Evaluation of the Tasman Environmental Trust

Final Report

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April 2019

Queries regarding this report should be sent, in the first instance, to info@tet.org.nz

Summary

The Trust's interest in evaluation

The Trust has indicated that it wishes to establish evaluation as a core function. This would further strength its quality focus and help show what conservation outcomes are being achieved from its work. A government agency recently suggested that "priority support" be given to those community organisations that can show "significant conservation gains"[1].

Evaluation can help strengthen the Trust's understanding and commitment to conservation outcomes. This relates well to the Kotahitanga mō te Taiao strategy which has identified five high-level outcomes for the 'top' of the South Island:

Kotahitanga mō te Taiao strategy –*Five desired final outcomes*				
Native species, including those found nowhere else, are thriving	**Naturally functioning ecosystems** are protected and restored	**Wilderness** is sustained	**People** flourish in harmony with nature	Ecological **connections and resilience** are protected and restored

What will enable effective evaluation?

Confirm the direct outcomes being sought by the Trust and establish appropriate measures

This report includes a theory of change for the Trust (Attachment 1). This clarifies the predictive assumptions and hypothesis about why undertaking certain activities may lead to desired outcomes. This analysis[2] was developed at stakeholder workshops which reviewed the desired outcomes and underlying assumptions. It shows that community-specific outcomes are necessary for conservation and confirmed the outputs, and activities, that are required to achieve them.

A clear understanding of desired outcomes (e.g. improved habitat, increased bird numbers) provides organisational focus and enables a shared view between project leaders, volunteers and other stakeholders. A published statement of desired outcomes, by the Trust would usefully support this understanding.

Understanding of desired outcomes includes evaluating their achievement, particular in areas where the Trust's work has a direct influence. The evaluation recommends that the Trust initially establishes one generic outcome measure - the area and quality of restored habitat by using a sampling technique similar to that outlined in WETMAK. Other possible outcome measures are discussed in Attachment 2 including measures applicable to individual projects. It is suggested that each project have an outcome measure as part of its annual reporting template (Attachment 3).

Establish a simple evaluation approach with explicit leadership, funding, and dialogue

A simple evaluation approach[3] would involve comprehensive use of one or two selected outcome measures such as 'areas of improved habitat resulting from planting and weeding'.

Annual discussions are suggested in order to establish ongoing evaluative thinking within the Trust. Clearly most key outcome results will only emerge over very much longer timeframes. However some meaningful annual information is likely to be available. This is likely to include interim outcome measurement data, project leaders annual reports, summary

[1] Parliamentary Commissioner for the Environment (2017) page 109 https://www.pce.parliament.nz/media/1695/taonga-of-an-island-nation-web-final-small.pdf;
[2] Some of the best outcome analysis is found in the health sector. See for example Centre for Disease Control reporting.
[3] This approach is consistent with published studies on NGO evaluation development such as Bailey et al 2016

insights from site reviews, science reports on changes in the biota and habitat (e.g. DOC science papers[4] on the region), and other reporting (e.g. TDC reports on storm damage).

As the Trust's work relies on project volunteers it might be useful if they are included in the evaluation conversation, particularly in feedback on what is being achieved. This could be presented at their annual get-together. It could include a volunteer survey (Attachment 4).

The evaluation approach could eventually include additional aspects such as assessment of organisational health using output and activity information. However the priority need is to evaluate outcomes from the Trust's work, as only this can show if there are "significant conservation gains" being achieved.

Following annual evaluation discussions there should be a summary report, available to donors, on the findings reached from the available evidence, and on possible actions. Actions could include 'tweaks' to the Trust's strategy to maintain relevance to conservation priorities. Some specific multi-year funding would be necessary for the Trust to be able to sustain this basic evaluation work.

Innovation

Some innovative thinking is required to establish evaluation as it is not a recognised area for conservation funding. The business case is centred on the argument that evaluation is essential for building a clear focus on outcomes and for understanding what drives effectiveness.

Once started, it will still be essential that evaluation is ambitious to generate meaningful and useful feedback. The suggestion made, that the Trust should annually measure the quality and area of key habitat recovery from its planting and weeding activities, is achievable but will need to be read alongside other information. The Trust would greatly benefit from DOC and TDC support in identifying other relevant evaluative insights from their scientific reporting.

The Trust's funding applications could routinely earmark a percent of funds for evaluation but it would need some dedicated funding to get started. Formation of an evaluation whanau for NGO conservation work would enable sharing of practical experience. An evaluation of the evaluation approach taken should be done after say four years to check its continuing value to the Trust.

Evaluation results to date

The report first speaks to current performance. The Trust lists sixteen projects on its website. Involvement in them varies from simply providing grants and specific administrative support, to being more extensively involved in project management. The evaluation reviewed evidence of how well these projects perform and the effectiveness of the Trust's support using project reports, interviews of project leaders and others involved in conservation in the local area. It found that the Trust's project development and support is highly valued.

Project leadership is well done but is a demanding responsibility and needs succession planning

Project management was one of the biggest challenges faced by project leaders. While some projects have some paid management, finding volunteers with appropriate skills and

[4] DOC's *science for conservation* series may be relevant, including earlier papers e.g. Dowding & Moore (2006) https://www.doc.govt.nz/globalassets/documents/science-and-technical/sfc261.pdf

enough time to lead projects is very challenging. Most leaders are under considerable work pressure and, for some, further support, including succession planning, may be needed.

The evaluation found that there is potential for conflicting perspectives to arise between project stakeholders on prioritising activities and outcomes. There is no evidence of any conflict existing at the moment but we emphasise this as it illustrates the complex relationships involved. The following points were summarized from the project leader interviews.

The Trust's value add

For nine of the ten projects the financial help from the Trust, either in raising/providing grant funds or in managing the funds was mentioned as an important area of their involvement. For five, half, of the projects this was the only benefit mentioned. Four projects said other administrative help, including grant applications, reporting, identifying work to be done, and technical support was important support provided by the Trust. Three projects said the Trust helped with providing expert assistance either scientific or contractors.

When asked what else the Trust could do, project leaders wanted more of the same sort of support that they are getting: more specialist help; more help with aspects of project management including paid project leaders; help with communications; more help with fund raising ; and help with technical issues (weeding, trapping).

The value of perceived independence

The Trust is seen as independent from both local and central government bodies, yet is able to facilitate expert help and advice from officials of those same bodies. It is seen as a bridge between community groups and the bureaucracy. Landowners, volunteers, specialists, experts, as well as government officials are involved in its projects.

Project outputs and outcomes

All projects have conservation outcome objectives: habitat recovery (8); reduction in pests including both plant and animal (9); and improvement in biota (7). However, most projects were not able to identify evidence of progress towards any specific outcomes[5]. One project is setting up GIS mapping to provide a framework to measure outcomes.

Seven of the ten projects also have an education-related outcome, either educating or raising awareness of the environment and conservation in the general public or working with school children and students.

Most projects were able to identify outputs: volunteers (~500 altogether); trapping (over 1000 traps operating); planting (~8000 plants planted in 2018); weeding, clearing and releasing plants; educational activities.

Challenges

The two biggest challenges project leaders noted were:

- Insufficient financial and leadership resources for basic project management; and
- Managing relationships with landowners, and private landowners in particular. Projects did have good working relationships with the landowners, but such relationships take time and resources and add a level of complexity to projects.

[5] This appears normal in NZ. A study of conservation grant applications found 15% could identify outcomes. (Jones& Kirk, 2018)

Contents

Introduction

Why evaluate?

