

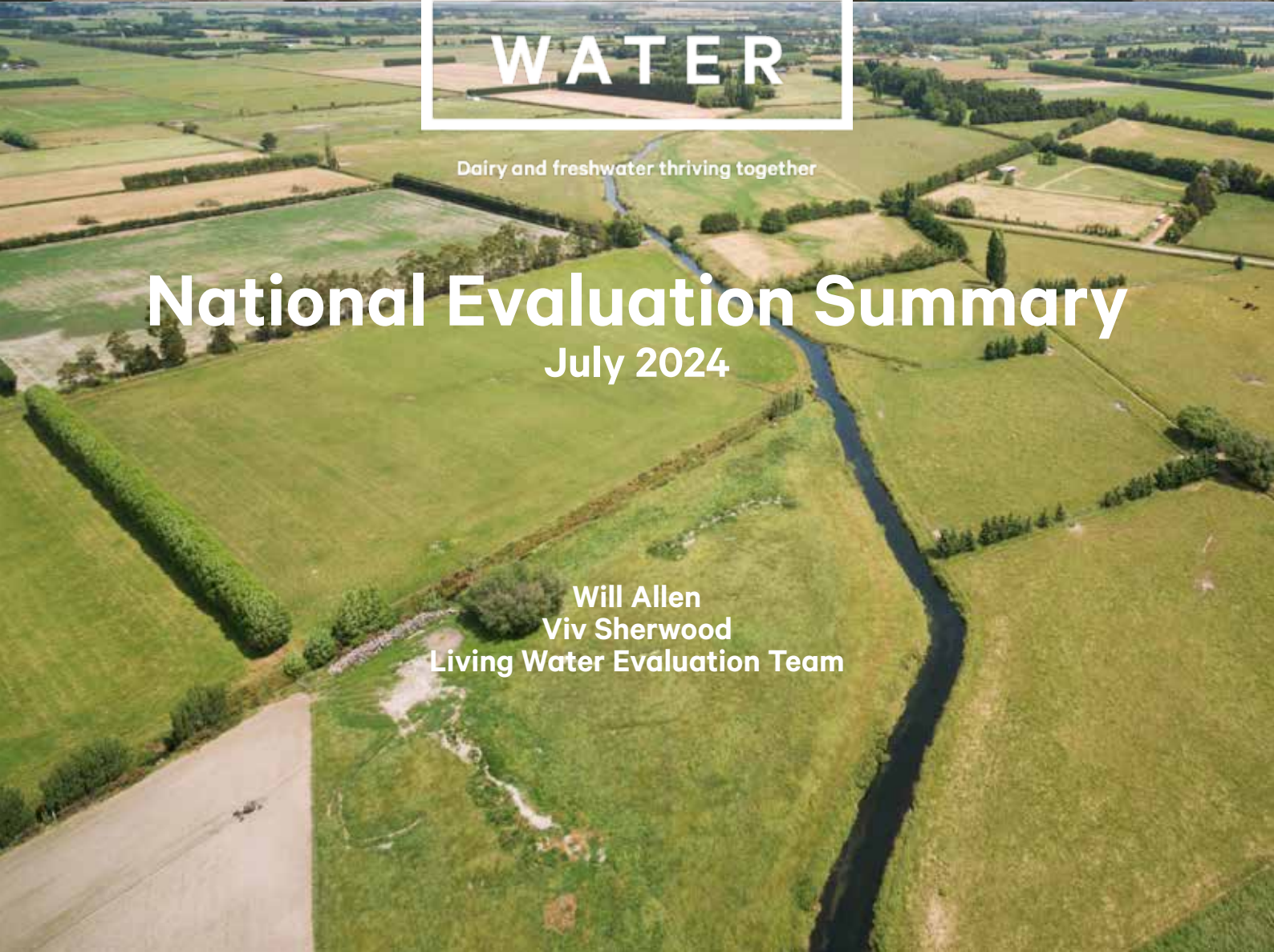


**LIVING  
WATER**

Dairy and freshwater thriving together

**National Evaluation Summary**  
July 2024

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**Note:** Will Allen and Viv Sherwood have been involved in the monitoring and evaluation activities of the programme through the initial monitoring and evaluation design phases, and more recently in the development and implementation of this final evaluation phase.

**Disclaimer:** This document has been prepared for the benefit of the Living Water team, their partner organisations, and others as a resource to use in future thinking about the implementation of collaborative place-based initiatives. The material contained within is provided solely for the purpose of being used within anyone's own participatory process. It should be subject to further consideration and refinement in accordance with their specific needs and circumstances. The individual perspectives we have presented may not always reflect the perspective of a partner organisation or other entity.

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# Abbreviations

CAME - Complexity-Aware Monitoring and Evaluation

DOC - Department of Conservation

FEP - Farm Environment Plan

KEQs - Key Evaluation Questions

MOU - Memorandum of Understanding

NGOs - Non-Governmental Organisations

SDA - Sustainable Dairying Advisor (Fonterra)

TNC - The Nature Conservancy

ToC - Theory of Change

TRKPT - Tiaki Repo ki Pūkorokoro Trust

UC-CAREX - University of Canterbury Waterway Rehabilitation Experiment

WTW - Whakamana Te Waituna

WWW - Waimā Waitai Waiora



The DOC-Fonterra Living Water team at their annual hui in 2022, Waituna, Murihiku/Southland.

# 1. Evaluation and programme introduction

## 1.1 Introduction

Living Water was a ten-year partnership between the Department of Conservation (DOC) and Fonterra. Its goal was to improve the health of freshwater ecosystems and support sustainable farming practices. It began in 2013 and was the first collaboration of its kind in New Zealand, bringing together a government conservation agency and a primary industry cooperative. The project aimed to address concerns about the impact of dairy farming on water quality. Throughout the ten years, Living Water worked with farmers, scientists, councils, mana whenua, and communities to try out and implement different tools, methods, and approaches. The goal was to find ways for agriculture and healthy freshwater ecosystems to coexist.

This national evaluation programme report brings together the main insights and recommendations from the individual evaluations of each of the five catchments: Wairua River, Northland; Pūkorokoro-Miranda, Hauraki; Lakes Areare, Ruatuna and Rotomānuka, Waikato; Ararira LII River, Canterbury; and Awarua–Waituna Lagoon, Southland. This summary report provides an overview of the programme's approach, progress, outcomes, and lessons learned. It starts with an explanation of the evaluation methodology and the programme's context, followed by an assessment of its development phases and strategic focus. The following chapters detail the specific achievements, challenges, and unintended outcomes. The report concludes with a synthesis of recommendations for future initiatives. When referring to any of these sites with illustrative examples, we draw from the specific site evaluations. Links to these individual evaluations and the information sources used in this evaluation are available in Appendix II. Additional appendices contain detailed recommendations grouped by category and biographies of the authors.

## 1.2 Evaluation approach

The Living Water programme used a participatory evaluation model, involving partnership staff, consultants, and various stakeholders. This approach included interviews, literature reviews, and workshops to ensure diverse perspectives were included. The evaluation consultants were closely involved with the different site programmes, working alongside a Living Water Evaluation Team at each site as co-authors to ensure shared ownership of the resulting reports. The performance story design used in each site evaluation assessed outcomes and impacts while fostering a collaborative environment for shared insights and learning.

The evaluations emphasised the place-based nature of the Living Water programme, focusing on the unique characteristics and needs of each catchment. This synthesis acknowledges the site-specific evaluation reports from Ararira LII, Pūkorokoro-Miranda, Waikato Peat Lakes, Wairua, and Waituna, highlighting the importance of tailoring insights and recommendations to each catchment's local context.

Complexity-aware monitoring and evaluation (CAME) approaches, such as systems thinking, adaptive management, and developmental evaluation, were used to capture the complex and changing impacts of the programme. These methods differed from mainstream evaluation approaches by emphasising localised insights and adaptive strategies. The evaluations also utilised the Living Water website and published a Living Water Story (eBook) to report on trials, processes, and important lessons learned. Importantly, the evaluations aimed to encourage ongoing discussions with site partners and local communities, using the findings to prompt learning debriefs and social learning discussions.

## National summary

This national summary builds on the five site evaluations, reflecting on the collective findings. It aims to provide an overall understanding of the Living Water programme's impact while directing readers to site-specific reports for detailed insights.

The national summary involves:

- **Aggregating site-specific insights:** Drawing common themes, challenges, and successes from each site's evaluation.
- **Comparative analysis:** Identifying patterns and differences across sites to understand the varying contexts and their impact on programme outcomes.
- **Broader lessons and recommendations:** Formulating lessons and recommendations that provide a cohesive understanding while emphasising the importance of local insights.

This synthesis complements the detailed site reflections by providing a comprehensive overview and directing readers back to the site-specific reports.



Fonterra Sustainable Dairying Advisers were a key part of the success of Living Water through their established relationships with farmers.

