Attachment

Case Studies

H

Designing holistic management responses

Project Grassroots (TF11.3.4)

Summary

Reef water quality projects typically aim to reduce the risk of target pollutants entering waterways, often by changing management practices in agriculture. It can be tempting to design projects that only aim to change a specific management practice. However, it has been found that projects that are more holistic in their management responses and work with landholders beyond a single management practice are demonstrated to have a higher chance of success and create long-term sustainable outcomes or legacy.

Project Grassroots illustrates this lesson particularly well. While this project has sought changes in specific grazing management practices to reduce sediment and nutrient losses to waterways, the management responses in this project are holistic, because rather than focusing on specific management practices, the project seeks to understand each individual landholder they are working with. Namely their circumstances, their property, their family and their business to deliver a project that works on positively changing the mindset and perspectives of the individual, as well as guiding them through property management planning that considers all aspects of its management, including water quality outcomes.

What was done?

Resource Consulting Services (RCS), the organisation primarily responsible for the delivery of Project Grassroots, places considerable value in getting to know the landholders they are dealing with. As a project team member from RCS notes:

> *"unless you completely support and understand where they're at in terms of how they run their business or what drives them to get out of bed in the morning, and then deal with all of those things, then you can't even begin to make a change out in the paddock. We get to know them [landholders] intimately because they invite us into their lives, essentially, to say, 'right, I'm ready to do something different now'. We do that with a large, diverse team with a wide skillset across many disciplines".*

Project Grassroots is one of several projects delivered by RCS, that take the same holistic approach to every project they deliver:

"We work across the whole of the landscape and the whole of the business. We don't just go out and focus on the gully on the property, that's pointless. You need focus on the whole of the property and the whole of the business and the family, which means that we get families involved, we make sure that when we do our training the husband and the wife are both there. We try and engage the kids and make sure that they've got a plan for succession and that it's not just one person that's got the plan in their head. We start to get them to work completely professionally and treat the business like it's the multimillion dollar business that it is…and if you don't get them to change the way they manage the business in their head, you can forget about anything else you do out on the ground. There's a lot of paradigm shifting, mindset changes that need to occur".

Why is it important?

A project team member discussed the importance of considering everything holistically when attempting to achieve practice change. He highlights that businesses, people and property management are complex, and changing one aspect of a farm's management can have flow on affects elsewhere, so the only way to embed practice change in a sustainable way is to look at how everything is managed as a whole:

> *"You can't reduce agriculture into its bits and then expect to get complete change in behaviour and success, because agriculture is everything. It's all of the parts. You can't just go and change a specific bit in your ecology and expect to get an outcome in your biodiversity.... And it truly is systems thinking and systems perspective. You can't take a bit out of that system*

and expect to make a significant change… because what happens to the rest of it? All you do is create more chaos… So that's why we offer that complete support because they're making significant changes in a system".

What are the benefits?

This approach has been demonstrated to be successful in Project Grassroots, and other projects where RCS have taken the same approach:

> *"It's completely possible to shift producers from B and C class, up to B and A class[1], even in a drought".*

> *"we've essentially established a program for landholders to bring them on a journey of continuous and infinite professional and personal development. We use this framework when we develop projects, because we know it works. We know it works because we've got financial and economic benchmarks, we know that they get improvements in their KPIs in the business, we know that they get growth personally. We know that when the people grow, their land and their ecology grows and improves along the way.*

[1] As per relevant land management practice ABCD framework for grazing lands developed as part of the Australian Government Paddock to Reef initiative

Focus on the bigger picture

Project Grassroots (TF11.3.4)

Summary

Projects are always limited in the outcomes that can be achieved within the project timeframe and budget. It can be tempting to think about a project in isolation, working only to achieve its own goals and outcomes. But to have a meaningful impact on the Reef, the environment and the community, current and future projects need to be working in synchronisation to establish foundations and collectively build towards long-term outcomes. Successful projects were those that were thoughtful about how they were contributing to something bigger and beyond their own lifespan, purposefully setting up the project to facilitate continual advancement towards a long-term goal.