The Trust has recently identified evaluation as being a necessary part of its quality assurance role. This is because evaluation can give objective feedback on what is being achieved; including both successes and failures. Evaluation analysis can help confirm the key contributing factors. Evaluation insights can then be fed back into the Trust's ongoing decisions on strategy and project facilitation.

Evaluation is useful for accountability to funders' and, more generally, in building a reputation for objective and robust work. These are necessary attributes for the Trust's work in engaging landowners and volunteers and for attracting ongoing funding.

Views on conservation objectives (important for evaluation) can vary widely, even amongst 'insiders.' A survey of conservation groups found that that 90 percent rated their contribution to conservation as being moderate or significant. "Significant contributions" included:

- "Increased community *participation* in conservation;
- Improvement of the natural environment;
- Improved public *awareness* of conservation;
- Improved security of threatened species; and
- Increased pest *control*[6]."

It appears that few NZ groups evaluate their outcomes, preferring instead to focus their energies on practical field work. A UK study found that local groups seldom used scientific studies relevant to their work[7]. Instead they preferred to rely on their own local knowledge and personal observation. This can give rise to a lack of clarity and confusion as to what is being sought to achieve.

For the Tasman Environmental Trust (TET), an outcomes focus, supported by evaluation work, would enable a better understanding of change, consistent with NZ's considerable scientific work on our biota such as the national surveys of the NZ bird population[8,9].

Evaluation methodology

This evaluation is based on evidence from:

1. eight interviews of wider stakeholders including people from DoC, TDC, scientists, and other conservation groups;
2. eight interviews with TET project leaders;
3. a review of literature;
4. a review of TET documentation;
5. regular meetings with the TET manager, Sky Davies; and
6. two workshops with TET trustees, staff, and other stakeholders.

The purpose of the first workshop was to define a theory of change for the Trust. The second workshop reviewed the draft theory of change and evaluation report. The workshops brought together individual perspectives and experience, adding to the other evidence. We thank all

[6] Hardie-Boys (2009) https://www.doc.govt.nz/Documents/science-and-technical/sfc299entire.pdf;
[7] Dasgupta (2017) *https://news.mongabay.com/2017/11/experience-or-evidence-how-do-big-conservation-ngos-make-decisions/;*
[8] There can also be insufficient research of population trends leading to what is sometimes called *Shifting Baseline Syndrome* (Pauly) See Steffons and Gasson as to how this issue has been explored in Tasman.
[9] Walter & Monks (2018) https://www.notornis.osnz.org.nz/node/4431;

those people who gave their time for interviews, workshops, and communications with us. This work reflects their combined contributions and would be significantly less without them.

Evaluation results to date

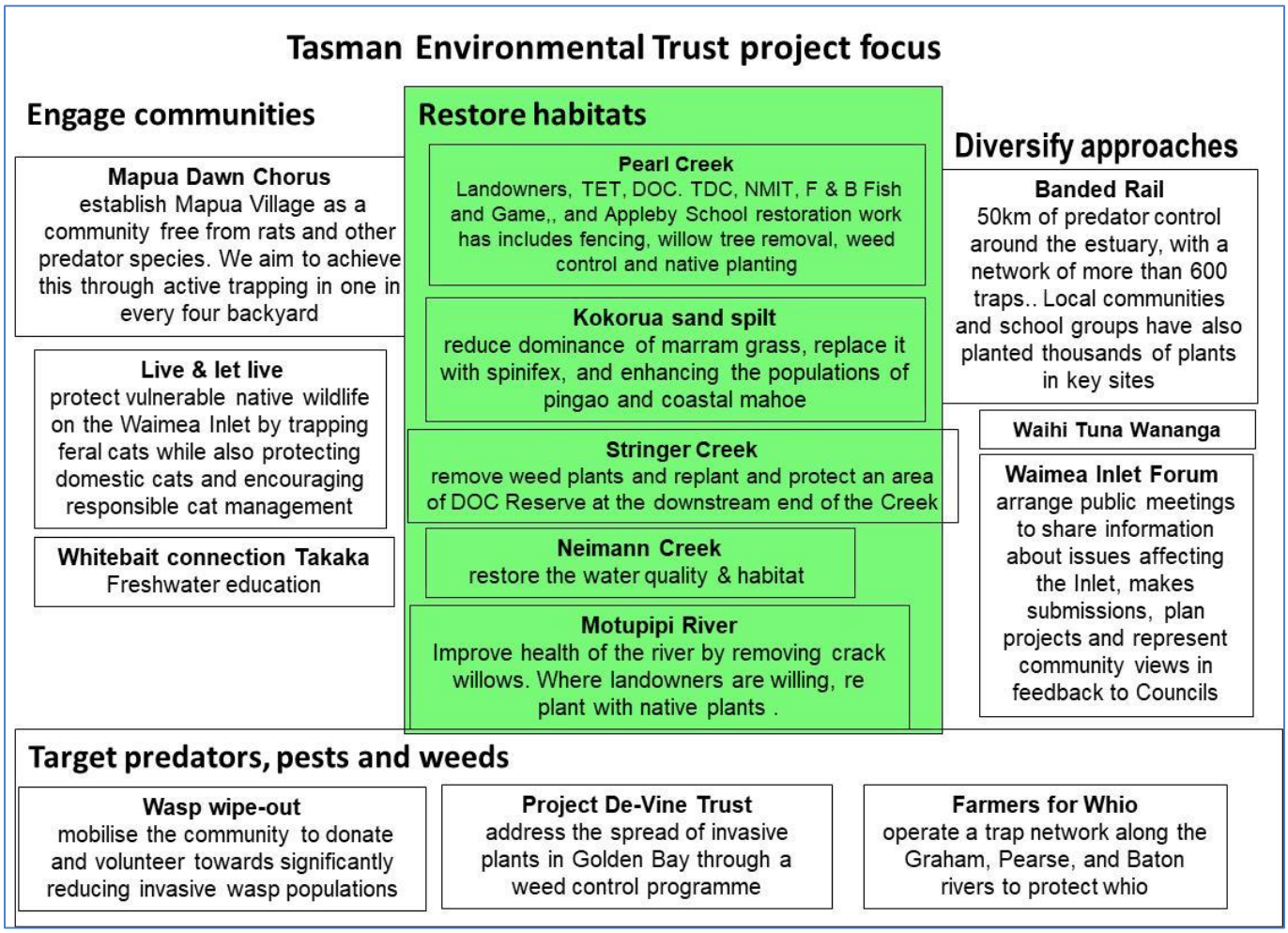
The following analysis is project focussed. In addition to this work the Trust publishes newsletters and liaises with government stakeholders and experts. Feedback from the evaluation interviews of stakeholders show that these communications are working well.

Eight project leader interviews were undertaken with responses recorded for ten individual projects. Two of the interviewees were also project managers for another *three projects* but separate responses were not recorded for each project in these cases, the interview being focused on the most significant project. One other project is in abeyance. The projects are described in the diagram below.

The projects included some that have existed for many years, and some only a year or two old. The Trust's involvement in some projects has changed over time.

Tasman Environmental Trust Current projects (reported on website) **grouped by type**

Projects currently supported[10] by the Trust are as follows:



[10] The Waiki Tuna Wanaaga project was a single activity, a workshop.

Answers to individual questions plus other information supplied in the interviews and in project reports are summarised in the tables on following pages. Where possible we have **not** identified individual respondents.

Project activities

Current activities being undertaken by these supported projects are summarised in the table below through the perspectives of the different types of stakeholder.

Who are the stakeholders, what do they contribute and how are they kept in touch?