### 1.3 Programme context and development

The Living Water partnership aimed to improve freshwater ecosystem health while enabling farming to thrive. Fonterra pledged \$20 million over 10 years, complemented by \$500,000 annually of DOC staff time to operationally oversee the programme of work. The programme focused on five catchments: Wairua River, Northland; Pūkoro-Miranda, Hauraki; Lakes Areare, Ruatuna and Rotomānuka, Waikato; Ararira LII River, Canterbury; and Awarua–Waituna Lagoon, Southland. Moving beyond a focus on individual farm enterprises, the partnership embraced a comprehensive catchment-scale approach, deepening understanding of effective environmental change on a larger scale, and showcasing the contributions agencies and sectors can make at this level.



**Figure 1.** The Living Water sites

Nationally, the programme aligned with evolving agricultural practices and environmental management policies aimed at enhancing water quality and resource management. Initiatives such as the Clean Streams Accord, Sustainable Dairying: Water Accord, and the National Policy Statement for Freshwater Management (Te Mana o te Wai) supported this shift. Living Water’s collaborative approach reflected contemporary environmental management strategies, encouraging integrated catchment management and the involvement of mana whenua, recognising their cultural values and perspectives.

Critical issues in this context include the degradation of New Zealand's lowland freshwater ecosystems, to which farming has contributed. Additionally, New Zealand's economic, cultural, and social well being depends on healthy ecosystems. Water is also a key part of the national identity, and New Zealanders expect to swim, fish, and gather kai in the country's water bodies.

The programme's development involved building foundational relationships, collecting baseline data, and implementing various habitat enhancement and conservation initiatives. Over time, it evolved into a tailored, systemic catchment management approach. Significant milestones included partnerships with local catchment groups, the establishment of community-led trusts, and the implementation of targeted environmental projects.

## **1.4 Programme reset and strategic focus**

Living Water initially began with the ambition to 'restore five catchments' but after several years it became evident that this would require a much greater investment of finances and resources, and would need to continue over a much longer period of time than the ten years of the agreed partnership. Following a partnership review in 2015, Living Water updated its national strategy in 2016, shifting to a more system-focused learning and 'proof of concept' programme. This involved prioritising partnerships, testing tools and approaches, and scaling up solutions to enhance freshwater ecosystems and promote sustainable farming.

To develop this new strategic direction, Living Water used the Google SPRINT process, an accelerated method for addressing critical business questions through design, prototyping, and testing ideas with stakeholders. This process combined business strategy, innovation, behavioural science, and design thinking. Strategic plans were then completed for all Living Water sites, prioritising annual investments to achieve desired impacts.

### **The Living Water strategy**

The Living Water strategy (Table 1) envisions a sustainable dairy industry that supports healthy, functioning ecosystems, enriching the lives of all New Zealanders. The strategy's purpose is to implement scalable, transformative solutions that exemplify sustainable dairying within thriving freshwater ecosystems. The focus lies at the interface between dairy farming practices and freshwater health, prioritising on-farm actions, improving water quality, and reconnecting lowland habitats through freshwater corridors. By advancing sustainable farming systems, the strategy supports the broader agricultural sector in New Zealand. Partnership pillars, long-term impacts, strategic objectives, and guiding principles collectively guide the implementation of this strategy, aiming to restore freshwater ecosystems, accelerate sustainable farming practices, and collaborate with key partners to demonstrate innovative solutions scalable both locally and nationally.



<b>Vision</b>	A sustainable dairy industry is part of healthy functioning ecosystems that together enrich the lives of all New Zealanders
<b>Purpose</b>	To implement game-changing and scalable solutions that demonstrate sustainable dairying in healthy freshwater ecosystems
<b>Scope</b>	We are focused on the interface between dairy farming practice and freshwater ecosystems. We prioritise on-farm actions, improving freshwater quality, and reconnecting lowland habitats via freshwater corridors. Our work needs to contribute towards advancing sustainable farming systems in New Zealand’s agricultural sector
<b>Partnership pillars</b>	<ul style="list-style-type: none"> <li>• Partnerships with a shared vision</li> <li>• Trialling and implementing technical solutions</li> <li>• Championing change with others</li> </ul>
<b>Long term outcomes (impacts)</b>	<ul style="list-style-type: none"> <li>• Healthy lowland freshwater ecosystems;</li> <li>• Responsible profitable dairying; and</li> <li>• A shared understanding of the interdependence of agriculture, economy and environment by the broader community</li> </ul>
<b>Strategic objectives</b>	<ul style="list-style-type: none"> <li>• Restore freshwater ecosystems and build resilience on and off farm</li> <li>• Accelerate environmentally sustainable farming practices</li> <li>• Work with key partners, farmers, iwi and communities to demonstrate game-changing solutions that can be taken to scale locally and nationally</li> </ul>
<b>Guiding principles</b>	<ul style="list-style-type: none"> <li>• Collaborate and Partner</li> <li>• Integrate Mātauranga Māori</li> <li>• Create Connections</li> <li>• Above and Beyond Regulation</li> <li>• Measurable and Repeatable</li> <li>• Learn and Share</li> </ul>

**Table 1.** The Living Water strategy

## 1.5 Programme development phases

The operating model of Living Water adapted over the ten years of the partnership as the programme of work moved through three phases:

**Establish, engage, investigate, and ‘quick wins’:** The initial phase focused on building foundational relationships, collecting baseline data, and initiating early conservation efforts to achieve quick successes. This included habitat enhancement, targeted biodiversity studies, and initial restoration work on public land, such as planting native species and wetland restoration. These efforts laid a solid foundation for understanding and addressing conservation needs within each catchment.

**Confirm strategy, consolidate, plan, trial, and build alliances:** Following a strategic reset in 2017, the programme advanced into a more tailored, systemic catchment management approach. This phase involved refining focus areas, developing strategic partnerships, and implementing targeted environmental projects. Emphasis was placed on integrated catchment management, involving detailed planning, trialling innovative practices, and building alliances with local stakeholders and communities. Community-led trusts were established, reflecting a shift towards collaborative catchment management.

**Share lessons, grow impact:** In the final phase (2020-2023), the programme focused on broadening its impact and sharing the tools and insights gained from earlier phases. This included formalising partnerships through memorandums of understanding, scaling up successful initiatives, and disseminating lessons learned to a wider audience. Efforts were made to ensure the sustainability of the programme’s impact by embedding practices within local governance structures and fostering ongoing collaboration among stakeholders.

This phased approach allowed Living Water to evolve from initial conservation efforts to a holistic catchment management approach, integrating ecological needs with community collaboration for sustainable ecosystem stewardship. In the following chapters, we delve deeper into the specific outcomes, challenges, and lessons learned from the wider programme.

## 1.6 Theory of Change and logic model

The Theory of Change (ToC) for the Living Water programme evolved significantly over its ten-year duration. A ToC explains how we believe change happens, serving as a roadmap that outlines desired outcomes, the steps to achieve them, and the causal links between actions and outcomes. This shared understanding is crucial for coordination and evaluation, encapsulating the programme’s context, logic model, and assumptions. A ToC can be written out explicitly or practiced implicitly, guiding programme actions either through formal documentation or through the collective understanding of staff and others involved.

Initially, the Living Water programme focused on establishing relationships, gathering baseline data, and initiating conservation projects. The main activities included ecosystem enhancement, sustainable farm management, community and iwi support, research and monitoring, and effective storytelling. These activities were based on the

belief that collaborative, informed, and community-driven efforts would create significant and lasting environmental change. The initial ToC assumed that these efforts would naturally align and progress in a straightforward manner, leading to the desired outcomes. However, experiences from different sites highlighted the need for a more nuanced and adaptive approach to reflect the complexities of environmental management and the challenges of working collaboratively. It became clear that better ways of working between organisations and sectors were necessary and that achieving community buy-in was often difficult.

In 2017, following the SPRINT process, Living Water adopted a more outcomes-based monitoring and evaluation framework, prioritising both social and environmental activities and outcomes. This shift moved the focus from on-the-ground restoration to a “proof of concept” approach, concentrating on testing scalable tools and approaches and sharing lessons learned. This led to the creation of the National Planning, Monitoring & Evaluation Framework in 2018.

As part of this strategic shift, Key Evaluation Questions (KEQs) were formulated to guide the programme’s evaluation process. These KEQs were designed to address the most critical aspects of accountability, effectiveness, efficiency, sustainability, and impact of the programme. The KEQs were:

- How have the partnerships Living Water formed affected the success of the programme?
- What evidence is there that interventions and approaches are being (or likely to be) scaled up and out?
- How, and to what extent, has Living Water accelerated the pace of the adoption of sustainable dairying practices?
- To what extent has Living Water restored freshwater ecosystems and built resilience in target catchments?
- How did farming practice changes affect farm profitability?

