

Inspiring community action:

Thriving Southland provides extension to farmers and the Southland community



**Prepared by:
Kellie Spee and Judy Oakden
August 2023**

Report Information

Prepared for Thriving Southland

Prepared by Judy Oakden, Pragmatica Limited
Kellie Spee, Kellie Spee Consultancy Limited.

Published 2023 by:
Pragmatica Limited – a member of the Kinnect Group

All rights reserved. Enquiries should be made to the publisher.

ISBN 978-0-473-68867-7

Acknowledgements

This case study draws on the knowledge and expertise of many people involved in various data gathering, analysis, and reporting stages. We want to acknowledge the Thriving Southland team, the Catchment Group members and other stakeholders who shared their stories with us. These people participated enthusiastically and candidly to support developing the case.

Research team

Judy Oakden of Pragmatica Limited and Kellie Spee of Kellie Spee Consultancy Limited developed this case study report with input from the internal Thriving Southland project team.

For citation, please cite as follows:

Spee, K. & Oakden, J. (2023). *Inspiring community action: Thriving Southland provides extension to farmers and the Southland community*. Wellington New Zealand, Pragmatica Limited.

Photo from Thriving Southland Facebook page: Aparima Community exploring sediment samples at Jacobs River Estuary.

Disclaimer

We developed this report in good faith using the information available to us at the time. We provide it on the basis that the authors of the report are not liable to any person or organisation for any damage or loss which may occur from acting or not acting to any information or advice in this report.

Key take-outs

What is the challenge?

Some farmers are under pressure. They want to understand better the environmental challenges they are experiencing on their farms and be able to respond to them. Despite regulatory uncertainty, many are keen to access and interpret new, relevant science. Supported by Thriving Southland through the *Change and Innovation Project*, many Southland farmers are highly engaged in making the necessary changes to support thriving farming businesses. This case shows the benefits to the Southland farming community from participating in Catchment Groups.



*“I now have more
...understanding... about
our environmental impacts
[of] the stream that runs
through our farm ... and
more understanding of
regulations that are
coming in and where to
look for information and
support.”*

What is the Thriving Southland Change and Innovation Project?

Thriving Southland received support from the *Productive and Sustainable Land Use Package* administered by the Ministry for Primary Industries. This package is designed to enable and support Catchment Groups. Thriving Southland aims to:

- provide primary producers with regional leadership that is transparent and well-resourced
- ensure Southland’s primary sector is agile and adaptable to change
- support Southland’s primary production sector to develop and market its regional story.

What have the Southland Catchment Groups been able to do?

Through the Catchment Groups, Thriving Southland is uniquely supporting cross-sectoral dialogue between farmers, Māori, industry and community stakeholders in Southland. In 2022-2023 there is clear evidence of farmers’ increased confidence to work with the science. They better understand different scenarios and trade-offs to support future farming. Access to science supports solution-based conversations and collective action among Catchment Group members. Many farmers are making changes to their farms to reduce their environmental footprint.

Next steps

Implementing new farming practices at a catchment level change takes time, energy and cooperation. Farmers are starting to work collaboratively within catchments. Thriving Southland is in a unique position to bring together farmers from the different sectors. It also offers mechanisms for farmers to share their positive stories and respond to regulations.

There is a continuing need for consistent and long-term support for Catchment Groups to implement better farming practices. The work is challenging, and environmental outcomes may take 10 to 20 years to realise. **We conclude that this initiative is starting to bring value to the region – and we recommend that funders continue to invest in it.**



Photo from Thriving Southland Facebook page: A family day out with the Lower Waiau Catchment Group carrying out stream checks.

Contents

Summary of findings.....	4
Background and methodology	4
Purpose of the case.....	4
Case method	5
Conclusion.....	5
Next steps.....	7
Case findings	8
Scope of the Change and Innovation Project	8
Thriving Southland’s support and influence benefits the Southland farming community	12
A farmer-led approach	14
Access to science drives change and affirms good practice.....	16
Farmers make a range of changes to farm practice	17
Thriving Southland helps build a sense of community	23
Progress with Māori engagement	24
Farmers build resilience and positive wellbeing.....	27
Conclusion	30
Appendix 1: Research method	31
Introduction.....	31
Case framing	31
Case method	31
Limitations	32
Appendix 2: Events undertaken and major projects	33
Activities undertaken.....	33

Summary of findings

Background and methodology

The Southland farming community face many challenges and opportunities, including the external pressure of regulations and compliance, climate change and mixed perceptions about agriculture amongst some in the population. At a farm system level farmers also deal with daily challenges, including weather, consumer markets, wintering, water quality and farming in isolated areas.

A cross-sectoral group of farmers established Thriving Southland in December 2020, funded by a *Change and Innovation Project* to address these challenges. Thriving Southland builds on the earlier work of the New Zealand Landcare Trust. The Ministry for Primary Industries provides most of the funding for the project through the *Sustainable Land Use Programme*, with \$6 million assigned for 2020 to 2023. The *Change and Innovation Project* aims to help farmers adapt, change and respond to compliance needs and prove themselves as leaders in the primary sector.

Thriving Southland provides a cross-sectoral platform for collaboration, by farmers, for farmers – while there continues to be external expectations about how land managers run their businesses (Thriving Southland, 2020).

Thriving Southland aims to:

- support primary producers with transparent well-resourced regional leadership and coordination
- ensure Southland's primary sector is agile and adaptable to change
- support Southland's primary production sector to develop and market its regional story.

Therefore, as part of their role Thriving Southland empowers farmers to take ownership of, address and resolve their local issues and challenges and perceive them as opportunities. Thriving Southland's team of dedicated coordinators connect with members of the farming community:

- providing support to develop and sustain Catchment Groups
- making connections to access science
- encouraging farmers to make evidence-based decisions for change.

Currently, there are 35 Catchment Groups, with two new catchments since 2022. Catchment Groups continue to grow with the support of Thriving Southland, with four others in development. Catchment Groups continue flourishing with Thriving Southland's backbone support, advice and funding.

Purpose of the case

For the third year, Thriving Southland commissioned a case from Pragmatica Limited. **This year's case shows some of the more recent progress and benefits** experienced by the Catchment Groups funded through the *Change and Innovation Project*. The case explores the ongoing benefits for the Southland farming community from joining the Catchment Groups and having support from Thriving Southland. It focuses on farmers' use of science to plan for future land use and to respond to the regulatory, environmental and economic change the Southland

farming community face. The difference noted this year is that farmers drive much of the focus and desired activity.

The case documents the progress made for those interested in Thriving Southland's work, Catchment Group leaders, the Southland farming community and external stakeholders such as funders and local government bodies. The case:

- shows the impacts of Thriving Southland support, including the on-the-ground change and outcomes for farmers
- shows the specific value of Thriving Southland for farmers and the wider Southland community.

Case method

This case is a local knowledge case (Thomas, 2021). The subject is the support Thriving Southland provides to Catchment Groups, and the object is the farmers' outcomes from taking part in the Catchment Group activities and projects. Pragmatica developed the case study from administrative data, surveys, social media content and feedback from eight participants from the Catchment Groups or other stakeholder groups (see Appendix 1: Research method on page 29 for more information).

The data shows a story of Thriving Southland providing support to Catchment Groups and farmers as they find ways to:

- improve farming practices
- address upcoming regulations at a time of increasing environmental and economic change
- develop approaches that best meet their needs and aspirations based on what is scientifically and financially possible.

The case shows the incremental progress made, focusing on May 2022 to May 2023.

Conclusion

Thriving Southland enables farmers to lead and respond to their challenges with a better understanding of the science and what will work. Relationships between farmers, Catchment Groups, external stakeholders, and partners, including Māori, are developing. There is good knowledge transfer, and farmers are open to learning how to improve farming practices.

Through the Catchment Groups, Thriving Southland is uniquely supporting cross-sectoral dialogue between farmers, Māori, industry and community stakeholders in Southland.