Project leaders • 50% are currently paid for some of their time commitment • Volunteer leaders include the Trust's manager and two of the trustees	**Contractors**- weed/tree removal, spraying • 50% projects employed contractors
Landowners • 50% projects each involve more than 5 landowners • In 40% projects government-owned land is involved • 20% of projects landowners involved in providing access to DOC-owned land • 20% projects don't directly involve landowners	**Volunteers-** all projects had volunteers but there was variation in group size, depending on specific needs. • 20% projects landowners provide voluntary labor • 60% projects involve planting or weeding days • 20% of projects had volunteers running trap lines • 30% projects NMIT trainee rangers do weed control
'**Experts'-** contribute to site reviews, planning activities, technical advice, teaching, presentations, report writing, grant applications and evaluation: • 90% projects draw on specialist expertise • 80% projects consulted with DOC staff • 50% projects consulted with TDC staff	**Project communications with stakeholders-** volunteer field activities are used to socialise and share knowledge, on practical conservation issues • 50% projects have newsletters • 50% projects have regular meetings • 30% projects use Facebook and own websites • All projects have a banner entry on the Trust's website

In leading projects, a critical task is building constructive relationships with landowners, government agencies and volunteers. These relationships then need maintaining over many years, being the life of most projects. This task falls on project leaders, all of whom do this part time. They also have to maintain appropriate governance and financial management when commissioning experts and contractors.

Project Outputs and Outcomes

What outputs has your project produced in 2018?

What is the range of activities undertaken and what outputs were achieved?

Volunteer turnout and commitment • All projects had volunteers, with a total of about 500 individuals. Note: Volunteers' satisfaction & achievement scores should be surveyed	**Education activities and outputs** • One project focuses on primary school children and three others had school-based activities including with secondary schools • NMIT trainee rangers contributed to three projects • 90% projects provided public communication/information.

Trapping and reduced predators • Two projects do trapping and a third sells traps • *One project monitors predators using tracking tunnels[11].* • *One project uses computer-based software for collating trapping data.*	**Planting and fencing established** • 70% projects had planting days with about 8000 plants being planted in 2018
Reduction in weeds and pests • 70% projects included weeding and weed removal (including trees -willows)	**Habitat site reviews and measurement** • Annual reviews are undertaken for some projects. One had monthly reports published in a local paper. • Measurement of improved habitat in the Waimea Inlet is currently planned using GIS measurement tools
Ongoing landowner commitment • Covenanted areas are reviewed every two years by QEII Trust.	**Reporting and accountability** • Output reporting should continue and be reviewed by the Trust Board

The Trust is able to assess the most relevant activities and outputs for conservation outcomes from scientific advice and reporting. Liaison with DOC[12] has a critical role here and the evaluation found that they have a good working relationship.

Scientific evidence of which outputs may be effective in the Trust's areas of work continues to grow and this can help further inform the Trust's strategy, alongside evaluation work. Examples of DOC reports of relevance to the Trust's work include the Brown et al review of the effectiveness of traps and of toxins in reducing predators. It concluded that:

- Controlling ship rats with single-kill traps is generally ineffective at scales beyond tens of hectares because traps need to be closely spaced and regularly checked" (page 8); and
- "At Lake Rotoiti, bellbird numbers increased dramatically in response to intensive stoat trapping and the use of brodifacoum in bait stations to control ship rats, but decreased again when rat numbers increased in response to beech mast and once brodifacoum ceased to be used" (page 18)

This feedback is relevant to and used by the Trust to support its intensive trapping programme on the Waimea Inlet as part of the Battle for the Banded Rail project.

What types of conservation outcomes are being sought?

Out of ten projects most had clear conservation outcomes.

# projects	Conservation outcome
8	Habitat recovery
9	Reduction in pests (animals/mostly weeds)
7	Biota improvement (e.g. more birds)

In one case habitat recovery work included a test removal of sediment from the area.

What other outcomes are sought?

Seven of the ten projects had some sort of social outcome, either educating or raising awareness of the environment and conservation in the general public or working with school children and students, e.g.

[11] Tracking tunnels can help identify trends in rat populations and review of control options. Windy Hill Sanctuary (2018)
[12] Others also offer science-based information of interest, such as NIWA's National Riparian Restoration Database

'Community and landowner education, teach them how to manage weeds themselves. Landowners often feel 'overwhelmed' by the weed problem. We get the pests under control so that landowners can start to manage them themselves.'

'in a school class you will see children whose interest is cultivated by activities'

'whole project is really an awareness raising project, education and social outcomes, information sharing'

How are outcomes being examined?

About half of the projects were not assessing outcomes. Some projects have only recently started and monitoring outputs and/or planning to assess outcomes is not established. Others were making some efforts with use photographs or relying on the biannual QEII monitoring but this information tends to be descriptive and may not be sufficiently robust.

Five projects put some effort in to measuring outputs but interpreting these outputs in the broader perspective of outcomes is not considered.

The Battle for the Banded Rail project (BBR) has detailed site reviews annually. These obviously involve considerable effort on the part of all involved and include detailed planning of upcoming work. However, only anecdotal assessment of the current state of the habitat is provided, e.g. '*This site has been very well managed and is a testimony to good weed control…'*

We suggest that the reviewers develop an assessment tool that could feed into the evaluation process. It could, for example, describe the percent of native plant cover, and /or the canopy density of native cover. This would enable more informed comparison over time. (Acknowledging there is an uncertainty with repeatability and estimation of cover. There are guidelines for this type of assessment readily available.)

What do project leaders see as the achievements of their projects to date?

Specific examples are as follows:

- Anecdotal evidence that Friends of Flora trapping less stoats in neighboring areas than last year.
- Re-establishment of native vegetation beside streams and estuaries- hectares planted
- increase in *spinifex*, saving the gene pool of local plants; but there have been setbacks; such as only just maintaining the *pīngao* (golden sand sedge) population
- Project is now working on a landscape scale; dealing with large numbers of landowners effectively; continued funding of projects and contract work illustrates our success.
- Creation of good projects: BBR, Bell Island restoration, Neiman Ck, Stringer Ck
- Banded Rail Poster, increased public awareness
- Moving onto new stages of project; funds coming in for new stages
- No measures available, but community interest has improved

What are the biggest challenges and constraints you have in undertaking your project?

Project management • 60% projects find management challenging • 20% would like a paid manager and volunteer managers find it difficult to devote sufficient time • 20% find succession planning difficult	**Volunteer engagement-** volunteer preferences sometimes affect the activities undertaken • 'Some volunteers very regular in their commitments; some just come for work on particular sites; our aim is to get those local to the site taking the lead in their local patch'. • Volunteers like planting. Planting gives volunteers a sense of fulfilment. Weeding and maintenance or releasing of plants attracts an order of magnitude fewer volunteers than planting.
Fund raising • Funding was not separately highlighted as an issue	**Landowner relations** • A number of projects have challenges managing relationships with private landowners. While these challenges are met by the project managers, maintaining landowner relationships can be time consuming. • When land changes hands it takes a while to establish a relationship with new owners. • One project was dealing with large numbers of landowners and said in any grouping of, say 100, landowners there will be one or two landowners who won't cooperate. • Other projects noted that while landowners may initially not want to participate in the project when they saw the results on neighboring properties, or thought more about what was being offered, they changed their minds and subsequently did join in.

At least three projects mentioned that the link between the volunteers on the ground and TET needs to be strengthened. In some cases volunteers are from different conservation organisations e.g. Forest and Bird, Keep Richmond Beautiful. At least two projects said that they wanted or would feel better if there was more contact from TET trustees or management.

How has TET helped your project?

On a scale of 1 to 5 how has TET helped?

X	1	Hasn't made any real difference to project
	2	
XX	3	
X	4	
XXXXXX	5	TET instrumental is getting project to where it is

What are the most important areas of involvement by TET?