**Key elements of the refined Theory of Change included:**

- **Outcome focus:** Moving beyond traditional metrics of inputs and activities to evaluate broader impacts on both the environment and community well-being.
- **Integrated management:** Emphasising the connection between land and water resources and fostering collaboration across partners, mana whenua and various stakeholder groups.
- **Adaptive strategies:** Using systems thinking, adaptive management, and developmental evaluation to address evolving environmental and social challenges.

This strategic evolution underscored the importance of understanding the relationships and processes that drive effective environmental change, ensuring that the programme’s initiatives were both impactful and sustainable.

## The national logic model

The logic model, a key component of the Theory of Change, serves as a comprehensive framework guiding the Living Water programme’s efforts to improve freshwater ecosystems while supporting sustainable dairy farming. As a diagram it provides a guiding framework for the project team and stakeholders. The national logic model (table 2) outlines the key inputs, activities, and desired outcomes that together chart the pathway to achieving the programme’s goals. By mapping these elements, it helps ensure everyone involved understands how their efforts contribute to the overall success of the programme.

<b>Vision:</b> A sustainable dairy industry is part of healthy functioning ecosystems that together enrich the lives of all New Zealanders			
<b>Inputs</b>	<b>Activities</b>	<b>Short term outcomes (by 2020)</b>	<b>Medium term outcomes (by 2023)</b>
<p><b>Human Resources:</b> DOC and Fonterra staff time; Fonterra Farmers; Site partners including iwi, councils, research organisations; Industry representatives, contractors.</p> <p><b>Knowledge / Cultural Resources:</b> Operational (farming and natural systems); Scientific; Mātauranga Māori; Social science; Organisational.</p> <p><b>Funding:</b> Investment from Fonterra; External grant funding.</p>	<p><b>Partnerships with a shared vision:</b> Co-design and delivery; Sprint planning process; Mana Enhancing Agreements.</p> <p><b>Trialling &amp; Implementing Technical Solutions:</b> Nutrient and sediment management tools; Naturalising agricultural drains; Catchment scale prioritisation tools.</p> <p><b>Championing Change with others:</b> Case studies, shared learnings, research papers; Partnerships with industry organisations, research institutions.</p>	<p>Robust and resilient partnerships built across operational agencies and iwi in target catchments.</p> <p>Fonterra and DOC staff capability for operationalising freshwater improvement initiatives in productive landscapes increased.</p> <p>Increased support for and ownership by farmers of the need for on-farm practices changes</p> <p>On-farm initiatives to improve freshwater ecosystems in target catchments increased</p>	<p>Partnerships built at systems levels across catchments, regions and sectors increased</p> <p>Environmentally sustainable dairying practices on Fonterra farms in target catchments increased</p> <p>Game-changing and scalable freshwater solutions rolled out regionally and/or nationally</p> <p>Freshwater biophysical indicators in target catchments improved</p> <p>The mauri of catchments improved</p> <p>Freshwater values improved while farm profitability was maintained or increased</p>

**Table 2.** The national logic model (2018)

## Underpinning assumptions and guiding principles

The assumptions and principles outlined here are from the Living Water National Planning, Monitoring & Evaluation Framework, which served as a foundational reference for the programme's strategic approach.

Causal assumptions included recognising the importance of:

- **Partnerships:** Effective change requires collaboration, as no single organisation possesses all the necessary resources or influence.
- **Social learning:** Learning occurs through action, reflection, and collaboration, offering new perspectives and pathways forward.
- **Behaviour change:** Enduring change in farming practices involves a comprehensive change cycle, from motivation to the embedding of new habits.
- **Systems thinking:** Addressing change at the individual farmer level is just one aspect; broader systemic changes are also necessary for accelerated impact.

These assumptions aligned with the Living Water programme's guiding principles, emphasising collaboration, the integration of mātauranga Māori, knowledge sharing, economic viability, scalability, and the importance of learning and sharing. These principles underpin the programme's approach to achieving its long-term goals and reflect a commitment to a holistic and inclusive strategy for catchment management.



Sharing knowledge and gaining an understanding of landscape characteristics are key for working at a catchment scale to improve freshwater.

## 2. Progress assessment

This chapter summarises the diverse experiences and outcomes of the decade-long Living Water programme. The programme aims to promote farming, freshwater, and healthy ecosystems thriving together. Here, we evaluate the programme's alignment with its initial Theory of Change (ToC), assess its assumptions, and revisit its guiding principles. This reflective examination will highlight achievements and issues faced. The synthesis aims to refine future environmental management initiatives and contribute constructively to future discussions on sustainable catchment management practices.

The Living Water programme has navigated a ten-year developmental trajectory characterised by evolving strategic focuses—from initial habitat enhancement efforts to a more active community-led integrated catchment restoration approach. Initially guided by an implicit set of assumptions, the programme formalised its strategic framework during the 'SPRINT' reset, which introduced a detailed ToC and Logic Model as outlined in Chapter 1. This pivotal adjustment allowed the programme to respond to emerging insights and challenges.

This section outlines how the Living Water programme has fulfilled planned activities and outputs, and assesses its contributions to the expected outcomes. The discussion examines these achievements based on evaluative evidence gathered over the programme's lifetime, providing a balanced view of accomplishments and areas where expectations were not fully met.

### 2.1 Key activities and outputs

The Living Water programme completed activities and outputs across five catchments, focusing on habitat enhancement, partnerships and collaborations, technical solutions, and knowledge sharing. Collaborations and partnerships with stakeholders, including local councils, community groups, iwi, educational institutions, and industry representatives, supported these efforts.

**Habitat enhancement:** The programme carried out significant habitat enhancement activities across all sites. This was primarily achieved through a combination of fencing and planting, strategic land purchases, raising awareness of habitat importance, developing restoration plans, and leveraging significant funding packages for related restoration efforts. In Pūkorokoro-Miranda, 19.6 hectares of farmland were obtained and turned into a reserve to improve habitats for shorebirds. The Ararira LII programme had an early focus on habitat enhancement and wetland restoration at Yarrs Flat and Tārerekautuku/Yarrs Lagoon. The Whakamana Te Waituna programme purchased 584 hectares of land to create a buffer for Waituna Lagoon and as of July 2024 had created 17.5 hectares of ponds and habitats for mahinga kai species. These efforts aimed to increase biodiversity and improve water quality, showing a commitment to restoring the ecosystem on a larger scale.

**Partnerships and collaborations:** Cross-sector partnerships and collaborations were central to the Living Water programme. The Pūkorokoro-Miranda programme engaged over 100 landowners in pest control workshops and developed tailored Farm Environment Plans (FEPs) for smaller farms and lifestyle blocks. The Waikato Peat Lakes programme collaborated with schools and community groups on predator and pest plant control, education, and planting initiatives. The Whakamana Te Waituna programme worked with rūnaka whānau, local councils, and community groups to achieve its goals. In the Wairua River programme, the Waimā Waitai Waiora partnership facilitated development of 137 farm environment plans, planted almost 400,000 plants and supported hapu-driven research about the wellbeing and mauri of the Wairoa River. These collaborations ensured a shared vision and collective action towards achieving the programme's goals.



Monitoring was a key aspect of the Living Water programme, to understand baseline conditions and measure change.

**Technical solutions:** The Living Water programme utilised partnerships, innovative tools, and scalable solutions to meet its goals, enabling the testing and refinement of interventions with broad application potential. Effective interventions recognised the importance of linking biophysical and social elements, ensuring that solutions were based on sound science and practical, innovative approaches. Various nutrient and sediment management tools were tested and implemented across the catchments. For example, in the Wairua River programme, sediment reduction trials were conducted in the Okarika Pocket to improve hydrological and ecological functioning. The Ararira LII programme focused on on-farm trials and co-designed waterway management plans. The Waikato Peat Lakes programme experimented with different techniques to reduce nutrients and sediment, although a plan to reintroduce native macrophytes was found to be unfeasible. The Whakamana Te Waituna programme included large scale sediment trap trials, and installing nitrogen and phosphorus filters. Collectively, these solutions explored a range of ways to improve water quality and scalable approaches to sustainable land management.

**Knowledge sharing:** Sharing knowledge was a crucial aspect of the Living Water programme at both national and site levels to ensure lessons learned and best practices were widely disseminated. Living Media engagement, including platforms like LinkedIn, Twitter (now X), and local and national media, as well as the programme's website, played a key role. In addition to social media updates, the programme's website serves as a repository of in-depth case studies and updates from across the five catchment sites. These records provide a holistic view of the activities, experiments, and associated contexts and delve into specifics like project expenditures, lessons learned, and benefits gained. Field trips involving Fonterra staff, councils, school children, the local community, and others played a crucial role in offering participants a firsthand view of the programme's initiatives. Collaborations with academic institutions, sponsorship, and participation in conferences and symposiums demonstrated wider community engagement efforts within the wider Living Water programme. These efforts ensured that the insights gained from the programme could guide future environmental management initiatives at local and national levels.