Project Grassroots and Project Pioneer illustrate this lesson particularly well. These projects were both primarily delivered by Resources Consulting Service (RCS) following a similar structure and format that:

1. Provided specialised education and extension to graziers to support a transition into land management practices that reduce sediment to the Great Barrier Reef, in alignment with the Reef 2050 WQIP; and
2. Aligned with RCS's overall vision of profitable farming that supports happy people and a healthy environment.

What was done?

What has really supported successful outcomes in these projects has been RCS's approach of channelling multiple streams of funding and income to delivering and improving a set program of events and activities each year. This program has been proved to successfully facilitate practice change and other co-benefits:

> *"These little projects give us an opportunity to fast track some change in the industry and they're great opportunities. We implement a whole heap of our own learning into projects."*

RCS points out that the generational shift in practice change required to create a true legacy can only be achieved over decades, not multi-year projects.

> *"We want to invest in people and agriculture for 10 to 20 to 30 years if we're going to be serious about long term environmental change, because you've got to focus on a generational shift if you want true legacy".*

Why is it important?

Having a well-defined and developed framework with structure and flexible format enabling integration of multiple lines of funding and income has allowed the organisation to continually improve the delivery of the program, keep information up to date, develop tools and resources for landholders, and maintain key staff members who are able to continually build their skills, capacity and social capital. As noted by a project officer from RCS:

> *"A lot of the tools and resources we use have been developed over 30, 35 years, so the client [landholder] gets more value than what's perceived initially… we invest a lot into our clients to ensure we help them manage in the changing world we live in. They're privy to those tools and resources, and they become members of the organisation where they've got access to those tools any time they want".*

> *"We've got a whole team of administration, and technical support guys behind our advisors to make sure we deliver anything that the client [landholder] needs and we're keeping up to date with changes in the industry from a technical and policy perspective. We do a lot of professional development ourselves….".*

What are the benefits?

By focusing on the bigger picture, RCS is able to deliver projects like Project Grassroots and Project Pioneer with additional value that has accumulated over 30 years or more. This has resulted in a model that has been demonstrated to be successful, and there is currently a waitlist of landholders interested in participating in future projects.

"we've essentially established a program for landholders to bring them on a journey of infinite professional and personal development…We use this framework when we develop projects, because we know it works. We know it works because we've got financial and economic benchmarks, we know that they get improvements in their KPIs in the business, we know that they get growth personally. We know that when the people grow, their land and their ecology grows and improves along the way"

Develop a shared understanding of the system and context

Complete Nutrient Management Planning for Cane Farming (RP161)

Summary

Reef water quality management projects occur in a complex physical, social and policy environment. Too often water quality improvement projects are undertaken without a thorough understanding of the physical, social and policy context. Developing a shared foundational understanding of the system and context by looking at a situation from multiple perspectives leads to a common understanding of the problem. It involves accurately defining the problem, understanding the risks, forming clear goals, objectives and developing an effective method for how to address the problem. Successful projects inherently include multiple stakeholders.

The Complete Nutrient Management Planning for Cane Farming in the Burdekin demonstrates these principles. The goal of the project was a reduction in excess nitrogen loads from Burdekin farms to the reef by finetuning fertiliser inputs using the Six Easy Steps methodology at the farm scale. However, the exact design of the project was informed early on by placing great effort on understanding the situation and context from the growers' perspective and running a pilot project (RP20) to test assumptions.

What was done?

Farmacist, a locally trusted agronomy provider in the Burdekin, worked with farmers to develop tailor-made nutrient management plans based on the 6 Easy Steps methodology that had been successfully piloted in a smaller project – RP20.