For nine of the ten projects the financial help from TET, either in raising/providing grant funds or in managing the funds was mentioned as an important area of involvement by TET. For five, half, of the projects this was the only benefit mentioned.

Four projects said other administrative help, including grant applications, reporting, identifying work to be done, and technical support;

Three projects said TET helped with providing expert help either scientific or contractors.

Two projects mentioned the synergy between TET projects as being important. This enabled projects to share contractors or work programmes (trapping, weeding).

Two projects mentioned TET's independence of government as being important for landowner collaboration.

What are the most frustrating areas of involvement by TET?

Only five project leaders responded to this question. One said, 'It is only frustrating if you have expectations of what they can do'. One said nothing was frustrating. Three mentioned more help with administration would be better, this included: assistance in dealing with difficult correspondence eg. an email regarding 1080; stocktaking of outcomes; more assistance with management and assistance with one-off management issues. One said there needs to be better links between TET and other organisations involved, e.g. Forest and Bird. One said organising on-site toilets for planting days was frustrating.

What else could TET do to help your project?

It was difficult to identify themes here. Projects want more of the same sort of support that they, or others, are getting: more expert help; more help with various aspects of project management ; help with communications; more help with fund raising (endorsement); more help with technical issues (weeding, trapping). The following illustrate type of response:

- Provide an ecologist or access to an ecologist to assess priorities for conservation projects.
- Hold a trapping workshop specifically for our project; to talk about monitoring trapping in other locations and how we could do it.
- Speak to TDC in support of conservation. Tell them when they aren't allowed to do things e.g. digging out drains in wetlands.
- Seek further project leaders who are able to provide effective project management
- Introduce different methods for managing weeding. If there was a contractor that TET paid who could do the week (or day) of work per year at each project would be useful. Spraying not a simple task, need to know what to spray and what it is not worth spraying.
- Seek endorsement of other potential funders
- Help with succession planning
- Assist with communications: Facebook page; newsletter; assistance with project management"

Feedback from other Interviews

Interviews were also undertaken with eight other people including scientists, TDC and DOC officials, representatives of other local conservation groups, and the TET chair. These interviews were intended to provide contextual information and did not have a formal structure. The following were some of the points raised by interviewees, usually in more than one interview.

TET's role

- TET is a community-focused organization
- TET has an important role to play including funding, providing administrative support, and coordinating activities
- TET's independence (of government bodies) is useful

- TET involvement in multiple, current local strategy discussions is important
- TET needs more funding, more long-term funding, to increase its capacity

Suggestions for outcome evaluation

- Periodic scientific studies of the biota and environmental changes would be useful
- Conservation work is often done in small areas and outcomes may only be seen in landscape scale projects
- Better reporting and record keeping on voluntary/local group activities is desirable
- Measures need to be succinct and achievable
- Use of volunteers to measure outcomes would require supervision and training
- Conservation is slow and long-term work

Other suggestions made

- Volunteers need to feel they are making a contribution and what they are doing is worthwhile. Volunteers don't like weeding.
- People underestimate the hours of meetings required for bureaucracy
- Consultation with experts is vital
- Bigger projects are better

Issues highlighted at workshop 2: Project leadership and grass roots base

Workshop Two provided feedback on the Interim evaluation report. It was apparent from discussion that the following factors influence performance:

1. The Trust's grass roots community base determines its performance and ensures a practical focus.

2. TET has an important role in relationship management, between all the players in the conservation sector: volunteers, landowners, project leaders, DoC, TDC, other government departments, scientists, contractors, other community conservation groups, and funders. Good relationship management is necessary for effective projects.

3. Project leaders are stretching themselves to achieve a lot with uncertain resources. We were surprised that project leaders didn't say they needed more resources. This is possibly because they are stretched to do what they do already.

4. Project leadership is critical to project success and ultimately the success of the Trust as illustrated in the theory of change. Skill requirements can evolve from start-up skills to ongoing management including volunteer activities and landowner liaison. The Trust recognizes project leader's skills and project leadership requirements, and helps build local leadership capabilities. Support may differ from project to project including succession planning where appropriate.

5. Collaboration between projects may be required to achieve outcomes**.** For example small projects, in combination, can create synergies and also a more measurable impact.

Establishing evaluation in the Trust

Consideration should be given as to where evaluation can best fit into the Trust's decision making processes so that it is useful and any resources used on evaluation will be of value.

Evaluation should routinely assess project outputs achieved and periodically examine outcomes. Outcomes can be, to some extent, assessed quantitatively using measures such as areas of improved habitat and increased numbers of iconic species (e.g. banded rail).

As conservation outcomes sought by the Trust emerge slowly (e.g. five years plus to observe significant habitat recovery or increased bird life) a long term evaluation approach is necessary to show meaningful results. However evaluation should ideally be made part of the Trust's core business. This may require establishing regular annual evaluation dialogue and reporting. Such work can utilise output reporting, outcome measures, plus relevant science reports (e.g. from DOC) and other work when justified.

Evaluate what? -the Trust's *theory of change* to identify critical outputs & outcomes

The Trust works across several distinct areas of change that align to its conservation objectives, namely

- Building community understanding and involvement in conservation
- Supporting conservation education and student involvement
- Working in partnership with others to establish projects and achieve outcomes
- Supporting improvements to habitat, including planting, weeding and predator reduction.

Attachment 1 has two diagrams that describe a theory-of-change for the Trust. The first diagram shows an overall (summarised) picture highlighting the importance of people-focused aspects of the Trust's work towards achieving conservation outcomes. This includes building environmental knowledge in local communities as a basis for sustained conservation actions. The second diagram in attachment 1 is an elaboration which shows each distinct output (e.g. planting and pest control) from the Trust's supported activities and how outputs relate to specific outcomes. The latter seeks to identify necessary and sufficient conditions for change. This is illustrated by the need to both reduce predators and improve/increase habitat to enable more NZ birds (and other species ranging from whitebait to geckos) to survive and increase.

The theory of change helps thinking about the key hypotheses and assumptions that are implicit in the Trust's work. One hypothesis is that a stakeholder–agreed strategy, further funding, and efficient 'field work' (planting, trapping) will lead to improved habitat and species recovery. This may be straightforward but the link between outputs and outcomes depends on the strength of the linkages particularly sustained effort and scale (e.g. pest control over a wide area) but also climatic influence. An evaluation question might therefore be 'what does the Trust need in order to achieve the desired scale and sustainability of work?'

A second hypothesis is that projects and project outputs can readily interact with each other to produce overall outcomes at the ecosystem and community levels. This is illustrated in the second diagram in attachment 1 showing the *cluster* of different outputs achieved by the Trust and how they jointly relate to outcomes. An evaluation question here is, for example, how well are the different Waimea Inlet projects able to build a robust foreshore habitat that is attractive to birds and native fish?

This helps identify the important evaluation questions which should guide decisions on data-gathering, analysis and reporting back. For example:

- What attention should be given to evaluation questions on project efficiency (e.g. were the planting objectives achieved) and what attention should be given to examining outcome effectiveness (e.g. habitat improvement)?

- Where then should the balance of evaluation effort be made between recording the activities, measuring outputs or evaluating outcomes?
- Should the key assumptions, such as those shown under the first diagram in attachment 1, be periodically reviewed?

These hypotheses should be periodically tested as part of the evaluation process. On the last question we understand that work is being contracted to measure habitat recovery in the Waimea Inlet with the help of GIS mapping tools.

