

Wild Lab Tiaki Taiao evaluation

Final report

December 2021

Prepared for:

The Longbush Ecological Trust, Wild Lab Tiaki Taiao Programme

Prepared by:

Akroyd Research and Evaluation Ltd

Acknowledgments

Thank you to Dr Jennie Harré Hindmarsh and Dame Anne Salmond from the Longbush Ecological Trust for the contracting and technical support that contributed to the completion of this report.

Thank you to Peter Jarratt, who along with Jennie Harré Hindmarsh provided extensive background information and documentation to support the evaluation.

Thank you to Pete Jarratt and Anne-Marie Vigeant for kindly sharing your experience as programme educators, and big thanks also to all the teachers and principals who took time from your busy schedules to speak with me.

It has been my pleasure evaluating the programme.

Contents

1. Executive Summary.....	6
2. Introduction	12
2.1 Background to Wild Lab Tiaki Taiao evaluation.....	12
2.2 Wild Lab Tiaki Taiao vision and purpose	14
2.3 Purpose of the Wild lab Tiaki Taiao evaluation.....	15
2.4 Key Information Areas for the evaluation.....	15
2.5 Key Evaluation Questions	16
3. Method	17
3.1 Mixed method.....	17
3.2 Sample	17
3.3 Informed consent	17
3.4 Data collection	17
3.5 Analysis.....	17
3.6 Data collection overview	18
4. Assessment against key evaluation questions	19
4.1 Formative learnings	19
4.2 Process learnings	32
4.3 Outcomes and impacts of the programme.....	40
5. Conclusion and recommendations	51
6. Appendices.....	61
6.1 Appendix A: Wild Lab Tiaki Taiao Retrospective Intervention Logic	61
6.2 Appendix B: Key informant information sheet and consent form.....	62
6.3 Appendix C: Key informant interview guide	64

Tables and figures

Table 1: Terms and abbreviations	5
Table 2: Evaluation monitoring framework for Wild Lab Tiaki Taiao	54

Disclaimer: The information in this document is presented in good faith using the information available to us at the time of preparation. It is provided on the basis that the authors of the report are not liable to any person or organisation for any damage or loss that may occur in relation to taking or not taking action in respect of any information or advice within this document.

Glossary

Table 1 defines the specialised terms used in this report.

Table 1: Terms and abbreviations

Term/abbreviation	Definition
Whanaungatanga	Building relationships with people and te taiao
Manaakitanga	Giving mana to others
Kaitiakitanga	Care and protection of kin, including land and waterways, plants, animals and people
The Longbush Ecological Trust (The Trust)	Established in 2009, the Trust is responsible for the restoration of both Longbush Reserve and Waikereru Ecosanctuary
Tuakana/teina	Tuakana/teina refers to the relationship between an older (tuakana) person and a younger (teina) person and is specific to teaching and learning in the Māori context
Te Taiao	The environment that contains and surrounds us, comprising four main components: Whenua (soil and land); Wai (all freshwater bodies and their connections); Āhuarangi (climate across time); and Koiora (all living communities: human, plant, animal)

1. Executive Summary

Background

The Wild Lab Tiaki Taiao programme¹ was initiated in 2016 by a unique partnership between the Longbush Ecological Trust and the award-winning team at Jarratt Create & Educate (JCE), informed by experts in Mātauranga mō te Taiao (ancestral ecological knowledge) and leading New Zealand scientists, including some involved in the Bio-heritage Science Challenge.²

Until 2020, the educators who co-designed the programme with the Trustees, Dame Anne Salmond and Dr Jennie Harré Hindmarsh, were Peter and Elle Jarratt of Jarratt Create Educate (JCE). JCE had more than a decade of experience in innovative creative education projects that have been recognised internationally.³ Since 2021 the programme has been further developed by Peter Jarratt, now of Two Hands Consultancy Ltd, and is being co-delivered by Peter Jarratt and Anne-Marie Vigeant (programme educators), Brighde Penn (costume designer responsible for all but two of the costumes), and Silke Steffens (costume character actor and drama teacher). The programme is delivered at the Waikereru Ecosanctuary⁴ in Te Tairāwhiti. Just 15 minutes' drive from Gisborne City, the Ecosanctuary is perfectly placed for educational purposes.⁵ At 120 hectares, Waikereru is the largest intensively managed restoration site on the East Coast, from Opotiki to Wairoa. Waikereru is a haven for native birds, plants and animals in a region where many species are threatened with extinction. The internationally acclaimed, award-winning 'Welcome Shelter'⁶ provides the 'home base' from which the Wild Lab Tiaki Taiao participants engage in workshops of ecological enquiry and exploration.

Wild Lab Tiaki Taiao workshops have been delivered since 2016, including three initial pilot projects at Waikereru Ecosanctuary during 2016/18.

Programme vision

In 2009 the Longbush Ecological Trust, which is responsible for the restoration of both Longbush Reserve and Waikereru Ecosanctuary, was set up to restore QEII covenanted areas within the site. In 2010, the Waikereru Ecosanctuary was established.⁷

The Trust has developed the Wild Lab Tiaki Taiao programme to give effect to its objective to educate the general public, especially school children, about wildlife and native forest environments in New Zealand, and the need to protect and care for them.

¹ <https://www.waikereru.org/wildlab/>, <https://www.waikereru.org/history/>

² <https://bioheritage.nz/>; <https://bioheritage.nz/kindness-in-science/>

³ "Dreamweavers, that find the gift in every child" – NZ Life & Leisure 2016, March, pp. 104-11.

⁴ <https://www.waikereru.org/>

⁵ <https://www.waikereru.org/>

⁶ Wild Lab Tairāwhiti, 2017. Application to the Air New Zealand Environment Trust, pp. 6-7.

⁷ <https://www.waikereru.org/shelter/>

⁸ <https://www.waikereru.org/history/>

Programme purpose

The Waikereru Wild Lab Tiaki Taiao programme engages young people and teachers in a quest to understand what has happened to local ecosystems since human arrival, and to restore them to a state of ora (health, well-being).

Experts in scientific disciplines have interacted with experts in Māori ancestral knowledge and leading creative education designers to develop inspiring workshops. Mātauranga, Science, Arts, History and Technology are taken into the wilderness, resulting in real world, immersive integrated learning that is vivid and unforgettable.

Teachers and young people gain insights into what is happening in local ecosystems and learn a great deal about the lives of particular endangered plants and animals. They discover that by drawing on western sciences and mātauranga Māori, they can make a powerful difference to the landscapes they live in, and to the planet.

The educational aims of the programme are that participants:

- Increase their emotional connection and sensitivity to the natural world.
- Increase their connection to others
- Develop a clear vision of the future we want to live in
- Increase interest in western sciences and mātauranga Māori linked to nature.

Evaluation purpose

The two purposes of the evaluation were:

- primarily to document programme impacts and outcomes to date, key factors which have enabled these, and identify what would enhance future efficacy; and
- to enable the development of a long-term evaluation monitoring framework for ongoing use by the Trust and educators.

The evaluation took a formative, process, and outcomes evaluation approach, enabling the evaluator to test assumptions made about the programme design and efficacy.

The evaluation process has provided an opportunity to increase programme stakeholder evaluation capability, particularly around future-proofing the data capture and analysis processes to feed into continuous programme improvement and evidence programme efficacy.

Key information areas for the evaluation

The following information areas formed a large focus of the evaluation and learnings are integrated under the relevant key evaluation questions located in the formative, process, and outcomes sections.

The key information areas are:

- Describe what difference the programme has made to participants (including students, teachers, parents) to date
- Identify any issues or barriers to the successful implementation of the Wild Lab Tiaki Taiao programme, and any factors that facilitated the successful implementation
- Determine whether there are early indicators of success (impacts and outcomes).

The additional information areas also reported on briefly in the report are:

- why and how the programme was designed, and who was involved in its design
- the programme components and activities

- any issues or barriers and facilitators to the successful design of the Wild Lab Tiaki Taiao programme
- what, how and to whom the programme has been delivered
- whether the funding investment was sufficient to support and sustain the programme
- recommendations for ongoing evaluation of the Wild Lab Tiaki Taiao programme, which might further explore the achievement of longer-term outcomes.

Key evaluation questions

There are eight Key Evaluation Questions (KEQs), which are as follows:

Formative

- KEQ 1: How effective was the design of the Wild Lab Tiaki Taiao programme and what lessons can be learned for ongoing design improvements?
- KEQ 2: How effective are the stakeholder relationships in giving effect to the design of the programme?
- KEQ 3: How sufficient was the programme resourcing during the formative development of the programme?

Process

- KEQ 4: How effective are stakeholder relationships in supporting the implementation of the programme?
- KEQ 5: How well is the programme being implemented and how can the implementation be improved?

Outcome

- KEQ 6: How well and in what ways are programme participants benefitting from participating in the programme?
- KEQ 7: How well and in what ways are other stakeholders benefitting from participating in the programme?
- KEQ 8: How well are local ecosystems benefitting from the programme?

Method

The evaluation used a mixed-method approach, which included:

- Qualitative key informant interviews
- Programme document review of an extensive number of background documents including two annual internal evaluation reports.

The evaluation sample included interviews with the following key informants:

- Two separate interviews with Trustees (one formal and one informal) – both online interviews
- One interview with two programme educators – online interview
- Five separate interviews involving six schoolteachers
- Two separate interviews with school Principals.

Data from interviews and secondary documentation was collated to enable analysis of the key evaluation questions. The evaluator used the data analysis template to guide data synthesis and analysis, working from handwritten notes.

Assessment against key evaluation questions

Wild Lab Tiaki Taiao education, environmental and Mātauranga Mori expertise is highly valued by schools and attractive to teachers and students. Their experiences typically exceed their expectations, even for environmental schools where the seeds for environmental care have already been planted. The programme's content and process design and use of multi-modal learning, attention to learning styles, creativity (costuming, drama/role play and making 'things'), immersive learning within an ecosystem and the focus on making learning fun and joyful in an outdoor setting is very evident. The programme's ability to adapt its delivery at short notice (within reason and limitations) e.g., due to poor weather, is also appreciated by schools. These things contribute to the Wild Lab programme being one that is very engaging of students, teachers, and parents, where the activities are multiple, varied and well timed. It also contributes to providing an all-sensory learning experience that school stakeholders consider to be broad-based, educationally, scientifically and culturally robust yet localised to the Gisborne area.

The programme design is effectively supporting the achievement of, and contribution to the intended outcomes across most of the key areas of importance and is underpinned by evidence-based research and experience.

Stakeholder relationships were very effective in giving effect to the design/co-design of the programme, including extensive and specialist expertise, and schools and education providers are active supports of the programme. The programme, from design to operation, is geared toward providing participants with broad knowledge (mātauranga) using multiple and effective methods to increase participants' understanding about what is needed to be done to care for the environment and role(s) they might play. The programme is also geared toward enabling participants to gain deeper insight (maramatanga) through immersive activities and end of workshop reflection process.

The time-limited resourcing received to date by the Wild Lab Tiaki Taiao programme was adequately sufficient during the formative development of the programme and the programme coordination and management is operating well, with Trustees and programme educators working in synergy to support programme implementation and to give effect to the Trust's purposes and other key areas of priority.

The relationships that programme educators have developed with schools and education providers is very positive and it has resulted in multiple school visits to the programme over the years. The ability of the programme to invite experts to inform and/or facilitate components of the programme, adds gravitas and specialised knowledge and perspectives to the learning experience.

Programme implementation is driven by skilled and experienced programme educators, whose behaviour and actions are underpinned by overarching programme 'tikanga', principles, values, and good education practice, which are congruent with their personal values and principles. The programme operation is giving effect to achieving the programme's goals.

There is overwhelming evidence that students experienced considerable benefits from participating in the programme. The workshops create ideal learning conditions where students are inspired and motivated to participate and learn about the environment and about themselves. Students' increased passion for learning is noted.

Teachers, principals, and parents are also benefiting well from their participation in the programme, in some ways feeling just as inspired and motivated as students by the programme content, expert facilitation, immersive outdoor environment, and purpose of the programme. The experience has encouraged teachers to reflect on their teaching practices and approaches.

There is evidence that the programme is contributing toward students being inspired to want to understand and care for their ecosystems. Teachers report that the programme ignites a passion in students for

environmental care and restoration, where schools support students to take action within a school or local environment after the workshops. However, it is too early in the life of the programme to assess how well the local ecosystems are benefitting from the programme. At the same time, the Waimatā river and three of its tributary streams run through the Waikereru Ecosanctuary, and there is great potential in the direct links between the Wild Lab Tiaki Taiao programme; world-class research focused on the Waimatā Catchment in the 'Let the River Speak' Marsden project led by Dame Anne Salmond and Dr Dan Hikuroa; and the active and highly successful Waimatā River restoration project, which involves active restoration of waterways and forests.

Key enablers of successful implementation include great intentionality by the Trust, programme educators and experts to design a programme that is well informed across all design elements. Intentionality was also evident by the same contributors to ensure that programme content plus expert facilitation would engage participants in fun and inspiring ways, utilising multi-modal learning and education pedagogy well. Programme content was brought to life by the educators, drama teacher, guest experts and a range of activities aimed at providing tangible experiences for participants to help them understand what they can do to take action and why this was important to them, to others and to the natural environment. It is evident that the principles of whanaungatanga (building relationships with people and te taiao), manaakitanga (giving mana to others), and kaitiakitanga (care and protection of kin) underpin programme educator's engagement of people and facilitation of the programme.

Barriers to successful implementation were relatively minor and were largely outside the scope of the programme, including cost to schools to bus students to the workshop, the impact of poor weather on planned visits, and impact of the COVID-19 pandemic.

Early indicators of success are:

- Effective and credible programme design that engages well with participants
- Effective engagement of the primary audience by programme educators – high interest
- Effective programme facilitation and delivery
- The programme is already meeting all its outputs and short-term outcomes and some of its intermediate outcomes noted in its logic model
- Evidence of increased student awareness of the need to care for and restore the environment
- Evidence of increased participant awareness of Mātauranga Māori and western science
- Evidence of increased student passion and motivation to take action to restore the environment
- Opportunity to increase the scale of programme offerings but limit increased scope.

Suggestions about programme improvements were mostly about making minor adjustments to the programme. The suggestions of future importance were about potential delivery of programme components at schools, obtaining funding to help subsidise bus transport for schools, and offering an overnight stay at the ecosanctuary.

The main recommendations for programme improvement revolved around seeking funding and include:

- Request baseline programme funding to cover at least two to three consecutive years to ensure ongoing delivery and consistent development, implementation, and improvement of the programme
- Request funds for the growing management-coordination functions, the development of a virtual programme experience concept, and to contract a local marketing specialist to support the current scope of operation going forward

- Request funds to cover ongoing evaluation costs for evaluation activities and for contracting someone with suitable evaluation capability and capacity over the long term, which could include evaluation training for that person.
- Continue to consider and develop a virtual resource that can be used in stand-alone and complementary ways to deliver programme components largely unaffected by COVID-19, if desired.

Conclusion

The Wild Lab Tiaki Taiao programme is well designed and there is cohesion between the design elements and the skilled facilitation and delivery of programme components and activities. There is a clear line of sight between the programme design and the intended outcomes it seeks to achieve. The processes that underpin the programme delivery include good communication between programme educators and schools as well as educators' adherence to principles of whanaungatanga, manaakitanga, and kaitiakitanga – something they live and breathe despite not specifically articulating the principles outright. There is very good support for the programme from schools, many of whom have supported multiple school trips to the ecosanctuary, which is positive when considering programme sustainability. The programme educators are clear about the primary vision of the programme which is to engage and inspire students toward understanding the importance of caring for the environment. There is ample evidence that this is occurring. Participants derive considerable benefits from participating in the programme and long-term evaluation and monitoring of the programme is required to assess overall programme efficacy in achieving its long-term outcomes. The programme is well placed to continue performing effectively.

2. Introduction

2.1 Background to Wild Lab Tiaki Taiao evaluation

The Wild Lab Tiaki Taiao programme⁸ was initiated in 2016 by a unique partnership between the Longbush Ecological Trust and the award-winning team at Jarratt Create & Educate (JCE), informed by experts in Mātauranga mō te Taiao (ancestral ecological knowledge) and leading New Zealand scientists, including some involved in the Bio-heritage Science Challenge.⁹

Leading national scientists who have informed the programme's workshops to date include Dr James Russell, an international expert in pest control from the University of Auckland; Dr Dan Hikuroa, Ngā Pae o te Māramatanga Centre for Research Excellence expert in mātauranga relating to freshwater and marine ecosystems; Dame Anne Salmond, co-leader with Dr Hikuroa of the 'Let the River Speak' Marsden research programme, focused on the Waimatā River; and Dr Sue Scheele and Katarina Tawiri (Landcare Research-Manaaki Whenua) who are leading authorities on harakeke (native flax).

The programme's Mātauranga mō te Taiao experts include Graeme Atkins of DOC Tairāwhiti and Ngāti Porou, a nationally acknowledged expert in native plants and animals; and Janine Te Reo who is a Ngāti Porou kaiako in weaving at Te Wananga o Aotearoa in Gisborne. Other local experts who have informed the programme's content include Murray Palmer, a freshwater and marine ecologist (Nga Mahi Te Taiao), Steve Sawyer and Robyn Wilkie, restoration ecologists, Dr Lois Easton (Kereru Consultants), and Malcolm Penn (MPI).