In 2022-2023 there is clear evidence of farmers' increased confidence to use the science. They better understand different scenarios and trade-offs to support future farming. Access to science supports solution-based conversations and collective action among Catchment Group members. Many farmers are making changes to their farms to reduce their environmental footprint.



“If we didn’t ...[have] access to regional funding like we do through Thriving, I don’t know that we would be as advanced as we are as a group today.”

realistic and reliable picture of change for both short and long-term impacts of mitigations. The access to science increases farmers' confidence that investing in a specific change is more likely to achieve the desired outcome.

“We’ve done all the science. And what we’ve identified from the science guide, is that farmers do know their land best. And there is some really nice stuff being done out there. [And] there’s direction to maybe just go and target these areas, the low hanging fruit and get some mitigations in place. Because it’s not going to happen overnight. It might take a couple of years to actually see a difference. At a catchment level [we are] massively like joining the dots. [Also it saves us] doubling up, all that stuff. [Also] taking away all the admin that just tires volunteers. So, taking some of the fatigue away for the Catchment Groups is really key. Because it’s not being left with just two or three people running it.” (Catchment Group Member)

Provides a mechanism to respond to regulations and share positive stories

Thriving Southland supports farmers in responding to regulations, and share positive stories about farming. Thriving Southland can balance the narrative about farming in Southland through publishing material on its website, conducting radio interviews, building engagement on Facebook and sharing updates through monthly newsletters.

With access to science specific to farm conditions, farmers can better understand the impacts on their farms of regulations and policies based on generalisations. Sometimes farmers find policy assumptions are not aligned with what they are learning from the science. Farmers like to feel supported and not alone at these times.

“[Its] been good to have them come in and just help us with a bit of momentum. I know farmers are getting a bit sick of just more and more regulations. It’s one thing after another. And it just keeps escalating and farming is one of those jobs where you can never get away from it.” (Catchment Group Member)

Next steps

There is an ongoing need for consistent and long-term support for Catchment Groups to implement better farming practices. The work is challenging when environmental outcomes may not occur for 10 to 20 years. As this initiative is starting to bring value to the region, we recommend that funders continue to invest in it. There will be a continued need for Thriving Southland as the culture, climate and environment change to support farmers work through the different trade-offs and implement change.

*Photo: Thriving Southland Facebook page:
Taken during the Lower Aparima Catchment Group Annual Winter Grazing Tour.*

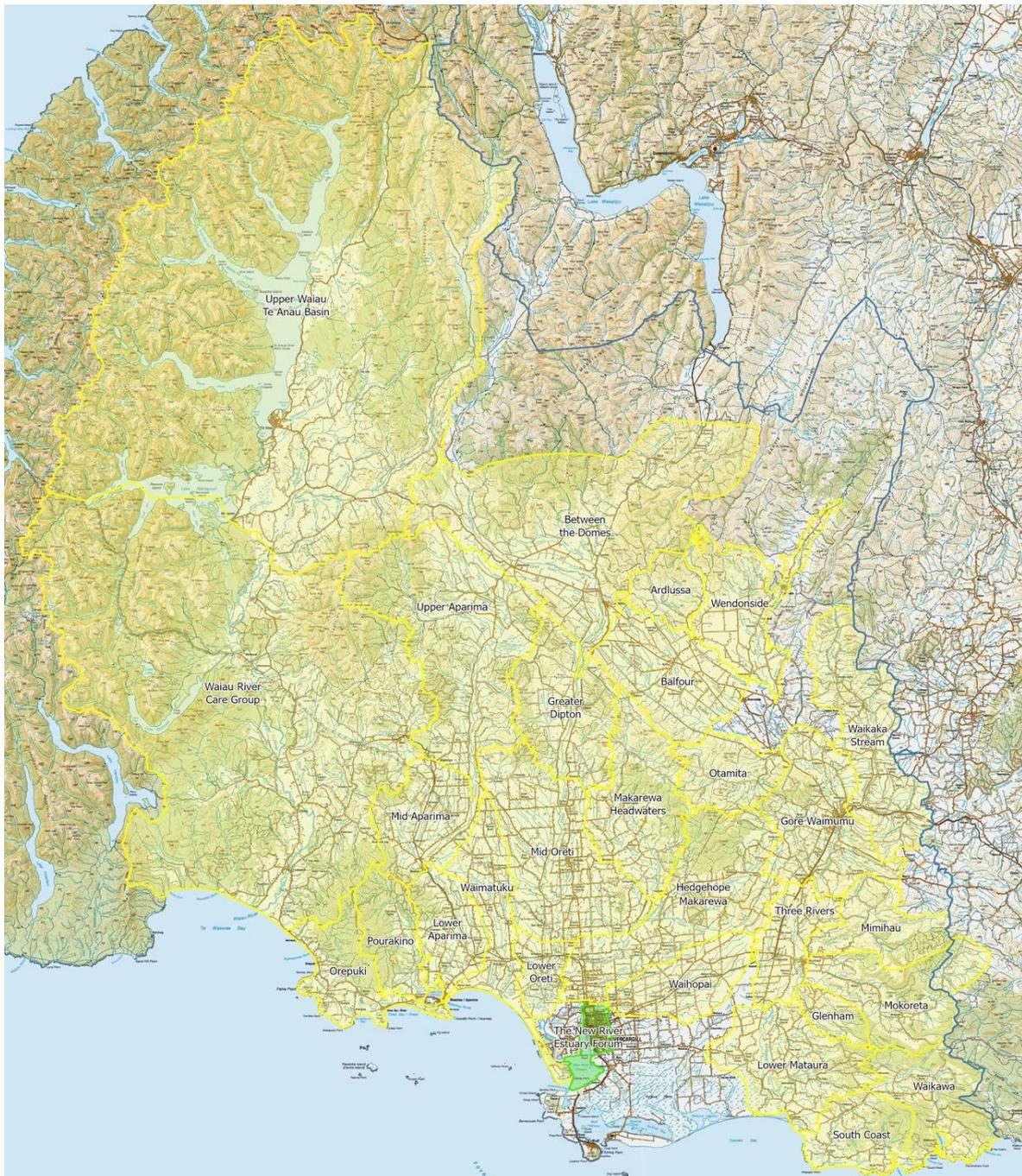


Case findings

Scope of the Change and Innovation Project

Southland farms link to four main river catchments, Mataura, Oreti, Aparima and Waiau and some smaller catchments. There are 35 Catchment Groups receiving funding from Thriving Southland through the Change and Innovation Project.

Map of the Catchment Group Areas



Map from Thriving Southland Website

Catchment Group scope

Thriving Southland continues to work in partnership with the 35 Catchment Groups and provides services that support the learning extension of farmers and the Southland farming community.

The Catchment Groups are organised into five networks, with a paid coordinator supporting each network. We note the two new groups developed since 2022 in **bold**.

<p>Waiau and Upper Oreti</p> 	<p>Between the Domes Te Anau Basin Lower Waiau Orauea River</p>
<p>Aparima</p> 	<p>Upper Aparima Mid Aparima Lower Aparima Waimatuku Pourakino Orepuki Aparima Community Environment (ACE)</p>
<p>Lower and Mid Oreti</p> 	<p>Greater Dipton Makarewa Headwaters Mid Oreti Hedgehope Makarewa Waihopai Lower Oreti</p>
<p>Upper Mataura</p> 	<p>Upper Mataura Ardlussa Otama Wendon * Waikaia * Wendonside Otamita</p>

	Balfour
Mid and Lower Mataura 	Gore Waimumu Waikaka Three Rivers Mimihau Mokoreta Glenham Lower Mataura Waikawa South Coast Titiroa

Catchment Groups running events between June 2022 and May 2023

Many Catchment Groups (26/35) ran events between June 2022 and May 2023. Around a third (11/35) were particularly active, offering four or more events that year. In total there were 2180 attendees at these events (some attending more than once). Farmers appreciate the kinds of projects and events on offer.