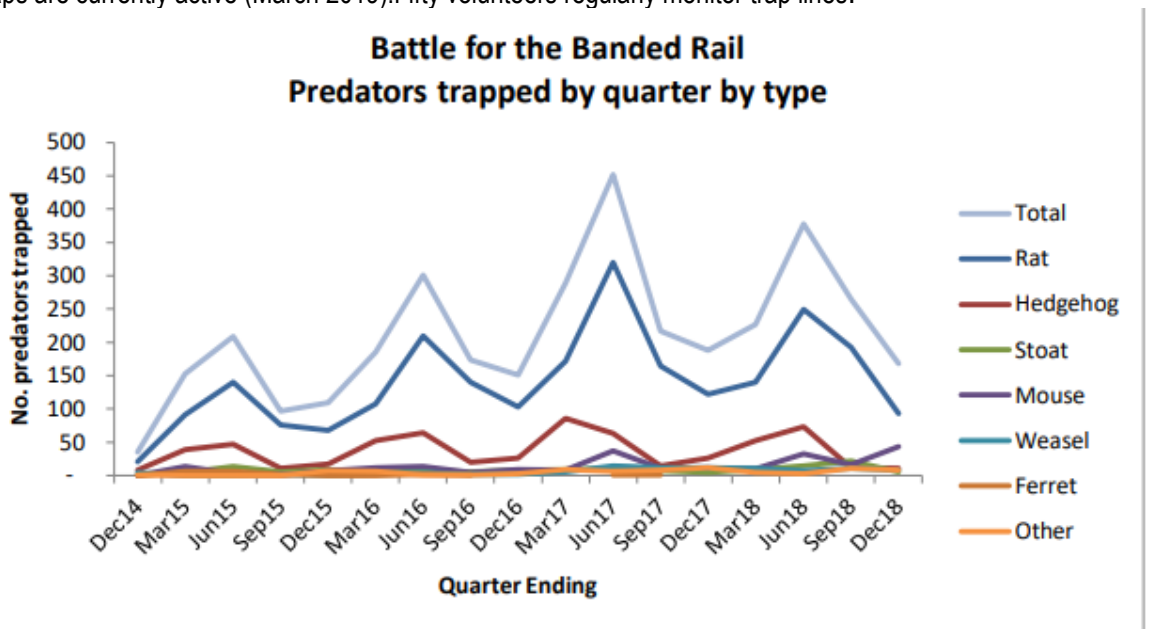
How should conservation outcomes be evaluated?

Conservation outcomes are hard to evaluate due to the complexity of the natural environment and level of expertise required to identify significant change. For this reason many NGOs around the world use proxy indicators such as measures of the recovery of iconic species. The Banded Rail project is a good example of this approach and one that should continue to be used by the Trust as being illustrative of its outcome focus.

The Battle for the Banded Rail project case study

Rails are notoriously difficult to see so counting of birds is not attempted, being unlikely to properly record the actual population even when counted by expert ornithologists. BBR instead looks for members of the public to report sightings of rails as a means of confirming that habitat restoration and trapping is having the desired results. Reported sightings, including photographs, have been made in Mapua and near Rabbit Island in the summer of 2018/19.

Trapping records are recorded using software and numbers can be generated to monitor trapping success. 780 traps are currently active (March 2019).Fifty volunteers regularly monitor trap lines.



Planting for habitat restoration has been undertaken over four years to date. Once planted maintenance, including weeding and in-filling, requires continued effort. Twenty-five to thirty-five volunteers attend eight to nine planting days each winter. Efforts are made to get local volunteers to become responsible for their restoration areas. **The evaluation recommends that BBR establishes the area of restored habitat, hectares of plantings and/or kilometres of shoreline, and then monitors the habitat quality by estimating the percentage cover of native vegetation using a sampling technique similar to that outlined in WETMAK.**

As well as the above reporting, Battle for the Banded Rail habitat restoration has undertaken annual reviews of restoration sites. This has been done in collaboration with experts from DOC and TDC.

Site reports detail challenges to be met and plantings for the upcoming season. While these reports are excellent for operational planning and management they have only anecdotal information on the results to date. This could be addressed by documenting vegetation cover as suggested in *Wetmak*. More information on *Wetmak* is provided in Attachment 2.

We also examined the approach by some other conservation groups such as the Friends of Flora (FOF). FOF are recording and evaluating the presence of kiwi over large area following their reintroduction. Project Janszoon has released kaka in Abel Tasman National Park and will monitor them using attached radio tracking instruments. Kaka breeding success will provide a proxy measure for predator density and control. We understand that this will depend on landscape scale success in reducing stoats in particular with the help of 1080 secondary poisoning.

The Ornithological Society surveys of NZ birds has periodically used mapping squares to measure occurrence (presence or otherwise of particular species and selected times) and this expertise may be helpful to the Trust over the longer term.

For the Tasman Environmental Trust the most important measures may be of planted and restored areas because this has been a key part of most projects.

Measures

TET current six monthly reporting includes measures of outputs, including plants planted, pest eradicated, predators killed, volunteer numbers, and hours, contributing to activities. The reporting template is in Attachment 3. We recommend that this reporting be completed for all projects. We have suggested adding a line for project specific outcomes. This might be the area of habitat restored.

Apart from banded rail sightings there is little or no outcome reporting to date. This is discussed in some detail in Attachment 2. There are advantages to, where possible, having similar outcome measures across related projects so that measures can be combined and a 'TET' measure given.

We recommend that

1) Some cores measures be applied such as:
   - length of stream restoration planting;
   - hectares of restoration plantings; and
   - kilometers of foreshore restoration.

   This would be useful in showing the scale of progress made to date and annually.

2) A measure of native plant cover be established. This is a measure of the quality of the habitat restoration and has the widest applicability across projects.

3) Other outcome measures be adopted as appropriate for projects where habitat restoration is not an aim, and/ or with time as more resources are available to consider outcome measures.

It is important that some measures are developed. In some projects outcome measures may be available from other sources, e.g. TDC, DOC, QEII Trust. In such cases effort should be

invested in obtaining these measures and understanding and communicating what they mean to stakeholders.

Evaluating organisational performance

This is a specialist area that would need to be separately justified in terms of its specific value to the Trust and its stakeholders. Its scope was discussed at the second workshop in terms of a stakeholder survey to test perception of how the TET as an organisation is evolving and where the sticking points are. Such work can be more insightful and useful than other areas which simply describe activities, something that some donors may request, e.g.

- Lists of organisations and people engaged with (already is being prepared for board meetings). Over time such lists can be used for relationship mapping.
- Dollars in financial management.(Value of contracts, turnover)
- Contracts being managed (employees, projects, specific activities)
- Communication activities (could be coded: public fora; web updates; newsletters; media coverage (newspaper, TV))

How can evaluation be made affordable and sustainable for the Trust?

What sort of capability might be needed?

A common NZ practice is to periodically commission an external person(s) such as a consultant to do an evaluation. However this can be expensive with additional hidden costs in commissioning and managing the work. Alternatively, evaluation can be done in-house by staff/volunteers who may also have other work. This is easier where there is an agreed evaluation framework with timelines and is supported by peer review to ensure the objectivity and quality of the work.

We think that a largely in-house approach will be far more sustainable for the Trust and enable simpler feedback. It would provide flexibility for example to routinely do project evaluations using a field outcome assessment plus output data (volunteer hours, plantings, trapping results).

A dedicated part time paid position is a good option but this might not establish the breadth of understanding across the organisation that is sought. For reasons of objectivity, evaluation responsibility should also be outside of the manager and chair roles. A further option might be formation of a trustee-led sub-committee, of say three, whose brief would be to:

1. Set annual expectations for staff (and perhaps volunteers) in the production of evaluation data and analysis and review the adequacy of this work;
2. Commission outside work as necessary to review outcome evidence; and
3. Present a brief annual evaluation report to the full meeting of the trustees that could be published on the web and given as an accountability document to funders.