Creative character costuming brings to life animals and birds used in the Wild Lab Tiaki Taiao and add a powerful performance element to the workshops. The costumes have been designed by Elle Jarratt (JCE) and Brighde Penn, with Penn continuing to be involved with the programme.

Until 2020, the educators who co-designed the programme with the Trustees, Dame Anne Salmond and Dr Jennie Harré Hindmarsh, were Peter and Elle Jarratt of Jarratt Create Educate (JCE). JCE had more than a decade of experience in innovative creative education projects that have been recognised internationally.¹⁰ Since 2021 the programme has been further developed by Peter Jarratt, now of Two Hands Consultancy Ltd, and is being co-delivered by Peter Jarratt and Anne-Marie Vigeant (programme educators), Brighde Penn (costume designer responsible for all but two of the costumes, now costume designer for the *Doctor Who* TV programme in the UK), and Silke Steffens (costume character actor and drama teacher). The programme is delivered at the Waikereru Ecosanctuary¹¹ in Te Tairāwhiti. Just 15 minutes' drive from Gisborne City, the Ecosanctuary is perfectly placed for educational purposes.¹² At 120 hectares, Waikereru is the largest intensively managed restoration site on the East Coast, from Opotiki to Wairoa. Waikereru is a haven for native birds, plants, and animals in a region where many species are threatened with extinction. The internationally

⁸ <https://www.waikereru.org/wildlab/>, <https://www.waikereru.org/history/>

⁹ <https://bioheritage.nz/>; <https://bioheritage.nz/kindness-in-science/>

¹⁰ "Dreamweavers, that find the gift in every child" – NZ Life & Leisure 2016, March, pp. 104-11.

"Feeding the Imagination" Education Gazette 2018, November, pp. 4-5.

¹¹ <https://www.waikereru.org/>

¹² Wild Lab Tairāwhiti, 2017. Application to the Air New Zealand Environment Trust, pages 6-7.

acclaimed, award-winning 'Welcome Shelter'¹³ provides the 'home base' from which the Wild Lab Tiaki Taiao participants engage in workshops of ecological enquiry and exploration.

Sixty-six Wild Lab Tiaki Taiao workshops have been delivered since 2016, including three initial pilot projects at Waikereru Ecosanctuary during 2016/18. All workshops were rated very highly by students, teachers, and parents both orally and by completing workshop evaluation forms.

The restoration journeys of two locally endangered species - Koura¹⁴ (freshwater crayfish) and the Oi¹⁵ (grey faced petrel), and the rare plants collected by Joseph Banks and Dr Solander from Endeavour in 1769 and featured in the Waikereru 1769 Garden¹⁶— provide the impetus for young people to engage in live science in a way that make unforgettable links between local flora and fauna, landscapes, New Zealand histories, their own cultural identities and their development as local and global citizens.

The programme also offers the River in Tears workshop¹⁷ that teaches participants how to measure the health of a river, how to use NIWA tools, and the importance of having healthy waterways. Contributors to designing this workshop include Murray Palmer (Director, Ngā Mahi Te Taiao), Nicky Horseman (Marine Biologist, NIWA), Dr Dan Hikuroa (NZ's UNESCO Cultural Commissioner, former Research Director of Ngā Pae o te Māramatanga), Dr Lois Easton (Kereru Consultants), Dr Billie Lythberg (University of Auckland), Dr Siouxsie Wiles (University of Auckland), and Natalie Robinson (Ngāti Porou, AUT).

Other workshop themes offered to date include Weaving with Harakeke, designed with Katarina Tariwi and Dr Sue Scheele of Landcare Research and Janine Te Reo of Ngāti Porou and Te Wananga o Aotearoa; Navigations designed with Malcolm Penn (MPI), Morgan Ngata (Ngāti Porou, school teacher) and Te Aturangi Nepia-Clamp (Rongowhakaata, Ngāti Porou, Tairāwhiti Voyaging); and Pesky Predators designed with Dr James Russell (University of Auckland) and Robyn Sawyer (Eco Works, Tairāwhiti). An eighth workshop, Hi-tech in the Bush, has been developed during 2021 with Dr James Russell and Steve Salmond (virtual reality expert), and Dr Jacqui Knight (Transtech Research at the University of Plymouth, England), and is ready for delivery from 2022. Steve Salmond and Brad Walker's *Taniwha* game app for children, which focuses on tackling environmental challenges, is currently one of three finalists for a major international award.

Participants in all workshops engage in a series of creative challenges based on gaming design, and programme educators discuss and evaluate the completion of their quest to understand local ecosystems, rare species, their relations with each other and their plight, and the interaction with humans as part of the ecosystem.

The young artists-scientists-engineers (students) are provided with high quality information about each species, apply their curiosity and imagination, participate in creative activities, and engage in intercultural dialogue aimed at exploring how to restore these plants and animals to local ecosystems, while applying this learning to their own world.

Challenges for workshop participants include: tracing the Pacific journeys of the oi (grey-faced petrel); designing and building a home that is predator proof for the oi; creating a karakia (traditional chant) to honour

¹³ <https://www.waikereru.org/shelter/>

¹⁴ <https://www.nmtt.co.nz/education/he-awa-ora-healthy-rivers/>

¹⁵ <https://www.waikereru.org/assets/documents/FirstYearTitiProjectReport.pdf>

¹⁶ <https://www.waikereru.org/1769-garden/>,
<https://www.rnz.co.nz/national/programmes/ourchangingworld/audio/2018621206/the-1769-garden>

¹⁷ <https://www.waikereru.org/river/> <https://youtu.be/3tQ9IKZ647s>

the koura (freshwater crayfish); using the weaving properties of harakeke (flax) to create a carapace that simulates the tough, waterproof Koura shell; and making bird feeders and nectars that attract particular species of native birds.¹⁸

2.2 Wild Lab Tiaki Taiao vision and purpose

In 2009, the Longbush Ecological Trust, which is responsible for the restoration of both Longbush Reserve and Waikereru Ecosanctuary, was set up to restore QEII covenanted areas within the site. In 2010, the Waikereru Ecosanctuary was established.¹⁹

The Trust has developed the Wild Lab Tiaki Taiao programme to give effect to an objective in its Trust Deed: to educate the general public, especially school children, about the need to conserve and protect wildlife and native forest environments in New Zealand.

The Trustees of the Longbush Ecological Trust²⁰ are all long-standing contributors to Longbush and Waikereru Ecosanctuary. They are: Dame Anne Salmond, Chairperson; Jeremy Salmond, Treasurer; Steve Sawyer; Dr Tim Salmond; Dr Jennie Harré Hindmarsh; Steve Salmond; Graeme Atkins and Dr Lois Easton. Each trustee is responsible for one aspect of the overall project.

An articulation of the vision

The vision for Wild Lab Tiaki Taiao is to facilitate an educational, cultural, wairua (spiritual) and developmental awakening for children, where they can be themselves in a beautiful ecosanctuary, unencumbered by the immediate threats, concerns, and weight of expectations they face. The programme aims to provide a learning environment for children that sits outside their usual framing, that is all about empowering children to become relaxed, inquisitive, and excited about learning. The programme takes a multi-modal learning approach that is fun, joyful, creative, and interesting - where Western science and Mātauranga Māori are interwoven into the programme design and where local traditions and stories come alive for participants. The vision is for an environment where associative learning, inquiry and exploration are encouraged and where children are affirmed, and mana given to them for things that are not only academia or sport related. The programme aims to support children and teachers to learn about their ecosystem environment, the relationship they have with it and with each other and how they can contribute to the ongoing well-being of it all.²¹

Purpose

The Waikereru Wild Lab Tiaki Taiao programme engages young people and teachers in a quest to understand what has happened to local ecosystems since human arrival, and to restore them to a state of ora (health, well-being).

Experts in scientific disciplines have interacted with experts in Māori ancestral knowledge and leading creative education designers to develop inspiring workshops. Mātauranga, Science, Arts, History and Technology are taken into the wilderness, resulting in real world, immersive learning that is vivid and unforgettable.

Teachers and young people gain insights into what is happening in local ecosystems and learn a great deal about the lives of particular endangered plants and animals. They discover that by drawing on western

¹⁸ Wild Lab Tairāwhiti, 2017. Application to the Air New Zealand Environment Trust, pages 3-6.

¹⁹ <https://www.waikereru.org/history/>

²⁰ <https://www.waikereru.org/team/>

²¹ Interview with a trustee of the Longbush Ecological Trust, 23 Nov 2021.

sciences and mātauranga Māori, they can make a powerful difference to the landscapes they live in, and the planet.

The educational aims of the programme are that participants:

- Increase their emotional connection and sensitivity to the natural world.
- Increase their connection to others
- Develop a clear vision of the future we want to live in
- Increase interest in western sciences and mātauranga Māori linked to nature.

2.3 Purpose of the Wild lab Tiaki Taiao evaluation

The two purposes of the evaluation were

- primarily to document programme impacts and outcomes to date, key factors which have enabled these, and identify what would enhance future efficacy; and
- to enable the development of a long-term evaluation monitoring framework for ongoing use by the Trust and educators.

Using a formative, process and outcome evaluation approach, the evaluator and stakeholders tested the assumptions made about programme efficacy and revealed considerations for programme improvements. The evaluation was able to capture evidence to document the known, expected, and unexpected efficacy of the programme.

The evaluation also enabled the development of a long-term evaluation monitoring framework that will support those governing and implementing the programme to capture ongoing, relevant, and timely programme data, using appropriate means, to inform ongoing continuous quality improvement and accountability reports

The evaluation process has also provided the opportunity to increase programme stakeholder evaluation capability, particularly around future-proofing the data capture and analysis processes to evidence ongoing programme efficacy.

2.4 Key Information Areas for the evaluation

The following information areas formed a large focus of the evaluation and response to these information areas sits under the relevant key evaluation questions located in the relevant formative, process and outcomes sections.

The key information areas are:

- Describe what difference the programme has made to participants (including students, teachers, parents) who have participated to date
- Identify any issues or barriers to the successful implementation of the Wild Lab Tiaki Taiao programme, and any factors that facilitated the successful implementation
- Determine whether there are early indicators of success (impacts and outcomes).

The additional information areas also reported on briefly in the report are:

- why and how the programme was designed, and who was involved in its design
- the programme components and activities

- any issues or barriers and facilitators to the successful design of the Wild Lab Tiaki Taiao programme
- what, how and to whom the programme has been delivered
- whether the funding investment was sufficient to support and sustain the programme
- recommendations for ongoing evaluation of the Wild Lab Tiaki Taiao programme, which might further explore the achievement of longer-term outcomes.

2.5 Key Evaluation Questions

The Key Evaluation Questions (KEQs) are as follows:

Formative

- KEQ 1: How effective was the design of the Wild Lab Tiaki Taiao programme and what lessons can be learned for ongoing design improvements?
- KEQ 2: How effective are the stakeholder relationships in giving effect to the design of the programme?
- KEQ 3: How sufficient was the programme resourcing during the formative development of the programme?

Process

- KEQ 4: How effective are stakeholder relationships in supporting the implementation of the programme?
- KEQ 5: How well is the programme being implemented and how can the implementation be improved?

Outcome

- KEQ 6: How well and in what ways are programme participants benefitting from participating in the programme?
- KEQ 7: How well and in what ways are other stakeholders benefitting from participating in the programme?
- KEQ 8: How well are local ecosystems benefitting from the programme?

3. Method

3.1 Mixed method

The evaluation used a mixed-method approach, which included:

- Qualitative key informant interviews
- Programme document review of an extensive number of background documents including two programme evaluation reports.

3.2 Sample

The evaluation sample included interviews with the following key informants:

- Two separate interviews with Trustees (one formal and one informal) – both online interviews
- One interview with two programme educators – online interview
- Five separate interviews involving six schoolteachers
- Two separate interviews with school Principals

3.3 Informed consent

Through a process of informed consent (refer Appendix B), one of the programme educators contacted teachers and Principals from schools where students had attended the Wild Lab Tiaki Taiao workshops within the last year, to get their permission for the evaluator to contact them. The evaluator contacted key prospective key informants to inform them of the evaluation and invited them to be interviewed. A similar informed consent process occurred with the other key informants that were interviewed as part of this evaluation. The evaluator developed an interview guide (refer Appendix C) based on the KEQs and information areas relevant to the project.

3.4 Data collection

Data collection started in early September 2021 and ended in early November 2021. Interviews occurred in early to mid-November.

3.5 Analysis

Analysis occurred from October to mid-November 2021. Data from interviews and secondary documentation was collated to enable analysis of the key evaluation questions. The evaluator used the data analysis template to guide data synthesis and analysis, working from handwritten notes, where no interviews were transcribed (the interviews were ranged from 20 minutes to 60 minutes). The evaluator used phenomenological analysis which lent itself well to the sample size with which the evaluator worked, and to gain an understanding about how participants experienced and interacted with the programme. The data were then mined for common themes and occurrences to identify emergent themes and unique differences, and a thematic reduction analysis was applied.

During the qualitative sense-making process, the evaluator also analysed the data in relation to the key information areas required by the Trust and against the logic model for the programme (Appendix A).

3.6 Data collection overview

Wild Lab Tiaki Taiao delivered three initial pilot projects between 2016 and 2017/18 and given the pilot status of the initial workshops, further development work was initiated when a grant was secured for three years. 'Year 1' of the programme officially got under way in 2019.

The Trust delivered 18 workshops to school groups across six themes during Year 1 in 2019, and two workshops to EIT candidate teachers. During the second year in 2020, the programme delivered 19 workshops across five themes. Most of the workshops were with groups of students and at least one teacher, while a small proportion of workshops were with candidate teachers and their tutors. This was despite needing to cancel or postpone 2020 workshop bookings from late February to early July due to the COVID-19 pandemic. During 2021, 20 workshops were delivered with school groups and 3 with candidate teachers before again being disrupted by the Covid pandemic.

Selected components of the workshop activities were video recorded which show snapshots of student engagement and their thoughts and views of the workshop.

Evaluative feedback from workshop participants (students and teachers) was also captured at the end of each workshop. This focused on programme satisfaction, comparing the workshop learning to in-classroom learning, and identifying learnings they would likely share. The specific questions were:

- What did you enjoy about the day?
- Is there anything you did not enjoy?
- How was it different to learning at school?
- What did you learn today that can share with friends and family?

4. Assessment against key evaluation questions

This section presents the evaluation findings from assessment against key evaluation questions, and against the key information areas. In addition, some of the findings are in response to how the programme is tracking against its intervention logic (refer Appendix A) that was developed for the evaluation and to guide strategic development and evaluation monitoring.

4.1 Formative learnings

4.1.1 KEQ 1: How effective was the design of the Wild Lab Tiaki Taiao programme and what lessons can be learned for ongoing design improvements?

Evaluative statement: The Wild Lab Tiaki Taiao programme design is very effective, reflecting specialist co-design input from a broad range of experts to achieve its distinctiveness. The programme design gives expression to achieving the Trust's focus, which is on renewing and re-establishing the area, and takes an ecological, Mātauranga Māori, evidence-based research, Western science, creative arts and credible education pedagogy approach to inspiring participants to take action to preserve and restore te taiao. The design is also aligned with the New Zealand Education Curriculum, Pūtātara, Education for Sustainability standards and education competencies as confirmed by the evaluation.

The Trust's decision to focus primarily on actively engaging schools and tertiary education institutes about the programme, was a good one. The strategic plan outlined all potential customer segments and while whānau, workplace and industry and domestic and international tourists are also part of the customer segment, in practice, the design allowed for an iterative engagement strategy with stages of engagement. Students and teachers are the primary audience for the workshops, and it is pleasing to hear about the overwhelming support for the programme, and its design, from the primary audience.

Evidence-based research and experience

The design and continuous improvement approach used by Wild Lab Tiaki Taiao is underpinned by evidence-based research and experience. In designing each workshop, with support from the trustees the lead educators consult with cutting-edge scientists and/or mātauranga experts, ensuring a deep and rigorous understanding is featured in the workshop of the species or ecosystem and of the challenges they face. There are a staggering number of experts with whom the Trust and programme educators have consulted to design and deliver high quality Mātauranga and evidence-based workshops.

One school principal noted that Dame Anne Salmond and her husband Jeremy were well known locals and had done extensive work at the ecosanctuary with plants and animals, adding credibility to the Wild Lab programme.

To date, given funding and resources available, the Wild lab Tiaki Taiao educators have aimed to deliver two workshop themes in each school term, each delivered four times to around 25 students from different schools and backgrounds. The programme has found that this approach fosters new relationships with schools and teacher development programmes and more open thinking. The types of open thinking that is fostered, as described by key stakeholders includes consideration about increasing fun and creative elements in student

learning, and the ability of the Wild Lab Tiaki Taiao programme to provide specific learning moments around curriculum e.g., social inquiry for candidate teachers.