“In the whole of Southland, there’s something like 35 or 38 new Catchment Groups now all doing these awesome cool projects that are helping water quality and stuff like that. I think we’ve made some great, great gains [particularly] from the water quality side of it.” (Catchment Group Member)

Key: Four or more events Two or three events One event No events

- ↑ Increase on previous year
- ↓ Decrease on previous year
- ↔ N/A - No change on previous year
- N New this year



Waiau and Upper Oreti

Between the Domes	↑
Te Anau Basin	↔
Lower Waiau	N
Orauea River	↑



Aparima

- Upper Aparima ↑
- Mid Aparima ↑
- Lower Aparima ↔
- Waimatuku ↑
- Pourakino ↑
- Orepuki ↓
- ACE (Aparima Community Environment) ↔



Lower and Mid Oreti

- Greater Dipton ↔
- Makarewa Headwaters ↑
- Mid Oreti ↔
- Hedgehope Makarewa ↔
- Waihopai ↓
- Lower Oreti ↑



Upper Matura

- Upper Matura ↔
- Ardlussa ↔
- Otama ↑
- Wendon N
- Waikaia N
- Wendonside ↔
- Otamita ↑
- Balfour ↑
- Knapdale N



Mid and Lower Matura

- Gore Waimumu ↓
- Waikaka ↑
- Three Rivers ↓
- Mimihau ↔
- Mokoreta ↓
- Glenham ↓
- Lower Matura ↔
- Waikawa ↔
- South Coast ↔
- Titiroa N

More detail on the projects run is included on page 31 in the Appendix.

Thriving Southland’s support and influence benefits the Southland farming community

“I now have more of an understanding... about our environmental impacts and the stream that runs through our farm. Plus [I have] more understanding of regulations that are coming in and where to look for information and support.”
 (Catchment Group Member)

Thriving Southland’s support and involvement within the Southland farming community is of meaningful value to the community. According to the Australasia-Pacific Extension Network (2021), “extension” is multi-faceted, involving helping people in a community adapt to changes in their society, economy and technology. **People can make the desired changes when empowered with the necessary knowledge and confidence to embrace change and offered ongoing support.** Based on the feedback from Catchment Group members and stakeholders, Thriving Southland helps:

- engage and facilitate Catchment Groups
- farmers access to knowledge and resources to make changes in their farming practices
- enable farmers to lead change and act in their Catchment Groups and the Southland farming community.

A typical comment from farmers following the field days was:

I just wanted to say that I really enjoyed your presentation. You made the complex understandable for 'lay people' and I really liked your genuinely collaborative approach to work with farmers. You've made me look at land use differently!
 (Catchment Group Member)

Thriving Southland supports a broad range of projects throughout the Catchment Groups. Projects are farmer-led and represent the aspirations and interests of the Catchment Group members and, sometimes, the wider non-farming community.

The following table describes **the new projects that started between May 2022 and May 2023**. It shows the types of projects undertaken and the way the funding was divided up.

Projects started between May 2022 and May 2023	No. of projects	Range of project value	Average per project	Total value
Orauea River Catchment Group	1	\$161,000	\$161,000	\$161,000
Greater Dipton Catchment Group	1	\$92,080	\$92,080	\$92,080
Small project category 2	16	\$150 to \$2,000	\$803	\$12,853
*BNZ Funding for Catchment Groups	15	\$364 to \$400	\$398	\$5,964
Total funded				\$271,897

Source: *New Projects for year three plus BNZ Funding.xls

Thriving Southland continues to deliver various activities and events, including field days, workshops, meetings and farm walks that engage farmers. **Through these events, farmers (and non-farmers) gain a wide range of knowledge and skills that are practical, targeted and valuable** including:

- native plant knowledge
- history of whenua /Catchment Group areas
- landscape DNA
- wetlands construction and management
- reducing emissions
- mapping soil types and sediment mitigation
- waste management
- overseas trends.

With the continuing support from Thriving Southland, Catchment Group members and stakeholders believe that the growing momentum to use science in the farming community and the positive gains are likely to continue. But without Thriving Southland's support, farmers thought it would be difficult to respond to the pressures and external expectations and develop a positive way forward.

“If I think of our catchment [without Thriving Southland] we probably wouldn't exist. We had a lot of meetings at the start, kind of pre-Thriving Southland. And it was quite negative; a lot of finger-pointing and stuff like that. Because we had no science to back us up. When Thriving started, a couple of people talked to us about [Catchment Groups] and then they came out and talked to us and we said that we need to get something going. So yeah, if it wasn't for Thriving, we probably wouldn't be a Catchment Group and we'd probably still be finger pointing.” (Catchment Group Member)

“I think the Catchment Groups would slowly disappear. It's really good to have someone helping us a lot. A lot of farmers are just sick of regulations.” (Catchment Group Member)

“Thriving Southlands our main support [and] if it wasn't for them we probably wouldn't have such a successful Catchment Group, [or] have the support to easily push out events for people to learn new things.” (Catchment Group Member)

Farmers thought it would be much more difficult for them to access science information individually. They appreciate Thriving Southland's role as a broker and funding source for Catchment Groups to engage with scientists and science information.

“... if Thriving Southland hadn't given all these Catchment Groups the opportunity with all this funding ... it either would [have] been a lot harder to get going or it wouldn't have happened at all. It would take a lot of effort from farmers to kind of go and find funding and stuff like that. I think that's the real benefit of Thriving and having this good funding. It's a lot easier [for] Thriving compared to one farmer going and

... applying for funding. It's very hard for a farmer to go out and ask and get any kind of money. But if a big group like Thriving can get some for everyone, it seems to be a lot easier. It's just very hard to get it unless you're a big group.” (Catchment Group Member)

A farmer-led approach

Thriving Southland provides a mechanism for Catchment Groups to investigate their farms and farming practices. It affirms farmers' knowledge, experience, expertise and supports farmer-led development.

A big change noticed in 2023 is that Catchment Groups act more confidently on the ground. Catchment Groups are well lead (79%), well-coordinated (77%) and well run (77%) to a moderate or high degree – according to Catchment Group members responding to the 2023 Thriving Southland Annual Survey.

As mentioned by one interviewee, “farmers are not burying their heads in the sand.” With Thriving Southland’s support, farmers proactively respond to what is coming instead of reacting once it has arrived.

Catchment Groups are learning to control the controllable – essentially, their actions and responses. Farmers are expanding their knowledge and leading their development. As a Catchment Group member described, [we’re] “using tools instead of just following the rules.”

Farmers' future planning and decision-making is evidence-based and considered. Thriving Southland does not tell farmers what to do. Instead, Thriving Southland helps farmers explore the change they want. With the support of Thriving Southland, Catchment Groups are a space for farmers from different sectors to explore and research ideas and concepts as a group. Collectively, farmers are motivated and inspired to learn more, ask for help and reach out.

In the 2023 Thriving Southland Annual Survey:

- 64% of participants believed that Thriving Southland was effective in helping Catchment Groups achieve their goals
- 63% of participants thought Thriving Southland was working well to provide requested support to Catchment Groups.

Farmers shared that they want to improve their businesses both environmentally and financially. Catchment Groups are a safe space to focus on the issues and challenges they face and to see those things as opportunities. There is safety in numbers, and it is less daunting when farmers can plan and move forward together.

Catchment Groups are a vehicle for farmers to assert their leadership, develop goals and purpose and make hard decisions. Farmers drive the process at their pace and based on their needs and aspirations.

... “I think we as farmers often think so small, just of our farm and region. ... but we don't have the time or headspace to think of larger things. For example, the movement from white to red protein and what drives that. And it made me wonder, how can we learn more about that?” (Catchment Group Member)



“Yeah and we've done all the science and what was emphasized is that farmers do know their land best and there is some really nice stuff being done out there.”

Farmers are taking opportunities to improve and be responsive to the science in their farming. Although there is often no quick-fix solution to some of the challenges, farmers are growing a sense of ownership and empowerment in their decision-making. **Farmers are the key agents of change – and leaders are developing in the Catchment Groups.** Catchment Group members are gaining knowledge that pays dividends in their work. One recently appointed local body councillor explained that involvement with Thriving Southland and the Catchment Groups gave him a good understanding of local environmental issues.