The approach taken is likely to depend on resourcing.

Budget and funding

We think that a three year budget of about $30k ($10 k p.a.) would enable good basic work to be undertaken by the Trust across all the projects that it supports, particularly if appropriate use is made of trained volunteers. A budget of this scale would integrate and

prioritise currently planned project "assessment" work by individual projects, such as by Waimea Inlet Forum.

Funding to be sought from the Rātā Foundation and the Department of Conservation (DOC) should include some provision for evaluation. The Foundation states on its website that NGOs should *examine outcomes and identify learnings from projects*[13]. This requires evaluation work. Clearly it would be more efficient if the evaluation work could be done by a few organisations collaborating with other smaller groups. The Trust offers a useful test case of how this can work.

DOC has suggested that the Trust become a regional conservation 'hub" working with Iwi and local communities. DOC has highlighted the value of measuring *conservation benefits* and it clearly supports evaluation of attributable outcomes (i.e. 'the difference being made'). This is important where public money is involved.

> "Many individuals and groups engage with DOC to grow conservation. Iwi, businesses, agencies, not-for-profit organisations, individuals and communities are partnering with DOC in a variety of ways, as volunteers, concessionaires and sponsors, ***allowing more conservation to be achieved***. Through this collaboration DOC upholds the Conservation Act and, by measuring different aspects of these partnerships, from the input of human and financial resources through to the benefits that are obtained, DOC can ***measure the difference*** that is being made by working with others[14]."

DOC has also published a guide for evaluating 'conservation with communities' projects[15]. Some DOC funding for evaluation by its partners would help establish the feasibility and value of what they suggested.

How can evaluation best be used so that it is value-for-money?

The Trust's evaluation process must be of practical use and be made sustainable, in terms of both resourcing and stakeholder interest. Use depends on having explicit mechanisms in place, such as 'evaluation feedback' as a standard annual agenda item on strategy or project review meetings and as a standard chapter heading in external reporting.

The board will need to decide when evaluation discussions should be held (e.g. as an annual review) and also include evaluation as a key topic in strategic review processes.

Suggested approach to measuring and evaluating outcomes

Evaluating the Trust's outcomes is difficult because of the complexity of the evidence (changes in biota in the context of other changes in the natural environment). To make the job feasible it may be best to focus on selected areas that are less complex but still indicative of what the Trust wants to achieve. This might include:

a) Measuring and reporting every two years (or annually if feasible) on the areas planted and the areas weeded- e.g. square kilometer of foreshore, riverbank/stream bank. Standard and well proven methods are available for this work such as the methods applied by the NZ Plant Conservation Network[16] ;

[13] https://www.ratafoundation.org.nz/funding/now-you-have-your-grant/reporting-and-learning-about-your-project;
[14] McGlone & Dalley (2015) https://www.doc.govt.nz/Documents/our-work/doc-outcome-monitoring-framework-overview-report.pdf;
[15] Johnson & Wouters (2008) https://www.doc.govt.nz/globalassets/documents/science-and-technical/docts34entire.pdf;
[16] http://www.nzpcn.org.nz/page.aspx?conservation_monitoring_mapping_spatial_extent_methods;.

b) Measuring annually the presence of iconic species, such as the banded rail[17]. Here too standard and well proven methods should be used (as they are at present for the Banded Rail);
c) Codifying, with use of a reporting template, the current site reviews, that engage a range of experts and using this to publish outcome briefings for the particular sites visited.

Outcome measurement options are discussed in more detail in attachment 2, below.

Evaluating effectiveness

Evaluating the effectiveness of the Trust's work may become possible in time when substantive outcome measures become available and the extent and effectiveness of conservation activity has further developed. Two recent studies illustrate what is possible. Bomaci, Pejchar and Innes used very robust bird surveys and sampling to show that NZ fenced sanctuaries are effective.

An offshore islands study of conservation effectiveness by Towns, Wright and Stephens which also shows substantial outcomes that relate directly to conservation work have emphasised the importance of systematic measures. (This helps, for example, in addressing confounding influences when doing the analysis).

Attachments

1. Theory of change diagrams

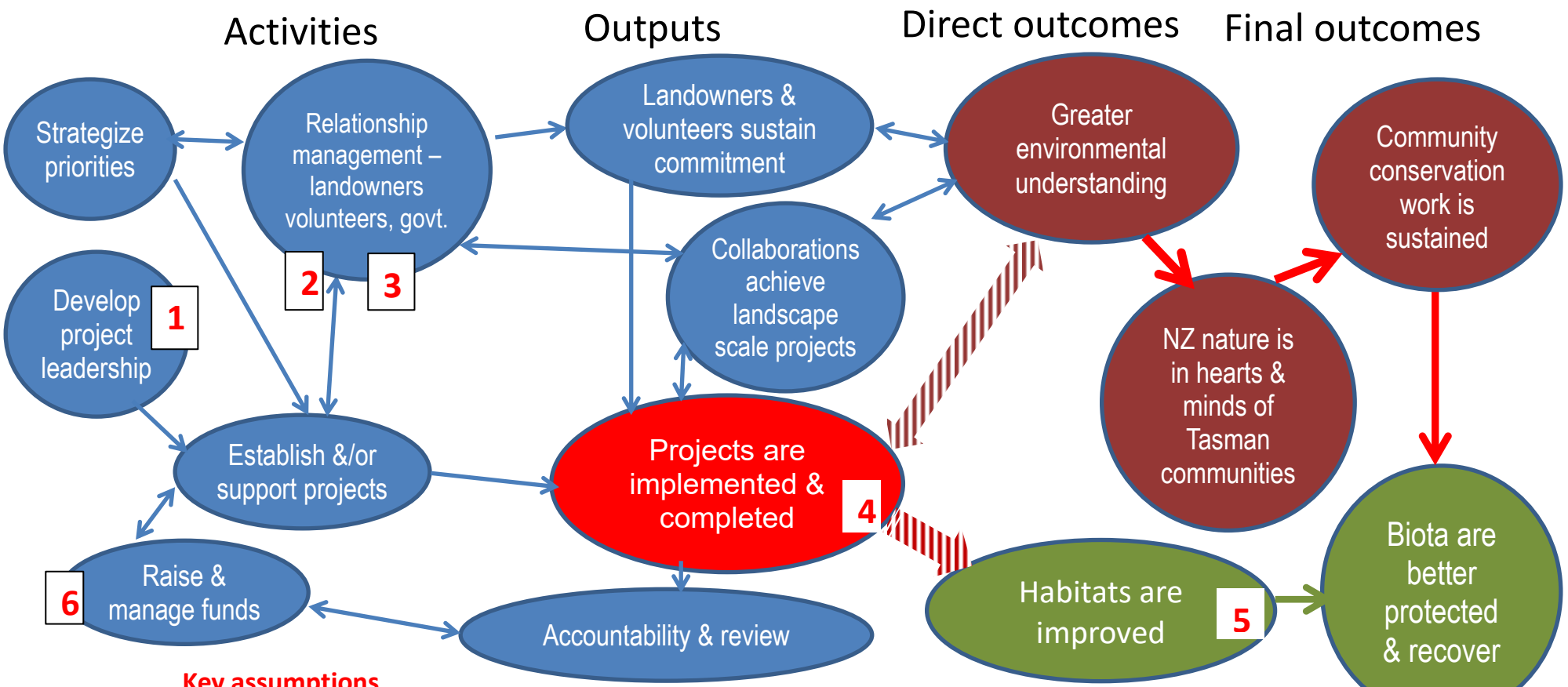
The following two diagrams were developed with stakeholders at two evaluation workshops to illustrate the links between the Trust's activities, its outputs and desired outcomes. They test the predictive assumptions and hypothesis about why undertaking certain activities may lead to desired outcomes summarises points made at the two evaluation workshops. This is discussed on page 14ff above.