At the very start of this project, time was taken to engage with local growers to understand 'the problem' and some of the underlying behaviour, barriers and drivers for practice change using this methodology from the growers perspective. This was done by a team of practitioners that work on the ground and have taken the time to understand the system from the growers point of view. As a project team member notes, drivers for landholders are different to the investor and so this project needed to understand this situation from both perspectives to develop a clear solution:

> *"No farmer rolls out of bed in the morning and says, "I'm going to do something about my water quality". But they certainly want to maximize productivity, profitability, and they are all motivated".*

By understanding the complexities associated with the intended practice change, the project identified early on that a holistic approach would be required to be effective:

> *"There's not one farm that's the same. They've all got different limitations, challenges, soil types, labour force, risk management, cash flow, there's so many variables. Even though it's a nitrogen project, we're not looking at nitrogen in isolation. It's part of a holistic approach".*

Why is it important?

The long-term success of the project lies growers getting value out of the program, which has resulted in a high level of uptake and on-going implementation. The project demonstrated that a shared understanding is critical to provide benefits to both the funding body as well as the farmer. A project team member discussed the benefits of developing a shared understanding of the system and context:

> *"It was really good because we took the time to understand what the values were for the growers, as well as the investor at the beginning. And I see some projects get up where the goal posts are constantly changing, and that could be due to the fact that s a lot of thought wasn't really put into the design of the project and the value to the end user".*

The team member also identified the necessity of understanding the system and context in project success:

> *"if you understand what you're trying to change, make sure there's a valid reason for changing it, understanding that the growers are going to be better off for, to take your advice, and you're meeting what the investor wants, well you can't go wrong".*

What are the benefits?

The project was proven to be successful from multiple perspectives. Major nutrient reductions were achieved in the first year of engagement and there was significant uptake of the program, with an oversubscription of growers willing to participate. The project has continued to build the legacy of the pilot project RP20 which demonstrated that the nitrogen rates in line with reef protection regulations and industry developed methodology SIX EASY STEPS are sufficient to meet the nitrogen requirements of the sugarcane crop. In fact, farm profitability is improved with this level of nitrogen application. The funding body recognised the success of the project and has committed to further funding. Additionally, following the success of the project a similar template was repeated in the other reef catchments.

Negotiate clear goals, objectives and project logic

Complete Nutrient Management Planning for Cane Farming (RP161)

Summary

Reef water quality management projects need to respond to investment priorities of the funding body. However, there is often a disconnect between the funding body's top down priorities and bottom up priorities at the local scale, or realistic drivers for practice change. Negotiating clear goals, objectives and a logical approach for how it's going to achieve these can help bridge the gap between the objectives of the funding body and other stakeholders to ensure mutually beneficial outcome. Successful projects have negotiated clear goals and objectives with multiple stakeholders, to allow a clear line of sight to plan and implement the project without the goalposts changing.

The Complete Nutrient Management Planning for Cane Farming in the Burdekin demonstrates these principles. The overall goal of the project was a reduction in excess nitrogen loads from Burdekin farms potentially getting to the reef. However, in addition to the investment priorities, the project utilised a strong understanding of the system and context through engagement with growers to set clear goals, objectives and a methodology that would produce win-win outcomes for both the investor and growers. Significant effort was put into understanding how the project could achieve win-win outcomes upfront based on sound evidence.

What was done?

Farmacist, a locally trusted agronomy provider in the Burdekin, designed a project to work with growers to develop tailor-made nutrient plans that reduced unnecessary fertiliser usage, and improved profitability. As a project team member from Farmacist notes:

> *"The mark is focusing on what the client wants, not what you want to give the client. And successful projects, the trick to successful projects, and especially reef related projects is to make sure that it is a win-win project that outcomes are beneficial for both. So RP161 helps growers get their fertilizer usage in order. They save money, it maximizes productivity, it meets reef regulations".*

While this method was clear, the project was still flexible and holistic in the way that it worked with individual landholders to achieve practice change. As a project team member from Farmacist notes:

> *"There's not one farm that's the same. They've all got different limitations, challenges, soil types, labour force, risk management, cash flow, there's so many variables. Even though it's a nitrogen project, we're not looking at nitrogen in isolation. It's part of a holistic approach.*

Why is it important?

The project had a clear logic for how and why there should be practice change and the goal posts did not change. Things were adaptively managed as they came up, but overall it was very clear what this project was seeking to achieve and how from the start. This allowed the project to be developed and implemented efficiently and effectively.