Farmers appreciate developing context-specific solutions. They came to realise that what they do on the land is amplified by the landscape. The Orauea River catchment provides a good example, as described below.

Understanding the geology, prioritising and defining solutions to sediment and E. coli in the Orauea River Project

For the Orauea River Catchment Group, understanding their geology was critical. Farmers within the catchment knew something was wrong with the Orauea River – as the water quality was deteriorating. Thriving Southland recommended that the Catchment Group get Clint Rissman from Land and Water Science to speak with them and explore the issue.

On learning that there is a significant amount of mudstone rock in the Orauea River catchment, the Catchment Group decided to embark on a project better to understand the geology of mudstone-based geology and soils.

Land and Water Science completed a high-resolution environmental data stock-take and mapped layers using radiometric and satellite data. Then they created a Catchment Prioritisation map. They also offered the Catchment Group ideas to mitigate mass-wasting, erosion and overland flow on-farm to the Orauea River and its tributaries.

“So we’ve had our whole Catchment Group mapped in terms of erosion susceptibility and topography, landscape. [What we know is] we’ve got a lot of mudstone in our catchment, and it’s quite unique to the rest of Southland. So it’s basically clay and after a heavy rainfall it just erodes very easily. And within that mudstone it’s got natural forms of E.coli. So every time a big rainfall comes through it actually disturbs all that E.coli. And that’s when we see the big spikes in our water testing. It is actually natural, but it still can have the same effect. When it’s stagnant and you’ve got the algae and stuff downstream that’s when it becomes a bit toxic.” (Catchment Group Member)

The Catchment Group learned more about how the interaction between mudstone and water affects water quality. They became more confident in choosing mitigations. With the ability to identify “hot spots” – the areas of higher susceptibility, farmers can prioritise their time and resources to target areas to maximise impact. Now backed by science, farmers can decide on the best solution for them and their farms.

“Yeah, it’s been a good project. And understanding the science [means] we can be more focused on the mitigations to slow that water down. [So] there’s not such a big impact when it hits the main river. We figured out that it was actually nothing to do with what’s farmed on the land, it is purely the geology and what’s underneath. So that’s why it’s a bigger emphasis on slowing that water down through the use of sediment traps and stuff like that. It’s hopeful.” (Catchment Group Member)

Access to science drives change and affirms good practice

Access to science is a game changer for farmers. It drives change, helps with planning, decision making and affirms good farming practices already in place.

Thriving Southland plays a critical role in connecting the Catchment Groups to consultants who then take the Group's ideas and help them develop unique projects. The science is "ground-truthed" – observed and measured within the Catchment Groups. Farmers commented that they trust the process to provide a realistic and reliable picture of change for both short and long-term impacts of mitigations.

As mentioned by farmers, one of the key benefits is increased confidence that investing in a specific change is more likely to achieve the desired outcome. Farmers can map out what works and the viability, cost and profitability with all the necessary information.

"We've got a wee bit of money so getting experts in and doing designs if they're required, digger work or laser that kind of thing. The next step for us is actually putting some of these allocations in place and seeing if they actually work and just doing some more ground truthing. There could be a high susceptibility area, but you actually go and assess it and you realise that everything's all fenced off and there's actually no high risk. It says it's a red spot on the map, but actually it's probably not that high risk." (Catchment Group Member)

Science backs farmers up; it gives credibility and assurance. Science also helps to manage expectations and can relieve the substantial pressure of responding to regulations some are experiencing.

With more evidence-based data to hand and their 'number 8' wire attitude to adapt and pivot, their resolve and ability to act strengthens. With the security of science, consultants, guest speakers and connection with external stakeholders, farmers feel less isolated.. Farmers commented that they can now make the right decisions for themselves and the environment. It is a team effort with the scientists.

"You know all the figures have been done by a respected consultancy out of Canterbury. Which is where Thriving Southland have come in. It makes the whole study legitimate you know it's not just a farmer just doing some figures on his own, it's you know and it's not just one farm it's multiple farms with multiple ideas. And we're all looking at different ideas as well." (Catchment Group Member)

Farmers are also willing to front some costs themselves. With better science, they know where and how to spend their money to get the best results. They can set priorities for short- and long-term change.



"You put in these other scenarios and there hasn't actually been a better scenario than what we're actually doing. So, tells me we're actually probably doing alright."

Example: Radiometric profile halves fertilizer use

Thriving Southland supported a project in northern Southland to undertake radiometric testing to identify the variations in nutrients in the soil. The results were so promising that a farmer in one Catchment Group decided to invest in the same process for his farm. The farmer obtained a map of areas where fertiliser was needed and information on how to improve profitability and cost.

“We saw an opportunity to link [the project] technology up with technology we already had on [the] farm with our fertiliser spreader. We’ve gone through that process, linked it all up and we’ve actually halved the amount of use of fertiliser in one season on the back of that science.”

With the support of Thriving Southland, the farmer could:

- Develop up a project quickly.

“That’s what I like about Thriving, it’s small, it’s nimble, it’s pretty fluid, you can have a conversation one day and pretty much put your project together the next”.

- Engage expertise.

“You know for us we were just contractor to contractor, to come and do the soil testing. So you know it was all pretty easy stuff with open-minded people... it just makes life a lot easier too.”

- Make informed decisions and invest with confidence.

“There is so much stuff coming that farmers can just pick up and run with. You know we don’t need to sit around and wait for funding to do this and that. There is so much stuff that is paid back to a business straight away that you know, that it’s an easy sell right.”

Outcomes

- Investing in upgraded tractor software, makes the fertiliser spreader more effective and efficient.

“So we’re putting the fertiliser [on] where it needs to be and turning it off where it doesn’t need to be. With quite high leeching soils being round the country. ... I think we saved [between] \$40,000 and say \$43,000 on fertiliser. ... so [the investment in radiometric testing and the tractor software meant it] was under a one-year payback.”

- The project contributes to a better environmental footprint.

“The fact [is] that when you halve your fertiliser you’re halving your footprint. We haven’t got too hung up on that just yet. But going forward we probably will start using the radiometrics to try and understand the water movement across our farm. Our properties are against a river so we’re the last point of contact before it hits the river. So we’re probably at a point where we’re just trying to not add to what’s coming through, [and] control [whatever] hits our property. That’s where our responsibility lies.”

Farmers make a range of changes to farm practice

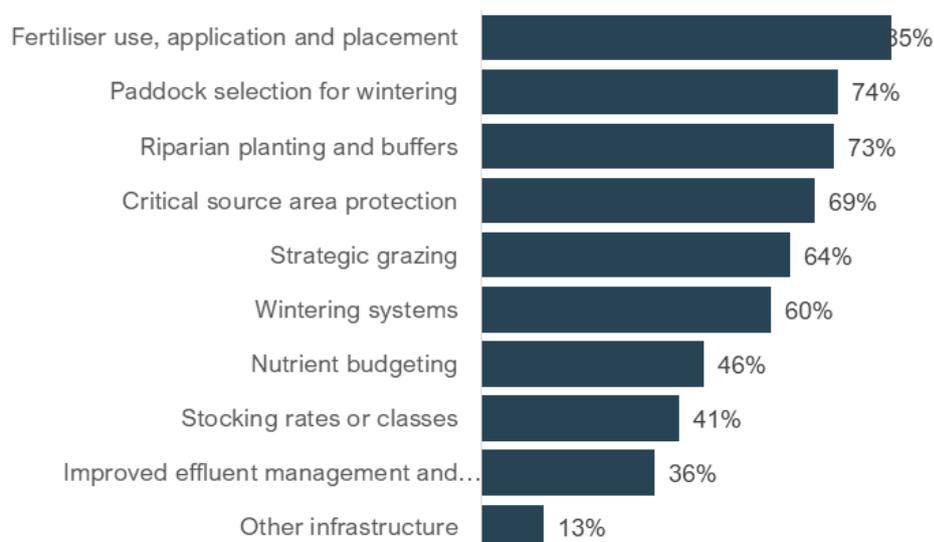
Farmers are making positive on-the-ground changes after engaging with Thriving Southland. Planned events, workshops and activities provide practical advice to implement immediately. The data and interviews with farmers and stakeholders highlighted **many specific actions taken across Catchment Groups**, including:

- wetland development
- radiometric soil testing
- fencing off waterways
- pest control
- winter grazing (back fencing and grazing critical source dry areas)
- effluent management systems
- nutrient budgeting
- fertilizer changes
- calculating stocking rates and improved stock management
- planting trees
- building sediment traps
- recycling e.g., baling wrap.