At the workshops we challenged each assumption, each activity statement each output statement, and the outcome dynamics. Importantly the diagrams illustrate why the community-specific outcomes are necessary for conservation.

For completeness the first diagram includes some possible performance 'indicators' (measures). These are further considered in Attachment 2.

[17] The Back Beech Beetle *Bembidion tillyardi* has been also suggested as it is very rare, only found on one sand-spit in the Waimea Inlet, but may not yet be sufficiently 'iconic.'

The Tasman Environmental Trust's *Theory of change - An overall picture*



Key assumptions

1. **Managerial skills are available**
2. **Volunteers are willing & available**
3. **Landowners will allow access**
4. **Conservation knowledge is applied**
5. **Habitats & species *can* recover**
6. **Sustainable funding is available**

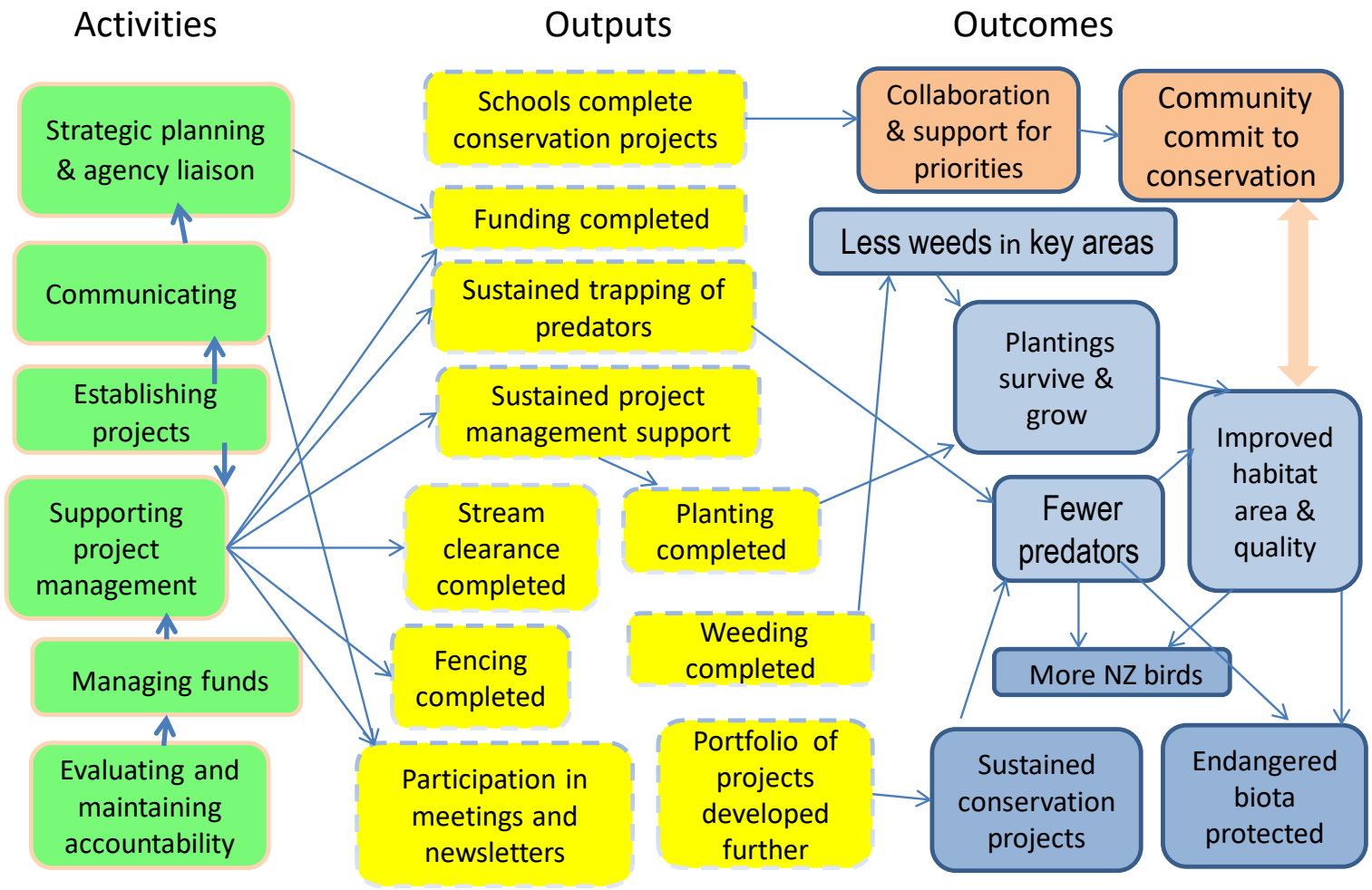
Output performance indicators

- *Volunteer hours & experiences*
- *Plants planted & area protected*
- *Predators destroyed*

Outcome performance indicators

- *Quality and quantity of habitat protected*
- *Site review conclusions*
- *Iconic species monitoring*

Tasman Environmental Trust - Theory of change (detail)



2. A proposal for the Trust to introduce specific outcome measures

The Trust could readily enhance reporting if further factual information or statistics about projects were developed and shared by project leaders. For example providing the metres of creek banks which have been restored, the hectares of planting, and hectares of which type of vegetation being restored gives basic information. Noting changes in this from year to year will show project progress, development, and context.

How can measures be identified?

Each project needs to identify and start undertaking *at least one* outcome measure. The outcome measure should be one which best reflects the project's objectives rather than the most easily measured. Some projects focus on restoration of habitat, others on education, others on weed eradication or predator reduction. Once one outcome measure is established and becomes routine, another should be considered until all project outcomes are reflected in measures. Possible outcome measures are outlined in the table on page 24. This is not an exhaustive list. When choosing any measure things that need to be considered include:

- How does the measure reflect project outcomes?
- Is the measure robust and able to show changes over time? (project progress)
- Are measurement techniques documented?
- How will data/results be reported?
- How will data/results be stored for safe keeping and future reference?

Outcome measures should ideally be decided at the start of a project and baselines established. Measurement over time can then enable project effectiveness to be estimated. The sooner measurement starts the sooner changes can be described. If one measure is not appropriate another should, if possible, be developed.

If outcome measures are not made then the project needs to be classified as 'not active' or 'light touch' or qualified in some other way.

The benefits of having outcome measures include: being able to aggregate outcome information across projects; developing time sequences to document changes; having robust evidence to show funders achievements. What do the experts suggest?

'Wetland Restoration. A Handbook For New Zealand Freshwater Systems' Edited by Monica Peters and Beverly Clarkson, Landcare Research, has many interesting chapters including one specifically on monitoring, Chapter 13. This is available online:

https://www.landcareresearch.co.nz/publications/books/wetlands-handbook

This material is also presented on the Landcare Trust webpage: http://www.landcare.org.nz/WETMAK

Both of these webpages are largely based on:

https://www.landcareresearch.co.nz/publications/researchpubs/handbook_wetland_condition.pdf

In the introduction this book says the system was specifically developed for estuarine wetlands as well as other types of NZ wetlands. This system was developed for the Ministry of the Environment for their Environmental Performance Indicator Programme. While community conservation groups and farmers are targeted audiences, some of the monitoring suggested is not simple for non-scientists. Also as part of that programme indicators have been developed for forests, published by Handford and Associates

http://www.formak.co.nz/webfolder.html

and stream health, by NIWA.

https://www.niwa.co.nz/our-science/freshwater/tools/shmak/manual/13help

These forest, wetlands, and stream health monitoring guides describe systems to which TET could aspire in the long term. To start something simpler is required.