## 2.2 Outputs - by the numbers



**35,000  
ha**

worked with farmers, scientists, councils, mana whenua and local communities across 35,000 hectares in five catchments

**100%**

of Fonterra farms in Living Water catchments have Farm Environment Plans

**50%**

of Fonterra farmers in Living Water catchments implemented freshwater improvement actions over and above regulations



**70**

projects completed

**44**

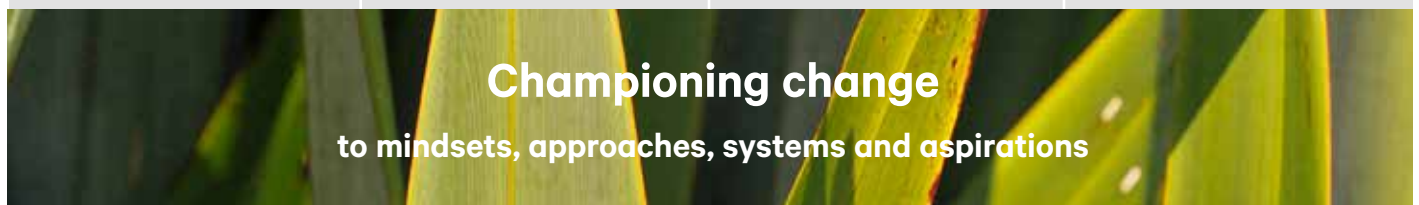
trials to see what can be scaled to improve freshwater

**17**

solutions that have been scaled or are being used by others

**30**

case studies completed about our trials



**60**

partners and groups we worked with to improve freshwater

**3483**

social media followers across all platforms

**12**

projects supported iwi and hapū as kaitiaki and integrated mātauranga Māori

**\$19m**

additional funding leveraged for freshwater projects

## 2.3 Contributions to outcomes

Outcomes are essential in measuring the success and impact of any programme. For Living Water, understanding outcomes helps evaluate the programme's overall goals, whether set implicitly or explicitly, including those formalised in the 2018 logic model and targeted through to 2023. These outcomes provide insights into the programme's effectiveness, sustainability, and scalability.

This section presents the outcomes achieved through the Living Water programme, structured into three main areas. First, it outlines the results from the 2018 logic model in a results table, showcasing the programme's contributions towards its formal goals. Secondly, it highlights the significant changes that emerged from the Living Water partnership between DOC and Fonterra, reflecting broader environmental and organisational benefits. Finally, it acknowledges the general areas of outcomes across all sites, emphasising the holistic and integrated impacts of the programme.

It is important to note that these outcomes address the Key Evaluation Questions (KEQs) that were formulated to guide the programme's evaluation process. These KEQs focus on accountability, effectiveness, efficiency, sustainability, and impact, and their answers can be seen reflected in the outcomes discussed below.

### Results table

This table offers a snapshot of the progress made towards the outcomes identified in the programme's 2018 logic model (refer to section 1.6 Theory of Change for a summary version of the logic model and its underlying assumptions). The table provides a brief overview of the outcomes and contributions towards achieving them. More information on achieving outcomes is contained within the site evaluation reports.

## Short and medium-term outcomes

## Contributions to outcomes

<p><b>Partnerships</b></p> <p>Robust and resilient partnerships built across operational agencies and iwi in target catchments</p> <p>Increased partnerships at systems levels across catchments, regions, and sectors</p>	<p>Over the course of ten years, partnerships and relationships were established with over 60 different groups and organisations from central and local government, NGOs, mana whenua, and community catchment groups. These developed at different decision making levels, with some continuing beyond the life of Living Water. Some examples of these, with focuses at different levels, include:</p> <ul style="list-style-type: none"> <li>• National partnerships such as DOC and Fonterra, The Nature Conservancy, and Farming with Native Biodiversity.</li> <li>• Catchment-level partnerships involving agencies, mana whenua, and communities like Whakamana Te Waituna and Waimā Waitai Waiora.</li> <li>• Local community collaborations included the Manga-o-tama catchment restoration project and Tiaki Repo ki Pūkorokoro Trust (TRKPT).</li> <li>• Mana whenua partnerships including Ngā Kaitiaki O Ngā Wai Māori and Kaipara Uri, Ngāti Apakura, Te Rūnanga o Ngāi Tahu, Awarua Rūnanga, and Te Taumutu Rūnanga.</li> <li>• Tool development partnerships like LandscapeDNA and UC-CAREX.</li> </ul> <p>These collaborations ensured a shared vision and collective action towards achieving the programme's goals.</p>
<p><b>Capability building</b></p> <p>Enhanced ability of Fonterra and DOC staff to operationalise freshwater improvement initiatives in productive landscapes</p>	<p>The Living Water programme significantly enhanced the ability of Fonterra and DOC staff to operationalise freshwater improvement initiatives in productive landscapes.</p> <ul style="list-style-type: none"> <li>• Staff acknowledged that their ability to contribute at a catchment level by improving their relational skills (rather than just focusing on individual projects such as fencing and planting) was developed through their involvement in Living Water.</li> <li>• The partnership provided opportunities for staff to collaborate in different ways, learning, experimenting, and planning together.</li> <li>• Individual staff benefitted from expanded networking opportunities.</li> <li>• Fonterra SDA and DOC staff members improved their cultural competency and established connections by working directly with mana whenua.</li> <li>• DOC staff members gained a better understanding of farm operations and strengthened their connections by working directly with land owners and land managers.</li> <li>• Capability building included not only technical skills but also cultural competencies and relationship management.</li> </ul>

## Short and medium- term outcomes

## Contributions to outcomes

### Farmer support and ownership

Increased support from and ownership by farmers for the need for on-farm practice changes

Growth in the number of on-farm initiatives aimed at improving freshwater ecosystems in catchments

Greater adoption of environmentally sustainable farm practices on Fonterra farms

Living Water worked directly with farmers in its catchments, accelerating the delivery of on-farm actions. The following examples and numbers are indicative examples of this aim:

- 100% of Fonterra farms in Living Water catchments have a Farm Environment Plan (FEP).
- 50% of Fonterra farmers in Living Water catchments are taking action over and above regulation (based on SDA reporting).

### Scalable solutions

Rollout of game-changing and scalable freshwater solutions regionally and nationally

While Living Water found that solutions need to be tailored for individual catchments, there are concepts and approaches that can be applied across multiple locations. Living Water developed 17 solutions that have been scaled or are being used by others (see eBook/website). Some notable examples include:

- The Ararira LII Catchment Management Plan process and approach for lowland waterways.
- The floating wetland, further developed using a traditional mōkihi, integrating mātauranga Māori into a nutrient reduction and habitat enhancement tool.
- Living Water approaches influenced the development of the DOC Ngā Awa River Restoration Programme.
- The integration of biodiversity information and actions into Farm Environment Plans using the Fonterra template.
- LandscapeDNA and physiographics tools, available nationally through the website.

## Short and medium-term outcomes

## Contributions to outcomes

<p><b>Improved freshwater indicators</b></p> <p>Measurable improvements in freshwater biophysical indicators in target catchments</p>	<p>The Living Water programme demonstrated approaches to achieve measurable improvements in freshwater biophysical indicators through targeted interventions, strategic planning, and innovative practices.</p> <ul style="list-style-type: none"> <li>• <b>Proof of concept:</b> Given the relatively short timeframe of the Living Water partnership, the strategy reset moved to a proof of concept rather than achieving full-scale restoration. This was reflected in the strategy pillars combining partnerships, tools, and scaling needed to achieve restoration aspirations. This strategic approach allowed for testing and refining interventions that showed potential for scaling up.</li> <li>• <b>Water quality improvements:</b> Trials demonstrated that water quality improvements are achievable through targeted interventions. For example, the use of detention bunds and peak run-off control structures effectively reduced sediment loads, a significant contributor to water quality degradation.</li> <li>• <b>Instream habitat:</b> Improvements in instream habitat were shown to contribute to increasing fish populations and overall habitat quality. These enhancements supported biodiversity and ecosystem resilience in the target catchments.</li> </ul>
<p><b>Enhanced mauri of catchments</b></p> <p>Improvement in the mauri (life force) of catchments, reflecting better ecological health and cultural values</p>	<p>Enhancing the mauri of catchments requires mana whenua-driven (directed) work. For the Living Water programme this included:</p> <ul style="list-style-type: none"> <li>• <b>Governance and decision-making roles:</b> Mana whenua were integral in this way to the Waimā Waitai Waiora (WWW) partnership, Whakamana Te Waituna (WTW) Trust, and Tiaki Repo ki Pūkorokoro Trust (TRKPT).</li> <li>• <b>Wairua:</b> Through the WWW, on-farm restoration support for Māori land was prioritised and hapū-driven research on values and issues crucial to the mauri and wellbeing of the Wairoa River to ultimately inform ecological management based on mātauranga Māori was undertaken.</li> <li>• <b>Waikato Peat Lakes:</b> Supported mana whenua reconnection with Lake Ruatuna through the development of a pā harakeke and rongoā garden, and facilitated mana whenua involvement in the Manga-o-tama catchment project via a mana enhancing agreement.</li> <li>• <b>Ararira LII:</b> Established a Memorandum of Understanding (MOU) with Taumutu Rūnanga and Selwyn District Council for the catchment redesign project.</li> <li>• <b>Waituna:</b> Supported mana whenua development with strategic land acquisition and retirement, leading to a mahinga kai pā development, and initiated catchment-wide sediment and nutrient reduction efforts.</li> </ul>