> *"It was really good because we took the time to understand what the values were for the growers, as well as the investor at the beginning. And I see some projects get up where the goal posts are constantly changing, and that could be due to the fact that s a lot of thought wasn't really put into the design of the project and the value to the end user".*

What are the benefits?

The project was proven to be successful from multiple perspectives. Major nutrient reductions were achieved in the first year of engagement and there was significant uptake of the program, with an oversubscription of growers willing to participate. The project has continued to build the legacy of the pilot project RP20 which demonstrated that the nitrogen rates in line with reef protection regulations and industry developed methodology SIX EASY STEPS are sufficient to meet the nitrogen requirements of the sugarcane crop. In fact, farm profitability is improved with this level of nitrogen application. The funding body recognised the success of the project and has committed to further funding. Additionally, following the success of the project a similar template was repeated in the other reef catchments.

Focus on the bigger picture

Cost-effective restoration of wetlands that protect the Great Barrier Reef (RP152P)

Summary

Projects are always limited in the outcomes that can be achieved due to constraints with project timeframes and budgets. It can be tempting to think about a project in isolation, working only to achieve its own goals and outcomes. But to have a meaningful impact on the Reef, the environment and the community, current and future projects need to be working in synchronisation to establish foundations and collectively build towards long-term outcomes. Successful projects were those that were thoughtful about how they were contributing to something bigger and beyond their own lifespan, purposefully setting up the project to facilitate continual advancement towards a long-term goal, as part of a greater whole.

The 'Cost-effective restoration of wetlands that protect the Great Barrier Reef' project successfully demonstrated this. The overall focus of the project was identifying the cost-effectiveness of restoring wetlands to improve water quality. This was recognised as a significant knowledge gap that has resulted in a lack of inclusion of wetland restoration targets in major reef water quality plans and funding programs. This project had a targeted objective of establishing strong foundations for future work, to facilitate further research and policy development.

What was done?

The project was an Advance Queensland research project with a collaboration between the Queensland Department of Environment and Science (formerly EHP) Wetlands Team, Environment Policy and Planning, and Griffith University. Significant effort was placed up front in co-designing research questions to ensure that the outputs and outcomes of the work could be practically used by policy makers. The project investigated the nutrient removal capacity and additional ecosystem services of different types of wetlands and subsequently made recommendations on the most cost-effective wetlands to restore. A project team member summed up the wider implications of the project below:

> *"This has been a major question that we've had for 18 years in wetlands and we haven't been able to answer itt. For the last scientific consensus statement there was, very limited direct information on the role of the nitrogen removal body wetlands. We had to use external and overseas literature. We had nothing to go on really in Queensland except one single paper that was quite limited. And this project has basically succeeded in delivering multiple outcomes for us and answering a very significant amount of the questions that we had. And also it's recognised that wetlands are much more significantly in terms of the roles in water quality improvement in the reef than they were before. … So it's a very effective project".*

Why is it important?

By embedding the bigger picture into the project design the project significantly contributed to longer-term reef water quality goals. The project was successful in big picture terms, by contributing to the knowledge base which informs reef water quality policy as well as building a research community of practice with relationships to the DES wetlands team.

> *"We continue to have expert workshops with a whole range of scientists that didn't exist beforehand. So we have a community of practice now when we never had before. And every time that we fill a gap, we identify another one. And so, the project is continuing to keep addressing gaps… we actually needed to come up with this conceptualisation of how wetlands are functioning in terms of nutrient removal".*

The project has set foundations to continue to address information gaps through a community of practice and has established foundations to practically use the information.

> *"We've actually got these conceptual models that will be going online that synthesizes this information. And attempts have been made to work with modellers and we've already done a paper on modelling the role of wetlands in nutrient removal. And our intent with the next project is to actually try and embed the findings into the catchment models so that the real role of wetlands and nutrients removal would be understood".*

What are the benefits?