A consistent focus and message is that Catchment Groups and farmers want to improve their environmental footprint through their farming systems

The data in this next section comes from the Thriving Southland Annual Survey 2023. As the following chart shows, farmers are making a lot of changes to their farming practice.

A broad range of farming practices have been implemented in the last five years



Source: Thriving Southland Annual Survey Data (2022) Q10: Good Management Practices 2022 (n=115)

Over the past five years farmers' main goals were to increase their farm's profitability (71%), improve wellbeing for themselves, their staff and family (67%), increase the farm business resilience (63%) and increase productivity (58%) and providing for the next generation with options to farm (succession) 49%). To achieve this, farmers focused on improving animal welfare (55%), improving water quality (47%), reducing waste (36%), retaining sediment (33%) improving biodiversity (33%), diversifying (18%) undertaking regenerative farming (14%) and changing land use (10%).

A consistent focus and message from the interviews this year is that Catchment Groups and farmers want to improve their environmental footprint through their farming systems. Catchment Group members understand that it will take time, and they are planning or implementing incremental changes to build sustainable change longer-term.

On the following page we show the latest results for *the Good Stuff feedback from Catchment Group members to June 2023*. This shows that many early mitigations are now completed by some Catchment Group members, such as on farm soil testing and fencing off waterways. Now farmers are starting to work on longer-term initiatives such as planting shelter belts, riparian areas and wetlands, retiring surrounding land, and putting in place sediment traps.

"I've actually seen quite a few farmers that have been doing things quietly on their own without too many other people knowing about it. Actually just getting on with it, planting stuff out and fencing. I think a lot of people have got [it as] part of their annual budget or plan ... that they'll work on a wee area as they go forward. And I think what's good about the Thriving situation is that [they're] pulling people together. So you can share ideas of what's working and just get a positive angle on things."
(Catchment Group Member)

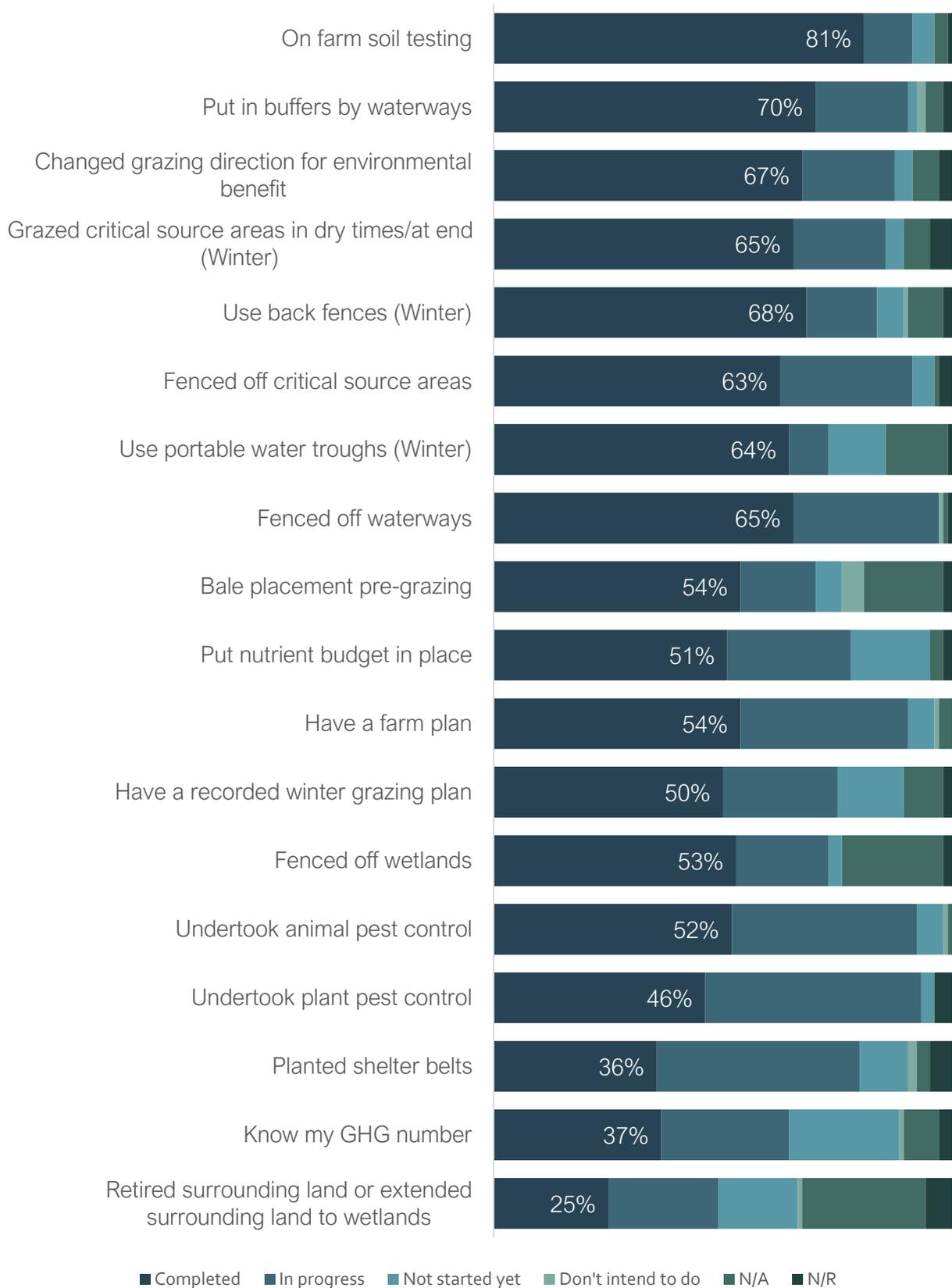
During 2022-2023, there was a strong drive amongst the Catchment Groups to understand their landscapes and farms better and then use this information to improve practice. In each interview, farmers illustrated how understanding the "DNA of the land" needs to underpin their action.

"We've had Land and Water Science out to discuss the science part of it. We've had someone from the Waiiau Trust, [who] can design sediment to give input, and we've had Environment Southland come out. It was really positive kind of communication around what can be done or what's actually already quite good – and perhaps doesn't need to change." (Catchment Group Member)



"I think what I could say is that farmers definitely have a better understanding of their context. And are able to access data about their farms. They probably intuitively knew but actually they can see that this soil is nitrate heavy... they've got the data to back up what they know and ... can make much more informed decisions." (Catchment Group Member)

All the Good Stuff that has been happening on farm



Base: All responses from April 2021 to June 2023 n=104

Showcase: Dipton Carbon Neutral

In 2020 Thriving Southland helped to set up the Dipton Catchment Group. In the first year, they took time to plan and consider what was important to them as a Catchment Group and bring as many people on the journey as possible.

The Dipton Catchment landscape contains native forest areas, exotic plantations, wind farms, agriculture and forestry production. They wanted to keep a robust livestock production system within the pressures of climate change and greenhouse gas emissions. Therefore, the Group decided to begin the journey towards becoming carbon neutral by understanding farm-specific and catchment-wide options and opportunities for biodiversity.