## Short and medium- term outcomes

## Contributions to outcomes

<p><b>Maintained or improved farm profitability</b></p> <p>Achieving freshwater value improvements while maintaining or improving farm profitability</p>	<p>The Living Water programme demonstrated that it is possible to enhance freshwater ecosystems using low cost interventions. Key strategies and outcomes include:</p> <ul style="list-style-type: none"><li>• <b>Farm environment planning and prioritisation:</b> Many farms in the Living Water catchments focused on activities that improved the environment. The use of catchment-wide prioritisation tools helped develop farm plans, leading to more efficient use of resources.</li><li>• <b>Targeted interventions:</b> Innovative practices such as detention bunds and peak run-off control structures showed they can help reduce sediment and nutrient loads, improving water quality while maintaining productive land use.</li><li>• <b>Increased on-farm resilience:</b> Actions such as retiring flood-prone land, protecting stock from waterways, and improving riparian planting helped build farm resilience. These measures not only contributed to environmental goals but also contributed to reducing the risks and costs associated with flood damage and water contamination.</li><li>• <b>Investing in nature:</b> Investing in freshwater improvements helps farmers maintain social licence and could contribute to profitability in the future through new financial instruments like biodiversity credits.</li><li>• <b>Cost benefit analysis:</b> A cost-benefit analysis by Living Water showed that working collectively at a catchment scale would achieve better environmental outcomes and spread costs over a longer period, rather than incurring significant upfront costs.</li></ul>
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**Table 3.** National results table

## DOC/Fonterra Living Water partnership outcomes

Organisations are inherently complex and relational, and changes to their functioning are influenced by multiple factors. Notably, Living Water contributed to adjustments in ‘business as usual’ practices and commitments, rather than initiating or directly leading these changes. It’s crucial to recognise that the changes and outcomes experienced by the two partner organisations were due to the collective efforts at all five Living Water sites.

The Living Water partnership between DOC and Fonterra resulted in several significant outcomes that extended beyond the individual site programmes. These outcomes reflect the collaborative efforts and shared vision of both organisations, contributing to broader environmental and organisational benefits:

- **Enhanced organisational capacity:** The partnership enabled both DOC and Fonterra staff to gain a deeper understanding of each other’s perspectives, fostering a more collaborative environment. This collaboration led to improvements in relational skills, cultural competencies, and technical knowledge, enhancing the overall capacity of both organisations to address freshwater management challenges.
- **Influence on national programmes:** Lessons learned from Living Water influenced the development of DOC’s Ngā Awa programme, which focuses on restoring biodiversity across 14 rivers in New Zealand. Similarly, Fonterra’s Sustainable Catchments programme was shaped by the insights gained from Living Water, guiding strategic decisions about partnerships and interventions.
- **Integration of environmental data:** The partnership supported the development of digital platforms for Farm Environment Plans (FEPs) that integrate regionally specific environmental information, such as soil types, physiographic data, and significant habitats. This integration has accelerated the delivery of FEPs and improved the ability of farmers to implement sustainable practices.
- **Support for system-level changes:** Living Water’s support for the national Farming with Native Biodiversity pilot helped Fonterra develop in-house capability and training for Sustainable Dairying Advisors (SDAs). This initiative has enabled Fonterra to provide direct support to farmers in enhancing biodiversity on their farms.
- **Elevating the profile of freshwater work:** The visibility and success of the Living Water partnership helped raise the profile of DOC’s obligations and efforts related to freshwater species and habitats. This increased recognition has led to additional funding and support for freshwater-focused projects within DOC, ensuring the continuation and expansion of this critical work.

## General areas of outcomes across all sites

In addition to the specific contributions and outcomes detailed in the national evaluation summary, it is important to acknowledge the general areas of outcomes that emerged across all Living Water sites. These areas highlight the holistic and integrated impacts of the programme:

- **Relational changes:** The Living Water programme fostered collaborative relationships among various stakeholders, including land owners, mana whenua, local councils, government agencies, communities, and NGOs. These relationships have built a strong foundation for future catchment initiatives and have enhanced the collaborative capacity of those involved.
- **Ecological changes and valuing the environment:** The programme has driven significant ecological improvements and fostered a deeper understanding and appreciation of environmental values. This includes on-farm ecological changes, biodiversity enhancements, and efforts to improve water quality, mauri, and habitat.
- **Capacity and capability changes:** The programme has enhanced the capabilities and capacities of individuals and groups involved, particularly in relation to collaborative problem-solving, strategic planning, and on-the-ground conservation efforts. This includes improvements in technical skills, cultural competencies, and relationship management.
- **Financial investment and impact:** Living Water has leveraged significant financial resources, both from direct programme funding and additional investments from partners, local stakeholders, and central government. These investments have contributed to substantial on-ground and community-level impacts, demonstrating the value of coordinated financial efforts.
- **Scaling up and out:** The programme has successfully scaled up and expanded its influence beyond initial catchment areas. By sharing expertise, tools, and practices, Living Water has contributed to new initiatives and partnerships, extending its impact to wider regions and fostering sustainable practices across multiple catchments.

These outcome areas are significant as they highlight the comprehensive and interconnected nature of the Living Water programme, demonstrating how the initiative has achieved holistic and integrated impacts across various domains.



## 2.4 Unplanned outcomes and contributions

In addition to planned outcomes, the Living Water programme led to several unplanned yet significant contributions, highlighting the dynamic, relational and adaptive nature of environmental restoration projects.

Unexpected alliances and collaborative efforts emerged beyond the initial plans, significantly enhancing the programme's reach and impact. The collaboration with The Nature Conservancy (TNC) on Blue Carbon research in Pūkoro-Miranda introduced new expertise and resources, enhancing the scientific depth of the reserve's restoration management programme and pioneering potential income generation pathways. Similarly, the Waikato Peat Lakes programme's flexibility and networks helped secure external funding for the Manga-o-tama catchment, broadening the scope of restoration initiatives and extending on-farm support. These emergent partnerships underscored the importance of adaptability and strategic collaboration in extending the programme's impact. In Wairua, strong relationships built through recognition of mana whenua aspirations and joint work on the ground, helped Fonterra become a 'trusted delivery partner' for the Kaipara Moana Remediation programme, scaling up their FEP development and implementation capacity and reach across the 660,000 hectare catchment.

The programme contributed to the development of new practices and strategies that were not originally anticipated, and were recognised as being innovative. For instance, in Pūkoro-Miranda, a predator control strategy emerged as an engagement strategy to involve hard-to-reach landowners, building relationships and protecting existing planting activities. The Waikato Peat Lakes programme saw Ngāti Apakura develop an all-natural floating wetland, integrating mātauranga Māori in a sustainable innovation since shared with other iwi.

The programme's engagement and participatory processes led to strengthened community relationships and enhanced environmental awareness. The Pūkoro-Miranda programme's activities around predator control and habitat enhancement led to improved relationships and dialogue among community stakeholders, fostering a greater understanding of environmental and cultural issues. Engaging schools and community groups in the Waikato Peat Lakes programme contributed to the Ōhaupō community adopting 'Home of the Peat Lakes' as part of their town's identity, reinforcing community ownership and pride. These efforts highlight the importance of building community connectedness with nature through active engagement and education, emphasising the value of collaboration and shared learning in achieving sustainable environmental outcomes.

The programme also faced several challenges that provided valuable lessons for future initiatives. Community resistance and trust issues in the Whakamana Te Waituna programme highlighted the need for thorough initial engagement and integrated, targeted communication and engagement strategies. Managing community expectations around land purchases and lagoon consent processes proved difficult, underscoring the importance of transparent and ongoing dialogue to foster trust and collaboration.

Resource allocation and planning challenges were common across all Living Water catchments, and emphasised the need for more realistic resource assessment, and realistic planning, particularly for the time needed to work through complex, implicit social processes, that are embedded in all work.

In summary, the Living Water programme's unplanned outcomes, both positive and negative, provided valuable insights into the complexities of environmental restoration. The development of partnerships, implementation of a variety of practices, and efforts to contribute positively to community resilience showed the programme's influence on catchment communities. However, the challenges encountered also highlighted areas for improvement, particularly in engagement, communication, and planning, which are crucial for future initiatives.



Living Water supported Ngāti Apakura with their innovative trial of a mōkihi - a natural floating wetland, constructed from raupō and harakeke flower stalks - to treat nutrients at Lake Ruatuna.

