways of knowing and new ways of being and becoming that reflect inclusivity in the true sense of the term. (UNESCO 2016)

Until recently, ESD had focused primarily on the analysis of how individuals and communities manage the environment, without exploring further what are the underlying dominant meanings and assumptions that human generations, especially the modern ones, have given to individuals, communities and the environment itself (De la Sienra, 2018). The most recent shift in the global conceptualisation of ESD involves a deep transformative approach where the focus is no longer on the knowledge or willingness



required to change human activities and behaviours, but on the inner exploration of the multiple determinants shaping the diverse human identity (De la Sienra, 2018).

Emotional understanding, the role of life experiences, and the identification and inclusion of diverse ways of being are the new priorities in ESD, as explained above in the quote from the Ahmedabad Plan of Action (UNESCO 2016). Attention is placed now on the inherent and exclusively human feature that is to build, change and transform the meaning of any experience at any time – consequently determining new patterns of emotion, thought and action derived from such meaning (Jackson 2011; Stevenson 2013). At this moment in human history, it is becoming more recognised that improving the relationship between humankind and the Earth's systems is dependent on our ability to first explore new possible meanings of the human condition (UNESCO 2016).

Transformative Learning for Sustainability

As noted above, the field of EE had a strong positivist orientation dominated by the direct connection between knowledge and behaviour; this led to the emergence of a broader and inclusive field named ESD. Today, ESD has become widespread globally, however it has been recognised that this approach has not been successful enough in achieving the required change. Therefore, a new range of more holistic approaches aiming for greater introspection and the deep transformation of the self, are being explored.

This recent development has seen the incorporation of the Mezirow's Transformative Learning Theory (TLT) into ESD. In this report, we have used the updated term Transformative Learning for Sustainability (TLfS), to encompass the most recent shift and corresponding growing research in the field.

Mezirow's TLT refers to the process '*by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive*' (Mezirow, 2000, p.7 cited by Sterling 2010). At its core, this theory argues that people can experience the transformation of meaning systems through certain types of experiences, triggering critical self-reflection, which may result in an expansion of consciousness (Hoggan, 2017). Transformative learning is facilitated through consciously accessing and radically changing the symbolic contents of the unconscious by critically analysing the conflicting underlying premises (Hoggan, 2017). This theory explains human psychological change, through critically questioning and assessing the integrity of deeply held meanings about the self, others and the world. This expansion of consciousness through the transformation of basic meanings is a process that occurs rarely in the spontaneity of life, but can be facilitated through intentional learning experiences (De la Sienra, 2018). According to Mezirow, people undergo a personal transformation when experiencing the following recognizable phases:

- 1) a disorienting dilemma;
- 2) self-examination with feelings of guilt or shame;
- 3) a critical assessment of assumptions;
- 4) recognition of one's (and other's) discontent;
- 5) exploration of new roles, relationships and actions;
- 6) planning a course of action;
- 7) acquisition of knowledge and skills for implementing one's plans;
- 8) provisional trying of new roles;
- 9) building of competence and self- confidence in new roles and relationships;
- 10) a reintegration into one's life on the basis of conditions dictated by one's perspective.

In other words, a transformational learning experience can be described as an exercise that take participants into:

"a deep structural shift in the basic premises of thought, feelings and actions. It is a shift of consciousness that dramatically and permanently alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-location: our relationships with other humans and with the natural world (Morrell & O'Connor, 2002, p.xvii)"

Sterling (2010, p.22) characterises transformative learning as that which impacts the deeper levels of knowing and meaning (see Figure 15), which therefore influences the '*more immediate and concrete levels of knowing, perception, and action*'.



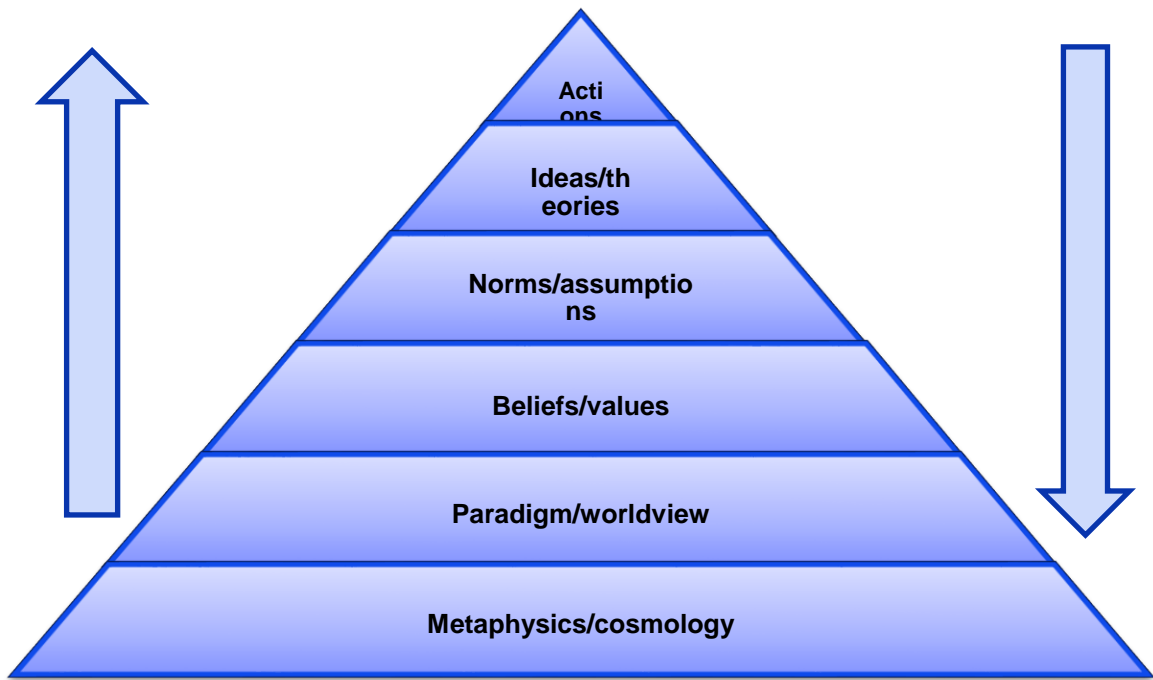


Figure 14: Levels of knowing (Sterling 2010)

Sterling (2010), drawing on the work of Mezirow and many others, describes three orders of learning and change, as illustrated in **Table 19**. First-order learning, or 'doing things better', second-order learning, or 'doing better things', and finally third-order learning, or 'seeing things differently', which is described as transformative learning.

Table 19: Levels of learning (Sterling 2010)

Orders of change/learning	Seeks/leads to:	Can be labelled as:
First order change cognition	Effectiveness/Efficiency	'Doing things better" Conformative
Second order change meta-cognition	Examining and changing assumptions	'Doing better things' Reformative
Third order change Epistemic learning	Paradigm change	'Seeing things differently' Transformative

Despite the high level of abstraction and potential psychological risk involved in this pioneering latest educational shift, and the relatively few documented examples of practical experiences and educational settings in which transformative learning has been central (Sterling 2010), there is enough evidence to suggest the adoption of a TlFS approach.

Three additional theoretical frameworks offer practical guidance on current best practice for environmental education including transformative learning design: social practice theory, values theory and worldviews-based learning framework. These are described further below.

Social Practice Theory focuses attention on the formation and dynamics of everyday social practices, such as shopping, driving, or cleaning. A social practice is made up of three elements:

- Materials: 'including things, technologies, tangible physical entities, and the stuff of which objects are made'
- Competences: 'which encompasses skill know-how and technique'
- Meanings: 'in which we include symbolic meanings, ideas and aspirations' (Shove, Pantzar & Watson, 2012).

While individuals can become more aware about environmental issues and develop a desire to act, the lack of appropriate materials, competence or meanings to establish a new social practice can stifle action. Education aimed at transforming practice needs to work not only with the meanings that people hold in their heads, but also in building their collective competence and providing the materials for new practices to emerge.