When we started the whole Catchment Group, we did a few things. We had a community...invitation to everyone. [We] asked the community what were the points of interest that they [would] want a Catchment Group to look at. ...we had a whole heap of post-it notes and [spent] a whole afternoon talking about different things. Social wellbeing was a big part of it [and] community enhancement. We went away and we probably had a year ...[where we] thought about things. We want[ed] to do something with a point of difference and that's why we headed this way. (Catchment Group member)

From November 2022 to May 2023, the project received \$92,000 through Thriving Southland. The project is aspirational and farmer-led, with good community engagement. It involved modelling five farms (two dairy and three beef and sheep farms) to:

- discover existing greenhouse gas emissions
- assess and develop viable options for each farm to reduce greenhouse gases
- increase sequestration.

The Catchment Group worked with each of the five farmers and a buddy group. The buddy groups involved neighbours and community members who shared and learned from one another at the farm sessions. In a safe, non-judgemental space, farmers and their buddies brainstormed ways to reduce emissions.

Given that going carbon neutral is a topical subject, the project achieved much interest over the past 12 months from other Catchment Groups and the Southland community. The Catchment Group shared project learnings and results through field day events and media.

Regular posts on a dedicated Facebook page 'Carbon Neutral Dipton' and through a newsletter and the Thriving Southland website and newsletter, kept the broader community updated. Those involved consider the project high-impact. The project's strength is identifying small steps each farm can take to reduce emissions. There is also potential for scaling the project up to other farms and areas.



Dipton Catchment are front footing climate change, having courageous conversations to become Dipton Carbon Neutral.

The project supports knowledge transfer and a better understanding of different farming systems. Farmers learn new ideas and can make real-time change.

“The big talk is [usually around] reducing your stock rate by 10% or 15%. But at the end of the day you feed your animals more and they’re still going to eat as much dry matter. And it’s the amount of dry matter that affects the carbon production, so you know, it’s really not going to change the emissions. Which is one of the things we’ve sort of discovered. And it actually probably reduces your profitability doing it that way too.”

The project supported practical research – giving farmers much-needed information to weigh up alternatives regarding sustainable farming.

“Our base scenario was based on planting trees because we had a forestry consultant as well, and he went and looked and said well this is what I would have recommended you to plant. And we’d done it so we were sort of a step ahead, and I had a lot of figures which made his job quite easy. But then we looked at selling all the lambs as store lambs instead of trying to finish them. We looked at doing a bit of arable growth in this place as well. So say planting a maize crop and selling it to dairy farmers, you know who may be a bit more limited as far as forestry and stuff like that goes. We [also] looked at low intensity farming so reducing our inputs of fertiliser and growing less grass. And the final one was we looked at planting all slopes greater than ten degrees in trees. Which was a bit over half the property. And at the end of the day all scenarios would all reduce their carbon emissions by a little bit, except for the two tree options really.”

The project also enabled solution-based conversations and supported collective action between Catchment Group members.

You know we looked at some of [our] scenarios, and the other sheep farm he looked at getting rid of all their cattle stock and just going trading stock, so buying lambs. We went the other way and looked at you know selling all the lambs and just keeping all breeding stock. And so we’re linking those two projects together a little bit to see how that works as well, so you know that’s how you link the catchment together a wee bit as well.

And it was the same a bit with the cropping scenario. Selling some of our maize crop to a dairy farmer. For a dairy farm to be carbon neutral is probably harder. So they’ll just pay the tax, you know the carbon fee or whatever. And then only way they can do that is probably to get more intensive because they’re going to have to create more. So take a dairy farm example, that maybe buys maize crop off us. [Then] we’re substituting those emissions from that dairy farm back through onto our hill country with the trees and stuff. So there’s a whole linkage back that way.

Overall, the project is a positive, farmer-driven, ground-up response. With new knowledge based on the scenarios, the five farmers and the wider catchment can be at the forefront of the climate change conversation. They can decide how to balance environmental and economic sustainability through innovative on-farm change.

Progress with Māori engagement

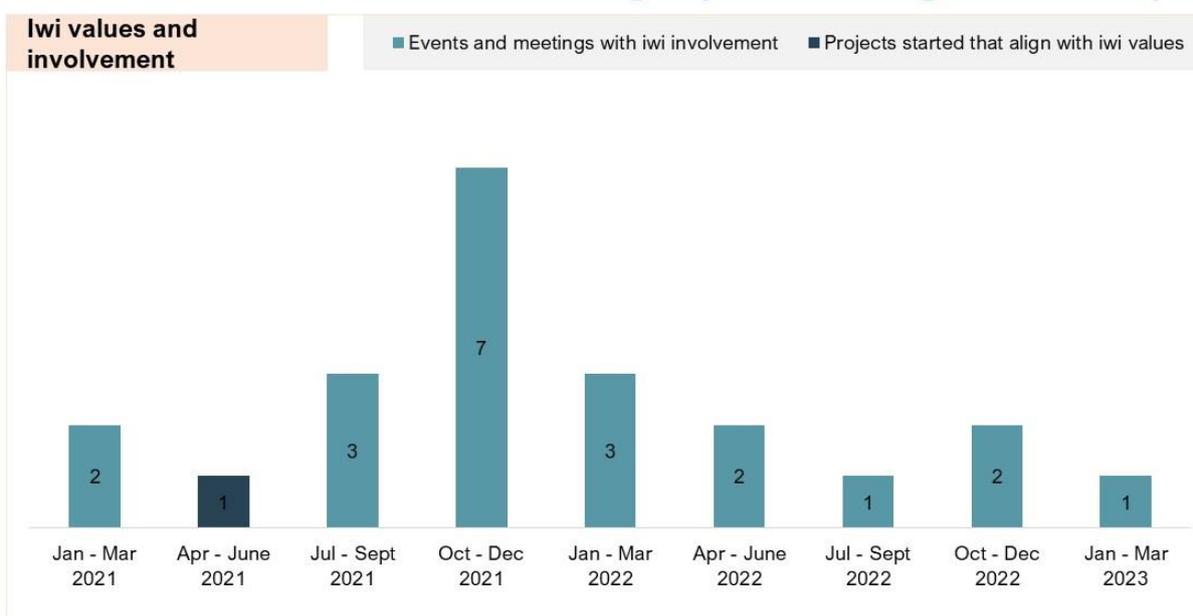
Thriving Southland continues to build relationships with Māori. As previously identified in *The difference that makes the difference* (Oakden & Spee, 2022), Thriving Southland has a good working relationship with Te Ao Marama Inc¹ and Environment Southland. Thriving Southland has supported socialising Southland’s freshwater and land policy through the People, Water and Land programme – Te Mana o te Tangata, te Wai, te Whenua. All three parties have helped to improve the understanding of Catchment Groups to achieve a state of hauora and te mana o wai.

In a recent letter to support Thriving Southland’s bid for further funding, Te Ao Marama wrote:

“We understand the importance of momentum to achieve the scale of change necessary, to be able to turn around widespread degradation in the region within this generation. ... The best way to achieve this is with mana whenua working in partnership with local authorities and Catchment Groups so that we are able to pool knowledge and resources to best effect. At the heart of this approach are relationships and connections, which is how Thriving Southland is facilitating change. Their presence in the region as a connecting body significantly reduces the burden on both Environment Southland and Te Ao Mārama in terms of engagement and ability to share knowledge to support change informed by mātauranga.”

Thriving Southland is also developing a relationship with the Reimagining Mataura River project and Hokonui Rūnanga Kaupapa Taiao. Together they offer opportunities for Catchment Groups to engage with iwi and better understand a te ao Māori worldview of the environment. Feedback is that this process has been hugely successful for the farmers involved.

Introduction of iwi values to catchment groups and building of relationships



Source: Thriving Southland Quarterly report – June 2023.

Note: This graph shows new projects started, it is not a running total of projects.

¹ Te Ao Marama Inc is the environmental arm of the iwi Ngāi Tahu ki Murihiku.

Thriving Southland helps to improve farmers' knowledge and understanding of Māori values.