## 2.5 Areas for improvement

While the programme has achieved significant milestones, it is equally important to reflect on areas that could be improved. This reflection provides valuable lessons and insights for future initiatives in environmental management. The following paragraphs synthesise key areas for improvement based on our assessment of the programme activities and outcomes.

A major area for improvement is strengthening collaboration among partners at each site. We often forget that each organisation, or even team, will have its own culture and ways of working that have developed over the years. While progress has been made bringing organisations together, further development of inter-agency and cross-sector partnerships is needed. Effective collaboration can bring better resource allocation and problem-solving. Future efforts should focus on overcoming administrative challenges and fostering regular communication and knowledge sharing to create more cohesive and integrated approaches to environmental management. Engagement and decision-making involving mana whenua needs to be better incorporated into initiatives. Although there have been successes, mana whenua knowledge and aspirations need more comprehensive inclusion. This requires trusted relationships, engaging mana whenua early on, aligning priorities and providing adequate resources to remove barriers to active participation and leadership.

Similarly, community engagement should be prioritised and better integrated into these complex programmes. While various strategies have been implemented, there are opportunities to make these processes more inclusive and participatory. Challenges within the programme of expanding outreach were partly due in some cases to a lack of staff with relevant experience for example in agricultural extension, community development or engagement initiatives. This meant staff often focused more on physical works delivery rather than integrating broader engagement into projects. Future programmes should invest in resources and staff with engagement expertise to help and better integrate this across all programme workstreams, rather than separate. Effective engagement should incorporate local knowledge, needs, and values into project planning and implementation.

Integrated planning is essential for achieving sustainable outcomes. Future initiatives should focus on leveraging co-benefits and aligning project plans with broader goals. Recognising these potential benefits early in the planning stages will enhance the impact of environmental programmes. By recognising and integrating co-benefits early on, the impact of environmental programmes can be maximised. Project teams require a diverse set of skills due to the complexity of environmental challenges. Capacity building in technical, interdisciplinary, cultural, interpersonal, and facilitation skills is necessary. Investing in training and development can enable teams to more effectively address multifaceted challenges. Adopting flexible strategies that incorporate continuous monitoring and evaluation allows for adjustments based on new insights and changing conditions, ensuring comprehensive and effective programme implementation.

To improve project outcomes, it is vital to adopt adaptive management and robust evaluation mechanisms. Monitoring and evaluation (M&E) plans have not always been given priority, impacting the strength of impact assessments. This issue is common in

place-based development programmes, where M&E elements are often overlooked or inadequately implemented. Initial Theory of Change and logic models were overly optimistic, failing to fully account for the complexities and time needed to achieve long-term ecological and social outcomes. For instance, while certain quantitative indicators were measured intermittently, qualitative aspects such as community outreach and farmer adoption of new practices were not systematically captured or examined. Improved M&E frameworks that incorporate adaptive management practices are crucial for tracking progress and making necessary adjustments in response to emerging challenges and opportunities. Incorporating regular review points into project implementation practices and fostering a culture of participation and learning within catchments will enable more responsive and adaptive management.

In conclusion, reflecting on these areas of improvement provides a solid foundation for the recommendations that follow. By addressing these areas, future environmental management initiatives can achieve more integrated, inclusive, and sustainable outcomes.

## 2.6 Reflecting on the guiding principles and assumptions

This final section revisits the Living Water guiding principles and foundational assumptions, reflecting on their effectiveness and impact across the programme. The Living Water Programme's guiding principles have been a cornerstone since its inception, shaping its approach to achieving long-term environmental goals. These principles have been reflected in all the site programmes. They include:

- **Collaborate and partner:** Emphasising the importance of working together with diverse stakeholders to pool resources, knowledge, and expertise.
- **Integrate mātauranga Māori:** Highlighting the commitment to incorporating indigenous knowledge and perspectives into environmental management practices, ensuring cultural relevance and respect.
- **Create connections:** Focusing on fostering relationships between people, organisations, and ecosystems to build a cohesive and supportive network for sustainable practices.
- **Above and beyond regulation:** Encouraging innovative and proactive approaches that exceed basic compliance, aiming for higher environmental standards.
- **Measurable and repeatable:** Underscoring the importance of implementing actions that can be quantified and replicated, ensuring that successful practices can be scaled and adapted elsewhere.
- **Learn and share:** Embodying the programme's dedication to continuous improvement and knowledge dissemination, promoting a culture of reflection, adaptation, and education.

Together, these guiding principles underpin the Living Water Programme's holistic and inclusive strategy for catchment management, driving its efforts to create resilient and sustainable ecosystems. These guiding principles align with the programme's foundational assumptions, which are:

- **Partnership:** Evaluating partnerships and collaboration effectiveness.
- **Social Learning:** Assessing the role of social learning in behavioural change.
- **Behaviour Change:** Understanding the change cycle for individuals and organisations.
- **Systems Thinking:** Reflecting on the application of systems thinking to address contextual challenges.

Collaboration was central to the Living Water programme, with partnerships playing a critical role in achieving objectives. Partnerships facilitated pooling of resources, expertise, and knowledge, essential for successful implementation. In both Waituna and Wairua, partnerships with local iwi, councils, and community groups enabled ecological improvements and ensured cultural and practical significance. Similarly, the Ararira LII programme's collaboration with Te Taumutu Rūnanga and Selwyn District Council enhanced biodiversity capabilities and integrated ecological and cultural values into catchment management. These partnerships validated the assumption that long-term collaboration is crucial for effective environmental management and engaging a wide array of community stakeholders.

Social learning, the process of learning through action, reflection, and collaboration, was integral to the Living Water programme. The Wairua River programme emphasised knowledge exchange among partners, fostering different ways of working and a deeper understanding of wetland restoration and catchment management perspectives. Transparency in sharing trial results and engagement of schools and community groups in restoration activities exemplified the importance of social learning in driving behavioural change. The Pūkorokoro-Miranda programme also demonstrated the value of social learning, as community engagement across different site activities led to improved relationships and understanding of environmental and cultural issues. These experiences underscore the effectiveness of social learning in achieving sustainable behavioural changes and building community resilience.

The Living Water programme aimed to change farming practices to achieve long-term ecological results. Over time it became clear that change was not just a linear process and would need changes at different decision-making levels to address barriers to better environmental management. Following the programme's 2017 strategic reset the programme's strategy included recognition of how different parts of ecosystems and socio-economic systems are connected. This approach was demonstrated in catchment management plans that considered the whole picture and included the interests of everyone involved in the area.

By taking a systemic approach, the programme made efforts to see partners working together towards the same goals for the environment, and treated challenges as issues that people needed to address together. These efforts demonstrated that it's important to consider the specific challenges in each situation and make changes that will help the environment be sustainable. The Whakamana Te Waituna and Wairua (Waimā Waitai Waiora) programmes highlighted the importance of appreciating different perspectives, integrating cultural values and traditional knowledge into restoration efforts, exemplifying systems thinking. These initiatives showed the importance of addressing contextual challenges and fostering systemic changes for sustainable environmental outcomes.



Mana enhancing approaches were a key component of Living Water relationships with mana whenua.

### 3. Recognising a range of value contributions

In evaluating the Living Water programme, we have looked at its contributions across social, economic, environmental, and cultural well-being. Our evaluation, framed with a Complexity-Aware Monitoring and Evaluation (CAME) approach, shows that the programme has provided significant value through its collaborative efforts. By working together, the programme has maximised resources and enhanced partner capabilities, leading to outcomes that exceed what individual efforts could achieve.

The programme's investment in partnerships has brought significant benefits. Collaborations with mana whenua have improved mutual understanding, provided valuable experience in co-governance, and increased cultural competency. The programme has supported training, and shared expertise with mana whenua, supporting catchment restoration efforts. These partnerships have also extended the reach and impact of collaborative efforts, into other joint catchment projects, building further positive relationships with a variety of groups. The programme has supported mana whenua aspirations, enhancing social and cultural value. It has helped achieve long-held goals and made progress on others, helping make space for mana whenua to reconnect with their environment, history, and cultural practices.

Efforts to improve catchment health have included facilitating land use changes, developing options for contaminant mitigation at the catchment level, and supporting more comprehensive farm environment planning (e.g. biodiversity information) and implementation. These actions not only contributed to ecological health but also promoted more resilient and sustainable economic development. The programme's activities have led to significant ecological improvements, such as planting and fencing of riparian areas, and protections for significant biodiversity sites on farms.

The Living Water programme has also built capacity and capability among individuals, organisations, and communities. There is now greater awareness of the need for skills in conflict resolution and governance, as well as a deeper understanding of local environments and cultural dynamics. These skills and insights are crucial for the programme's ongoing success and sustainability.

The programme has played a crucial role in bringing together and strengthening relationships among diverse stakeholders. By fostering a collaborative environment, it has built trust and facilitated the exchange of knowledge and expertise. These relationships have been key to achieving collective goals and ensuring the long-term sustainability of initiatives.