Secondly, **Schwartz's Theory of Basic Human Values** highlights the important role that values play in behaviour change. Values are deep psychological structures that guide our attitudes and behaviour. Schwartz (2012) identifies ten universal human values, which are of varying importance for different people: conformity / tradition; security; power; achievement; hedonism; stimulation; self-direction; universalism; and benevolence. The relative strength of these values can be identified using standard survey instruments. These values are relatively stable and provide much of the meaning associated with social practices. Individuals are more likely to do things that are consistent with their values. Thus, education can raise awareness of environmental issues but unless it also shifts or activates particular values, it may not lead to behaviour change. Importantly, some values are more consistent with pro-environmental behaviour. These are known as intrinsic values, or "bigger than self" values. From the list above, they include self-direction, universalism and benevolence. Research consistently shows that people for whom these values are strong or active are more likely to engage in pro-environmental behaviour (Crompton, 2010). This points to alternative educational strategies that seek to engage or activate intrinsic values rather than just raise awareness or change attitudes.

The **Worldviews-based Learning Framework** described by De la Sienna (2018), highlights the potential for the concept of *worldview* to help achieve ESD's transformative agenda, because it encompasses the wholeness of the mental and behavioural complexity of humanness. Her work suggests that ESD could benefit from five specific learning principles based on positioning worldviews at the heart of its practice. In this framework a worldview is defined as:

"A complex constellation of meaning (beliefs, values and other perceptions) from which the wide range of human conduct emerges; it is the uniquely personal and subjective meaning given to reality, which explains each life experience prescribing patterns of emotions, thoughts and actions. It is a hierarchical network of significance framing relationships with ourselves, and between the environment and ourselves. Mental states, attitudes, choices and behaviours are derived from this network. Therefore, the worldview concept can help to explore how people apprehend and make sense of their own reality, form their unique structures of meaning and choose their way of being, becoming and behaving" (De la Sienna, 2018).

The five principles are:

- Principle 1. Learning is not cerebral but embodied: the whole body forms, changes, transforms and expresses meaning, not only the brain
- Principle 2. Emotions are the central energy activating the body, learning, the mind and its worldview: recognition and management of emotions is thus a fundamental aspect of learning
- Principle 3. The intricate combination of one's biology and social relationships is what makes worldviews unique: one's own and others' learning processes and meanings are both unique and interdependent
- Principle 4. A worldview is mostly an unconscious entity: consciousness and meta-consciousness occur rarely and only for short periods of time
- Principle 5. Learning is permanent and goes beyond childhood: throughout the lifespan a worldview is constantly prescribing responses to each experience and, in turn, being shaped by the experience



This framework guides the design of innovative learning experiences that boost introspection and generate new conceptualizations about how worldviews shape what it means to be human. This tool brings together disjointed types of knowledge relevant to the transformative ESD goals, providing a theoretical basis to build learning experiences that encourage introspection, self-observation, reflection, and a potential transformation of meaning making about others, the environment and ourselves. Such learning experiences could ultimately, contribute to the potential transformation of patterns of emotions, thoughts and actions of individuals, towards more sustainable ways of being, becoming and behaving.

An example explanation of the general features that would be included in a learning experience is shown in Box 2.

- Take the learning experience outside the classroom and into different settings, depending on the theme of the experience: like the park, the factory, a restaurant, a botanical garden, a government office, your house or someone else's house, the community centre, the library, etc. Always try to show a very different cultural context, through pictures, videos, live streaming from another country, or even traveling when possible. These views are equivalent to the **SETTINGS OR CONTEXT** section of a traditional lesson-planning template.
- Use a combination of audio-visual resources and multiple sensory experiences; always combining abstract thinking and critical self-reflection with different positions and scans of the body, sounds, landscapes, and moments of creativity or contemplation. The goal would always be to balance the simulation of the body and the mind; critical thinking and emotional awareness; contemplation and meta-consciousness. **RESOURCES AND TECHNIQUES**
- Encourage the permanent practice of self-observation, a sustained process of increasing self-awareness about own emotional responses and how they affect thoughts, decisions and behaviours. In each learning activity, encourage the habit to check-in with oneself aiming to be better at self-recognising how own personal worldviews are shaping the ways we are choosing to be in the world. **BASIC CURRICULUM 1: MY WORLDVIEW**
- Promote the identification of similar and different worldviews (mental realities) and empathy. In each learning activity promote the recognition, interaction and acceptance of different worldviews **BASIC CURRICULUM 2: YOUR WORLDVIEW**
- Provide a scrapbook with blank pages and multiple colours for writing, drawing, sticking clippings, or pictures, etc. Maybe some other tools useful in expressing and capturing what is happening in the conscious and meta-conscious mind could also be provided in certain moments; for example, a voice recorder, or taking pictures. **(SELF) EVALUATION**
- Emphasise how emotional processes influence cognitive processes and vice versa; inviting people to practice awareness of these interactions in their daily life and, most importantly, how they influence their mental states, choices and behaviours.
- In order to be more attentive or aware of learning processes, meanings and one's own worldview (formation, evolution, transformation and/or expression), people could be encouraged to find unique ways to engage in routines of momentary awareness. Conclude each learning activity inviting people to observe and explore their own worldview on daily basis, and play with the unlimited possibilities to always shift patterns of emotions, thoughts, actions and, ultimately, ways of being in the world. **(NON-MEASURABLE) OUTCOMES**

Box 2: Example template for designing a worldview based learning experience



Appendix 4: List of other Environmental Education Grants available nationally and in NSW

Location	Name	Focus area	Description	Source	Cross-over with Environmental Ed Grant programs
SOME POTENTIAL CROSSOVER IN GRANT FUNDING					
NSW	Environmental Trust	Environment	The Environmental Trust is an independent statutory body that was established by the NSW government to support exceptional environmental projects that do not receive funds from the usual government sources.	OEH website	
NSW	Climate Change Fund	Climate Change and Energy	The Climate Change Fund was established by the NSW Government in July 2007 to help households, businesses, community organisations, schools and government to save water, energy and greenhouse gas emissions.	OEH website	Cross-over in terms of grants for schools, but focused on resource consumption reduction not educational outcomes
National	Threatened Species Prospectus	Environment	The Threatened Species Prospectus invites the business, industry and philanthropic sectors to join us in the battle to prevent further extinctions. It includes more than 50 projects that have been scientifically assessed by the Threatened Species Commissioner, in consultation with passionate and hardworking Australian's who are saving species on the ground across the country.	environment.gov.au	Education component to many of the programs, but generally larger scale and have scientific, management and policy development aspects as well.
National	Threatened Species Recovery Fund	Environment	The Threatened Species Recovery Fund (the Fund) will support communities to actively protect Threatened Species, leverage additional investment, and assist with delivering on the Targets and Action Areas in the Threatened Species Strategy.	environment.gov.au	TSR Fund activities can include educational component
Private	Ian Potter Foundation	Broad	The Ian Potter Foundation is a major Australian philanthropic foundation that supports and promotes excellence and innovation. Its vision is of a vibrant, healthy and fair Australia. It is committed to helping Australia's most capable organisations to achieve their	CommunityBuilders	Potential to fund similar projects, but has much broader eligibility