This project successfully achieved its objectives of making recommendations of the most cost-effective wetlands to restore based on research specific to the Great Barrier Reef. The research outcomes have been used including in economic modelling and the development of conceptual models of wetland nitrogen removal. Additionally, the research has facilitated further research and policy development, including a further extension of funding to expand the project.

Embed outputs and outcomes

Cost-effective restoration of wetlands that protect the Great Barrier Reef (RP152P)

Summary

The legacy and outcomes from projects don't always stop when the money runs out, there are important roles and responsibilities for ensuring that project outputs and outcomes are not only shared, but actively used to influence other Reef outcomes. It can be tempting to think about this as an activity that occurs at the end of a project, but projects that successfully embedded outputs and outcomes to maximise impact were aware of the intended legacy of the project early on, and took steps throughout the project to ensure that this happened effectively.

The 'Cost-effective restoration of wetlands that protect the Great Barrier Reef' project successfully demonstrated this. The overall focus of the project was identifying the cost-effectiveness of restoring wetlands to improve water quality. From the very start of this project, a co-design process was undertaken to ensure that information produced through the research could be practically drawn on by multiple uses, and continue to be built upon by others. Furthermore, the project was established in a way that ensured that there was a continuous science-policy relationship that has successfully influenced policy design.

What was done?

The project was a collaboration between the Queensland Department of Environment and Science (formerly EHP) Wetlands team, Environment Policy and Planning, and Griffith University. The project investigated the nutrient removal capacity and additional ecosystem services of different types of wetlands and subsequently made recommendations on the most cost-effective wetlands to restore. Researchers sat within the Wetlands team several days per week, which allowed for a continuous and informal dialogue. This informed research questions that were relevant to policy and facilitated multi-directional learning. The project focused on providing policy makers with scientific information continually as it was developed.

Policy makers benefitted from interaction with researchers through enhanced knowledge and skills, and information about other pertinent research. Researchers benefitted as they gained a nuanced understanding of the policy or practice environment. Subsequently, they developed and pursued research questions that have real-world applicability, and, through ongoing conversations with policy makers, interpreted results with a deeper understanding of contextual circumstances. This, in turn, enhanced the usefulness of the research findings.

A project team member from the research side stated that:

> *"sitting here with a team and learning how they work and what were the things that they require … I was able to understand what things they needed and when do they need it and what scale, at what sites".*

A project team member from the policy side explained that:

> *"the answers that came out of it were actually basically directly related to the question that we actually had. Which was what was the role of wetlands in terms of nutrients, particularly nitrogen removal".*

Why is it important?

With the outcomes and outputs embedded into the project design from the beginning, the project team was able to ensure that the effort and investment put into this project had a real and positive impact. Indeed, the relationship developed between the researcher and the department meant that information could be continually provided and tailored for policy uses in a timely manner throughout the life of the project. It was noted that policy can change rapidly, but good science takes time, and it is important to inform policy with the best knowledge there is at the time, even if its incomplete or not perfect. A project team member summed this up below:

"Griffith university were very happy to share the data and information very early in the piece. And was really enthusiastic about it. So in sharing that information earlier than when it was published, we were able to, with caveats at least know what the outcome of the research was… if you have to wait until the paper is published, the policy issue has moved on".

What are the benefits?

This project successfully achieved its objectives of making recommendations of the most cost-effective wetlands to restore based on research specific to the Great Barrier Reef. The research outcomes have been widely used including in economic modelling and the development of conceptual models of wetland nitrogen removal. Additionally, the research has facilitated further research and policy development, including a further extension of funding to expand the project.

Establish a fit for purpose governance framework

Project Catalyst

Summary

Fit for purpose governance systems at that project scale underpin multiple aspects of a successful project. A core aspect of any governance system is establishing clear project protocols at the start of a project. When not established early in a project's life, a lack of project protocols can lead to a loss of confidence and respect, cause major time disruptions and create conflicts between stakeholders.

Project Catalyst provides a good example of clear project protocols including:

- Establishing clear roles, responsibilities, expectations and accountability among partners, contractors and stakeholders.
- Establishing clear processes and expectations for data collection, data representativeness, management and sharing upfront.