Three of the workshops in the programme - on the restoration of oi (grey-faced petrels), koura (native freshwater crayfish) and the 1769 Garden – had been successfully piloted during 2016-2018, supported by small grants from the Department of Conservation, the Williams Trusts, the Sunshine Foundation and the Te Hā Sestercentennial Trust in Gisborne, and the Eastern and Central Community Trust based in Hawke's Bay.

In this way, the programme was rigorously tested for its effectiveness in meeting the needs and interests of local students, and there is overwhelming qualitative evidence from participants that this is the case.

Based on the pilot evidence, The Longbush Ecological Trust submitted a successful proposal to the Air New Zealand Environment Trust for three years funding to further develop and deliver the programme free to schools and teachers during 2019-2021 (now to mid-2022 given the COVID-19 pandemic disruptions).

As part of the programme audience engagement process, the educators consulted with schools, who effectively recruited students, and programme educators scheduled the workshops for mutually agreeable times and dates. School stakeholders reported being given a range of educational workshops from which they could choose to best suit with local school curriculum or inquiry interests.

Over the years the programme educators have built considerable rapport with schools and have gained solid support from them. There are examples of school principals, teachers and parents writing unsolicited letters of thanks to the programme and evidence of schools and teachers returning to the programme each year, thrilled at what the programme offers. One such letter from a principal included the following excerpt:

Our students absolutely loved being out of the classroom and in the wilderness for the day. The variety of activities and learning opportunities offered were excellent and kept our students' interest throughout.... They returned to school on a real high and were keen to share their day with peers and teachers. From a teacher point of view, I felt the day was well planned and thought out. The pace was excellent changing constantly from being quite physical to the more sedate discussion and question times leaving no time for boredom to set in. I have recommended Wild Lab to a number of my colleagues and will be planning to take another group there again next year. (Principal)

Using 'gaming' approaches, they design the curriculum, challenges, and artistic programme for problem-solving in each workshop and check back with the experts. Resources and teaching materials are prepared, and the workshops delivered.

To ensure that the workshops are continuously enhanced, evidence is gathered using participant self-completion forms and pre-and post-surveys to evaluate the design and impact of the workshops, and how future workshops can be improved. Analysis of these data were included in the two programme evaluation reports²² and cited as secondary data sources in this report.

Teachers confirm that the programme design and expert facilitation aligns very well and holistically with the New Zealand Curriculum on many levels, which is explored in more detail in later sections.

School stakeholders confirm that the programme educators demonstrate effective education pedagogy, providing and facilitating content expertly and in ways that engage the range of students that attend the workshops. The programme educators were commonly described by school stakeholders as communicative, energetic, relaxed, fun, passionate, excellent facilitators, able to engage students (and teachers), proficient in

²² Wild Lab Tiaki Taiao Year Two Report (PDF) (2020), Wild Lab Tiaki Taiao Year One Report (PDF) (2019).

using education pedagogy, and possessing great ability to motivate and keep the interest of students for the entire workshop time. Educators were also described as having good ability to link programme activities to the curriculum.

Pete is an excellent facilitator! [Education provider]

Anne-Marie is so energetic! She was there to deliver content that was fun and enjoyable...she was relaxed, she just knew what she was doing, was very relatable, a nice person and she knew what she was talking about. [Teacher]

The programme has gone a step further by commissioning the development of an ongoing evaluation monitoring framework to ensure that evaluative data are captured in more comprehensive, useful and timely ways throughout programme operation (refer Table 2, page 54).

Distinctiveness of the programme design and delivery

An overview of the distinctiveness of the programme design was developed by the evaluator after assessment of the various evaluation data. Primary data sources included interviews with programme educators, a Waikereru Trustee, and school and education institute stakeholders. Secondary sources included documentary evidence from a range of written documents including programme evaluation reports.

One key informant mentioned that it was distinctive that the programme aimed to address student concerns and to instil hope and encourage agency in students. The key informant felt that children are facing a world in which there are many crises and uncertainty e.g., COVID-19 pandemic, global warming, and feel the weight of expectations from school and family to succeed in this environment. The key informant also considered that children felt compelled to lower their sights at school (or at home), where success seemed to be attributed most to academic or sporting success, and this framing could be limiting for children. As such, the stakeholder felt that children felt disempowered and less hopeful about what the future holds for them or what they can do to improve their standing. Hence, the programme's aim to help address these issues.

One of the most common factors mentioned by stakeholders as making Wild Lab distinctive is the workshop location in a beautiful ecosanctuary offering a pristine private learning environment where trees, water and birds provide a backdrop that is invigorating and calming and lends itself to be explored. The site is beautifully maintained and unencumbered with technology, which teachers (and students) appear to enjoy. It is also situated close to the Gisborne city area, making the transport cost for most schools negligible.

Programme educators demonstrate expert facilitation and are skilled in engaging students and teachers, making use of effective education pedagogy and a range of well-timed and varied activities. The expert facilitation along with the outdoors environment encourages a freedom for participants to relax, engage and make the most of their time there, making this a distinctive experience for participants.

The programme design gives expression to achieving the Trust's focus, which is on renewing and re-establishing the area, including preserving flora and fauna and bringing back the birdlife, and taking a healthy ecological, Mātauranga Māori, and educational focus to inspiring participants to take action to preserve and restore te taiao. This integration of western science, Māori ancestral knowledge and cultural traditions, education pedagogy and the arts in relation to te taiao is very evident within the workshops and programme content, providing a very holistic learning and inspiring environment, which is a distinctive feature of Wild Lab.

Participants are exposed to an all-sensory, play-based and multi-modal learning experience where they see, feel and hear 'things' that are new, and sometimes known to them, which generates interest for them to know and understand more about te taiao and local history.

Creative problem solving and the use of gamification is employed by programme educators, which provide a fun, interesting and competitive element to learning, both individually and as a group, and is received enthusiastically by participants.

The beauty of the environment, effortless learning, hands-on activities and understanding the importance of environmental restoration create ripple effects of ongoing inspiration and action. These are most evident in post-workshop school activities where students have made pest traps, created posters, recorded their experience of Wild Lab experiences, and have learned about how to care for other creatures e.g., the weta. Teachers and principals commonly mention the enthusiasm and excitement students have for environmental and ecosystem related action after attending Wild Lab.

Stakeholders commonly mentioned that everything about the programme was done so well, highlighting the quality of both the programme and programme educators.

Alignment with the New Zealand education curriculum

Programme educators mentioned that their primary focus was on employing credible education pedagogy and proven communication and facilitation methods to engage students and teachers about te taiao. Having the Wild Lab programme and content aligned with the New Zealand education curriculum was a secondary focus. The educators were aware from the pilot workshops that the content of the programme aligned with the curriculum on many levels, and teachers and principals whose school students attended the pilot workshops confirmed the alignment and that 'standards' were being met for learning outcomes during workshops.

School stakeholders and an education provider staff member who attended Wild Lab and were impressed by what the programme offered and how it operated. The programme content aligned with school and tertiary education provider curriculums. For the tertiary provider, this included the social science curriculum which included place-based pedagogy e.g., the programme focused on kereru, their habitat, and the reasons for the threats they encountered.

One principal mentioned that the programme linked well with the school science curriculum, where students were able to look at the ecosystem, both underground and overground and had opportunity to look at science in practice. Students were involved in hands-on activities as well, whether building of huts/burrows, participating in drama or walking to the top of a hill to practice traditional 'calls'.

There's not many experiences like that [Wild Lab], that are linked to the curriculum and teach children in an interactive way. [Principal]

A deputy principal mentioned looking to the Wild Lab workshops as inspiration for the types of activities a school might adopt after attending a workshop. For example, the deputy principal talked about using the Mayfly workshop as a starting point, then incorporating other workshop activities to energise and engage students.

So, we need to bring it [Wild Lab education approach and activities] back into school and carry on with it. For example, the Mayfly [workshop] could be used as a starting point and we could build on the ideas like turning the awa into a person where students could use this interesting point for writing persuasive arguments.... If we thought about the programme [Wild Lab] like this, we could plan [ongoing school] learning to fit around our trip to Wild Lab. [Deputy Principal]

The same deputy principal mentioned that the programme used a multi-modal learning approach that targeted multiple areas of the brain, which was an effective way to engage students. The approach created experiences for students that involved, hearing, seeing, and doing together and used creativity and imagination very effectively, drawing from arts-based pedagogy, which for the principal was about putting student learning into an authentic context to feel more connected to their learning. The principal felt that this was of good benefit for

students as it provided them with a good reason to want to learn and research. The principal also observed that the Wild Lab learning was immersive in that all the activities and processes were about enabling students to learn about the ecosystem (te taiao) and their role in its wellbeing.

It [Wild Lab] provided intrigue for the children, to capture their interests – like drama – the kids were not expecting that! It gives them agency – to go and see it [ecosanctuary], to catch things in the water, the physical stuff but all the way along, they are learning. That's gold! You can't replace that. There's no downside to that kind of learning. [Deputy Principal]

The workshops provide easily accessible and quality learning opportunities for students (and teachers) that integrate New Zealand school curriculum and environmental factors using a cultural, traditional, and science-based approach that captures the interest and imagination of students.

One teacher inferred that the workshop learning wasn't limited to just the school curriculum:

It's not just specifically laying this into one subject area, it's looking at the values and stuff that the NZ curriculum has. The key stuff that kids, ideally need to be when they come out of primary school and this relates to it so much, because they are learning to care for the environment again those strong Māori values, all that kind of stuff by doing simple things like this, getting back out into the environment. Participating, communicating... (Teacher)

Another teacher was very clear that the workshop was clearly aligned with the New Zealand education curriculum and with real-world application of learning. In particular, the teacher reflected on how the workshop covers broad subject areas relevant to the curriculum and encourages students toward enquiry and informed decision-making to take action:

I think every single aspect of today [workshop] can be connected back to every single area in the NZ curriculum. You had the drama, obviously the physical fitness, you had your science but then you had your technology (through your planning and your building), you had your social sciences through taking that action and enquiry. You had your maths through just basic measurement (the fact we realised our burrow didn't work and we had to change it), that basic mathematical language. So, every single area of the curriculum is going to come into here, it's just the way that the teachers perceive that as being a free way to integrate it in and not a structured way...It's the best possibility because when they are going out to the real world that is how it works. (Teacher)

The workshops inspire teachers to want to be good educators and to improve how they teach:

This [attending a workshop] just took me back to my childhood. I loved it. This is how I want to teach. The smells, touch, feel. That's how I learn, and I know lots of other Māori learn that way too. I think schools are starting to see that this type of learning is crucial. We are not computers. Māori have always known that. (Teacher)

This makes total sense. The learning all fits into a wider understanding. Building knowledge slowly but in context. It's really exciting. This can be applied to so many different areas. (Teacher)

It's so practical but reflective. I can't help wanting to change the way I do things. It's very special. I feel like we have been on an adventure together. (Teacher)

Alignment with Education for Sustainability Standards

Education for sustainability develops the knowledge, skills, values, and world views necessary for people to act in ways that contribute to more sustainable patterns of living. It enables individuals and communities to reflect on ways of interpreting and engaging with the world.

While no specific inquiry was made with teachers about whether and how well the Wild Lab workshops were aligned with Education for Sustainability Matrix²³ learning outcomes, the evaluation evidence suggests that the Wild Lab workshops are aligned with most of the outcomes, including the following:

Level 2

- Undertake a personal action, with reflection, that contributes to a sustainable future
- Explain how human activity in a biophysical environment has consequences for a sustainable future
- Demonstrate understanding of how different personal values have implications for a sustainable future
- Demonstrate understanding of initiatives that contribute to a sustainable future
- Develop a collaborative response that promotes a sustainable future, in relation to a current issue
- Develop understanding of aspects of sustainability in different contexts

Level 3

- Evaluate a personal action that contributes towards a sustainable future
- Evaluate measures that may be taken to sustain and/or improve a biophysical environment
- Analyse how different worldviews, and the values and practices associated with them, impact on sustainability.

Alignment with Pūtātara

While no specific inquiry was made with teachers about whether and how well the Wild Lab workshops were aligned with Pūtātara²⁴ outcomes, the evaluation evidence strongly suggests that the Wild Lab workshops are aligned with the three key tenets of the framework, which are Tūrangawaewae, Kaitiakitanga, and Whakapuāwai.

Alignment with education key competencies

Evaluation learnings based on the design and operation of the Wild Lab workshops show that there is good alignment with education key competencies, including:

- Thinking
- Using language, symbols, and text
- Managing self
- Relating to others
- Participating and contributing.

Strategic plan

The strategic plan has a focus on product and on the market.

Product

The 'problem' that Wild Lab Tiaki Taio sought to address comprised four key areas, which are:

- People losing connection of being part of the ecosystem

²³ <https://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards/Social-sciences/Education-for-sustainability>

²⁴ <https://putatara.education.govt.nz/#/home>

- Grave concern over the current state of ora (health, well-being) of local ecosystems
- Lack of understanding of how to restore local ecosystems using both Mātauranga and western science
- Variability in intercultural understanding, respect, and communication.

There is good qualitative feedback from programme participants that indicates they do not have strong connections with the ecosystem prior to attending the workshops.

This includes comments about living so close to the ecosystem sanctuary and not even knowing it was there.

I have been just so excited since the start of the term when I heard we were coming. This is the most enjoyable trip I have ever been on. In my daughter's old class, she never even got to go out! It's right up our street. I love the bush and try to take my whanau into the outdoors as much as possible. This is great, I never knew it was here. I feel so lucky and have loved sharing this space with the kids.

(Parent)

Feedback from participants supports the notion that they are gaining increased understanding and concern about the wellbeing of the ecosystem and what they can do to support it to improve its state of ora.

Solution to identified 'problem'

The 'solution' to the problem revolved around three key areas, which are:

- Foster a relationship of kaitiakitanga between people and the wider environment
- Foster relationships between Māori and non-Māori, and between Mātauranga and western science traditions
- Provide a motivating and immersive experience that encourages self-persuasion to take action.

There is good evidence to support that the programme design and workshop content is closely aligned with giving effect to achieving the identified solutions.

Feedback from participants reveal that programme content includes learning about caring for the environment (kaitiakitanga) which includes learning about Mātauranga and science traditions. There is ample evidence from participant feedback about the workshops providing motivating and immersive experiences, which orients them toward the desired goals i.e., fostering relationships, taking action.

The unique value proposition of Wild Lab Tiaki Taiao is functioning as a fully-fledged, world class creative environmental programme, featuring Mātauranga and western science-based creative challenges/workshops.

Key metrics of success are:

- Levels of engagement (easily identified)
- Ongoing behaviour changes (need further ongoing evaluation)
- Programme awareness (easily identified)
- Community participants are inspired to restore their ecosystems to a state of ora
- Levels of community participant connection and sensitivity to the natural world
- Community participants develop a clear vision of the future in which they want to live.

Levels of engagement can be easily identified by the rich qualitative feedback captured to date. It is very clear that the design, content, and location of the workshops along with the expert facilitation of the educators is engaging students and teachers effectively.

It is too early to be able to assess whether the design and content is contributing to ongoing behaviour changes. A long-term evaluation and monitoring framework will be useful for gathering this evidence.

Levels of programme awareness is easily identified from participant and stakeholder feedback. There is high awareness of the programme, particularly after the first time a school sends groups to the workshops. The enjoyment of learning and the creative content based in a beautiful ecosystem leaves an indelible mark on participants, based on their comments.

There is some evidence about students as community participants feeling inspired and enthusiastic about their ecosystems as noted by their desire to continue with ecological and environmental tasks and projects after attending Wild Lab. However, more robust data capture is required to evidence this outcome. A long-term evaluation and monitoring framework will be useful for gathering this evidence.

There is good evidence about the levels of student connection and sensitivity to the natural world, as community participants, however, more robust data capture is required to evidence this outcome. A long-term evaluation and monitoring framework will be useful for gathering this evidence.

At this stage, it is difficult for an evaluative assessment to be made about how well community participants have developed a clear vision of the future in which they want to live. More discreet questioning around this is required and will be supported by the presence of a long-term evaluation and monitoring framework.

One of the ultimate outcomes for the programme is that the Wild Lab Tiaki Taiao is functioning as a fully-fledged, world class creative environmental programme, featuring Mātauranga and western science-based creative challenges/workshops. The design and content of the workshops and its associated promotion and socialisation is working well to support this end goal. However, more discrete data collection is required to evidence this achievement. This will be supported by the presence of a long-term evaluation and monitoring framework.

Programme team members noted that the cost structure components for the programme remained largely unchanged from the 2018 strategic plan until recently, where additional cost components are being considered.

The cost structure for the programme relates to:

- Programme design and delivery costs
- Management costs
- Marketing costs
- Transport costs
- Venue costs.

Market

There are three distinct 'unfair advantages' that Wild Lab Tiaki Taiao possesses, that increases their effectiveness in achieving strategic plan intentions, which are:

- Access to experts in scientific disciplines and Māori ancestral knowledge
- Award winning 'Welcome Shelter' and 1769 Garden, and Rene Orchiston collection/ Pa Harakeke
- Innovative programme design.

The evidence is very clear that the programme has experts as noted in their strategic plan that worked collectively to design and develop the programme. These experts continue to work collaboratively to provide ongoing expert support to the programme.