“It was really interesting the first hui wānanga we had with Thriving Southland, we had about 47 farmers come along. They came in the door and were like “what is this iwi group going to tell us we need to do etc”. Well the whole conversation was around “what are your aspirations? What are your challenges? How can we connect?” And the reflection afterwards was “oh they didn’t have a plan and they didn’t want to tell us off.” And so some of our job is to break down some of those pre-conceived narratives. Because their traditional engagement with the rūnanga has been when they put in a consent – and it gets to us and we say no. I think there’s a better understanding now that if you’re engaging before the consent process you can co-design that to then get a good outcome”. (Reimagining Maitai River project)

Farmers understand their role as kaitiaki o te taiao – stewards of the environment and are open to holistic changes. There are value-based synergies where farmers and iwi can connect the two worldviews to further positive change.

“When you’re talking with any industry, farmers or community groups there’s always aspirations that you jointly want to achieve. What’s really interesting particularly from an iwi organisational view is farmers have an intergenerational view, and there’s some synergies in how that aligns. It starts a conversation around how you may be able to deliver the work in a meaningful way, to be able to go beyond what the regulations are, beyond what they are required to do and think intergenerationally. I think that’s where the fit with Thriving is, they’re about farming at a farm system, they’re looking across a catchment. They’re thinking about the cumulative effect. They’re using data as a strong base which we totally agree with. And they are open to conversations around learning and understanding the cultural context within which they work.” (Hokonui Rūnanga)



Riki Parata, Environmental Lead Hokonui Rūnanga, speaking at the Catchment Group Leaders Forum.

Going forward there is a need to further relationships and genuine partnerships between Catchment Groups and Māori. This involves building sustainable relationships that are true collaborations and represent iwi concerns and aspirations. The Thriving Southland team can continue to initiate these conversations with papatipu rūnanga keeping them abreast of activity within Southland and providing opportunities for their expertise and input. This will continue to improve knowledge and understanding of Māori values and highlight synergies between farmers and iwi.

Reimagining Matura: a connector for Thriving Southland and Māori

Given Hokonui Rūnanga Kaupapa Taiao and Thriving Southland's common interests, they forged a relationship to support the high-level goals in *Reimagining Matura*. The project is led by the Hokonui Runanga Kaupapa Taiao, with support from Thriving Southland, who brings connections and access to Western science. In this way Hokonui Rūnanga Kaupapa Taiao and Thriving Southland combine catchment-by-design methodologies (Western science) and mātauranga Māori to build cultural, environmental and economic resilience in the catchment.

The project supports future flood investment and floodplain management – to move towards a climate-resilient platform, to support cultural, economic, biodiversity and community outcomes. Thriving Southland supported access to data and information while avoiding duplication of effort across the Hokonui taiao team. Hokonui extended the projects by applying a cultural lens. A single, easily accessible repository of available data will enable more transparent decision-making, create efficient coordination between organisations and eventually allow for everyone to build cultural, environmental, and economic resilience in the Matura catchment.

“We connected in with Thriving Southland because obviously Thriving has funding to do upfront data and investigations but nothing to support the next phase of implementation, and we see an opportunity in being able to directly support either through some planning funding or some mahi that we do ourselves. [Also] I’m not big on duplicating any kind of effort, so they’ve got some great data that they’re collecting through some of their contracts. There’s an opportunity to think about the physiological data that they’re capturing, and then put a cultural and environmental lens across it.” (Hokonui Rūnanga Kaupapa Taiao Kaihautū)

A GIS viewer (currently in development) will allow users to see the Matura River Catchment and dive into individual areas and tributaries. It will also provide a synthesis of the activities within the catchment.

“For the Reimagining [project] we’ve got a web viewer that we’re building layers and being able to create a public open forum. So, people can reuse that information where possible. So, we’re collecting all the data from ES and other LiDAR, and other kind of data sets. And we see the Thriving Southland component as yet another data set that can add to that stack.”

The *Beyond Regulation* case study, supported by Thriving Southland, is an example of a data set for use in *Reimagining Matura*.

... farmers to give things a go. You don't have to build the Clyde Dam, just try little things. And at least we're building little things." (Catchment Group Member)

Farmers are open to learning, adapting and responding to adversity or challenges. As mentioned, with increased knowledge and understanding, farmers are more likely to believe they can work through on-farm challenges. They are developing positive coping and management strategies. Drawing on past successes and access to new science, many within the Catchment Groups are motivated to face challenges head-on.

As mentioned, connections and relationships are strengthening between Catchment Groups, farmers, stakeholders and the Southland community. Based on a ground-up approach, farmers are getting together and sharing ideas. As a result, farmers are far more likely to trust others, share what they are doing and be innovative. Farmers are sharing good news stories and their achievements through various media.

... "The very first thing we did for the Catchment Group was a picnic under the willows, and we just had it down at a picnic area at the river, [on a] beautiful fine sunny summer day, [with] heaps of deck chairs around. A guy who wrote the history in the area gave us a whole history brief of the Dipton area and it got a great response. A lot of people turned up. ... Before eighteen months ago there probably wasn't a lot of, you know within the community sort of get togethers, on farm get togethers. [The Catchment Group] was something to find a reason to get people together. And that's part of that social wellbeing." (Catchment Group Member)



"It just changes your approach a wee bit, gives you a bit of hope that you're not just ruddy battling red tape for the sake of it."

Waimatuku – Building a community

Thriving Southland supported revival of the Catchment Group, which started in 2016. The membership has extended from four original founding members to 76 people who meet regularly. The Catchment Group has built a sense of community, bringing together diverse people with shared interests. They have carried out several projects involving Catchment members and the community from Invercargill. These events include a *Group Christmas Do* at Thornbury, *Beach Clean-up* and *Planting Days* – all supported by Thriving Southland.

More recently, the Catchment Group sought to build their profile. They wanted to find out who they are as a catchment, the history of the area and the changes occurring over time.

“We’re focusing on the community aspect, what people want, [and] would like to see. It’s just [about] who are we, what were we like, what are we like now, [and] what do we think might happen in the future. What kind of cool amazing animals do we have here. What cool amazing environmental things do we have within our area.”

The Catchment Group plans to develop the information into a booklet or video for the local schools. They have also recently developed signs that proudly welcome people to Waimatuku catchment.

“It will be really good to say hey look, this is the amazing things you have here on your doorstep and for anyone that moves to the area there’s going be this little hub [of information]”.



Photo courtesy of Waimatuku Catchment Group

Conclusion

Science supports change and grows farmer confidence

In 2022-2023 there is clear evidence of farmers' increased confidence to work with the science. They better understand different scenarios and trade-offs to support future farming.

Access to science supports solution-based conversations and collective action among Catchment Group members. Many farmers are making changes to their farms to reduce their environmental footprint.

Thriving Southland continue to fill gaps that other organisations do not cater for and provide access to science that supports sound decision making. The team inspires and motivates, providing a positive buffer and sharing positive farming stories.

Relationships between farmers, Catchment Groups, external stakeholders, and partners, including Māori, are developing. There is good knowledge transfer, and farmers are open to learning how to improve farming practices.

Thriving Southland's contribution

Through the Catchment Groups, Thriving Southland is uniquely supporting cross-sectoral dialogue between farmers, Māori, industry and community stakeholders in Southland. They enable farmers to lead and respond to their challenges and maximise opportunities with a better understanding of the science and what will work. With the right people on the ground Thriving Southland continues to provide coordination and support for Catchment Groups.



“And then if you haven’t got the calibre, the expertise of the consultants then it’s got no legitimacy. Because we’ve done it this way we’ve actually got some pretty powerful data that we can use.”

Appendix 1: Research method

Introduction

Thriving Southland commissioned Pragmatica Limited to show some of the more recent progress and benefits experienced by the Catchment Groups in 2022-2023. The case explores the ongoing benefits for the Southland farming community from joining the Catchment Groups and having support from Thriving Southland. It focuses on the use of science to plan for future land use and to respond to the regulatory, environmental and economic pressures the Southland farming community face.