The multi-layered governance structure of the project team lends itself to transparency and accountability. The structure includes Project Officers and Coordinators to General Managers, to a Board of Directors, who were all held to account for their deliverables. The benefits of which are pointed out by a project team member:

> "*Having that structure there of checks and balances on a number of levels to make sure that the money's being handled correctly, the deliverables are being met, the outputs of the reporting, and the trial reports, and the grower stories, et cetera, are being met. I think that gives confidence to the people involved with the project, knowing that it's not being run out of someone's backyard.*"

What was done?

Project Catalyst identifies, implements and validates pathways to rapid adoption of enhanced management practices, leading to significant water quality improvements for the Great Barrier Reef. Innovation and early adoption trials are conducted as part of the project. The project fosters a 'grower led' approach, where landholders have input on all aspects of the trials and share their story with other growers' to promote peer to peer learning.

Early in the project, clear project protocols were established with contractors to provide agronomic support to landholders, including their workload, reporting, data collection, management and sharing. In addition, templates and examples were provided to contractors to set out clear expectations. A project team member describes the process of engaging contractors to undertake the work:

> "*It goes right through from the legal side of things, we actually contract these people, and we're quite specific and detailed in what our expectations are. They get as part of the contract a standard that these reports are due on these dates and these months. This is the type of detail that is expected. These are the templates we will use, here's how many growers that you will do trial work with. Obviously, there's communication that happens before that and negotiation, where we decide together about how many trials can they handle, how many adoption pieces of work can they do. Once they've sort of agreed on the workload then they're locked in, and we hold them to account on that".*

This ensures that the work undertaken by contractors is clear and mets multiple expectations for the project.

Additionally, it was made clear and agreed with landholders that all the data and information will be shared, which reduces the risk of resistance later on in the project once the landholder realises that they will be expected to put all their

information online and be publicly accessible. A project team member points out that:

> *"there are no secrets, it is all there for them to see. That sort of a learning as well that the transparency of the outcomes of the work that you've done need to be very upfront, so that people understand that it's going to be made available, so that other people can use it and make informed decisions with it."*

Why is it important?

Project Catalyst is now in its twelfth year and has expanded from operating within the Mackay region to include the Burdekin area and up into the Wet Tropics. Establishing and maintaining a fit for purpose governance structure and clear project protocols has enabled the project to expand, whilst ensuring that the outcomes are of a consistently high standard. Embedding a consistent reporting framework early on, including a quarterly, bi-annual and annual reporting scheme, ensures that results have been consistently quantified and demonstrate the success of the program. This in turn has led to further funding and further uptake of the program by landholders. The multi-layered governance structure has ensured oversight of the project and that outputs are consistent with what was agreed upon.

What are the benefits?

The results of the trials are openly available, so learnings are shared widely. In addition to successful trials, the project acknowledged from the outset that not all trials will produce positive results but identify these projects as important in flagging practices that should not be pursued. This project continues to produce significant reductions of agricultural pollutants contributed to the Great Barrier Reef, a major increase in capacity and knowledge base of growers and a major reduction in costs of fertiliser application.

Build capacity and capability

Project Catalyst

Summary

Building the capacity and capability of stakeholders maximises the potential for positive change with sustained outcomes. Successful projects are strategic about providing the 'right' information and support to build capacity and capability. Successful projects are thoughtful about the key audience and provide a variety of opportunities to build capacity and capability that caters to different learning styles.

Project Catalyst demonstrates building capacity and capability through successful peer to peer learning. The project leveraged the experience of early adopters to promote further practice change. The project did this well by gathering high quality data for effective communication, and producing multiple grower 'success stories' to promote peer to peer learning. A project team member describes the importance of capacity building in terms of peer-to-peer learning:

> *"peer-to-peer learning is critical. In particular with agriculture, but perhaps in all industries where growers will tend to take advice from extension officers and agronomists. They'll do a bit of research on their own in these days of the internet, but one grower being able to relay their experiences to another grower is where they pick up the most information."*

What was done?