			goals, delivering positive, lasting benefits for the community and the nation http://www.ianpotter.org.au		
Private	Reichstein	Social justice and environmental sustainability	The Reichstein Foundation works for social justice and environmental sustainability by investing strategically in inspirational people, projects and organisations. It is a catalyst for more effective philanthropy in Australia https://www.reichstein.org.au/about-us/	CommunityBuilders	Potential to fund similar projects, but has much broader eligibility
Private	Sidney Myer Fund and the Myer Foundation	Education	Education grants, http://myerfoundation.org.au/grants/	CommunityBuilders	There could be the potential for school environmental initiatives to be funded through the education program, but it would be outside of the core focus
Private	Sidney Myer Fund and the Myer Foundation	Sustainability and environment	Sustainability and the Environment http://myerfoundation.org.au/grants/	CommunityBuilders	Focused on Generation and preservation of urban landscapes (large grants) and improvements to urban environments and urban biodiversity (capacity building)
NSW	Love Food Hate Waste	Food	This delivers Grant funding totalling \$350,000 under Waste Less, Recycle More for food waste education projects using the NSW EPA's new tailor-made programs Food Smart for households and Your Business is Food for business.	CommunityBuilders	Some crossover – but specific focus on food waste
NSW	Shellharbour City Council – Small Environmental Projects Fund	Environment	This program aims to help fund projects and environmental education that assists the Shellharbour community to practice sustainable living and protect and promote the natural environment.	GrantGuru	LGA only – broader than education focus
Nat	Coles Junior Landcare Garden Grants	Outdoor learning	This program aims to support schools and youth groups by funding projects that promote environmental stewardship and encourage students to learn about the environment through “outdoor learning” and interaction.	GrantGuru	(LOOKS TO HAVE CEASED IN 2015 – REPLACED BY YATES JUNIOR LANDCARE GRANT)
Nat	Yates Junior Landcare Grant	Community / school gardens	Similar (or probably the same with different sponsor) as above. (http://community.grantready.com.au/Find_Grants/Search/index.aspx?itemDetails=12655&cId=&itemDetailsSubTopic=228) - 15 grants of \$2000	Web search	Very similar to Eco Schools, but less funding, smaller number and wider pool of potential applicants.

Nat	Teachers Environment Fund	Environment for educational institutions	<p>We're offering grants of up to \$2,000 to help schools, TAFEs and CITs make their environmental projects a reality. Making learning fun and engaging will assist students to learn about their environment and will help contribute to a sustainable future for all of us. Plus if your school is successful we will showcase your efforts for others to learn from.</p> <p>Examples of eligible projects include:</p> <ul style="list-style-type: none"> • Habitat conservation, biodiversity • Chicken coups • Outdoor learning areas • Waste, recycling, energy or water projects • Aboriginal projects • Vegetable and kitchen gardens, organic produce • Innovative ideas of sustainability education <p>https://www.tmbank.com.au/community/2016/teachers-environment-fund-grants-open-for-2016</p>	Web search	Similar to Eco Schools, but less funding, smaller number and wider pool of potential applicants.
NSW	Lane Cove Council – Sustainability Small Grants Program	Sustainability	This program aims to assist the development of a range of initiatives that are of direct and practical benefit to a sustainable Lane Cove community.	GrantGuru	LGA only - broader than education focus
Nat	ANZ Staff Foundation	community	This program aims to support projects run by charitable organisations which offer a direct and tangible benefit to local communities. - Up to \$5k	GrantGuru	Limited number and scale of funding, for charities only. Not just education focus.
Nat	ANZ Seeds of Renewal	Rural community	<p>\$250k, with grants of up to \$15k.</p> <p>The program focuses specifically on helping build vibrant and sustainable rural communities, to ensure the ongoing prosperity of regional Australia.</p> <p>http://www.frrr.org.au/grants/ANZ-seeds-of-renewal</p>	Web search	Wider focus than just education, funding capped at \$15k. Rural and regional
NSW	Central Coast Council – Community Development Grants	Community	This program aims to support organisations to deliver activities that foster a sense of community, build capacity within our community, strengthen our economic base, enhance the quality of life for local Central Coast residents and protect and enhance the natural qualities of the Central Coast.	GrantGuru	LGA only – broader than education focus

Nat	Hamer Sprout Fund Sustainability Grants	Sustainability	This program aims to build communities inspired to take action for a sustainable future. - \$25 k in total funding available, \$5k max per grant	GrantGuru	Small scale and number of grants
NSW, QLD, VIC, WA	Aurizon Community Giving Fund	Various	This program aims to provide cash grants to charitable projects aimed at improving health and wellbeing, community safety, the environment and education in the local communities in which Aurizon operates and the employees reside – up to \$20k	GrantGuru	Wider scope than just education, smaller funding cap
NSW	Liverpool City Council – Community Matching Grants	Community	This program is designed to provide financial support to projects and activities that build or strengthen communities within Liverpool.	GrantGuru	LGA only – broader than education focus
NO EVIDENT CROSSOVER IN GRANT FUNDING					
NSW	Landholder assistance	Environment	Assistance with conserving nature for landholders includes voluntary conservation agreements, wildlife refuges and the Land for Wildlife scheme.	OEH website	No
NSW	Park revitalisation	Environment	The NSW Government has committed \$38 million for NPWS to invest in the Revitalising Sydney's National Parks Program -- a four-year program which aims to revitalise key visitor destinations in the Blue Mountains, Sydney Harbour, Botany Bay, Ku-ring-gai Chase, Royal, Lane Cove and Georges River national parks.	OEH website	No - may be some education component of NP visitor center upgrades
NSW	Coastal, estuary and floodplain management grants	Environment	The NSW Government's coastal and estuary grants and floodplain management grants programs support councils in their management of coastal areas, estuaries and floodplains.	OEH website	No
NSW	NSW Environmental Upgrade Agreements	Climate Change and Energy	NSW Environmental Upgrade Agreements allow councils to enter into environmental upgrade agreements with owners of certain buildings and finance providers as a way of funding works to improve the energy, water or environmental efficiency or environmental sustainability of those buildings.	OEH website	No
NSW	Heritage	Heritage	NSW Heritage Grants aims to recognise and protect the state's most significant heritage places and values to ensure future generations can enjoy them.	OEH website	No

NSW	Sponsorship	Various	Sponsorship provides the NSW Government the opportunity to support organisations and activities that align with its strategic goals. Limited sponsorship opportunities are offered for projects, programs and events that advance the government's goals but are not covered under the various grant programs listed above.	OEH website	No (covers areas not already covered by the govt - which already has the Env. Trust)
National Grant Funding		http://www.environment.gov.au/about-us/grants-funding			
National	Green Army	Environment	The Green Army is a hands-on, practical environmental action program that supports local environment and heritage conservation projects across Australia. The Green Army Program will close on 30 June 2018. There are still opportunities to engage in Green Army projects that were previously announced.	environment.gov.au	No - different focus, some small cross-over - focuses on restoration, not education
National	National Landcare Program	Environment	The National Landcare Program is a key part of the Australian Government's commitment to protect and conserve Australia's water, soil, plants, animals and ecosystems, as well as support the productive and sustainable use of these valuable resources.	environment.gov.au	No
National	The Reef Trust	Environment	The Reef Trust is one of the key mechanisms assisting in the delivery of the Reef 2050 Plan, focusing on known critical areas for investment—improving water quality and coastal habitat along the Great Barrier Reef, controlling the current outbreak of crown-of-thorns starfish and protecting threatened and migratory species, particularly dugong and turtles. The Reef Trust has a strong focus on evaluation and adaptive management, to ensure it effectively contributes to the long-term sustainable management of the Great Barrier Reef. It seeks to complement existing Reef investment by providing prospective investors with new opportunities to support the delivery of conservation and protection projects that align with the desired outcomes of the Reef Trust.	environment.gov.au	No
National	20 Million Trees	Environment	The 20 Million Trees Program will plant 20 million trees by 2020, to re-establish green corridors and urban forests.	environment.gov.au	No
National	Emissions Reduction Fund	Climate Change and Energy		environment.gov.au	No