The Longbush Welcome Shelter²⁵ at the Waikereru Ecosanctuary received a national Design Award from the New Zealand Institute of Architects in the small project architecture category, for the Gisborne and Hawkes Bay region, in 2020. Described by judges as “feeling as though it has sprung up organically through time, the shelter is in fact the product of generous donations of labour (88 volunteers) and materials (88 suppliers), made to promote the stewardship of our natural environment. In the tradition of the picturesque, an elegant canopy floats over three rough-hewn boxes carefully positioned to frame views. There is a certain frisson in the contrast of the techniques and tastes of leisured English travellers of the 18th century and an environmental restoration programme for the untamed New Zealand bush that helps elevate this small collection of structures into something quite special and timeless.” Participants of the Wild Lab workshops mentioned how beautiful the shelter was and how well it served as a point of contact and for undertaking workshop challenges and activities.

Stakeholders overall agreed that the programme was innovative because it provided contextualised learning that drew on western science and Mātauranga within a beautiful ecosystem using activities that invited student creativity, problem-solving, and collaboration, engaging students across all the learning styles. The costuming and drama elements of the workshops were particularly innovative and not done within a school classroom environment. Student learning was characterised by having fun and enjoying themselves.

The channels for promotion and socialisation of the programme are:

- Education networks
- Word of Mouth
- Public relations (PR)
- Social media
- Educational and ecological tourism networks.

The programme has been socialised by programme team members through their education networks. Word of mouth remains the main method for promoting the programme, as noted by programme educators. Programme educators take a relaxed approach to promoting the programme, ensuring that they keep ‘people’ interested but “not overdoing it” to ensure that programme is not oversubscribed. Facebook and Facebook Messenger were used from the start to promote the programme and the latter has proven to be an effective communication tool. Educators reported that the Waikereru Ecosanctuary website is a key channel for promoting the programme, which provides photos, information and articles that show the programme’s journey. The programme has received much positive ‘PR’ from the local newspaper, The Gisborne Herald, and an article from Radio NZ, which appear on the Waikereru website.

Stakeholders confirmed that they had heard about the programme directly from programme team members and from staff, and that awareness of the programme was high amongst local schools, largely due to word-of-mouth promotion.

Stakeholders confirmed that programme personnel have engaged with school principals, teachers and staff from teacher education and professional development entities (e.g., EIT Tairāwhiti, Ako Panuku (Haemata Ltd), Tairāwhiti Learning Support Coordinators) to promote and socialise the programme in simple, relevant ways. This included programme personnel initiating and attending school staff meetings, meeting with school principals and senior staff and with senior managers from education institutes/organisations.

²⁵ <https://www.nzia.co.nz/awards/national/award-detail/9335>

While there are five key customer segments identified in the strategic plan, the three that are currently in scope are:

- Schools (Teachers/Students)
- Tertiary Education (Teacher Education) and Teacher Professional Development Programmes
- Families/Whanau.

4.1.2 KEQ 2: How effective are the stakeholder relationships in giving effect to the design of the programme?

Evaluative statement: Stakeholder relationships were very effective in giving effect to the design/co-design of the programme. The programme benefitted from extensive and expert expertise across all the design elements and through careful coordination and facilitation, the expertise was channelled into the multiple workshops over the years. School teachers, principals and education organisations also contribute to ongoing improvements in programme design both orally and by completing workshop survey forms at the conclusion of workshops.

Requisite expertise

The Wild Lab Tiaki Taiao team has engaged, and continues to engage experts in western science, mātauranga Māori and cultural traditions, education, costume design and performance, and drama to inform the design and operation of its programme. The 'content experts' who have contributed to date is presented below.

Pete and Elle Jarratt (Jarratt Create & Educate, JCE), award-winning educators who co-designed and delivered the formative workshops, had an exceptional ability to engage with young people and inspire them with enthusiasm for science and technology and environmental insights gained from mātauranga taiao. This expertise has continued with Pete Jarratt (Two Hands Consultancy Ltd) and Anne-Marie Vigeant (Human Chlorophyll) as the programme educators. Anne-Marie has qualifications in Applied Management (Tourism), Environmental Education and Adult Teaching and is a Sustainable Living Educator.

Creative character costuming expertise is provided by Brighde Penn, who draws on her theatre and film costume design experience, and the early designs of Elle Jarratt (JCE), to give effect to the performance element of the programme.

Drama expertise is provided by Silke Steffen, who also enacts the character of the costumes.

Dr James Russell (University of Auckland) and from the Bio-diversity National Science Challenge is an internationally recognised expert in pest ecology and control, who has also helped to organise early funding for Wild Lab projects. In consultation with Steve and Robyn Sawyer (Ecoworks) workshops explore the impact and management of introduced mammal predators, linking participants with Waikereru Ecosanctuary pest management challenges²⁶ and related local and national Predator Free New Zealand initiatives now underpinning the 100% Pure New Zealand brand.

Steve Sawyer, a restoration ecologist who has guided restoration work at the Waikereru Ecosanctuary since 2002, is an expert in the restoration of seabirds and reptiles who advises on projects in Fiji and Hawai'i, and

²⁶ <https://www.waikereru.org/assets/documents/LongbushAndWaikereruManagementPlan.pdf>

restoration projects at Young Nick's Head and Cape Kidnappers. He has provided advice on the Oi workshop²⁷ along with local Māori experts (Ngai Tamanuhiri) as part of the Tairāwhiti Titi Restoration.

Murray Palmer is a freshwater ecologist who has been involved in restoration work at the Ecosanctuary for some years. He has contributed to the Restoring Koura workshop, in consultation with Amy-Rose Hard (Nga Mahi a Taiao, Gisborne), which is informed by their 'Assessment of the freshwater environments at the Longbush Eco-sanctuary' (Te Awaroa Report No.7, 2015). They support and lead participants into the He Awa Ora Healthy Rivers project²⁸ led by Nga Mahi a Taiao, a holistic science-based project that provides education opportunities to further develop participants' understanding, appreciation and management of our freshwater environments.

Dr Dan Hikuroa is a geologist and mātauranga taiao expert who collaborated with Dame Anne Salmond in the Te Awaroa project at Ngā Pae o Te Māramatanga Centre of Research Excellence.

Graeme Atkins (Ngāti Porou), winner of the Loder Cup for conservation, a renowned expert in mātauranga taiao and a DOC Tairāwhiti ranger, and botanist Malcolm Rutherford, assisted with the establishment of the 1769 Garden in Waikereru Ecosanctuary which was designed by Philip Smith (O2 Landscapes) and features plants collected in 1769 by Dr Daniel Solander and Joseph Banks from the Endeavour.

Philip Smith is the author of a major book on New Zealand landscapes and NZ's leading native plant landscape architect.

Janine Te Reo (Ngāti Porou), weaving tutor at Te Wānanga o Aotearoa, is the kai-tiaki of the Orchiston harakeke collection and informed the design of a programme workshop on Pā Harakeke/Manu Tukutuku²⁹ in consultation with Erica Lawson, te reo Māori expert and Fiona Collis (Harakeke artist). Dr Sue Scheele (Landcare Research-Manaaki Whenua) was pivotal in establishing the Rene Orchiston harakeke collection at Waikereru, who along with Katarina Tawiri (Landcare Research-Manaaki Whenua) deepens dual heritage knowledge and inspires uses of traditional materials for innovation.

The programme has recently developed a "Hi-tech in the Bush" workshop for delivery from 2022. This is a soundscape experience applied to ecology to capture the voice of nature using parabolic, binaural, and contact mics to record nature live and then mixing the sounds in the studio to create music tracks. The workshop will involve collaboration with Tōnui Collab (specialist bilingual education lab in Gisborne), Stu Potter (Ngāti Porou) of Mojo, a virtual experience company, Steve Salmond, a Virtual Reality Expert, and Dr Jacqui Knight of Transtechnology Research at the University of Plymouth in England.

The Wild Lab Tiaki Taiao team is overseen and co-ordinated by Distinguished Professor Dame Anne Salmond and Dr Jennie Harré Hindmarsh as two of The Longbush Ecological Trust's voluntary trustees. Dame Anne, a co-founder and the Chair the Trust, was 2013 New Zealander of the Year, is an anthropologist with a strong interest in environmental sciences. She is also patron of Te Awaroa: 1000 rivers and a number of other environmental organisations, co-initiated the Waimata River Catchment Restoration Project³⁰, and was the 2013 winner of the Rutherford Medal, New Zealand's preeminent scientific prize.³¹ Dr Jennie Harré Hindmarsh has considerable Education, Policy and Research experience including a PhD in Education (Victoria University

²⁷ <https://www.waikereru.org/assets/documents/FirstYearTitiProjectReport.pdf>

²⁸ <https://www.nmtt.co.nz/education/he-awa-ora-healthy-rivers/>

²⁹ <https://www.waikereru.org/news/pa-harakeke-plans/>

³⁰ <https://www.waikereru.org/river/>

³¹ Wild Lab Tairāwhiti, 2017. Application to the Air New Zealand Environment Trust, page 8.

of Wellington), a Master of Sciences in Social Administration and Social Policy (London School of Economics, University of London), and was the Research and Evaluation Coordinator for Ngāti Porou Hauora Trust Board for the past 15 years. Jennie has also occupied numerous government, not-for-profit and private sector roles including Trustee, Te Hā 1769 Sestercentennial Trust, Trustee, Longbush Ecological Trust, and Board Member, Ako Aotearoa National Centre for Tertiary Teaching Excellence.

Strategic planning and strategic relationships

There is good evidence to support that the programme design and associated workshop activities are closely aligned with the strategic plan and its intent and that the 'programme' has engaged with experts using a co-design process to achieve this.

Wild Lab Tiaki Taiao has a strategic plan, which has helped the programme to maintain focus since October 2018, building on the learnings from the pilot phase. The plan was developed by the strategic partners, each bringing relevant expertise to its development.

Co-design of programme

School stakeholders noted that the co-design and co-construction of workshop content had happened prior to them getting involved with the programme. This was confirmed by programme personnel and Longbush Ecological Trustees. The Trust draws on experts in Western science, Mātauranga Māori, Arts, History and Technology including a botanist, pest management expert, traditional weavers, restoration ecologists, and experts in kaupapa Māori pedagogies. In designing programme workshops, the education designer engages with the various other experts about a workshop topic and each expert provides input into the design of the workshops. Programme personnel confirmed that all experts were aware of the intent and objectives of the programme. Careful coordination of expert input was often required because the experts are in great demand and are very busy.

Strategic relationships

The strategic partners were:

- The Longbush Ecological Trust
- Jarratt Create and Educate (JCE) until 2019
- Two Hands Consultancy Ltd from 2020
- Ongoing consultation with an informal youth reference group, groups of teachers, principals and communities of learning.

4.1.3 KEQ 3: How sufficient was the programme resourcing during the formative development of the programme?

Evaluative statement: The resourcing received by the Wild Lab Tiaki Taiao programme was adequately sufficient during the formative development of the programme. The generosity of Air New Zealand Environmental Trust, and other funders, enabled the Trust to build on the learnings from the pilot programmes, and to secure administrative and workshop facilitation expertise. Generous good will and considerable pro bono input from the two Trustees and many experts has helped the resourcing to go further for longer.

Funding and revenue

The programme successfully obtained funding for development stages and capacity until mid-2022.

The Trust is committed to a principle of providing the programme free of charge to schools and groups of teachers to ensure there are no financial barriers to participation. Therefore, it has sought funding for the Wild Lab Tiaki Taiao operation since 2016 and to date has attracted funding from a small range of benefactors.

Funding was secured for three years after the pilot workshops. The Air New Zealand Environmental Trust has been the most substantive funder to date and was thoroughly impressed by the programme after their first visit as part of deciding on their response to the funding application, and then each year in response to the Trust's annual reports.

At minimum, the strategic revenue plan for the programme is to be fully funded year-on-year, covering all costs, demonstrating the Trust's commitment to keeping the programme entry-free to schools and teachers. Currently the programme has received sufficient funding for development stages and capacity to mid-2022, especially given the good will and considerable associated pro bono input. Considerable effort is now being expended to secure at least another three years of funding to continue to provide the programme to schools and teachers.

The revenue streams identified in the strategic plan are:

- Air NZ Funding Environment Trust
- Other funders
- Professional development (PD) budgets
- Tertiary education budgets (teacher training)
- Sponsorship
- Industry human resources (HR) budgets
- Fees.

Infrastructure

The unique value proposition of Wild Lab Tiaki Taiao is operating a world class environmental programme, featuring Mātauranga and western science-based creative challenges/workshops. Therefore, infrastructure that enables fundamental facilities, systems and resources that support the sustainable functionality of this proposition needs to be present.

The specific foundational systems and resources which are present for the Wild Lab Tiaki Taiao programme, to function effectively (and sustainably) are summarised below.

The programme has permanent long-term access to a sufficiently large QEII covenanted ecosystem/natural environment that lends itself to the workshops and activities that have been designed.

There are good roads to and from the ecosystem and the ecosystem sanctuary is only a 15-minute drive from Gisborne city.

There is a purpose-built award winning 'Welcome Shelter' building on site, which is a 'base' for workshops, and also a large Yurt tent pitched 5 minutes' walk away. As yet there is no power or internet available in the Welcome Shelter area, however solar power and internet will be installed when the added 'Tree House', currently at final design stage, is built nearby. A compost toilet facility is at the site, which covers basic requirements and enables the technology component of the workshops to be supported.

The programme has rich resource assets to support the design and delivery of the programme. These include having access to leading expertise in:

- Mātauranga Māori, traditional knowledge
- Western science

- Ecosystems and environmental matters
- Education facilitation and delivery
- Creative design e.g., costuming
- Workshop design that incorporates mātauranga, creative challenges, environmental educational outcomes, and aligns with the NZ Curriculum.

The programme, through its 'team' has developed relationships and support with schools, communities, scientists, and a wide range of Māori, and has worked hard over the years to build and maintain these relationships. Since the pilot programmes in 2016, the programme has engaged with schools and teacher development programmes and has sought participant feedback about the workshops as part of their continuous improvement practice. The programme is currently well promoted and socialised locally to schools and whānau in Gisborne city and its rural fringe, as reported by programme personnel and key stakeholders.

While the strategic plan³² has identified connecting workplaces and industry with the environment as part of their longer-term vision, and domestic and international tourists e.g., cruise ships and ecological groups as potential programme customers, these potential developments are currently out of scope. This is primarily because expanding the programme's operation could affect its ability to remain cost/entry-free for schools. The Trust is very clear about not wanting the programme to become a commercial operation which could diminish its distinctiveness and ecological value. Also, if the programme was to expand in scope and operation, the increased activity could have a negative impact on the ecosystem, which would be counterproductive to the Trust's desire to both preserve and restore the environment and provide a sustainable unique outdoor environmental educational facility.

4.2 Process learnings

This section presents evaluation learnings based on the assessment of how well the programme is being implemented against process elements identified in its intervention logic (refer Appendix A) and against its strategic plan. The learnings also provide commentary about whether and to some extent, how well, the programme's processes are supporting the achievement of intended outcomes.

4.2.1 KEQ 4: How effective are stakeholder relationships in supporting the implementation of the programme?

Evaluative statement: Programme coordination and management is operating well, with Trustees and programme educators working in synergy to support programme implementation and to giving effect to the Trust's purposes around educating the general public about the need to protect and restore wildlife and native forest environments in New Zealand. The relationships that programme educators have developed with schools and education providers is very positive and it has resulted in multiple school visits to the programme over the years. The relationships and consequent attendance at Wild Lab also motivate teachers to promote the programme, generating new school group visits. For some of the workshops, experts have attended to facilitate components of the programme, adding gravitas and specialised knowledge and perspectives to what is learned and experienced by participants.

Programme coordination and management

Programme coordination and management is sponsored, supported, and overseen mostly by Jennie Harré Hindmarsh, a Trustee on behalf of the Trust, with support from the Trust Chair and Treasurer (all three are pro

³² Wild Lab Tiaki Taiao, 2018. Strategic Plan, Draft version 2.

bono/voluntary). One of the educators, Peter Jarratt, as part of his contract with the Trust, and the MoU between the Trust and JCE then Two Hands Consultancy Ltd, works collaboratively with the Trustee, Chair and Treasurer to provide professional services to deliver the programme. The operational coordination is undertaken by Peter Jarratt and Anne-Marie Vigeant, both of whom are programme educators. Anne-Marie has been facilitating the workshops whilst Peter has been overseas most of 2022. Peter receives an annual ‘admin fee’ as well as an education co-design and delivery fee under current funding agreement, and subcontracts Anne-Maire and Silke.

The combined governance, coordination, management, and operation of the Waikereru Wild Lab Tiaki Taiao programme gives effect to the purpose described in Clause 5 (h) of the Longbush Ecological Trust, Deed of Trust, 2009³³, which is to “educate the general public, especially school children, about the need to conserve and protect wildlife and native forest environments in New Zealand.”