The wetland assessment has five indicators including changes in: hydrological integrity; physiochemical parameters; ecosystem intactness; browsing, predation and harvesting regimes, and a dominance of native plants.

What is a pragmatic approach for the Trust to establish outcome measures?

In view of the focus of many of the TET projects on habitat regeneration we suggest that, particularly for those projects with a habitat restoration focus, initial measurements be of native/exotic plant coverage. Once this initial measure is established others could be considered.

It is important that the measures are developed carefully and be well documented. The use of measurements enables comparisons over time. Measurements therefore need to be repeatable and data need to be comparable.

Following techniques described in the Wetmak guide would be advantageous. Landcare Trust offer workshops on the Wetmak process. An email response to a web enquiry indicated a cost of approximately $4,000 to $5,000 for a one day workshop, for 8-12 people, and required materials. It is important that measures are established. While anecdotal information has some use, it is not useful for long term comparisons or to provide measures of project progress.

Any information on important species, both natives and exotic pests and weeds, should also be recorded. For example the banded rail and fern-bird counts/monitoring should continue as consistent long-term measures can prove invaluable.

Vegetation density measures would initially need to be completed annually. Some projects will need to identify more than one site for measurement and results amalgamated for an overall score.

An analysis of other measurement options is set out in the table below.

Measures and data held by TDC should also be considered. A workshop in March 2015 referred to new environmental impact measures being developed for the Waimea Inlet but theses appear, as yet, unpublished.

Analysis of some outcome (and *output) measurement options

TET TOC detailed outcomes	Measure	Advantages	Challenges
More NZ birds; Endangered biota protected	Bird counts	• Established techniques for five minute bird counts in forests • Established techniques for counts of particular species	• Requires expertise in species recognition and tracking •Some birds difficult to see, even for experts •Is only ever a sample of population
Endangered biota protected	Counts of other iconic species	• Iconic species useful for communication and engagement	• Not good for little things that are hard to observe, eg beetles, galaxiid
Plantings survive and grow; Less weeds in key areas; Improved habitat area and quality	% native/exotic vegetation hectares of land in restoration	• Measures growth of plantings • Measures weeds • Relevant for most projects	• Careful techniques will need to be established including sample plots
Improved habitat area and quality	Stream health	• TDC assessments to be used by the Trust	• requires some expertise and equipment
Fewer predators	Tracking tunnel data[18]	• Measures live populations rather than counting numbers killed	• only useful for mice, rats, not mustelids
Improved habitat area and quality	Photographs	• Not technically challenging but still needs careful composure and ability for reproduction of subject	• Data can be difficult to interpret over time. • Re-photographing can be difficult as vegetation grows • Photographs provide a record but not a robust measure of quality.
Community commit to conservation	Survey of volunteer satisfaction with relevance, enjoyment and effectiveness of work	• Readily collected at annual meetings and mail-outs to volunteers • Valuable insights from core stakeholders on commitment and focus	• Surveys usually result in a non-response bias which would need some analysis
Community commit to conservation	*Attendances at public forum	• Indication of public engagement	• Is really activity rather than outcome
Community commit to conservation	*Number of volunteers and hours committed	• Already estimated	• Is really activity rather than outcome
Community commit to conservation	*Number of classes/ students/ education projects		• Not sufficient large on the Trust's work to warrant this measurement • May not meet school protocols

[18] https://www.doc.govt.nz/Documents/science-and-technical/inventory-monitoring/im-toolbox-animal-pests-using-tracking-tunnels-to-monitor-rodents-and-mustelids.pdf

3. The Trust's project reporting template

Current reporting of TET project activity uses the following template. (***Shown in red are suggested additions***.)

This reporting has been undertaken for most projects in the last year. What has been reported to date is project activity rather than outcomes. This is useful reporting and needs to continue.

Project title; report date :
Description of recent activity and progress
Any issues that need to be resolved or support needed
Funding outlook (eg when does project funding run out? Funding opportunities to pursue?)
Number of volunteers and hours contributed (please include both measures if you can)
Number of plants planted, *predators killed, plant pests eradicated*
Any Health and Safety incidents
Add-Outcome measures   ***(state outcome and measure planned, undertaken, and/or reported)***
Date: Prepared by:

4. Volunteer survey

A very simple biennial conservation volunteer survey could be used to check levels of engagement, drawing on employee satisfaction survey experience[19] with questions such as:

1) How many days have you volunteered for conservation work this past year?
2) Are you finding volunteering currently satisfying/useful to conservation/informative[20]?
3) Thinking of your largest project do you feel sufficiently informed about its objectives?
4) Is there anything in particular you would like more information on or more support for?
5) What additional actions are needed to achieve conservation outcomes for your projects?

19 See for example van Saane et al, 2002, *Reliability and validity of instruments measuring job satisfaction—a systematic review*

20 See Bell 2003 page 54

5. References

Bailey R, McKegg K, Wehipeihana N & Moss M, 2016, *Successful NGO evaluation cultures,* Superu

Bell K, 2003, *Assessing the benefits for conservation of volunteer involvement in conservation activities*, DOC Science for Conservation 223

Bombaci, Pejchar & Innes, 2018, *Fenced sanctuaries deliver conservations benefits for most common and threatened native island birds in NZ*, Ecosphere 9/11

Brown K, Elliott G, Innes J & Kemp J, 2015, *Ship rat, stoat and possum control on mainland New Zealand*, Department of Conservation

Clarkson B et al, 2003, *Handbook for Monitoring Wetland Condition*, Landcare Trust

Dasgupta S, 2017, *Experience or evidence: How do big conservation NGOs make decisions?* Mongabay

Dowding J & Moore S, 2006, *Habitat networks of indigenous shorebirds in New Zealand*, DOC Science for Conservation 261

FORMAK, *Forest Monitoring Manual*, website briefing

Hardie-Boys N, 2009, *Valuing community group contributions to conservation*, DOC Science for Conservation 299

Jones C and Kirk N, 2018, *Shared Visions: can community conservation projects' outcomes inform on their likely contributions to national biodiversity goals,* NZ Journal of Ecology 42/2

Johnson & Wouters, 2008, *A guide to evaluating Conservation with Communities Projects*, Department of Conservation Technical Series

Kilroy and Biggs, *Stream Health Monitoring and Assessment Kit*, NIWA, Website manual

Landcare, WETMAK, Wetlands Monitoring and Assessment Kit Website manual

McGlone M & Dalley J, 2015, *A framework for Department of Conservation inventory and monitoring: intermediate outcomes* 1-5, Landcare Research

New Zealand Plant Conservation Network, *Spatial extent mapping methods*, Website brief:

Parliamentary Commissioner for the Environment, 2017, *Taonga of an island nation: Saving New Zealand's birds*

Peters and Clarkson, 2010, *Wetland Restoration: A handbook For New Zealand freshwater systems'* Landcare Research

Rātā Foundation, *Expectation for reporting on your funded programme*, Website

Steffons and Gasson, 2009, *A history of threatened fauna in Nelson Lakes area*, Department of Conservation

Towns, Wright and Stephens, 2009, *Systematic measurement of effectiveness for conservation of biodiversity in New Zealand's Offshore Islands*, DOC

Walker S and Marks A, 2018, *Estimates of local occupancy for native land birds from the New Zealand Bird Atlases*, Notornis 65(4) 223-236

Windy Hill Sanctuary, 2018, *Goodnature A24 Trap Project: Final Report #10*