National	Solar Communities	Climate Change and Energy	The \$5 million Solar Communities program is supporting local responses to climate change and help deliver lower electricity costs for community organisations. The program is providing funding for community groups in selected regions across Australia to install rooftop solar PV, solar hot water and solar-connected battery systems.	environment.gov.au	No
National	Solar Towns	Climate Change and Energy	Funding of \$2.1 million (GST exclusive) was provided for the programme from 2014-15 to 2015-16 to support community organisations who wish to install a renewable energy system (solar photovoltaic panels or a solar hot water system only) on an existing building that provides support to community groups.	environment.gov.au	No
National	Australian Renewable Energy Agency	Climate Change and Energy	N/A	environment.gov.au	No
National	Clean Energy Finance Corporation	Climate Change and Energy	N/A	environment.gov.au	No
National	Energy Exchange	Climate Change and Energy	N/A	environment.gov.au	No
National	Community Heritage and Icons Grant	Heritage	N/A	environment.gov.au	
National	Protecting National Historic Sites	Heritage	N/A	environment.gov.au	No
National	Australian Antarctic Science Programs	Science & Research	N/A	environment.gov.au	No
National	Australian Biological Resource Study	Science & Research	N/A	environment.gov.au	No
National	National Environmental Science Programme	Science & Research	N/A	environment.gov.au	No

Victoria	Community Skills Development Grants	Environment	The Community Skills Development Grants aim to strengthen environmental volunteer group and network capacity by supporting learning and skills development opportunities, and encouraging knowledge sharing with other groups and networks.		No – Vic based
Victoria	Biodiversity On-Ground Action	Environment	The funding will focus on protecting and managing a range of native plants and animals, threatened species and habitats through increased engagement and alignment of natural resources, scientific, educational and community sectors.		No – Vic based
Victoria	Landcare	Environment	The Victorian Landcare Grants support Landcare and other community-based natural resource management groups to protect and restore the Victorian landscape.		No – Vic based
Victoria	Community Volunteer Action Grants	Environment	Over \$2 million dollars was provided to small-scale, local threatened species projects that build community connections to the local environment.		No – Vic based
Victoria	Critical Action and Strategic Partnerships	Environment	\$3 million dollars was provided to environmental agencies and organisations, as experts in threatened species management, to undertake work that reduced threats to secure important sites for threatened species. This work which funded 70 projects has now been completed.		No – Vic based
VIC	City of Melton – Environmental Grants	Environment	This program seeks to assist local environment groups that carry out projects that will benefit the local community.	GrantGuru	No – Vic based
QLD	Moreton Bay Regional Council – Don Perrin Environmental Bursary	Environment	This program seeks to assist a resident in Moreton Bay Region with their tertiary educational expenses.	GrantGuru	No – QLD based
QLD	Resource Replacement Scheme	Resource replacement	This program seeks to compensate schools and other educational sites for loss of, or damage to, resources in the event of an incident.	GrantGuru	No – QLD based
VIC	Warrnambool City Council – Community Development Fund	Community	This program seeks to assist local clubs and organisations in the provision of programs, projects activities or events within the City of Warrnambool.	GrantGuru	No – Vic based
QLD	Logan City Council – EnviroGrants Program	Environment	This program aims to enhance and protect the natural environment and foster environmentally sustainable practices across the City of Logan through community awareness and participation.	GrantGuru	No – QLD based

Appendix 5: Online surveys

Online survey of successful and unsuccessful grant recipients

Table 20: Key demographics of the online survey of successful and unsuccessful grant recipients

Classification	Attribute	%
Project year	2010	2.3
	2011	5.4
	2012	7
	2013	12.1
	2014	12.5
	2015	22.6
	2016	26.5
	Unsure	11.6
Program code	Environmental education	53.5
	Eco Schools	30.9
	Food Gardens in Schools	15.6
Application status	Grant awarded	48.4
	Grant not awarded	51.6
Grant status	Declined grant	32.1
	Active grant	27.7
	Grant acquitted	40.2

Table 21: Survey questions for online survey with successful and unsuccessful grant recipients

Questions	Response options
A1. Which of the following best describes the organisation you are at, or were at, when you applied for a grant from the NSW Environmental Trust?	<select one> 1. State government agency 2. Local government/council 3. Primary school 4. Secondary or high school 5. Central School (K-12) 6. Schools for Special Purposes 7. NGO/association/community organisation with environmental focus 8. NGO/association/community organisation (non-environmental focus) 9. Other <please describe>
A2. Which of the following grants from the Environmental Trust did your organisation apply for?	<select one> 1. Environmental Education grant 2. Eco Schools grant 3. Food Gardens in Schools grant
A3. In what year did you apply for your grant	<select one> 1. 2010 2. 2011 3. 2012 4. 2013 5. 2014

Questions	Response options
	6. 2015 7. 2016 8. 2017 9. Unsure
A4. Was your application for an Environmental Education Grant successful?	<select one> 1. No – we did not make it pass the expression of interest stage 2. No – we made it past the expression of interest stage but were not awarded a grant 3. Yes-we were awarded the grant 4. Yes, but we declined the grant
A5. Was your application for an Eco Schools or Food Gardens in Schools grant successful?	<select one> 1. No 2. Yes
A6. Is your grant still active?	<select one> 1. No 2. Yes
B1. Please indicate up to three environmental outcomes that your organisation was/is trying to achieve with your grant from the NSW Environmental Trust.	<open text boxes>
<i>Pipe options from above</i> B2. To what extent have you achieved the outcomes you intended to achieve?	<matrix - select one> 1. None yet but we hope to 2. We have made minimal progress 3. We have made good progress but there is still work to do 4. We have been able to achieve most of our objectives in this area 5. We have achieved our objectives in this area 6. Unsure
B3. Please indicate up to three educational outcomes that your organisation was/is trying to achieve with your grant from the NSW Environmental Trust.	<open text boxes>
<i>Pipe options from above</i> B4. To what extent have you achieved the outcomes you intended to achieve?	<matrix - select one> 1. None yet but we hope to 2. We have made minimal progress 3. We have made good progress but there is still work to do 4. We have been able to achieve most of our objectives in this area 5. We have achieved our objectives in this area 6. Unsure
B5. What have been the main challenges that have made it difficult for you to achieve the outcomes you intended to achieve?	<open text box>
C1. Trees contribute to the health of hydrological (water) systems because they	<select one> 1. Shade the soil 2. Attract rain

Questions	Response options
	3. Stabilise waterways 4. Provide essential calcium to waterways 5. Keep the water table from rising to the surface
C2. What is the major contributing factor to the endangerment of native animal species in NSW?	<select one> 1. Roadways 2. Competition with pests 3. Use of pesticides 4. Loss of habitat 5. Harvesting for pet food
C3. Many of the plants introduced to Australia during the past 200 years have become environmental weeds, resulting in	<select one> 1. Changes to fire intensity and frequency 2. Suitable habitat for native fauna 3. Reduced levels of nitrogen available in soils 4. Decline in the diversity and abundance of native plants 5. less evaporation from soil
C4. The best habitat for sheltering hollow-dependent wildlife is found in	1. dead trees. 2. saplings. 3. live, hollow-bearing eucalypt trees. 4. live, hollow-bearing exotic trees. 5. roofs, sheds and bridges
C5. The biggest contributor to global warming in the last 50 years is	<select one> 1. The hole in the ozone layer 2. Volcanic activity 3. Greenhouse gases from burning fossil fuels 4. Greenhouse gases from deforestation 5. Human industrial activity
C6. A healthy garden can be described as an ecosystem because	<select one> 1. It is self-contained and separate from the outside world 2. It supports a web of biological relationships 3. The cycling of water and nutrients, as well as the plant-animal interactions, are essential to the garden's survival 4. It contains healthy plants and water 5. It supports the economy by using resources
C7. Some ecosystems are more sensitive than others to a changing climate. In a warming and drying climate, the most sensitive ecosystems are	<select one> 1. Woodlands 2. Rainforests 3. Savannahs 4. Wetlands 5. Deep ocean beds
C8. Extinctions, the loss of species altogether, are a natural part of evolution of life on Earth. Current extinctions	<select one> 1. Involve animals and plants unable to relocate when their habitat is lost 2. Will help reduce overcrowding on Earth 3. Mainly involve species unable to adapt quickly to urban environments 4. Are spread fairly evenly around the Earth 5. Are occurring mainly in areas rich in species and where habitat destruction is high