Positive relationships and collaboration

The Waikereru Ecosanctuary (Longbush Ecological Trust) has very strong engagement with and support from local and national organisations – including to date the Eastern Institute of Technology; Te Hā 1769 Sestercentennial Trust; YMCA; Gisborne District Council; Te Wananga o Aotearoa; the Department of Conservation; Trees that Count; Predator-Free New Zealand; Queen Elizabeth II Trust, and funders across the country.

The Trust has many examples and letters of support for different projects in the Ecosanctuary Waikereru from these organisations, and from others who have visited the site.

It is very evident that the programme has positive relationships and collaboration with inspiring teachers and leading experts.

Local communities are empowered to apply their curiosity and imagination to explore and contribute meaningfully towards desired environmental goals. This is evident by the collaboration with multiple experts across iwi, academia, environmental and education fields.

Communications processes, marketing, branding and promotion

Effective Wild Lab Tiaki Taiao marketing, branding and promotion is established and is evident.

Actively engaging schools and education institutes

There is good evidence that the programme has actively engaged schools and tertiary education institutes about the programme, which have been the primary focus of their attention. School stakeholders confirmed that Wild Lab programme educators communicate directly with key contacts from schools through attendance at planned school meetings e.g., Principals Association meetings and through email and phone calls. Parents and whānau are typically engaged in supportive roles by schools directly, as a secondary audience for the programme.

For an education provider, the relationship with the Wild Lab programme was established with a previous staff member who implored the new staff member to keep connecting with the programme. The relationship between the provider and Wild Lab has been a stable one since. The new staff member met with the programme educator to ensure that provider educational aspirations were still aligned with the teacher education programme (which they were) and subsequent contact was by predominantly by email.

³³ Longbush Ecological Trust, 2009. Deed of Trust. Clause 5 (h).

This uncomplicated communications process suits school staff well and once a relationship with Wild Lab educators is established, it is easy to continue with ongoing communications as required. A few school stakeholders noted that teachers who left the school but who had formed relationships with programme educators were very passionate about ensuring the relationship continued, and a new teacher was always appointed as key contact to continue the relationship.

As noted in section 4.1.3, the programme has not actively engaged with workplaces and industry, and domestic and international tourists, which are currently out of scope, despite them being identified as target groups in the strategic plan.

Programme awareness

Most stakeholders reported that Wild Lab is well known within the teaching community, especially with Enviro Schools, but that they were uncertain about how well-known Wild Lab was to the wider community. Many teachers suspected that it might not be that well known in the wider region given that some teachers had not known about Wild Lab until hearing about it from other teachers. Some teachers wondered whether Wild Lab was not looking to become too 'big' in case they lost their special sense of awe and value about what they offered, if it was heavily promoted through social media.

Branding and marketing

Most stakeholders were aware of the Longbush Ecological Trust's website and had visited it and a few were aware of the programme's presence on Facebook and Instagram. Most stakeholders were uncertain about whether the programme had a presence on social media.

In terms of specific marketing and branding, programme leaders noted that additional funds would be sought to contract a local marketing specialist to further develop this area for its current operation, and to print related materials.

The programme is promoted by the primary audience

Once schools and candidate teachers have attended a workshop, they become advocates for the programme and passionate supporters of it, as indicated by the qualitative feedback from them in internal programme evaluations, and interviews with school stakeholders for this evaluation report.

All school stakeholders interviewed actively promoted the programme internally and to other schools and unreservedly continued to advocate for the programme and promote it within the education community.

Word of mouth promotion was particularly evident amongst all school staff, mostly hearing about the programme in the first instance through one of the programme educators.

The enjoyment of learning together within an ecosystem environment was very evident, as noted by one of the teachers (who had previously participated as a candidate teacher):

I was really pleased to be able to return now as a qualified teacher. Last time I was here as a 3rd year student. It's been neat to do the same things now actually alongside my own class, learning together and having heaps of fun. (Qualified teacher)

Providing the programme to candidate teachers has not only added value to their education, but also has helped promote the programme to others. For example, three of the EIT candidate teachers who attended the workshops in 2019 returned in 2020 with classes of their own during their first year of full-time teaching.

I loved it! I look forward to recommending this [Wild Lab Tiaki Taiao workshops], to the next school I attend! (3rd year candidate teacher).

Trustees and programme educators noted that for some of the workshops, they invited experts to deliver components of the programme, bringing their specialised knowledge and expertise to bring alive the experience for participants. The experts are very supportive of the programme and are keen to be involved depending in availability.

4.2.2 KEQ 5: How well is the programme being implemented and how can the implementation be improved?

Evaluative statement: Programme implementation is supported by many factors. The programme educators are very skilled and experienced and possess clear understanding of the programme vision and how best they can give effect to this. The way they operate is underpinned by overarching tikanga, principles, values, and good education practice, which are congruent with their personal values and principles. There is good evidence from virtually all programme participants of how well they are engaged and how much they gain from participating. There is good evidence to show that the programme operation is giving effect to achieving the programme's strategic 'solutions', as identified in its strategic plan, which are:

- Foster a relationship of kaitiakitanga between people and the wider environment
- Foster relationships between Māori and non-Māori, and between Mātauranga and western science traditions
- Provide a motivating and immersive experience that encourages self-persuasion to take action.

The key areas for improvement lie in the programme's ability to secure funding to continue and increase in scale, develop complementary resources, and to have technical input into systems development as required.

Programme implementation

Underpinning programme tikanga, principles, values, and good practice

Programme educators described the importance for them to model effective engagement practices and education pedagogy. For them, their behaviour was underpinned by their own set of tikanga, principles and values, though they did not specifically articulate it as such. Foremost was the importance of whanaungatanga (building relationships with people and te taiao) by establishing and building respectful and inclusive relationships and through the programme, demonstrating how important it is to apply these same relationships to nature.

Programme educators demonstrated kaitiakitanga (care and protection of kin) in various ways. Sometimes it required them to 'protect' the learning opportunities for students by asking teachers and invited guests to step back from their usual positions of influence or expertise to allow the students to be guided and facilitated by the programme educators. This was to ensure that students engaged freely, were able to be themselves unencumbered by the weight of expectation of others, to experience the full impact of a dynamic programme.

When stakeholders were questioned about whether programme workshops were safe places for participants, the overwhelming response was that they were indeed safe places. There are multiple stories from teachers and principals about how well students engaged with programme educators and the natural environment, and no mention, whether prompted or unprompted, about students or teachers not feeling safe for whatever reason.

Kaitiakitanga always meant demonstrating care and understanding of the environment and for representing and honouring the various cultural, historical, and environmental knowledge contained within the programme. It was also demonstrated by educators taking utmost care to ensure the safety of programme participants, whether physical, emotional, or otherwise.

Programme educators demonstrated manaakitanga (giving mana to others) by encouraging students based on their individual strengths and achievements, which was solely about the students and not about achieving competency-based standards. As noted by a programme educator, this included reprimanding students about their behaviour, but it was always done with the proviso that they would build-up the same students.

We see the mana in every kid. It sometimes means reprimanding a kid, but we always build them back up again. (Programme educator)

For the educators, modelling the respectful and inclusive behavior is congruent with who they are as individuals, and it was also in keeping with the entire ethos surrounding te taiao and the cultural and historical traditions that have nurtured both people and the land, as they have come to know it. The educators have a strong desire through the programme, to help people develop a genuine connection with the land as noted by one educator:

We've had distance created [between nature and ourselves] by how you live. You can go for a walk in nature but people don't know how to look and see and experience nature. People want to connect to nature, but we need a mechanism to reconnect with it. It's [Wild Lab] about getting people back in the game again. (Programme educator)

Tailoring experiences to schools' preferences

Programme educators noted that there was flexibility within the programme to accommodate school's requests for the programme to cover specific curriculum related interest items. This has always been a feature of the workshops right from the pilot stage. Educators noted that some schools were more than happy to take what the programme offered and some, for example wanted a workshop that included content about Moa and their extinction or content about Korora (little blue penguins), which were local inquiry topics within the respective schools. Other requests by schools were for things that were not necessarily competency based as noted by one of the programme educators:

Many teachers say things like "there's been fighting in the classroom, can we [Wild Lab] address leadership?" Or someone [student] might be shy and [ask] can we accommodate that. It's [requests] not necessarily competency based, but it's adapting things. Every workshop is different. [Programme educator]

School stakeholders reported being given a range of educational workshops from which they could choose to best suit with their requirements. Schools could select experiences to accommodate student age-group, class size, age, and best fit e.g., alignment with a current in-school inquiry, which optimised workshop content with local curriculum and learning outcomes and supported school staff to exercise a measure of agency about the experience.

A couple of teachers mentioned receiving an overview of the workshop in which their students would engage, prior to the visit. The overview detailed a learning outline and the activities for the day and the teachers noted that the programme educators delivered everything as described and exceeded teacher's expectations.

It wasn't information overload and there were different spaces to learn. A lady dressed up as a bird for show and tell and the kids were hooked and fascinated by what she shared. They tapped into what was interesting for the kids in different ways and the kids just loved it! [Teacher]

A strong emphasis on ancestral mātauranga Māori links

Most stakeholders reported that the programme incorporated Māori ancestral knowledge and cultural traditions and narrative that was woven through the activities. This included:

- programme educators describing traditional communication 'calls' between two points
- explanation of landmarks e.g., hangi pit, kumara pit, hill-top

- discussion about native trees and birds on site, and about the oi (Titi)
- discussion about endangered species and the Moa and Haast Eagle
- presenting local history and Māori habitation of the areas as described by local Māori.

Teachers spoke very favourably about the strong emphasis the programme places on maintaining ancestral mātauranga Māori links and how this connects in cultural ways to the environment.

Māori legends and ancestral knowledge was incredible to hear. That sort of stuff just isn't written!! And Kaitiaki came across very strong. Caring and protecting our beautiful planet. Awesome delivery in every way I would have nothing to add to this incredible experience. (Teacher)

The workshop design aligns with school-based processes used as part of the Māori curriculum:

I was really impressed with how you have incorporated using the pepeha when using the design led thinking model as this follows what we do at school as part of the Māori curriculum. I feel that it could be used in any classroom and having opportunities to do some EOTC [Education Outside the Classroom] is beneficial for all kids to move out of their 'safe place' and challenge themselves. Having been to Waikereru and experienced what you do out there, having this resource on our doorsteps, we as a community are very lucky. (Teacher)

The programme also provides the Pā Harakeke / Manu Tukutuku workshop, which was full immersion te reo Māori that involved experts in te reo Māori and Māori ancestral knowledge in the design and delivery of the workshop. The workshop features karakia timatatanga (starting) and whakamutunga (closing) specifically related to the harakeke kaupapa (topic) and expert teaching and instruction about harvesting harakeke and making manu tukutuku.

The immersive learning experience was distinctive, motivating and inspiring

There is ample evidence from participant feedback about the content of the workshops providing motivating and immersive experiences for participants. The workshop activities immerse students within the environment and ecosystem where they interact with nature e.g., building huts/burrows, calling the oi from a platform amongst the trees.

The workshop creativity is exemplified using costuming and drama that brings to life the insects and animals characteristics and persona, where students have a tangible experience that surpasses the rational understanding. Instead, they also see, hear, and feel what it might be like to be Mayfly, the oi, a moth, or a stoat. This new understanding is reinforced as they are given dramatising challenges to become the insects and animals within the natural environment, guided by the educators. Students (and teachers) are given license to pretend, and to be silly and curious and to explore the lives of insects and animals and their engagement with their habitat. Programme educators noted that the workshop is designed for students to make a more personal connection with te taiao instead of obtaining this simply by reading or hearing about it. The educators added that the costuming component tends to 'break the ice' with students because it is something that they were not expecting to encounter, and it captivates them and holds their attention. A parent said the following about the workshop approach:

Loved the great day out. Looking at nature with the kids and the class is important. Everything is not about pen and paper. Activities - I loved them all. Great steady pace the kids can manage, it's relaxed, enjoyable and I loved the approach of freedom to learn and explore not the 'do this, do that' attitude. (Parent)

While there is a lot of collaborative work required in the workshops, as noted by programme educators, the primary focus of the workshops is to engage students and teachers, and to inspire and encourage individual self-direction, self-persuasion, and freedom in students to take action (agency).

Programme educators mentioned being intentional at the end of the workshop (end of the day) to engage in reflection with participants about the day. They remind students about what they had learned and help to 'join the dots' for students about what the activities and challenges were really about, in case they hadn't worked these out themselves. As noted by the programme educators and some teachers, the reflection component often made students and teachers realise that much of the learning was almost incidental because of how interesting and fun the activities and challenges were throughout the day.

One programme educator noted hearing stories from parents about how Wild Lab has positively changed their children, and the following quote conveys:

I hear parents of kids that have attended the programme saying that Wild Lab has changed their kids! They say, "my kids don't like science, but being in nature, it really cracked it open, and they're engaged in science now."

Two principals spoke fondly of the programme discussions and activities in which teachers and students participated, including learning about pests and predators, storytelling, learning about the oi (Mutton bird) and freshwater koura, and working with natural material like flax. Students were highly interested in the programme content, which they described as increasing students' understanding about the ecosystem there. One principal noted that the programme met school expectations about students having an educational and enjoyable day out, where students felt inspired to talk about their experience weeks after the event. Many stakeholders described the programme's multi-modal immersive learning approach kept children engaged all day.

One programme educator mentioned that it was the sum-total of the workshop that inspired students – it was a bit of everything and there was no fixed agenda. It was also about helping students to become self-aware and to see their potential.

It's about lifting the horizons [for students] to see who I am in this space. (Programme educator)

Engagement processes support good levels of participant engagement

The fact that the educators engage with schools and local teacher development programmes in simple, relevant ways through forums and meetings, facilitates positive relationships between Māori and non-Māori simply by the different ethnicities represented by these groups.

Teachers that were interviewed described the programme as relevant, inspiring, and having a local identity. Healthy competition (gamification) was also a motivator for the students, as noted by teachers, as were the creative tasks like students drawing what they could see and hear in the ecosanctuary. For most students, the workshop activities with which they had engaged were new to them, as noted by one principal:

Kid's gained better knowledge about local native plants that are important to Māori. Some [kids] had never climbed a hill before and some didn't know how to balance themselves.... A few older kids were practicing their kooi's, trying to communicate with each other, for a week and a half after the visit, all over the place. [Principal]

There was no behaviour management needed. The kids were totally engaged and as a school, we try to promote joy of learning and the whole experience [at the workshop] was joyful. The learning was almost incidental – they [students] didn't want to leave. [Teacher]

Sufficient numbers of schools attend the workshops

Sufficient numbers of schools (students and teachers) are participating in Wild Lab Tiaki Taiao events, given current available funding and capacity. Programme team members noted that the ideal number of workshops each year, given current resourcing, was 35-40. Currently the numbers were slightly lower than the ideal numbers, which is understandable (and somewhat frustrating) given the interruptions caused by the COVID-19 pandemic.

Programme improvement with ongoing funding and revenue

Additional programme funding is required

The Trustees and programme personnel report that they are considering what their next maximum delivery per year would be, costing this and developing proposals to secure the funding needed. They also noted that to date they had been very careful that the programme did not get much bigger as that could over negatively impact the Ecosanctuary and be counterproductive. They continued to agree that the scope and scale of the programme should not increase to the detriment of the programme retaining its specialness. A few Trust members and one programme educator felt that the scale of the programme could be increased to accommodate increased number of weekly workshops, with no issues for the programme.

The Trust is preparing to apply for increased funds to continue to deliver the programme, cover the growing management-coordination functions, to develop a virtual programme experience which could operate largely unaffected by a pandemic, and to contract a local marketing specialist to support the scope of operation going forward. In addition, the evaluation monitoring framework will require funding for it to be implemented and to ensure that adequate evaluation and monitoring capability is contracted. The framework will provide robustness to evaluation and monitoring processes around evidencing impacts and outcomes both attributable to the programme and contributed to by the programme.

Trustees and school stakeholders mentioned that it was important for the programme to gain funding for at least two to three consecutive years to ensure consistent development and improvement of the programme. A trustee noted that having to start then stop programme development and delivery based on funding uncertainty made it difficult for the Trust to efficiently improve the programme and achieve their vision.

If Wild Lab was no longer around

There was common feeling shared by school stakeholders in that they would be very upset for the programme and schools if Wild Lab was unable to obtain ongoing funding. They considered the programme to be invaluable, and a huge asset to the region, and felt very fortunate to have it available to them and students.

Enablers of successful implementation

The enablers of successful implementation are:

- Intentionality about the programme design being informed by experts across all design elements
- Intentional focus on having programme content that enables learners to understand what is required to care for te taiao, and why this is important to them and wider communities
- The development of a supportive network of experts, schools, education providers, funders, council, and creatives that provide programme support and will enable environmental sustainability
- Intentionality about taking a fun, interesting and tailored approach to engaging students about te taiao and western science so that they feel excited and inspired but not overwhelmed by what they experience and what action they might take, if any, after the workshop
- Effective facilitation and use of multi-modal learning by programme educators
- Effective understanding and use of education pedagogy by programme educators
- Effective use of in-house tikanga, values and principles that underpin programme processes and operation and those incorporated from other stakeholders
- Commitment by schools to attend workshops.