Case framing

The case documents the progress made for those interested in Thriving Southland's work, Catchment Group leaders, Southland farming community and external stakeholders e.g., funders, local government bodies. The case:

- shows the impacts of Thriving Southland support including the on ground change and outcomes for farmers
- shows the specific value of Thriving Southland for farmers and the wider Southland community.

Case method

This case is a local knowledge case (Thomas, 2021). The subject is the support Thriving Southland provided to Catchment Groups, and the object is the farmers' outcomes from participating in the Catchment Group activities and projects. Pragmatica developed the case study from administrative data, surveys, social media content and feedback from eight participants from the Catchment Groups or other stakeholder groups (see Appendix 1: Research method on page xxx for more information).

The data shows a story of Thriving Southland providing support to Catchment Groups and farmers as they find ways to improve farming practices, address upcoming regulations at a time of increasing environmental and economic pressure, and develop approaches that reflect their needs and aspirations. The case shows the incremental progress made since the start of the project, with a particular focus on the progress made from May 2022 to May 2023.

Data used in this case

Pragmatica developed the case from administrative data, surveys, social media content and feedback from five participants from the Catchment Groups or other stakeholder groups.

The following information was used to develop this case.

- Eight semi-structured interviews were conducted by zoom with stakeholders (including Iwi organisation and Thriving Southland Board member) and Catchment Group members. Interviews were of 30 to 60 minutes duration and were conducted between May and June 2023.
- Thriving Southland's Annual survey questions and data.
- Tracking worksheets on Catchment Group projects and events.

- Tracking worksheets on Catchment Co-ordinator activities.
- Science reports prepared for Thriving Southland.
- Individual Catchment Group project reports and social media communications.
- Catchment Group feedback, workshop information (including presentation to Te Mana o te Wai).
- Reviewed Thriving Southland and Catchment Groups' social media.

The case study also used information from two briefings with the Project team and a one-and-a-half-hour sense-making session with two Thriving Southland staff - the Project Manager and the Project Lead.

Analysis, synthesis and reporting

The researchers first separately analysed the individual data sources outlined in the previous section. Administrative data sets in spreadsheets were analysed using descriptive statistics. Some comment fields were analysed qualitatively.

The researchers then undertook a synthesis process to draw the different strands of data together and map them against the emerging themes. The interviews were transcribed and coded using Dedoose, a cross-platform application for qualitative and mixed-methods research analysis. The coding framework aligned with the key inquiry areas.

We then held a sense-making workshop with the Project team to present and discuss the findings, validating and contextualising the conclusions. This process helped ensure any recommendations offered have strategic alignment with Thriving Southland policy direction and are practical to implement.

Limitations

This is a small, targeted case focusing on Thriving Southland's support of Catchment Groups and what Catchment Groups have achieved in supporting farmers. The case does not cover other areas of the *Change and Innovation Project*, such as Thriving Southland's governance or project management functions.

Appendix 2: Events undertaken and major projects

Activities undertaken

Detailed list of activities undertaken by Thriving Southland and the Catchment Groups May 2021 to May 2022

Activity	Number attending
ACE - Future Farming Expo 2021	130
ACE – GFP Make it count field day	39
ACE 2022 Series Pourakino Stream Walk	34
ACE RP's catchup	6
ACE Sediment Trap Field day	25
ACE Wetland Land Walk	17
AGM	34
Aquavan - Community Session, Winton	65
Aquavan - Education Programme, Winton	200
Ardlussa Winter Grazing Plans, Pizza and Beer	14
B+LNZ Farm Environment Plan Workshop Day 1	18
B+LNZ Farm Environment Plan Workshop Day 2 - 1p.m. to 6 p.m.	21
Between the Domes Catchment Group Xmas BBQ & Native Planting Afternoon	18
Brews & Banter - Dipton	60
Catchment Group Forum	97
Community Social & Wellbeing Evening with Wayne Langford	45
Education Kit Day at Balfour School	120
Glenham Initial Catchment Group event with Justin Kitto	16
Gore Effective Meetings and Engagement Workshop	14
Greater Dipton Catchment Group - SHMAK Kit Training	8
Greater Dipton Catchment Group Native Seed Collection Field Day	18

Greater Dipton Catchment Group Roadside Clean Up & Community Lunch Wellbeing event	21
Greater Dipton Catchment Group SHMAK Kit training session 2 with Environment Southland	9
Greater Dipton Catchment Group Utilising Unproductive Land Field Day	22
Hedgehope Makarewa Catchment Group Grow Your Own Native Trees From Seed Field Day	8
Hedgehope Makarewa Catchment Group Pot Luck Lunch	20
Lower Aparima planting day	16
Lower Aparima Catchment Group brings to Riverton the YOLO Farmer	25
Lower Aparima Catchment Group Stream walk	21
Lower Maitua Catchment Group - Tour and Social event	18
Lower Maitua Great South Event	16
Lower Oreti Catchment Group Wintering Event	51
Lower Waiau Wellbeing Event BBQ and Swim	16
Makarewa Headwaters end of year BBQ	51
Making online easy: Tips and Tricks for using Zoom	7
Marshalls Creek Stream Monitoring - Mid Oreti Catchment Group	10
Mid Oreti Catchment Group - Grow Your Own Natives Part 2 - Trees	18
Mid Oreti Catchment Group - hosted for Mid & Lower Oreti Catchment Groups - Environment Southland and Te Ao Marama Future Environmental Challenges Facing Southland Talk	29
Mid Oreti Catchment Group Composting Barn Field Day	60
Mid Oreti Catchment Group Spring Social BBQ	6
Mid Oreti Catchment Group's Grow Your Own Natives Event - Part 1	24
Mighty Marshalls Creek Rubbish Clean Up	4
Mokoreta Catchment Group - understanding our water quality	22
New River Estuary Exhibition Committee Meeting	5
Orepuki Stream Catchment Group walk	9
Orepuki Wintering Tour	23
Otago & Southland Coordinator Hui	12
Otamita Catchment Group Stream Walk	15
Otamita Catchment Project Event	15
Rural Support Trust Coffee Drought Shout - Te Anau	10
Social Science Training Workshop	n/a
South Coast Catchment Group & Beef + Lamb NZ - Farm Planning Workshop	24

South Coast catchments wintering event	40
Stakeholder Breakfast	41
Teams that Thrive Leadership Workshop	17
Think to Thrive Strategy Workshop	19
Three Rivers Catchment Group School Lunch	10
Three Rivers Wintering Event "The Good the bad and the Mudly"	25
Thriving Southland presents Matt Chisholm - Mossburn	63
Thriving Southland presents Matt Chisholm - Waikaka	63
Titiroa Catchment Group - On Farm Biodiversity Workshop	33
Waihopai Catchment Group Christmas BBQ	25
Waihopai Catchment Group On Farm Recycling Field Day	18
Waikaka Catchment Group & Beef + Lamb NZ - Farm Planning Workshop	18
Waikaka Catchment Group Grow your own natives	13
Waikaka Catchment Group nursery visit	8
Waikaka Stream Catchment Group, Limit setting talk with E.S.	13
Waikaka Catchment Group Wintering Event	50
Waikawa Catchment Group Pest Event	13
Waimatuku ACE Stream walk	11
Waimatuku Catchment Group Planting Day	30
Waimatuku Catchment Group History and Wellness evening	37
Wendonside Catchment Group Wintering Field Day	n/a
Winton Effective Meetings and Engagement Workshop	6
Womens Enviro Steering Group	16
Total	2,180

References

Australasia-Pacific Extension Network. 2021. "What Is Extension?"
<https://www.apen.org.au/extension>. Accessed 16 April 2021.

Spee, K. & Oakden, J. (2023). *The difference that makes the difference*. Wellington New Zealand, Pragmatica Limited

Thomas, G. (2021). *How to do your case study* (3rd ed.). London: United Kingdom: SAGE

Pragmatica

PO Box 2950

Wellington

info@pragmatica.nz