Questions	Response options
C9. Currently the greatest threat to tropical coral reefs is	<select one> 1. Suffocation and starvation of sea life by plastic waste 2. Acidification of seawater affecting formation of the coral skeleton 3. Warming of surface water temperatures which leads to coral bleaching 4. Overfishing and fishing practices that use cyanide and dynamite 5. Cooling of surface water temperatures due to melting ice
C10. To what extent did delivering your project funded by the Environmental Trust increase your knowledge about the environment?	<Select one> 1. No extent 2. Slight extent 3. Moderate extent 4. Large extent 5. Very large extent
C11. Please rate your current confidence to deliver Environmental Education projects in the future?	<Slider bar 1-10; where 1 indicates no confidence and 10 indicates very confident>
D1. To what extent did the project you delivered benefit your target audience? (note that your target audience could be your staff, customers, students or members of your local community)	<Select one> 1. No extent 2. Slight extent 3. Moderate extent 4. Large extent 5. Very large extent 6. Unsure
D2. Please describe these benefits to your target audience.	<open text>
D3. To what extent did the project you delivered with your grant increase your confidence to deliver environmental learning and engagement?	<Select one> 1. No extent 2. Slight extent 3. Moderate extent 4. Large extent 5. Very large extent 6. Unsure
D4. Have you continued to deliver environmental education in your organisation?	<select one> 1. No 2. Yes
D5. Please describe how you have continued to deliver environmental education in your organisation.	<open text>
D6. Did the project meet the planned budget?	1. Yes 2. No, went over budget 3. No, was under budget 4. Unsure
D7. Is the project likely to meet the planned budget?	1. Yes 2. No, likely to go over budget 3. No, likely to be under budget

Questions	Response options
	4. Unsure
D8. Could the project have been implemented without this grant?	1. Yes 2. No 3. Unsure
D9. What, if any, of the following techniques did you use to engage with your target audience in your project? (note that your target audience could be your staff, customers, students or members of your local community)	1. Focus group/interviews 2. Workshops 3. Direct engagement 4. Field days 5. Partner with another organisation 6. Partner with an existing event 5. Other <please specify what techniques you used>
D10. What, if any, of the following tools did you use evaluate what the target audience has learned and are now doing differently, because of your project?	1. Survey 2. Pledges 3. Direct engagement 4. Focus group/interviews 5. Observational study 6. Other <please specify what tools you used>
E1. Did you (or have you) regularly promote the outcomes achieved from your project?	<select one> 1. No 2. Yes <please describe how you provided these updates> 3. Unsure
E2. Which of the following ways have you promoted your project in your community?	<select all that apply> 1. Community newsletter 2. Social media 3. On your organisation's website 4. School newsletter 5. Local media (e.g. local newspaper or community radio) 6. Word of mouth 7. Staff newsletter (paper or online) 8. Student developed communications 9. Staff or community events 10. Other <please specify> 11. We have not promoted our project 21. Unsure 13 Other <please specify>
E3. Can you describe the key messages included in your promotion or communication	<Open text>
F1. Has your organisation been able to continue or build on the project beyond the duration of your grant?	<select one> 1. No <please explain why not> 2. Yes <what have you done or what are your plans> 3. Unsure at this stage
F2. Please rate your current confidence to deliver Environmental Education projects in the future?	<Slider bar 1-10; where 1 indicates no confidence and 10 indicates very confident>
F3. To what extent did delivering your project funded by the Environmental Trust increase your confidence to embed positive	<Select one> 1. No extent 2. Slight extent

Questions	Response options
environmental behaviours in your organisation, and more broadly into the community?	3. Moderate extent 4. Large extent 5. Very large extent
F4. To what extent did delivering your Eco Schools or Food Gardens in Schools project increase your school's ability to integrate sustainability into the school plan and school activities?	<Select one> 1. No extent <please explain why not> 2. Slight extent 3. Moderate extent 4. Large extent 5. Very large extent
F5. Please describe how you are integrating sustainability into the curriculum or school activities.	<open text>
G1. Please rate your level of agreement with the following aspects of the grant application process. <ul style="list-style-type: none"> • The application guidelines were easy to understand • The eligibility criteria for applicants was clear • The types of projects that were eligible for funding was clear • The assessment criteria for applications were clear • The 'Expression of Interest' was easy to complete (note Environmental Education grant applicants only) • The application form was easy to complete • The application budget was easy to complete • It was easy to submit our application • There was adequate support from the NSW Environmental Trust to answer any questions we had about the application process • The curriculum support materials (Eco Schools) supported the application process • The support materials (Eco Schools) case studies / videos were helpful 	<Select one> 1. Completely disagree 2. Mostly disagree 3. Somewhat Disagree 4. Somewhat Agree 5. Mostly agree 6. Completely agree
G2. Did you receive feedback about why your application was unsuccessful?	<select one> 1. No – we were not provided the opportunity to receive feedback 2. No – but we were given an opportunity to seek feedback 3. Yes
G3. How useful was that feedback for future grant applications?	<select one> 1. It was not useful at all 2. Somewhat useful 3. Moderately useful 4. Very useful

Questions	Response options
G4. Have you applied for any other environmental education grants since your unsuccessful application with the NSW Environmental Trust?	<select one> 1. No 2. Yes but we were unsuccessful <please indicate the type of grant you unsuccessfully applied for> 3. Yes and we were successful <please indicate the type of grant you received>
G5. What have been, or were, up to the three most significant factors that supported you in applying for your grant.	<text boxes>
G6. What are (up to) three things that could have made it easier for you to apply for a grant.	<text boxes>
G7. Please describe any other ways to improve the grant application and selection process.	<open text>
H1. Please rate your level of agreement with the following statements. <ul style="list-style-type: none"> • It was easy to develop a project plan using the template provided • It was easy to develop indicators to measure the impact of our project • The template we were provided to report on the progress and impacts of our project was easy to complete • The reporting requirements for our grant were onerous • Our grants administrator was easy to contact • Our grants administrator provided us with enough ongoing support to manage our grant • The conditions outlined in the grant agreement were easy for us to comply with 	<Select one> 1. Completely disagree 2. Disagree 3. Agree 4. Completely agree 5. Neither disagree or agree
H2. To what extent were the reporting requirements useful for you to manage your project (e.g. informing decision-making, measuring performance)?	Select one> 1. Not useful <please explain why not> 2. Slightly useful 3. Moderately useful 4. Very useful
H3. Did the project meet planned timeframes?	<select one> 1. No 2. Yes 3. Unsure
H4. Is the project likely to meet the planned timeframe?	<select one> 1. No 2. Yes 3. Unsure

Questions	Response options
H5. What have been, or were, up to the three most significant factors that supported you to manage your grant.	<text boxes>
H6. What are up to three things that could have made it easier for you to manage your grant?	<text boxes>

Online survey of program participants

Table 22: Key demographics of the online survey of program participants

Attribute		%
Program code	Education (government)	14.6
	Education (community)	10.9
	Eco Schools	53.6
	Food Gardens in Schools	20.7
Highest level of education	Advanced Diploma/Diploma	4.9
	Bachelor Degree	41.5
	Certificate I/II	1.2
	Certificate III/IV	2.4
	Graduate Diploma/Graduate Certificate	8.5
	Postgraduate Degree	37.8
	Year 11 or below	2.4
Age	Year 12	1.2
	18-19	4.9
	20-29	3.7
	30-39	15.9
	40-49	29.3
	50-59	31.7
Gender	60-69	14.6
	Male	15.9
	Female	81.7
	Other	1.2

Table 23: Respective councils of respondents of the online survey of program participants