Barriers to successful implementation

The barriers to successful implementation are:

- Cost for schools to pay for a bus to transport students if the number of parents available to transport students is too low
- Poor weather and the threat of poor weather, exacerbated by the absence of adequate wet weather clothing and footwear by students
- COVID-19 pandemic has limited the number of workshops delivered
- Time constraints - A teacher noted that students had a lot of fun and were engaged by the workshops and wanted to stay longer. However, having a limited timeframe also limited the amount of fun and learning students experienced.

Time constraints. Having a limited time frame hindered the fun - students wanted to stay longer!
(Teacher)

- Managing for larger class numbers and poor weather - larger class sizes in 2020 i.e., 25 or more students has raised issues for the programme in finding sheltered space for students to complete tasks when the weather is bad. One stakeholder mentioned that some schools tended to cancel planned trips if weather looked like it was going to be poor, which affected programme planning
- Interruption due to COVID-19 pandemic – this resulted in cancelled or postponed bookings from schools and teaching institutions during the first half of 2020 and during the latter part of 2021. Even after the lockdown was lifted in 2020, schools were reluctant to make school trips due to uncertainty about COVID-19 conditions and prioritising student and teacher safety. Pressure on schools to catch up with student progress in Maths, English and Science led to most schools concentrating on classroom-based teaching and experiences for most of the second half of that year. One principal noted that despite the disruption, there wasn't any excuse for school not to attend Wild Lab because they could if they wanted to.

4.3 Outcomes and impacts of the programme

4.3.1 KEQ 6: How well and in what ways are programme participants benefitting from participating in the programme?

This section refers to students as programme participants. KEQ 7 relates to teachers and parents as programme participants.

Evaluative statement: Programme participants (students) are benefiting well from their Wild Lab experiences. There is overwhelming evidence that students have benefitted from participating in the programme as reported by them, teachers, parents, and programme educators.

Students have experienced considerable benefits from participating in the programme. The workshops create ideal learning conditions where students have benefitted by being inspired and motivated to participate and learn about Mātauranga Māori, caring for the natural environment, local history, and cultural heritage. They also benefit from learning about themselves and experiencing the freedoms and increased agency that come from participating in a range of educational activities in an outdoor setting that is play-based, fun and interesting. Students increased passion for learning is identified by many teachers and there are many stories about students continuing to discuss their Wild Lab experiences after the visit and of their enthusiasm to take action within their school or wider community environments.

What difference has the programme made to participants (students)?

Workshops and activities create ideal learning conditions

Wild Lab Tiaki Taiao engages experts in scientific disciplines who interact with experts in Māori ancestral knowledge and leading education designers to develop inspiring workshops. There is good evidence from participant feedback that the workshops are indeed very inspiring. Furthermore, the activities integrate scientific disciplines and Māori ancestral knowledge and are well aligned with the programme educational aims and New Zealand curriculum learning outcomes.

The workshop location was both inspiring and close to where the students lived

Teachers mentioned that the ecosanctuary in which the workshops operate was beautiful, so close to the city and an outstanding resource. The ecosanctuary brought to life the things they were learning about their local ecosystem, and they found the location and learning to be inspiring.

The sanctuary was utterly beautiful, and I am amazed that something so beautiful could exist so close to a city. (Teacher)

Workshops as an exemplar for project and passion-based learning

Teachers (qualified and candidate teachers) consider the Wild Lab Tiaki Taiao platform as an exemplar for project/inquiry and passion-based learning. They praised the ways in which the workshops used real, contextualized learning to increase their understanding of the environment and how it facilitated increased warmth and connection between participants and with the environment. Students reported loving all the activities and learning while being in a forest.

This is real, contextualised learning and I see it as a great vehicle for COL schools. (Coordinator for regional Schools' Community of Learning)

Not only did I feel as though I had learnt an enormous amount about the local environment, but I also came away feeling closer to the members of our group. (Teacher)

This allowed us to build the relationships needed, so that the students can succeed, and also provide the student teachers with a wider understanding of the environment around them and how to incorporate that into their teaching. (Teacher)

One teacher liked the less 'school' structured, and more contextualised learning for students:

They think learning has to be structured and the teacher has to lead it - no they don't. You can take kids up here and let them go, just sit back and watch and see the learning come out of what they are doing out there. That's the neat part about it. (Teacher)

Other teachers spoke positively about the hands-on nature of the workshop that offered experiential, all-sensory and learning styles approach to learning for both students and teachers:

I know nothing about native birds and stuff, so I would be right alongside my kids, learning together. Coming out here and just doing it. You can do either way around - the practical and then the do. I'm all about the hands-on stuff and how that can influence the way you learn. Half the time if you're not seeing it in front of you, how are you going to remember and how is a kid going to remember it too? (Teacher)

Not only was it hands on, going to the top of the hill, calling to the Oi and seeing it appear, (that's going to stick with me for the rest of my life), but you also introduce the laptop, images, drawing etc... throughout this whole day's activity you've ticked off kinaesthetic learning, audio learners, visual learners, all the ways they prefer to learn and develop. This whole experience has everything for those individual learners, but they are doing it as a collaborative group, so they can bounce off those

memories for the rest of their school time and probably for the rest of their lives, which really determines who they are going to be. (Teacher)

The workshops provided a learning environment that teachers and schools were unable to provide for students, due to a lack of resource, capacity, and capability. Teachers do not have the time to develop anything remotely like the Wild Lab Tiaki Taiao workshops and what they offer.

I would love to do something like this again. Realistically the amount of work as trainee teachers we need to do, the focus is on that, it's not on the kids' experiences and it gets in the way. Which is something very hard to get around and assessments are a massive pressure but if I was looking as a first-year student with my own class the barriers would be the communities want for their students to experience this. Then time balancing this with actual community events. So, a solution could be to turn this into a whole school event, fostering it in every class. Community events which are prioritised are things like a school production. (Teacher)

A less classroom-structured learning environment encourages student exploration

The workshops provided students with a less-structured learning environment compared with school, which provided them with opportunities to explore their passion for the environment and local ecosystems. This exploration enables students to consider what action they might take about the environment later.

Listening to the opinions of all the students and fostering their passions and their imaginations. I think that a place like this really opens up into all the outside of the classroom passions that kids are going to have. You can use a place like this to use the passions that the kids have to build experiences and take that into proper action. (Teacher)

Device-free experience that is engaging and memorable

Common comments were made about the importance of students experiencing nature in person and not through a screen or device. Teachers noted that this was a key to providing students with a positive, engaging, and memorable experience.

Great to hear kids talking about how much they loved no technology. (Teacher)

Costume characters increased the students' engagement

Teachers mentioned that the creative and informative way in which the workshop was designed invited students' creativity and made learning informative, fun, and relevant. Having the learning environment outdoors was a big factor that contributed to students' enthusiasm about learning. Students were able to make a connection to the fauna and flora discussed in workshops and the related costumes brought these to life for the students. Having the opportunity to see and 'meet' an endangered species first-hand was a catalyst for some students to becoming more caring.

This was a creative and informative way for the students to make a connection to the Oi narrative. Lots of smiles! (Teacher)

The moth costume was very well received. Wow factor. (Teacher)

I observed that they really wanted to save the bird once they met her for real. Very interesting that this could be the difference in getting students to care for something. (Teacher)

A teacher from the 2020 year mentioned that linking practical experiences with workshop costumes continues to be a winning combination.

Wonderful to see the kids' faces. We had heard great things, so we came to check it out. Next time we will base a whole term's learning around it. They [students] learnt so much by doing rather than talking. We saw the mayfly, studied the mayfly, and even had a larger-than-life mayfly. Great way to learn.

Students are inspired and motivated to learn

There is good evidence to support that students are inspired and motivated to learn, and to learn the things the programme intends to teach them. There are numerous mentions by students and teachers about the holistic, creative, interesting, and explorative programme design and setting.

Creating memories and fostering creativity and resilience in students

Teachers were very positive about the ways in which the workshops fostered student creativity and encouraged imaginative thinking, which makes learning more enjoyable for students. Teachers wholeheartedly supported the purpose of the programme and workshops in achieving these important outcomes and noted how well the programme was oriented toward this purpose.

It's [the workshops] definitely memory building. We talked about not having kids outside enough, in the bush doing stuff. The activity we did would build an instant memory for them... It brings back memories of playing in the bush myself, and all those things that you want to be able to 'gift' a kid is having those attachments to those memories, and that's by doing this sort of stuff, it's ideal to build those memories, build that love for the whenua. (Teacher)

The activities, like climbing up that hill and showing the resilience, I think a lot of kids just learn to give up these days. If you can let them finish things, they can say they're done. 'I made this, I did this, it's mine!'. I think it's just the perseverance of doing things, and making it and it yours, you've got that whenua, that belonging. (Teacher)

Attention to learning styles and supportive learning principles

One teacher from the 2020 year noted that their students, who were more challenging to keep engaged and motivated in the classroom, were more motivated at Wild Lab Tiaki Taiao than at school.

We have lots of children with learning disabilities and very young. I have been so impressed by their level of listening and engagement. (Teacher)

Teachers and students praise the educators and the engagement approach taken by the programme facilitators to connect with and educate students in ways that draw on multiple learning styles.

Participant feedback supports the notion that student learning becomes almost incidental as part of student's engagement experience in the outdoors environment, which is conducive to students forgetting that they are there to learn. One parent noted:

Wicked, loved it. Wasn't expecting it. I can tell the kids loved it. Laughing and learning, that's the key. (Parent)

The interactive nature of the activities and expert facilitation draws on principles and techniques of associative 'play', scaffolding, and tuakana/teina³⁴, which require both collaborative and individual decision-making and contribution.

I really like how you use the strengths of the individual in a group situation. It is very motivating as everyone has a chance to contribute and feel important. You manage to weave in Māori knowledge in an authentic way too. Often it is just a footnote, but you really emphasise its importance to saving the planet. (Teacher)

³⁴ <https://tereomaori.tki.org.nz/Curriculum-guidelines/Teaching-and-learning-te-reo-Maori/Aspects-of-planning/The-concept-of-a-tuakana-teina-relationship>

High levels of engagement and trust

Workshop facilitators are trusted

High levels of student and teacher engagement and trust of workshop facilitators was evident. As noted by teachers, students shared their ideas comfortably in a group setting, participated enthusiastically and in ways typically outside their comfort zone and found the experience fun, interesting and motivating.

That it was a lot of fun and that I would love to go again if I get invited again. That I learnt a lot of cool things about crayfish, and I would like to go again. That you guys knew a lot about koura. (Student, Makauri school)

I like everything such as the huts, playing hide and go seek, walking up the hill and my favourite was talking about the Oi. I want to go back to Wild Lab. (Student, Makaraka school)

A few teachers noted that the programme has introduced a short relaxation (mindfulness) method to the beginning of the workshop, which helped students to quickly get into the atmosphere of being in nature. Other teachers expressed their views about engagement and trust in the following ways:

Allowing the students to feed each other's ideas into the whole group was exceptionally effective. (Lead teacher)

Students who may normally shy away from being outside their comfort zone were engaged in all aspects of the workshop, with smiles! (Teacher, Cobham School)

Engendering value of old traditions is positive

There is good evidence from programme participants that they appreciate learning about old traditions in how people lived and interacted with te taiao and the value in having a healthy ecosystem. More robust data capture is required to assess with greater certainty about whether this is happening and what actions result from this if at all.

Developing a clear vision of the future in which they want to live

The evaluation was unable to provide insight on whether participants are developing a clear vision of the future in which they want to live. Further evaluation is required to capture relevant data.

Collective effort, and individual agency are evident

Teachers report many examples of the evidence of collective effort, and individual agency they have seen from students attending the workshops. This report contains multiple examples of such things.

4.3.2 KEQ 7: How well and in what ways are other stakeholders benefitting from participating in the programme?

Evaluative statement: Stakeholders other than students (teachers, principals, parents) are benefitting well from their participation in the programme. In many ways, they are just as inspired and motivated as students by the programme content, expert facilitation, immersive outdoor environment, and purpose of the programme. For teachers, especially candidate teachers, the experience of observing how well their students engage in the workshops encouraged them to reflect on their practice and how they might adopt some the engagement and education approaches used in the workshops. Other key benefits include students becoming interested in science, reinforcement of environmental learning that happens within schools, having Wild Lab as an impacting

environmental resource for schools and experiencing improved relationships between parents and students, and teachers and students.

What difference has the programme made to participants (teachers and parents)?

Learning opportunities for candidate teachers

The programme also provided learning opportunities for candidate teachers around social inquiry and action-based learning e.g., making kete and oi-bird shelters/huts, participating in drama, visual arts, walking to the top of a hill to hear about historical events and practicing traditional communication calls. Being in the bush provided an immersive social inquiry process that encouraged reflective thinking in teachers. A principal mentioned that the programme content reinforced local stories known to their teachers and students and linked to the curriculum

For an education provider, the programme prompted candidate teachers to think about how they might incorporate bringing to life certain historic places through stories and ensuring that different historic perspectives are included. It also prompted teachers to think about how they might want to teach the history curriculum to bring it alive for students and to recreate the interest, joy, and fun they had learning about history at the ecosanctuary.

For the education provider, the programme provided very useful context for teachers to understand the practical expression of the teaching pedagogies they were learning. This experience provided teachers first-hand experience of what their students would encounter in the Wild Lab environment, which helped them to reflect on what was working about the workshops and why that was, so they can recreate the conditions, where possible within the classroom. The programme reinforced what teachers were learning at the education institute, including the value of social learning and social inquiry.

For enviro-schools, the programme added value to school-based programmes and reinforced learning at school by making students more aware of the environmental impact on their world. The programme also reportedly increased students' passion for caring for the environment.

For Enviro schools, like ours, for the curriculum [caring for the environment] the seed is already planted but it complements our curriculum and school approach. [Teacher]

The Wild Lab programme and facilitators are resources for teachers, providing complementary knowledge and educational processes for teachers to utilise. The Wild Lab workshop content also serves to reinforce what students are learning at school and the education approach used by facilitators complements teaching approaches used in schools.

It's [Wild Lab] a fantastic resource and we already think we will be there next year in a heartbeat! It would be a huge shame if it didn't continue. [Teacher].

Relationships between students and teachers are improved by attendance at workshops

Not only are students building relations with other students, but they are also consolidating and building on existing relationships with teachers. One teacher noted:

I've really enjoyed being able to let my guard down with the kids. I'm very old school and curriculum-based subject by subject, but I feel the learning has been really incredible, and the style really suited the kids. I loved how they got to see me as a real human struggling up the hill and we got to do real things together. A truly great experience I feel very lucky to have shared it and I will definitely be sharing these stories with my own whānau. (Teacher)

Relationships between students and their parents are improved

There is some evidence that the workshop is strengthening relationships between parents and their children who attend the same workshop. One parent commented that her daughter had been impacted by the workshop in ways that she (the daughter) wanted to change how they interacted:

My daughter is going to change the way we do things from now on after coming here. This is my one day off work, being outside is special but this is amazing. I love the way you interact with the kids and the best way to describe it is 'you have them all learning in the palm of your hand'. (Parent)

4.3.3 KEQ 8: How well are local ecosystems benefitting from the programme?

Evaluative statement: There is evidence that the programme is contributing toward students being inspired to want to understand and care for their ecosystems. Teachers report that the more passionate that students become about caring for the environment, the more likely they are to willingly adopt actions and behaviours toward this. Teachers report that the programme ignites a passion in students for environmental care and restoration, where schools have supported students to continue to take relevant action, after the workshops. While there is evidence that students are developing improved understanding of ecosystems, thinking about related career prospects, demonstrating increased sensitivity and connection to the natural world, it is still too early to assess how well the local ecosystems are benefitting from the programme.

Community participants are inspired to act regarding te taiao

Improved understanding of ecosystems

Many teachers talked about how the workshops helped to ignite a passion in students for the outdoors and for environmental care and restoration. Teachers praised how the programme enabled students to create memories of their environmental experiences both from an individual and teamwork perspective.

I think the biggest thing that I took from today is about 'The care of the environment, comes from a love of the environment'...which is what kids will need to experience if they want to be community driven and passionate parts of society, which is a massive part of the NZ curriculum at the moment. (Teacher)

It's finding a way those kids can show they love the earth! Teachers can't go in there and telling them 'you need to be stopping the plastic!' They need to believe this, and they need to be doing this. You need to give them opportunities to see that and find it for themselves, because they are not going to become passionate about it unless they discover it for themselves. Doing things like this really promotes that. (Teacher)

Normalising engagement with the environment and career opportunities therein

The workshops provide students with opportunity to consider whether pursuing a career or employment in an environmental field might be of interest to them, normalising these possibilities.