Beyond the quadruple bottom line, the programme has delivered value in several other areas:

- **Educational value:** Increased environmental awareness and understanding among the community; increased outdoor education spaces.
- **Health and well-being:** Improved environmental conditions contributing to better health outcomes; improving opportunities for connections (including with ancestral lands and mahinga kai species).
- **Recreational value:** Enhanced opportunities for outdoor activities.
- **Aesthetic value:** Improved landscapes and natural beauty.
- **Scientific and research value:** Valuable data and insights for scientific research.
- **Economic resilience:** Promotion of sustainable land use and agriculture.
- **Policy influence:** Informing and influencing environmental policies.
- **Community empowerment:** Empowering local communities in environmental stewardship.
- **Biodiversity conservation:** Protecting and enhancing local biodiversity and tāonga species.
- **Cultural heritage:** Promoting connections with cultural heritage and knowledge.
- **Innovation and best practices:** Fostering innovation in environmental management processes and practices.

These contributions align with the fields of Value for Money (VfM) and Value for Investment (VfI), offering a comprehensive view of the programme's impact. By using a CAME approach, the programme effectively addresses the complexities and dynamic nature of environmental and community initiatives.

Despite these successes, the programme has faced challenges. Integrating diverse stakeholder perspectives and managing varying expectations have been ongoing hurdles. Ensuring consistent engagement and commitment from all partners has required continuous effort. Adapting to the changing and complex nature of environmental and community programmes has tested the programme's flexibility and resilience. Tackling these challenges has provided valuable lessons and highlighted the importance of adaptive management and continuous learning.

In summary, the Living Water programme can be seen to have contributed across multiple dimensions of value within a CAME framework. While challenges remain, the collective efforts and partnerships have laid a strong foundation for ongoing and future successes in environmental resilience and community well-being.



# 4. Overarching recommendations

The synthesis of evaluations from the five Living Water sites has led to eight key recommendations essential for effective catchment management. Collectively, these recommendations offer valuable lessons from the Living Water programme and highlight areas where agencies and sectors can make significant contributions and changes.

The process of identifying and grouping the recommendations involved reviewing the evaluation reports from each of the five Living Water sites. A total of 25 individual recommendations were developed across these sites. Each site report provided insights into specific challenges and successes, along with detailed recommendations tailored to the local context. By analysing these site-specific recommendations, common themes and priorities emerged, which were then synthesised into broader, overarching recommendations. This thematic grouping ensures that the recommendations are relevant not only to individual sites but also to wider place-based initiatives.

In developing the eight overarching recommendations, we analysed the 25 site-specific recommendations to identify areas in common. This approach allowed consolidated individual recommendations into broader, more strategic themes, aiming to ensure that key insights and suggestions from each site were effectively captured. Some recommendations naturally fit into multiple categories, reflecting their multifaceted nature and the interconnectedness of the programme's goals. The table in Appendix I illustrates the alignment of site-specific recommendations with the overarching themes, providing a comprehensive view of the strategic directions proposed.

A brief commentary on each of our eight overarching recommendation themes follows:

## 1. Strengthen cross-sector collaboration and partnerships

Effective collaboration among multiple stakeholders, including inter-agency and cross-sector partnerships, is crucial for successful catchment management. Strengthening these partnerships ensures better resource allocation, shared responsibilities, and enhanced problem-solving capabilities. Future programmes should focus on building robust partnerships from the beginning, fostering cross-sector collaborations, and maintaining strong linkages between agencies, mana whenua, and landowners. This involves regularly reviewing the effectiveness of collaboration, proactive communication, and addressing administrative barriers to ensure smooth operations. Identifying partners with community connections and synergies early on can help initiate shared actions, build trust, and gain momentum. A unified approach to environmental management, facilitated by continuous knowledge exchange and collective problem-solving, will enhance the effectiveness and sustainability of implementation actions.

## **2. Support mana whenua aspirations and implementation**

Engaging with mana whenua and incorporating their knowledge and aspirations into decision-making processes is crucial for effective environmental management that acknowledges Treaty (and settlement) rights and responsibilities. By building cultural competencies and involving mana whenua, projects can be aligned with values and goals, and develop appropriate management practices. To prioritise this, future initiatives should focus on early and continuous engagement with mana whenua, building relationships to understand contexts, aspirations, and capacities. Decision-making authority should be shared and resource contributions of time and knowledge should be acknowledged, recognising mana whenua as key partners and participants alongside other experts. Collaboration is also needed to support the necessary capacity and capability to integrate cultural aspirations into environmental governance.

## **3. Enhance targeted community and stakeholder engagement**

Community and stakeholder engagement is essential to incorporate local knowledge, needs, and values into project planning and implementation. Engaged communities are more likely to support and sustain environmental initiatives. To achieve this, future programmes should develop inclusive engagement strategies using a range of participatory tools and create flexible frameworks that encourage regular dialogue, shared decision-making, and open communication. Broad stakeholder involvement enriches initiatives by bringing diverse knowledge and perspectives, fostering a sense of ownership and stewardship among community members.

## **4. Diversify capacity and capability for effective management**

Effective catchment management requires a diverse set of skills, including technical, interpersonal, and facilitation abilities. Building capacity across these areas ensures that teams are well-equipped to handle complex environmental challenges and contexts. To enhance capacity and capability, future initiatives should prioritise developing well-rounded teams that combine technical expertise with strong interpersonal, cultural, and facilitation competencies. This includes investing in training and development programmes, enhancing cultural competencies, fostering cross-organisational learning, and enhancing both technical and social capabilities. A diverse skill set within project teams promotes continuous learning, adaptation, and the ability to engage effectively with communities and stakeholders, ultimately leading to more resilient and impactful environmental management.

## **5. Implement adaptive management: Enhancing planning, acting, and reflecting**

Continuous monitoring, evaluation, and adaptive management are essential for responding to changing conditions and improving project outcomes. Future strategies should include robust monitoring and evaluation systems with formal review points to adapt based on ongoing insights. This adaptive management should extend beyond environmental impacts to consider social, economic, and cultural dimensions, ensuring comprehensive programme effectiveness. Embedding important (and realistic) progress indicators in monitoring and evaluation systems, and supporting a culture of participation, information sharing, and learning within catchments, will enable partners to adjust delivery approaches and achieve long-term change.

## **6. Promote integrated planning and acknowledge co-benefits**

Integrated planning that considers ecological, cultural, and community factors is critical for effective catchment management. Future programmes should leverage co-benefits and align plans with broader goals to enhance project impact and sustainability. This includes adopting adaptable catchment management frameworks, incorporating robust theories of change, and using insights from behavioural and social sciences to design interventions that encourage community action and ownership. Supporting the implementation of farm environment plans (FEPs), maintaining strategic land acquisition strategies, and ensuring comprehensive, integrated planning processes will lead to more effective and sustainable management outcomes.

## **7. Innovate and improve technical interventions**

Innovation and the continuous improvement of technical interventions are essential for addressing environmental challenges effectively. This grouping focuses on the development and application of both biophysical and social technical solutions, ensuring that projects are based on sound scientific data and innovative approaches. It supports evidence-based decision-making and effective problem-solving, promoting resilience and adaptability in catchment management. Future programmes should implement comprehensive biophysical monitoring programmes to track changes in water quality, habitat conditions, and biodiversity. Developing and applying innovative technical solutions to address specific environmental issues, such as sediment and nutrient load reductions and habitat restoration, will ensure that interventions are impactful, particularly when combined with social and organisational considerations. Regularly updating and adapting technical strategies based on monitoring data and scientific research supports evidence-based decision-making and effective problem-solving.

## 8. Practise patience and flexibility

Building relationships and achieving environmental outcomes takes time. Practising patience and flexibility allows for the accommodation of changing circumstances and the development of strong, lasting partnerships. Future programmes should recognise the time needed to build and maintain relationships, understanding that wider contexts such as competing priorities and resource constraints can influence engagement and action. Adopting a holistic and flexible approach to roles and leadership, and being adaptable to changing conditions, will promote resilience and long-term commitment to project goals, ensuring the sustainability and success of environmental management initiatives.



The Living Water team on a field trip to see the Peak Run-off Control structures in Waituna, Murihiku/Southland.

# Appendix I: Combined recommendations by groupings

In developing the eight overarching recommendations, the 25 site-specific recommendations were analysed to identify commonalities and areas of synergy. This approach allowed us to consolidate individual recommendations into broader, more strategic themes, ensuring that key insights and suggestions from each site were effectively captured. Some recommendations naturally fit into multiple categories, reflecting their multifaceted nature and the interconnectedness of the programme's goals. This table illustrates an alignment of site-specific recommendations with the overarching themes, providing a comprehensive view of the strategic directions proposed. While the Living Water programme has officially concluded, these recommendation themes are intended to inform and guide similar place-based and collaborative programmes, enhancing future efforts to achieve integrated and sustainable environmental management.