Council	Frequency
Bathurst	2
Blacktown	1
Blayney	1
Blue Mountains	5
Bogan	1
Bourke	2
Brewarrina	1
Burwood	1
Byron	2
Camden	1
Campbelltown	1
Canterbury-Bankstown	2
Central Coast	2
Coffs Harbour	5
Cootamundra-Gundagai	1
Fairfield	1
Forbes	1
Georges River	1
Gwydir	1
Hawkesbury	3
Hornsby	1
Hunter's Hill	1
Inner West	2

Council	Frequency
Ku-ring-gai	3
Kyogle	1
Lake Macquarie	2
Lane Cove	1
Lismore	2
Liverpool	1
Maitland	1
MidCoast	1
Newcastle	1
Penrith	4
Port Macquarie-Hastings	2
Queanbeyan-Palerang	1
Richmond Valley	1
Ryde	1
Shellharbour	1
Snowy Monaro	1
Sutherland	4
Sydney	2
Tamworth	2
Upper Hunter	1
Wingecarribee	1
Wollondilly	2
Wollongong	1
Don't know	6
Total	82

Table 24: Survey questions for online survey with program participants

No.	Questions	Scale/response options
	Survey will be sent to participants in the following categories:	<ul style="list-style-type: none"> Community environmental education program Government's environmental education program Eco-School program Food garden in school
1.	How old are you?	<ul style="list-style-type: none"> 1. Under 18 [TERMINATE - END OF SURVEY] 2. 18-19 3. 20-29 4. 30-39 5. 40-49 6. 50-59 7. 60-69 8. 70-79 9. 80+
2.	How did you get involved in the program?	<ul style="list-style-type: none"> 1. through the local council 2. through NSW government 3. through an environmental organisation 4. through a local school 5. Other (please specify)
3.	In what capacity did you participate in the program?	<ul style="list-style-type: none"> 1. As a community member/resident 2. As a staff/team member of an organisation 3. Other (please specify) _____
4.	What did you expect to achieve by participating in the program?	<p><select all that apply></p> <ul style="list-style-type: none"> 1. Form relationships/partnerships with other people/organisations to work together on environmental issues 2. Increase my awareness and/or knowledge about environmental issues 3. Increase student/staff awareness and/or knowledge about environmental issues 4. Increase my skills and capacity to deliver environmental programs in future 5. Inform state/local government environmental policy through research 6. Other (please specify) _____
5.	You indicated that you expected to achieve the following things by participating in the program.	<ul style="list-style-type: none"> 1. Expectations not met at all 2. A few expectations met 3. Most expectations met 4. All expectations met

No.	Questions	Scale/response options
	To what extent were your expectations met?	5. Unsure
6.	How satisfied were you with the way in which the program was delivered?	1. Extremely satisfied 2. Satisfied 3. Somewhat dissatisfied 4. Not at all satisfied
7.	Which of the following environmental aspects did the program focus on:	<select all that apply> 1. Waste management 2. Increasing water use efficiency 3. Reducing pollution 4. Establishing and maintaining green public spaces 5. Restoring degraded land 6. Interacting with your neighbourhood's local flora and fauna 7. Learning about how to restore your local neighbourhood's bio-diversity 8. Providing resources such as videos and documents on environmental education 9. Promoting environmental sustainability and conservation learning amongst students, teachers and other members of the school community 10. Creating an environmental community group 11. Other (please specify) _____
8.	As a result of participating in the program, to what extent have you changed the way you think about the environmental issues selected above?	1. Not changed at all 2. Changed a little 3. Changed a lot 4. Changed completely 5. Unsure
9.	You indicated that program participation has changed the way you think about "SELECTED CHOICE". How has the program changed the way you think about this environmental issue?	<Please specify> _____
10.	As a result of participating in the program, to what extent have you been able to improve your environmental behavior?	1. Not improved at all 2. Improved a little 3. Mostly improved 4. Completely improved 5. Unsure

No.	Questions	Scale/response options
11.	<p>You indicated that as a result of program participation, your environmental behaviour has improved.</p> <p>Do you feel you will be, or have been able to, sustain this behavior change?</p>	<ol style="list-style-type: none"> 1. No, not at all 2. No, not really 3. Yes, mostly 4. Yes, completely 5. Unsure
12.	<p>What have been the main barriers to sustaining this behavior change? (Select all that apply)</p>	<ol style="list-style-type: none"> 1. Easy to fall back on old habits 2. Too expensive 3. Not convenient 4. I need more help or support 5. Other (specify) 6. Unsure
13.	<p>You indicated that as a result of program participation, you have been able to:</p> <ul style="list-style-type: none"> • “completely” or “mostly” improve your environmental behaviour, and • sustain this behaviour change. <p>In what way(s) do you think improvements in your environmental behaviour has contributed to improvements in the environment?</p>	<p><Please specify> _____</p>
14.	<p>As a result of participating in the program, to what extent have you shared your knowledge with other people e.g. family, friends students, teachers, co-workers, parents, community members?</p>	<ol style="list-style-type: none"> 1. Not shared knowledge at all 2. Shared knowledge a bit 3. Shared knowledge a lot 4. Shared all knowledge gained 5. Unsure
15.	<p>Overall has your participation in the program strengthened your relationship with any of following:</p> <p>Students Teachers/school administration Local council Local businesses Local community</p>	<p><select all that apply> For each select:</p> <ol style="list-style-type: none"> 1. Yes, strengthened a lot 2. Yes, strengthened somewhat 3. No 4. Unsure 5. Not applicable

No.	Questions	Scale/response options
16.	Has your participation in the program strengthened your relationship with any other parties or groups of people?	<ol style="list-style-type: none"> 1. Yes (please specify) 2. No
17.	You specified that your participation in the program has strengthened your relationship with "[AS SPECIFIED]". Please rate to which extent program participation has strengthened your relationship with "[AS SPECIFIED]".	<ol style="list-style-type: none"> 1. Yes, strengthened a lot 2. Yes, strengthened somewhat
18.	You suggested that you participated in the program as a staff/team member of an organisation. To what extent did your participation in the program change your organisation's approach towards a specific environmental issue?	<ol style="list-style-type: none"> 1. Not changed approach at all 2. Changed approach a little 3. Changed approach a lot 4. Changed approach completely 5. Unsure
19.	Thinking back, do you have any suggestions on how the program could have been improved?	<please specify> _____
20.	Are you?	<select one> <ol style="list-style-type: none"> 1. Male 2. Female 3. Other
21.	What is the highest degree or level of school that you have completed	<select one > <ol style="list-style-type: none"> 1. Postgraduate Degree 2. Graduate Diploma/Graduate Certificate 3. Bachelor Degree 4. Advanced Diploma/Diploma 5. Certificate III/IV 6. Certificate I/II 7. Year 12 8. Year 11 or below
22.	Please select your Council from the list:	<Drop down menu with pre-coded options> Don't know
23.	Which suburb do you live in?	<Please specify> _____