I think it's a massive generation gap is the fact previously you have parents that grew up learning that subject based, do your learning, pass a test and get a job. Within today's society there's so much of an avenue for different jobs that you can go into like the one job you guys have made here, this passion for doing this isn't something you'd expect. It's these opportunities that are open to the kids nowadays, it's that imagination, passion for different avenues that you need to foster with your kids and you're not going to do that if they're stuck in a classroom. It only comes from giving them those opportunities to experience the ways to achieve. I think it's going to take a very long time for parents, teachers, communities to have the focus on individual passions and way of learning and taking away that

structured top-down teaching method because it's a scary thing. Society is going to have to overcome this fear before this kind of learning is massively accepted. (Teacher)

The workshops also remind teachers about incorporating environmental learning as part of their planned activities, thereby helping teachers to normalise this approach to education:

It's a stunning place and so many opportunities. This is a stunning environment, and the workshop reminds us there will be places close to us that we can use to do really neat stuff with. (Teacher)

Increased connection and sensitivity to the natural world

Students demonstrated gaining insight about the environment through the activities in which they were required to participate e.g., projects, speeches, writing, art, and dance. There is good evidence that students leave the workshops having gained increased connection and sensitivity to the natural world and about the importance of restoration. Examples of this include talking about the endangered species, interacting with fauna, and talking about scientific or environmental career options after attending the workshops.

One parent praised the workshop for providing an awesome targeted and interesting learning experience for students and herself that taught them respect for the environment and the importance of caring for it. The parent added that the workshop was the future they needed to understand the importance of caring for their environment:

I loved it [the workshop], it was very hands on and kinaesthetic. Awesome exploration up close, fun and personal. Never time to be bored. Great mix of energy, relaxing. Targeted totally to the audience it was intended for. The kids and I loved it. Everybody should bring their school here. Teaching them respect, to live and care for our environment is so important. We need these guys - they are our future. You are doing awesome work out here, please just keep doing what you are doing. (Parent)

Another parent appreciated the workshops' focus on nature and that it was a no-device environment:

Connecting the tamariki to nature and your knowledge of the land. Thank you. This means a lot to our tamariki. And yes, no devices. Clean fresh air doesn't set off my allergies like when I'm inside. (Parent)

Increased student ownership of challenges, and increased agency

Students were taking control and ownership of the workshop challenges and applying their own skills and creativity to specific tasks. A key feature of the workshops was the hands-on practical participation for students, where 'doing' something to learn was valued by students e.g., making huts and figurines. This included students gaining a sense of importance about their ability to make a positive environmental difference, as noted by a teacher, and making cultural connections with animals and their narrative, as noted by a student, who said:

I liked the stories about how the Oi [Grey-faced petrel] are taonga and were brought back to Waikeru. I liked how we were in charge. (Student).

It's awesome for kids to be immersed in what they're doing. Kids I work with gives them confidence to go up hill, encouragement is awesome. It's beautiful. 10/10, naturally experiencing it, showing and doing, they are way more engaged. (Teacher)

Increased student motivation to make a difference to their ecosystem

Teachers mentioned that there was increased personal motivation by students who wanted to make a difference about their local ecosystem – to restore their ecosystems to a state of ora. This included feedback from some students contained in the programme evaluation reports³⁵ about wanting to become scientists

³⁵ Wild Lab Tiaki Taiao Year two report (PDF) (2020), Wild Lab Tiaki Taiao Year one report (PDF) (2019).

locally, to carry on with the project locally, feeling motivated and good about themselves by completing practical tasks, carrying on with self-selected environmental studies outside of school, having their questions answered and thinking clarified about environmental matters and satisfaction that came by being encouraged to think creatively.

Two boys said they were definitely going to be scientists in their local river and look after it. All 24 kids said they wanted to carry on the project with their school in a local river. (Teacher)

Watching the students give feedback and ask questions allowed several different ideas to be clarified. The creativity that came through was outstanding. (Teacher)

Kids are still using the call of the Oi bird and students have been carrying out their own individual studies outside of school. (Teacher)

Ongoing learning

Ongoing learning and activities for students after attending Wild Lab included building rat traps, visiting the environment centre in town to learn more, learning more about their school carbon footprint, planting harakeke at school, identifying native birds at the school reserve, searching for the plants they had learned about at the ecosanctuary, learning more about weta, developing a slide show, posters and writing about what they had learned from the workshops, and looking at practical ways of helping the environment e.g., plastic recycling.

It [Wild Lab] made them [students] more aware of the environment, to protect things – don't just pick up a weta and start touching it. They learned all about the weta. [Teacher]

[A benefit from attending Wild Lab was] it makes sure that the children are connected to the environment, to care for it. [Teacher]

A few teachers mentioned that parents also spoke very positively about their experiences of the programme.

Parents are raving about it [Wild Lab workshop]. [Teacher]

Programme educators mentioned that after attending the River in Tears workshop there were a small number of schools that began monitoring the streams and rivers within their ecosystem. One educator suspected that had the school gone 'full-on' into monitoring prior to attending the 'River' workshop, they probably would not have got teachers and students involved.

Another impact of the programme mentioned by a programme educator was that NIWA had been contacted by schools that had attended Wild Lab to request information and support for environmental projects. Another impact that came to the attention of the educator was that the number of inquiries to the Tairāwhiti Environment Centre for trapping information, from schools that had attended Wild Lab had increased. This followed the trapping workshops delivered by Wild Lab.

A world class creative environmental programme

The scope of the evaluation did not lend itself to examining whether the Wild Lab programme is currently operating as a world class creative environment programme. As a relatively new, but well-established programme, the evaluation supports that the design and delivery of the programme is operating well and in accordance with its strategic planning. Further specific evaluation is required at a later date to examine what constitutes a world class creative environmental programme and whether Wild Lab is an example of this.

4.3.4 Early indicators of success

Based on the intention of the programme and how the programme is tracking against its logic model, early indicators of success are:

- Effective programme design confirming the presence of credible education pedagogy, activities, and expert content that engages with participants
- Effective engagement of the primary audience by programme educators – high interest
- Effective programme delivery including expert facilitation, creative components, and participant engagement. The programme is already meeting all its outputs and short-term outcomes as shown in the programme logic as well as some of its intermediate outcomes
- Evidence of increased student awareness of the need to care for and restore the environment
- Evidence of increased participant awareness of Mātauranga Māori and western science
- Evidence of increased student passion and motivation to take action to restore the environment
- Opportunity to increase the scale of programme offerings but limit increased scope.

4.3.5 Improvements to the programme

Suggestions about programme improvement were mostly about making minor adjustments to the programme.

Improved matching of workshops with school curriculum focus area

As part of the programme's ongoing improvement participant feedback is sought, which has led to programme improvements, and it has shown they have listened to participants/community and responded by creating fitting solutions. Many teachers noted that the programme offered a workshop choice for schools to better match their curriculum or interest focus area. This was a positive thing for schools. Another teacher noted that the workshop content is highly relevant to the curriculum.

This [choice of workshops] fits into so many parts of the curriculum. (Teacher)

Increasing awareness of the option for schools to request additional workshop alignment

While an option already exists for schools to request additional alignment of workshop activities with current school projects and planning, some of the schools were aware of this. A few teachers and a principal suggested the current option as an improvement, not knowing that it already existed. Increased awareness to all schools about this option would meet this perceived gap.

Extra school staff or parents to attend workshops

One principal suggested schools needed to have a plan to ensure that students can return to school from the ecosanctuary due to sudden unwellness, injury or other urgent matter should they need to. This was because the principal was aware on one occasion where a student needed to return to school but there wasn't cell phone coverage to call the student's parent or school, and the group could not spare a teacher or parent to return the student to school.

Providing Wild Lab Tiaki Taiao experience unaffected by COVID-19

Figuring out how to provide the Wild Lab experience to schools on a continuing basis, largely unaffected by the COVID-19 pandemic, was one of the things the Trust was contemplating. One of the things that the Trust is exploring is the use of virtual/digital technology. Providing participants with the ability to experience the programme using virtual technology would help reinforce and further the learning gained by those who had already attended the programme physically. It would also enable new participants to experience a version of the programme for the first time. The ideal engagement process might be for participants to have visited the programme on-site first, then virtually if they cannot visit the ecosanctuary in person a second or third time. When stakeholders were questioned about whether a Wild Lab digital platform might be a relevant and useful way to engage students, all stakeholders agreed that it would.

Visits to schools

One suggestion made by a teacher was whether programme educators could visit schools to deliver components of the programme or an abridged programme.

Subsidised bus transport for schools

One school stakeholder noted that while the zero-entry cost for participants was hugely appreciated by schools, schools still need to hire a bus to transport students, which can be expensive for some schools. The stakeholder wondered whether the Wild Lab programme was able to secure additional funding to subsidise the cost for schools to hire bus transport.

Overnight stay

One school stakeholder wondered whether the programme might consider adding an overnight site stay option to schools, which might add another dimension to the learning opportunity for students. The stakeholder was aware that this suggestion might require a lot of planning and supports.

Increased student participation in the drama activities

School stakeholders spoke very favourably about the drama activity in the programme, and programme educators described it as an immersive experience for students in which they played the roles of the animals and insects. Based on one stakeholder's observation of the drama activity, the stakeholder encouraged increased student participation in the drama activities.

Improvements already made after receiving workshop participant feedback

Based on the workshop learnings over 2019 and 2020, the recommendations adopted by the Trust to improve ongoing programme effectiveness were as follows:

- Continue to offer workshops for whole class groups to make it easier for the schools to organise student participation.
- Promote the Wild Lab Tiaki Taiao to whole year groups in schools, rather than individual classes, to help with organising and scheduling.
- Encourage pre- and post-workshop learning to embed the Wild Lab Tiaki Taiao workshop experience into the curriculum and further develop learning.
- Complete the remaining two workshop themes (Hi-tech in the Bush & Pesky Predators) in Term 1 of 2021, and trial these during Term 2.
- Agree on and implement ways to minimise and mitigate the impact of intensive group activities on the Ecosanctuary environment, especially around the Longbush and other Waikereru Ecosanctuary paths and in the streams.
- Develop and implement a plan to expand the delivery of teacher development workshops (currently exploring strategies and options with the Tairāwhiti Mohaka to Nuhaka Resource Teachers Learning Behaviour Group, and with the Ako Panuku Programme for Te Reo Language and other Māori Teachers).
- Advise the ANZET that the three-year funding grant will now be expended over four years (finishing in 2022), and the Longbush Trust's contract with the programme educators to further develop and deliver the programme will likewise be extended to 2022. This extension is necessary given the impact of the Covid-19 pandemic and related matters which has limited completion of deliverables in 2020.
- Develop plans and secure funding for additional shelter alternatives for larger groups.

5. Conclusion and recommendations

5.1.1 Conclusion

The programme design is effectively supporting the achievement of, and contribution to the intended outcomes across most of the key areas of importance e.g., Mātauranga Māori, increasing environmental awareness, engaging participants. The design and continuous improvement approach used by the programme is underpinned by evidence-based research and experience.

Stakeholder relationships were very effective in giving effect to the design/co-design of the programme, including extensive and specialist expertise, and schools and education providers are active supports of the programme. The programme, from design to operation, is geared toward providing participants with broad knowledge (mātauranga) using multiple and effective methods to increase participants' understanding about what is needed to be done to care for the environment and role(s) they might play. However, the programme is also geared toward enabling participants to gain deeper insight (maramatanga) through immersive activities including anthropomorphic dramatising activities, and an end of workshop reflection process. This is about increasing participants understanding about why it was important to care for the environment.

The resourcing received by the Wild Lab Tiaki Taiao programme was adequately sufficient during the formative development of the programme, particularly supporting the design, establishment, and iterative improvement of the programme over time.

Programme coordination and management is operating well, with Trustees and programme educators working in synergy to support programme implementation and to giving effect to the Trust's purposes and other key areas of priority. The relationships that programme educators have developed with schools and education providers is very positive and it has resulted in multiple school visits to the programme over the years. The ability of the programme to invite experts to inform and/or facilitate components of the programme, adds gravitas and specialised knowledge and perspectives to the learning experience.

Programme implementation is well supported by many factors including having skilled and experienced learning facilitators whose behaviour and actions are underpinned by overarching tikanga, principles, values and good education practice, which are congruent with their personal values and principles. The programme operation is giving effect to achieving the programme's goals, including its strategic 'solutions' about fostering kaitiakitanga and inter-cultural relationships between people, and between Mātauranga Māori and western science tradition. It also provides a motivating immersive experience that encourages self-persuasion and action.

There is overwhelming evidence that students experienced considerable benefits from participating in the programme. The workshops create ideal learning conditions where students are inspired and motivated to participate and learn about the environment and about themselves, as they experience new freedoms and increased agency derived from participating in a range of educational activities in an outdoor setting that is play-based, fun and interesting. Students increased passion for learning is noted.

Teachers, principals, and parents are also benefiting from their participation in the programme, in some ways feeling just as inspired and motivated as students by the programme content, expert facilitation, immersive outdoor environment, and the programme's purpose. The experience has encouraged teachers to reflect on their teaching practices and how they might adopt some the engagement and education approaches used in the workshops.

There is evidence that the programme is contributing toward students being inspired to want to understand and care for their ecosystems. Teachers report that the programme ignites a passion in students for environmental care and restoration, where schools support students to take action within a school or local environment after the workshops. While there is evidence that students are developing improved understanding of ecosystems, thinking about related career prospects, demonstrating increased sensitivity and connection to the natural world, it is still too early to assess how well the local ecosystems are benefitting from the programme.

Key enablers of successful implementation show great intentionality by the Trust, programme educators and experts to design a programme that is well informed by experts across all design elements. Intentionality was also evident by the same contributors to ensure that programme content plus expert facilitation would engage participants in fun and inspiring ways, utilising multi-modal learning and education pedagogy well. Programme content was brought to life by the educators, drama teacher, guest experts and a range of activities aimed at providing tangible experiences for participants to help them understand what they can do to take action and why this was important to them, to others and to the natural environment. A supportive network of experts, education providers, schools, funders, creatives, and council has been developed over time and this network will enable sustainability of the programme, whether attending workshops, designing new workshops, or supporting requests by schools for access to community resources. Lastly, programme staff have demonstrated tikanga (whanaungatanga, manaakitanga, and kaitiakitanga), which underpins their engagement of people and facilitation of the programme.

Barriers to successful implementation were relatively minor. These included the cost to schools to bus students to the workshop, schools cancelling planned workshop visits due to poor weather and the threat of poor weather (exacerbated by some students' absence of adequate wet weather clothing and footwear), and the interruption to visits and increased safety measures caused by the COVID-19 pandemic. Managing for larger class numbers and poor weather was an issue that programme educators faced, especially when trying to engage all students and finding sheltered space for them to complete tasks.

Early indicators of success are:

- Effective programme design confirming the presence of credible education pedagogy, activities, and expert content that engages with participants
- Effective engagement of the primary audience by programme educators – high interest
- Effective programme delivery including expert facilitation, creative components, and participant engagement
- The programme is already meeting all its outputs and short-term outcomes as shown in the programme logic as well as some of its intermediate outcomes
- Evidence of increased student awareness of the need to care for and restore the environment
- Evidence of increased participant awareness of Mātauranga Māori and western science
- Evidence of increased student passion and motivation to take action to restore the environment
- Opportunity to increase the scale of programme offerings but limit increased scope.

Suggestions about programme improvements were mostly about making minor adjustments to the programme. These included increasing awareness of the option for schools to request additional workshop alignment (most know but not all), all schools groups to take an extra school staff member or parent to return a sick or injured child to school without affecting the workshops, being able to provide the programme largely unaffected by COVID-19 (no specific suggestions given), delivery of components of the programme at schools, the programme obtaining funding to help subsidise bus transport for schools, having an overnight stay at the ecosanctuary, and ensuring student participant in the drama activities.

5.1.2 Recommendations

For the programme design and operation

Recommendations include:

- Increase awareness of the option for schools to request additional workshop alignment
- Suggest to school contacts to consider whether taking an extra school staff member or parent to workshops is a viable option to return a sick or injured child to school if needed
- Continue to consider and develop virtual and other resources that can be used as stand-alone and complementary ways to deliver components of the Wild Lab Tiaki Taiao programme, and so that Wild Lab can operate largely unaffected by COVID-19, if desired
- Request additional funding from sources to be able to offer schools cash to subsidise the cost for bus transport to and from the ecosanctuary
- Request additional funding to purchase all-weather shelter resources to be able to provide participants dry areas to complete activities should weather conditions deteriorate during workshops
- Request additional funds for the growing management-coordination functions, the development of a virtual programme experience concept which could operate largely unaffected by the COVID-19 pandemic, and to contract a local marketing specialist to support the current scope of operation going forward
- Request funds to cover ongoing evaluation costs for evaluation activities noted in the evaluation monitoring framework (refer Table 2, page 54) and for acquiring suitable evaluation capability and capacity over the long term. This might also include training a suitable candidate in the use of qualitative, and or quantitative tools e.g., NVIVO or Dedoose, to work closely with the Trust to undertake robust data collection. This will assist with continuous programme improvement and contribute to obtaining yearly process and outcomes data, useful for evidencing the impact of the programme.
- Request baseline programme funding to cover at least two to three consecutive years to ensure ongoing delivery and consistent development, implementation and improvement of the programme.

For programme evaluation

To undertake long term evaluation of the process and outcomes component of the Wild Lab Tiaki Taiao programme.