## **1. Strengthen cross-sector collaboration and partnerships**

- 1.1 Strengthen cross-sector and inter-agency collaboration (Ararira)
- 1.2 Strengthen cross-sector collaboration processes (Pūkoro-Miranda)
- 1.3 Strengthen inter-agency collaboration processes (Whakamana te Waituna)
- 1.4 Strengthen agency collaboration's linkages with mana whenua and landowners (Waikato Peat Lakes)
- 1.5 Continue support for mana whenua aspirations and leadership (Wairua)

## **2. Ensure mana whenua engagement and decision-making**

- 2.1 Ensure mana whenua are engaged, resourced, and part of decision-making (Waikato Peat Lakes)
- 2.2 Strengthen alignment with cultural aspirations (Whakamana te Waituna)
- 2.3 Continue support for mana whenua aspirations and leadership (Wairua)

## **3. Enhance community and stakeholder engagement**

- 3.1 Enhance community and stakeholder engagement (Pūkoro-Miranda)
- 3.2 Enhance community engagement (Whakamana te Waituna)
- 3.3 Focus more on farm planning process effectiveness (Wairua)
- 3.4 Enhance technical support and engagement tools (Pūkoro-Miranda)

## **4. Build capacity and capability for effective management**

- 4.1 Diversify capacity and capability (Ararira)
- 4.2 Diversify capability and capacity (Whakamana te Waituna)
- 4.3 Enhance on-farm planning process effectiveness (Wairua)

## **5. Implement adaptive management and robust evaluation**

- 5.1 Provide more emphasis on evaluation and adaptive management (Ararira)
- 5.2 Build upon the scope and value that monitoring can provide (Waikato Peat Lakes)
- 5.3 More emphasis on evaluation and adaptive management (Whakamana te Waituna)

## **6. Promote integrated planning and co-benefits**

- 6.1 Leverage co-benefits (Ararira)
- 6.2 Improve integrated planning for integrated programmes (Pūkorokoro-Miranda)
- 6.3 Support the implementation of Farm Environment Plans (Waikato Peat Lakes)
- 6.4 Maintain a land acquisition strategy (Whakamana te Waituna)
- 6.5 Maintain and build on progress (Wairua)

## **7. Enhance biophysical monitoring and technical interventions**

- 7.1 Integrate technical innovations into adaptive management (Ararira)
- 7.2 Enhance technical support and engagement tools (Pūkorokoro-Miranda)
- 7.3 Ensure farm environment plans are implemented and support wider catchment resilience (Wairua)
- 7.4 Expand focus on Okarika pocket to other drainage districts (Wairua)

## **8. Practise patience and flexibility**

- 8.1 Practise patience (Waikato Peat Lakes)
- 8.2 Be flexible beyond 'business as usual' (Waikato Peat Lakes)

# Appendix II: Information sources for evaluation

The development of this evaluation report is grounded in a participatory model that prioritises collaboration and inclusive engagement across a wide array of stakeholders. The approach has integrated insights and contributions from a range of partners and sources, enriching understanding of the outcomes and impacts of the Living Water initiatives. Presented below is an outline of the key information sources and participatory processes that informed this evaluation.

## Wider Living Water evaluation activities

### 1. Evaluation design and ethics

- [Living Water National Planning, Monitoring & Evaluation Framework](#) (July 2017-2018).
- [Logic model, indicators and monitoring plans for site](#) (April 2018).
- An evaluation ethics plan was developed with the Living Water management team and agreed with the Senior Responsible Owners for the Living Water Partnership from the Department of Conservation and Fonterra. Those involved in the Living Water programme evaluation followed the agreed processes and complied with the ethics protocol.
- The independent evaluation consultants were responsible for undertaking individual and group interviews to assure participant confidentiality and anonymity.
- Development of Performance Story and CAME evaluation methodologies underpinning final individual site evaluation reports. This evaluation design was developed by the independent consultants, and then fine-tuned in consultation with each site Evaluation Team.
- Cross-site Learning: The evaluation methodology was significantly enriched by learnings from across all the Living Water sites. This broader perspective was crucial in shaping insights and understanding of each site's unique challenges and successes, fostering a comprehensive understanding that reflects the interconnectedness of the Living Water initiatives.
- Development and implementation of the Whakamana te Waituna Monitoring & Evaluation Framework, Programme & Action Plan in 2019.
- Two participatory partnership evaluations for Living Water management and governance groups (2018 and 2021).
- Waimā Waitai Waiora (Wairua) Mana Enhancing Partnership review (March 2022).
- National evaluation reflection with Living Water team (December 2022).

## **2. Interviews with past and present staff**

- Conducted one-on-one interviews with past Living Water staff across 3 sites, gaining historical perspectives and insights into the evolution of programme activities and strategies.

## **3. Engagement with representatives outside the Living Water Partnership**

- At certain sites, engaged with 1 or 2 representatives from other partner organisations, broadening our perspective on collaborative efforts and their impacts.

## **4. Regular meetings with programme management**

- Fortnightly meetings with two members of the Living Water programme management team were instrumental in aligning the evaluation process with the programme's overarching goals and objectives. These two members were also involved as members of the site evaluation teams (See Appendix II).

## **5. Annual Living Water hui and reflections**

- Including a final closure hui and field trip held with both Living Water staff and stakeholders and presentations and field trip for NZARM conference (November 2023).

## **6. Living Water Site Evaluation Reports**

The development of these reports provided detailed insights into the specific activities, outcomes, and lessons learned at each site, contributing to a nuanced understanding of local and site-specific contexts.

- Wairua Evaluation Report
- Pūkorokoro-Miranda Evaluation Report
- Waikato Peat Lakes Evaluation Report
- Ararira LII Evaluation Report
- Whakamana te Waituna Evaluation Report<sup>1</sup>
- Site reports found on the [Living Water website](#)

## **7. Living Water National Evaluation Summary**

A national evaluation summary provides an overview of the achievements and outcomes of the Living Water partnership and draws together the lessons and recommendations from the five site evaluation reports.

- Report can be found on the [Living Water website](#)

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1. The Whakamana te Waituna Evaluation Report was commissioned by the Whakamana te Waituna Trust, of which Living Water was a key member and funder.



## 8. Place-based Engagement and Impact tool

The Place-based Engagement and Impact tool was created to aid organisation staff and stakeholders in place-based initiatives. It provides flexible guidelines for implementing complex environmental and community programmes.

- The tool can be found on the [Living Water website](#)

### General Living Water documentary and secondary sources

- [Living Water programme website](#): Served as a primary source of both current and archived information on programme objectives, activities, and outcomes
- Living Water Programme Annual Reports 2014 - 2023, see [Our progress/Tō mātou Kokenga Whakamua](#)
- Living Water [Governance and Operating Model](#).
- [Living Water Story \(ebook\)](#): A celebration and summary of experiences and learnings from all five sites offered a holistic view of the programme's objectives and achievements.
- General material: Reviewed additional materials of a more popular nature, including newsletters, media releases, and public communications. These sources helped capture the broader narrative and public engagement strategies of the Living Water initiative.

This multifaceted approach to gathering information has enabled a comprehensive and nuanced evaluation of the Living Water initiatives across the sites. It reflects our commitment to a participatory and inclusive methodology, ensuring that the insights and learnings derived from this evaluation are deeply informed by the experiences and expertise of all stakeholders involved.

# Appendix III: Author biographies

## External evaluation consultants

### Will Allen

Consultant Evaluator

Dr Will Allen is an independent evaluator and systems scientist with over 30 years of experience in sustainable development and resource management. His work bridges local, indigenous, and organisational perspectives, helping multi-stakeholder groups develop shared goals, actions, and indicators. An inaugural Board member of the Aotearoa New Zealand Evaluation Association (ANZEA), he has managed the Learning for Sustainability (LfS) website since 2006. The site is a knowledge hub for methodologies, skills and processes needed to support collaboration and address complex sustainability issues.

### Viv Sherwood

Consultant Evaluator

Viv Sherwood (VM Works) is an independent consultant with almost 20 years' experience in government sector operational roles in community development and environment sectors. Viv has also worked with and within iwi structures on environmental management. Her monitoring and evaluation work is informed by practical experience - in operational planning and delivery, the complexity of working in partnerships, as well as community development approaches - with participatory and complexity-aware monitoring and evaluation (CAME) approaches preferred.

## Living Water National Evaluation Team

### Sarah Yarrow

Living Water National Manager

Sarah Yarrow managed the national Living Water programme, bringing together a diverse range of stakeholders to enhance freshwater ecosystems while supporting sustainable agriculture. Her leadership and strategic vision have been instrumental in guiding the programme's development and implementation across multiple catchments.

### Katie Collins

DOC Freshwater Science Lead

Dr Katie Collins was the Principal Scientist for the Living Water programme, providing scientific guidance and expertise to ensure the programme's activities are grounded in robust evidence and best practices. Her work involved close collaboration with site leads, researchers, practitioners, and community members to drive impactful environmental outcomes.