Appendix 6: Environmental literacy of grant applicants

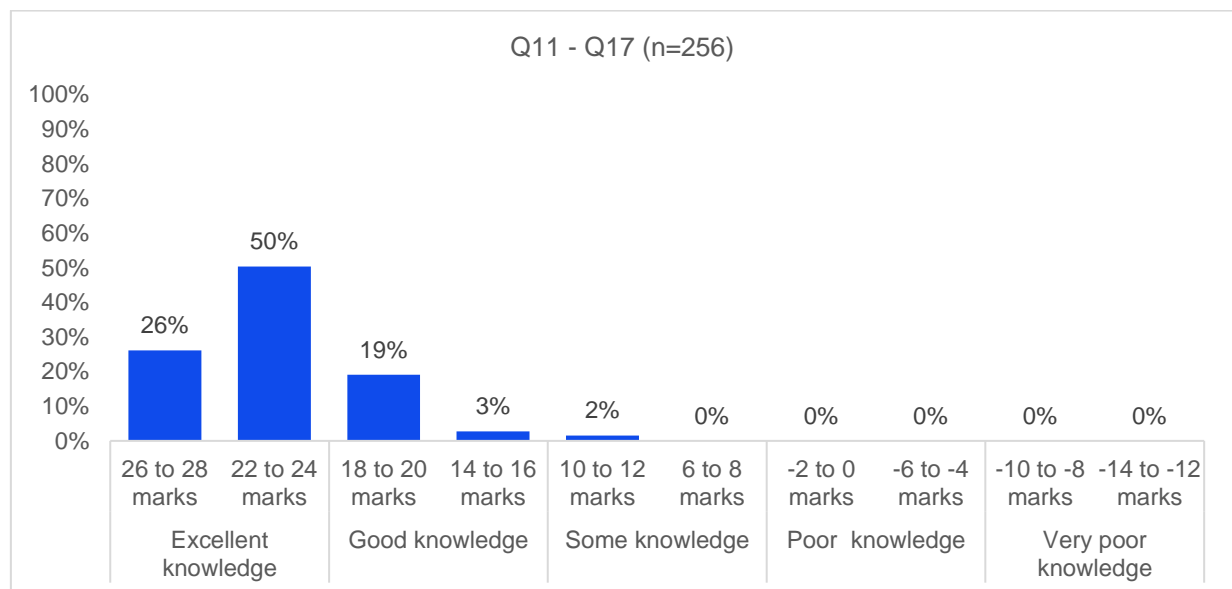
The survey asked about participants' a series of questions to measure environmental literacy. As **Error! Reference source not found.** demonstrates, the majority of grant applicants had 'excellent knowledge', and only 2 per cent of all applicants had 'some knowledge'.

A Pearson's chi-square test indicated significant differences between applicants to the Environmental Education grant, and to the Eco Schools grant $\chi^2 (1, N = 252) = 7.8, p < .01$. Compared to the Eco Schools applicants, 85.6 per cent of those who either applied for, or received an Environmental Education grant had 'excellent knowledge'. This was 70.9 per cent of the Eco Schools cohort. (**Error! Reference source not found.**)

No differences were found between those who were successful in their grant applications, and those who were unsuccessful¹⁰.

Participants who scored in the 'some knowledge' category were excluded from the chi-square analyses, as there were so few. When performing a chi-square test, there should not be less than five instances in any one category. For example, there were less than five people in the 'unsuccessful' category who had 'some knowledge'.

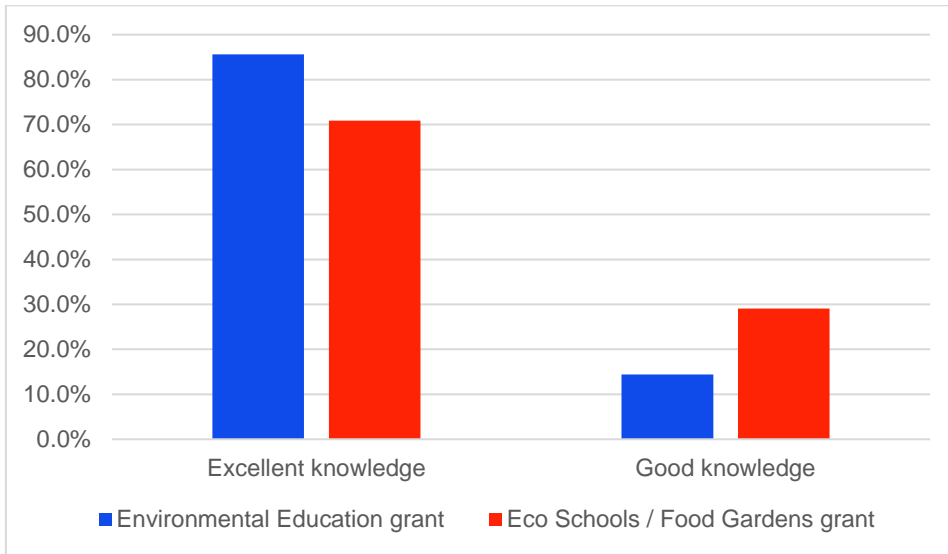
Figure 15: All applicants' environmental literacy scores



Data source: Online survey with successful and unsuccessful grant recipients

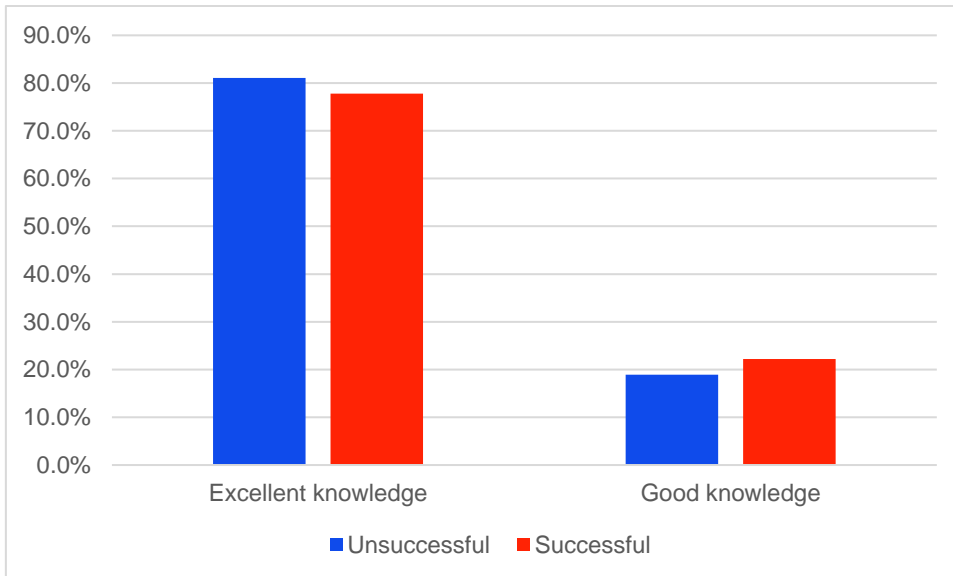
¹⁰ **Error! Reference source not found.**, $\chi^2 (1, N = 252) = .95, p = ns$

Figure 16: Education grant vs. Eco Schools environmental literacy scores



Data source: Online survey with successful and unsuccessful grant recipients

Figure 17: Successful vs. Unsuccessful environmental literacy scores



Data source: Online survey with successful and unsuccessful grant recipients

Appendix 7: Cost effectiveness

7.1 Data analysis—method

In order to proceed with our analysis, we transformed economic data in order to support comparability of grantees. This is necessary because we obtained, from the Trust, funding data for grantees over the period 2010 to 2016. In order for these funds to be broadly comparable it was necessary to convert these nominal monetary values into 'real' monetary values. This was performed by deflating values based on the Australian Bureau of Statistics Australian general consumer price inflation series. For ease of use, we further rebased these monetary values into 2016 terms.

In order to further contribute to comparability of projects we sought to account for the variable project durations among grantees. In turn, we converted all project measures data (and funding data) into monthly equivalents. This is necessary because attempting to compare outcomes and funding of projects in their entirety could produce misleading results.

Next, we also attempt to account for the observation that some grantees obtain funding from sources other than the Trust. This means that it is necessary to consolidate total funding (including in kind and other cash contributions) to make grantees comparable – this is because outcomes between grantees should be compared based on their *total* rather than *grant-only* funding else these comparisons would not be equivalent.

7.2 Calculation of average co-contribution in Table 9

Co-contribution % is a ratio of the total co-contributions to the total grant contributions measured using the following formula:

$$\frac{\sum_{i=2010}^{2016} (\text{Grant funding} + \text{in kind additional contributions} + \text{Additional cofunding})_t - \sum_{i=2010}^{2016} \text{Grant funding}_t}{\sum_{i=2010}^t \text{Grants}_t}$$

This has been averaged for all years and for each grant type. It has also been converted to equivalent \$A 2016.