Table 2: Evaluation monitoring framework for Wild Lab Tiaki Taiao

Programme outcomes	Indicators based on:	Data source	Who will collect data?	Timing
Short-term				Ongoing (2021-2024)
Students are inspired and motivated to learn - holistic, creative, interesting, and explorative setting	What inspired about Why inspired? What are key enablers of inspiration?	Observation Surveys	External evaluator or Internal evaluator or combination of both Survey administrator	Surveys after workshops Monthly to bi-monthly data collation and synthesis Capture stakeholder observations at the end of workshops
Students feel safe to share feelings - acceptance by peers	Why do you feel safe to share? Why do you feel accepted?	Observation Surveys	External evaluator or Internal evaluator or combination of both Survey administrator	Surveys after workshops Monthly to bi-monthly data collation and synthesis Capture stakeholder observations at the end of workshops
Engendering value of old traditions	What old traditions resonate and why?	Observation Surveys	External evaluator or Internal evaluator or combination of both Survey administrator	Surveys after workshops

				Monthly to bi-monthly data collation and synthesis Capture stakeholder observations at the end of workshops
Understanding 'restoration' and developing a connection to ecosystems	Why is restoration important: Why is restoration important to you? Are you feeling connected to an ecosystem? How so and why?	Observation Surveys	External evaluator or Internal evaluator or combination of both Survey administrator	Surveys after workshops Monthly to bi-monthly data collation and synthesis Capture stakeholder observations at the end of workshops
Facilitators are not seen as teachers or parents	Perception of facilitators? What like/dislike about them? How do they make you feel?	Observation Surveys	External evaluator or Internal evaluator or combination of both Survey administrator	Surveys after workshops Monthly to bi-monthly data collation and synthesis Capture stakeholder observations at the end of workshops
Drawing on western sciences and Mātauranga Māori	Understanding Mātauranga Māori in relation to te taiao Understanding western science in relationship to te taiao	Observation Surveys	External evaluator or Internal evaluator or combination of both Survey administrator	Surveys after workshops Monthly to bi-monthly data collation and synthesis

	<p>Understanding the relationship between Mātauranga Māori and western science</p> <p>Understanding of kaitiakitanga</p> <p>Understanding of kaitiakitanga between people and the wider environment</p>			Capture stakeholder observations at the end of workshops
Intermediate term - stakeholders				
Local people are engaged as part of their ecosystems in transformational learning about their ecosystems and their roles therein	<p>What ecosystem?</p> <p>What type of engagement?</p> <p>What role(s)?</p> <p>Why engaged? Who with?</p>	<p>Interviews</p> <p>Focus groups</p> <p>Projective visual technique e.g., Photo Voice</p>	<p>External evaluator or Internal evaluator or combination of both</p>	<p>Interviews and Focus Groups – twice per year</p> <p>Projective technique task to be set up and completed by stakeholder prior to interview</p>
Peoples' understanding of their ecosystems are transformed by the programme's ecosystems and ecological model approach	<p>What is their understanding of their ecosystems?</p> <p>What about their understanding has been transformed?</p> <p>How has the ecosanctuary ecosystem impacted them?</p>	<p>Interviews</p> <p>Focus groups</p> <p>Projective visual technique e.g., Photo Voice</p>	<p>External evaluator or Internal evaluator or combination of both</p>	<p>Interviews and Focus Groups – twice per year</p> <p>Projective technique task to be set up and completed by stakeholder prior to interview</p>
Local communities are empowered to apply their curiosity and imagination to explore and contribute meaningfully towards desired environmental and social goals	<p>How and why do they feel empowered?</p> <p>In what ways do they want to contribute? To what goals?</p> <p>In what ways are they curious and feel imaginative about?</p>	<p>Interviews</p> <p>Focus groups</p> <p>Projective visual technique e.g., Photo Voice</p>	<p>External evaluator or Internal evaluator or combination of both</p>	<p>Interviews and Focus Groups – twice per year</p> <p>Projective technique task to be set up and completed by stakeholder prior to interview</p>

Positive relationships and collaboration with inspiring teachers and leading experts	In what ways are the relationships positive? In what ways are the collaborations positive? How are the teachers and experts inspiring you?	Interviews Focus groups Projective visual technique e.g., Photo Voice	AKROYD RESEARCH & EVALUATION External evaluator or Internal evaluator or combination of both	Interviews and Focus Groups – twice per year Projective technique task to be set up and completed by stakeholder prior to interview
Intermediate term – students				
Collective effort, individual agency, and the emergence and development of authentic self are evident	Awareness of individual agency and changes Awareness of authentic self and changes Examples of collective effort Examples of action taken and reasons for action	Interviews Focus groups Surveys Projective visual technique e.g., Photo Voice	External evaluator or Internal evaluator or combination of both Survey administrator	Interviews may prove too difficult – students may lack comprehension, reflection and language to articulate thinking Surveys – may need to be developed or adapted from existing validated surveys – ideally with students that have attended Wild Lab at least twice - timing depends on individual student attendance frequency
Students confident in learning, talking, sharing understandings about ecosystem restoration thinking and practices	Reasons for confidence? What things do they want to talk about and share with other?	Interviews Focus groups Surveys Projective visual technique e.g., Photo Voice	External evaluator or Internal evaluator or combination of both Survey administrator	Interviews may prove too difficult – students may lack comprehension, reflection and language to articulate thinking

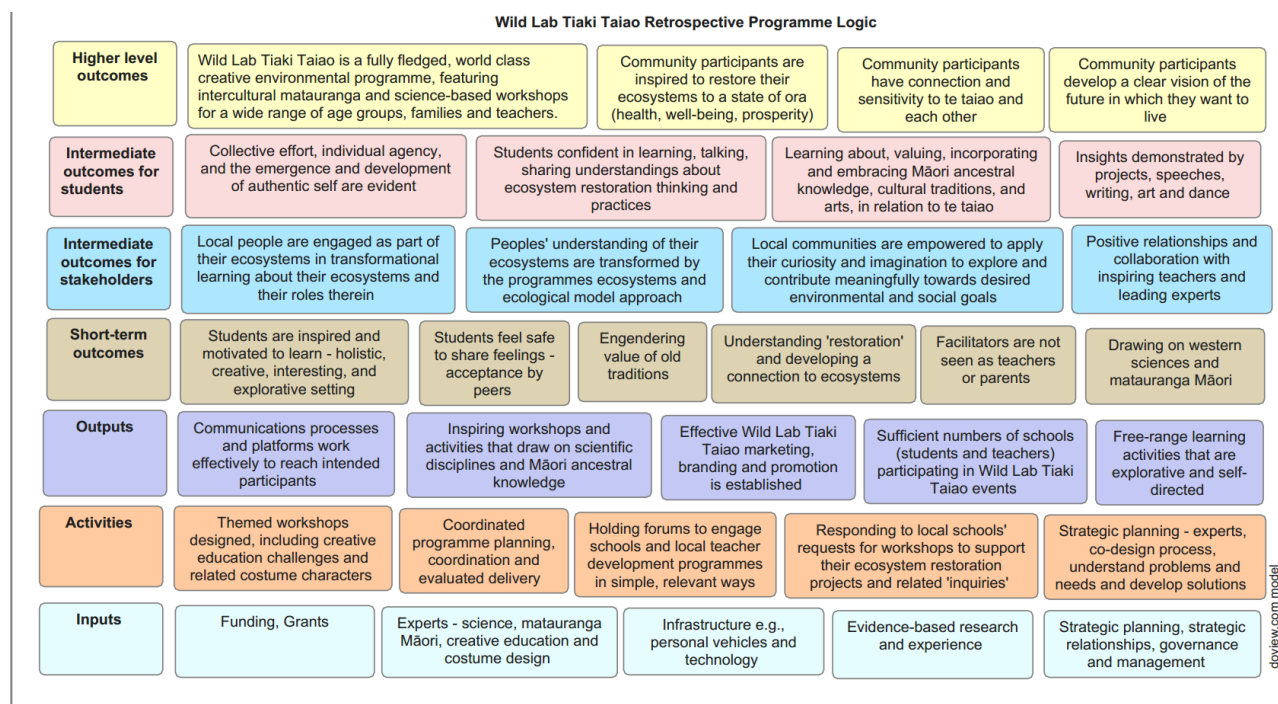
				Surveys – may need to be developed or adapted from existing validated surveys – ideally with students that have attended Wild Lab at least twice - timing depends on individual student attendance frequency
Learning about, valuing, incorporating and embracing Māori ancestral knowledge, cultural traditions, and arts, in relation to te taiao	Understanding of Māori ancestral traditions and arts in relation to te taiao? How do they understand the connection between Māori ancestral knowledge, cultural traditions and arts, with te taiao?	Interviews Focus groups Surveys Projective visual technique e.g., Photo Voice	External evaluator or Internal evaluator or combination of both Survey administrator	Interviews may prove too difficult – students may lack comprehension, reflection and language to articulate thinking Surveys – may need to be developed or adapted from existing validated surveys – ideally with students that have attended Wild Lab at least twice - timing depends on individual student attendance frequency
Insights demonstrated by projects, speeches, writing, art and dance	What insights gained? How expressed? What if any actions taken?	Interviews Focus groups Surveys Projective visual technique e.g., Photo Voice	External evaluator or Internal evaluator or combination of both Survey administrator	Interviews may prove too difficult – students may lack comprehension, reflection and language to articulate thinking

				Surveys – may need to be developed or adapted from existing validated surveys – ideally with students that have attended Wild Lab at least twice - timing depends on individual student attendance frequency
Long term				
Wild Lab Tiaki Taiao is a fully fledged, world class creative environmental programme, featuring intercultural mātauranga and science-based workshops for a wide range of age groups, families and teachers	<p>What are the characteristics of a fully-fledged world class creative environmental programme?</p> <p>How well does intercultural mātauranga and science-based workshops for a wide range of age groups, families and teachers feature within Wild Lab?</p> <p>How does Wild Lab compare to the characteristics of a fully-fledged world class creative environmental programme?</p>	<p>Desktop research</p> <p>Interviews</p> <p>Focus groups</p>	<p>External evaluator or Internal evaluator or combination of both</p> <p>Survey administrator</p>	<p>Desktop research – as required</p> <p>Interviews/Focus Groups – key informants – End of 2022, 2023 and 2024</p>
Community participants are inspired to restore their ecosystems to a state of ora (health, well-being, prosperity)	<p>Levels of inspiration?</p> <p>What this looks and feels like?</p> <p>Triggers for inspiration?</p>	<p>Interviews</p> <p>Focus groups</p>	<p>External evaluator or Internal evaluator or combination of both</p> <p>Survey administrator</p>	<p>Interviews/Focus Groups – key informants – 6 monthly</p>

Community participants have connection and sensitivity to te taiao and each other	<p>How do you describe your connection and sensitivity to te taiao and others?</p> <p>What has supported or enabled this connection?</p> <p>What actions have you taken as result?</p>	Interviews Focus groups	External evaluator or Internal evaluator or combination of both Survey administrator	Interviews/Focus Groups – key informants – 6 monthly
Community participants develop a clear vision of the future in which they want to live	<p>Have you developed a clear vision of the future in which you want to live?</p> <p>What does the vision look and feel like?</p> <p>What has enabled the vision to become clear?</p>	Interviews Focus groups	<p>External evaluator or Internal evaluator or combination of both Survey administrator</p> <p>External evaluator or Internal evaluator or combination of both Survey administrator</p>	Interviews/Focus Groups – key informants – 6 monthly

6. Appendices

6.1 Appendix A: Wild Lab Tiaki Taiao Retrospective Intervention Logic



6.2 Appendix B: Key informant information sheet and consent form

Evaluation of the Longbush Ecological Trust, Wild Lab Tiaki Taiao Programme: Key informant Information Sheet (Nov 2021)

Tēnā koe - You are invited to take part in a 15-minute interview by phone or Zoom about your experience of the Wild Lab Tiaki Taiao programme, as a key informant. The interview is part of an independent evaluation of the programme offered in the Waikereru Ecosanctuary between April 2019 and September 2021.

What is the evaluation about?

As part of the programme's ongoing improvement and sustainability, the Longbush Ecological Trust has commissioned Shaun Akroyd (Ngāti Porou, Te Aitanga-a-Mahaki, Rongowhākāta) of Akroyd Research & Evaluation Ltd to complete this evaluation, which includes document analysis and interviewing key informants.

The evaluation aims are to document programme impacts and outcomes to date and the key factors which have enabled these, and to identify what would enhance future efficacy. The evaluation will also enable the development of a long-term evaluation monitoring framework for ongoing use by the Trust and educators.

How will the information be used?

The information gained from the evaluation activities will inform the above-mentioned evaluation aims. The evaluator will ensure that all the information from you and others is securely stored, where only the evaluator will have access to it.

Process

The evaluator will contact you to inform you about the evaluation and ask you whether you wish to be interviewed as a key informant. If so, he will agree on a time with you for a phone call or Zoom chat. As noted, the interview will last 15 minutes and with your permission, be audio recorded.

Participation is voluntary. You will not be personally identified in any reporting and the evaluator will keep confidential what you say. You do not have to answer any questions you do not want to. A summary of learnings will be provided to key informants who request a copy.

Who do I contact for more information or if I have questions or concerns?

Shaun Akroyd Evaluator - Akroyd Research & Evaluation 027 568 5810 Shaun@akroydresearch.co.nz	Jennie Harré Hindmarsh (Trustee) Longbush Ecological Trust 021 738 272 jenniehh@outlook.co.nz
--	--

Evaluation of the Longbush Ecological Trust, Wild Lab Tiaki Taiao Programme: Key informant Consent Form (Nov 2021)

The purpose of the evaluation has been clearly explained to me, and:

- I know that I don't have to participate in the evaluation.
- I have been given an information sheet.
- I understand the information that I read and had explained to me.
- I have had the chance to talk and ask questions about the evaluation.
- I know that I don't have to answer any questions that I don't want to, and I can request for the recording device to be turned off at any time.
- I understand that I won't be identified in any reports unless I agree for this to happen.
- I know who to contact if I have any questions about the evaluation.
- I understand that a summary of learnings will be made available to me if I request it.

I agree to participate in this evaluation under the conditions set out in the Information Sheet and Consent Form (please circle one option): **YES / NO**

I agree for the discussion to be audio-recorded (please circle one option): **YES / NO**

I would like a copy of the summary of learnings (please circle one option): **YES / NO**

Participant name:	
Signature:	Date:
Email or postal address to send the summary of learnings:	

If you have any questions about the evaluation, contact:

Shaun Akroyd Evaluator - Akroyd Research & Evaluation 027 568 5810 Shaun@akroydresearch.co.nz	Jennie Harré Hindmarsh (Trustee) Longbush Ecological Trust 021 738 272 jenniehh@outlook.co.nz
--	--

6.3 Appendix C: Key informant interview guide

Interview guide – Key informants – Wild Lab (November 2021)

Background/context

- How heard about Wild Lab Tiaki Taiao
 - Requests by schools
 - Responding to invitations from Wild lab
 - Attended forums or meetings to hear about Wild Lab
 - Social media
- Why decided to participate

Formative

- How describe relationship with Wild Lab Tiaki Taiao and the Waikereru Ecosanctuary
 - Rapport
- Awareness of Wild Lab in schools and community
- Cost of participating in Wild Lab

Process

- What is distinctive about the Wild Lab programme?
 - Innovative or creative
 - Western science
 - Mātauranga Māori/Māori cultural traditions
 - Immersive, in nature
 - Out of school learning
 - Safe place
- How do students and teachers react to the activities?
- Alignment with the school education curriculum

Benefits, impacts and outcomes

- Willingness to promote Wild Lab
 - If so, how come and in what ways
- Key impacts/benefits for:
 - Teachers – thinking, adapting teaching practice, personal learning
 - School
 - Students - Improved key competencies
 - Thinking
 - Using language, symbols and text
 - Managing self
 - Relating to others
 - Participating and contributing
 - Inspired to restore their ecosystems or work in the sector
 - Increase their emotional connection and sensitivity to the natural world
 - Increase their connection to others
 - Increase interest in western sciences and mātauranga Māori linked to nature.

Improvements

- Any suggested improvements?
 - Then probe for any suggestions for:

- how the programme could be adapted to enable more participation during a pandemic etc, including through the use of digital technologies
- further enhancing its 'dual heritage' delivery (i.e., informed by mātauranga Māori and western science)
- further enhancing (and sustaining) the Waikereru Ecosanctuary's environment for such a programme
- enabling the Longbush Ecological Trust to continue to offer this programme free of charge to organisations like theirs (and any other suggestions they have for how we could collectively financially sustain this programme).

Additional questions for programme educators

- Requests by schools for specific or tailored workshop activities – what, how done, how come etc?
- Aligning curriculum with workshop activities and education pedagogy – what, how done etc?
- How you approach engaging students – what informs it, bottom-line, what does success look like re engagement?
- Discussion and processes aimed at incorporating Mātauranga Māori, ancestral traditions and knowledge, Western science, education expertise etc., into workshop design and content – what, when with whom?
- Limitations, issues, and frustrations as educators about any aspect of the programme
- Opportunities to maximise ongoing impacts of the workshops for students and schools
- Potential measures for student uptake of programme outcomes e.g., inspired to restore their ecosystems, sensitivity to te taiao, developing a clear vision of the future in which they want to live.