The percentage grant funding has been estimated using the following formula:

$$\frac{\sum_{i=2010}^t (\text{Grant funding} + \text{in kind additional contributions} + \text{Additional cofunding})_t - \sum_{i=2010}^{2016} \text{Grant funding}_t}{\sum_{i=2010}^{2016} \text{Grants}_t}$$
$$\frac{\sum_{i=2010}^{2016} \text{Grant funding}_t}{\sum_{i=2010}^{2016} \text{Grants}_t}$$

7.3 List of project measures

Measure ID	Measure Description	Measure Category
EC5	Other cash contributed to the project (\$)	Economic
EC6	Total amount of in-kind support contributed (\$)	Economic
EQ1	Reduction in Greenhouse Gas Emissions	Environment Quality
LM1	Project Area	Land Management
LM10	Area of Connected Vegetation Established	Land Management
LM11	Environment Type (Primary)	Land Management
LM12	Environment Type (Secondary)	Land Management
LM13	Threatened Species	Land Management
LM14	Endangered Ecological Communities	Land Management
LM15	Invasive Species	Land Management
LM16	Target Species (Primary)	Land Management
LM17	Target Species (Secondary)	Land Management
LM18	Area Of Aboriginal/Culturally Significant Land	Land Management
LM19	Organisations or Stakeholders Adopting IALM Practices	Land Management
LM2	Area Regenerated	Land Management
LM20	Land Management Plan Developed	Land Management
LM21	Voluntary and Non Binding CA	Land Management
LM22	Conservation Commitment	Land Management
LM23	Conservation Covenants	Land Management
LM24	Area Protected Under CC	Land Management
LM25	Area Cleaned Up	Land Management
LM26	Total Waste Removed	Land Management
LM27	Method of Waste Removal	Land Management
LM3	Area Revegetation	Land Management
LM4	Number of Plantings	Land Management
LM5	Survival Rate of Planting	Land Management
LM6	Area Weeded	Land Management
LM7	Area Protected by Fencing	Land Management
LM8	Length of Fencing Installed	Land Management
LM9	Area of Vegetation Corridors	Land Management
R1	Innovative Technology	Research
R10	Researchers involved	Research
R10H	Researchers involved Hours	Research
R11	Post graduate students involved	Research
R11H	Post graduate students involved Hours	Research

R12	Partnerships established with community and/or government	Research
R13	Potential end user / target audience for applying the outcomes of this project	Research
R14	Individuals potentially reached	Research
R2	Technical or Scientific Conferences	Research
R3	Other events that will result in presentation of the research	Research
R4	Individuals engaged	Research
R5	Publications developed	Research
R6	Trust funded staff involved	Research
R6H	Trust funded staff involved Hours	Research
R7	Consultants/contractors involved	Research
R7H	Consultants/contractors involved Hours	Research
R8	Non trust funded staff involved	Research
R8H	Non trust funded staff involved Hours	Research
R9	Volunteers involved	Research
R9H	Volunteers involved Hours	Research
RC1	Materials Consumed	Resource Conservation
RC2	% of Materials with Recycled Content	Resource Conservation
RC3	Range of Materials Recycled	Resource Conservation
RC4	Waste Avoidance Strategies	Resource Conservation
RC5	Waste Avoided	Resource Conservation
RC6	Other Sustainable Practices	Resource Conservation
SC1	Individuals actively involved	Stakeholder & Community
SC10	Training Sessions	Stakeholder & Community
SC11	Training Session Conducted by RTO	Stakeholder & Community
SC11a	People receiving a qualification under the AQTF through this project	Stakeholder & Community
SC12	People Trained	Stakeholder & Community
SC13	Awareness Raising Events	Stakeholder & Community
SC14	Awareness Raising Events Attendees	Stakeholder & Community
SC15	Educational Products Developed	Stakeholder & Community
SC16	Individuals Potentially Reached	#N/A
SC16a	Individuals known to have been reached	Stakeholder & Community
SC17	People S/G/R Traditional Aboriginal Knowledge	Stakeholder & Community
SC18	Partnerships with Community/Government	Stakeholder & Community
SC19	Partnerships with Aboriginal Groups	Stakeholder & Community
SC2	Trust Funded Staff	Stakeholder & Community
SC20	Primary target audience for this project	Stakeholder & Community
SC21	Secondary target audience for this project	Stakeholder & Community
SC2H	Trust Funded Staff Hours	Stakeholder & Community

SC3	Consultants/Contractors	Stakeholder & Community
SC3H	Contractors/Consultants Hours	Stakeholder & Community
SC4	Non Trust Funded Staff	Stakeholder & Community
SC4H	Non Trust Funded Staff Hours	Stakeholder & Community
SC5	Volunteers	Stakeholder & Community
SC5H	Volunteer Hours	Stakeholder & Community
SC6	Primary School Students	Stakeholder & Community
SC6H	Primary School Student Hours	Stakeholder & Community
SC7	Secondary School Students	Stakeholder & Community
SC7H	Secondary School Student Hours	Stakeholder & Community
SC8	Tertiary Students	Stakeholder & Community
SC8H	Tertiary Student Hours	Stakeholder & Community
SC9	Organisations Engaged	Stakeholder & Community
WM1	Volume of Stormwater Recycled	Water Management
WM2	Volume of water saved	Water Management
WM3	Devices installed to Improve water quality	Water Management
WM4	Improvement in water quality	Water Management
WM5	Area that supports sediment erosion	Water Management

7.4 Projected versus actual reporting of project measures in successful grant programs¹¹

Table 25. Land management

	LM1	LM19	LM2	LM20	LM21	LM23	LM24	LM25	LM26	LM3	LM4	LM5	LM6
PROJECTED	346	10	119	3	5	1	3	1	2	147	281	110	67
ACTUAL	115	8	54	1	3	1	2	1	1	64	75	3	30
ACTUAL RECORDING RATE	33%	80%	45%	33%	60%	100%	67%	100%	50%	44%	27%	3%	45%

Table 26. Research

	R12	R13	R14	R2	R3	R4	R5	R6	R6H	R7	R7H	R8	R8H	R9	R9H
PROJECTED	1	2	79	0	2	2	3	0	0	2	2	2	2	371	366
ACTUAL	1	2	65	1	1	2	3	0	0	2	2	2	2	166	168
ACTUAL RECORDING RATE	100%	100%	82%		50%	100%	100%			100%	100%	100%	100%	45%	46%

Table 27. Resource Conservation

	RC1	RC2	RC3	RC4	RC5	RC6
PROJECTED	2	1	1	0	115	0
ACTUAL	2	1	1	0	24	0

¹¹ A complete list of project measures is presented in Appendix 7.3.

ACTUAL RECORDING RATE	100%	100%	100%		21%	
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Table 28. Stakeholder & community

	SC1	SC10	SC11	SC11a	SC12	SC13	SC14	SC15	SC16a	SC17	SC18	SC19	SC2	SC20	
PROJECTED	253	72	10	1	74	68	64	620	19	304	79	24	69	3	
ACTUAL	96	67	10	0	68	59	55	259	10	137	68	21	61	2	
ACTUAL RECORDING RATE	38%	93%	100%	0%	92%	87%	86%	42%	53%	45%	86%	88%	88%	67%	
	SC21	SC2H	SC3	SC3H	SC4	SC4H	SC5	SC5H	SC6	SC6H	SC7	SC7H	SC8	SC8H	SC9
PROJECTED	1	69	71	69	239	233	199	194	470	448	232	227	18	18	627
ACTUAL	1	61	65	64	83	83	64	63	181	168	106	103	20	19	265
ACTUAL RECORDING RATE	100%	88%	92%	93%	35%	36%	32%	32%	39%	38%	46%	45%	111%	106%	42%



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