Project Catalyst identifies, implements and validates pathways to rapid adoption of enhanced management practices leading to significant water quality improvements for the Great Barrier Reef. Innovation and early adoption trials are conducted as part of the project. The project fosteres a 'grower led' approach, where landholders have input on all aspects of the trials.

Two major components of the project facilitate sharing of knowledge between growers. Firstly, the project provides agronomic support to early adopters to undertake an innovative trial and capture the information and data required and share the results of the trial to other growers with confidence. Secondly, the project identified that peer to peer learning is the most successful when growers are presented with 'success stories' of someone that is similar to them, or in a similar situation. The project sought out multiple pathways to support grower networking and share success stories in a variety of formats which cater to different engagement and learning styles. This includes one-on-one interactions, farm shed meetings, conferences, as well as a variety of communication products. One thing that Project Catalyst prides itself on is developing a case study and providing the information online for every successful trial that is undertaken.

A project officer explains the project as such:

> *Project Catalyst, its innovation of farm management systems leading to practice change, and then broader adoption, and hopefully then that becoming a best management practice. You need to support your leaders within the group who tend to influence the broader growing community, we need to support them with the scientific information. That's where your agronomists and that come in handy because they're the ones that are generating the reports and the data, and assessing the findings. We support them with that sort of information in bite sized chunks…. You've then got the numbers behind it, and that's the whole idea behind trialling this stuff with some science behind it, is then you're backing up the anecdotal information with scientific rigor, but presenting it in such a way that the general community can understand.*

Why is it important?

Project Catalyst is now in its' twelfth year and has expanded from operating within the Mackay region to include the Burdekin area and up into the Wet Tropics. A project team member discusses the importance of the capacity building:

> *"If you don't have that ability for the people involved to be able to share their learnings and information with other people within their group, I think it doesn't stop practice change happening, but it certainly slows it down."*

The project team member goes on to say:

> *"I truly believe it's been a very successful project. You can gauge that by the number of growers that have remained loyal to it and are still involved with it 12 years later, the new growers who are vying to be part of it because they've heard what it does, the funding sponsors who, in some cases, have been involved with it, again, from the beginning, putting money into this because they can see the results that it generates. Then I look to the actual outputs of it. There's a number of farming practices, like I mentioned before, that were trialled, started being trialled, 10 years ago, 12 years ago, that are now considered industry best practice".*

What are the benefits?

This project has seen successful peer to peer learning that has built the capability and capacity of individual growers, as well as advancing industry standards. The success of sharing growers' stories has prompted further funding of this project to include additional growers who are interested in implementing a practice change they have seen from another grower involved in Project Catalyst.

Build interpersonal relationships based on trust

Landholders Driving Change (TF8.2.1)

Summary

Strong interpersonal relationships built on trust have been shown to underpin successful projects by building strong collaborative working relationships. Establishing trust with a landholder has also been shown to be a critical factor for successfully facilitating practice change. Getting the conditions right to facilitate the development of strong interpersonal relationships over time, or within the life of a project can be challenging. Successful projects were considerate of the timeframes required to build relationships, setting up the right foundations, and the behaviours and attitudes that can promote or break strong interpersonal relationships.

NQ Dry Tropics leads the delivery of the Landholders Driving Change (LDC) Project which provides a good example of building strong interpersonal relationships with landholders, scientists, industry and government. Trust has been critical to the high degree of collaboration through the design phase, overall level of engagement in the project, and has established strong foundations for future behaviour change outcomes.

What was done?

LDC aims to reduce erosion and deliver accelerated progress towards water quality outcomes through empowered communities who manage healthy and productive landscapes. Delivered within the Burdekin Region, the project relies heavily on behaviour change outcomes from graziers. The involvement of graziers in a co-design process is seen as a cornerstone to driving change. As noted by NQ Dry Tropics:

> *"In order for the project to be truly grazier-focused, it was critical to involve them from the very start of the design process… our goal is to engage and get everybody participating and adopt a good relationship ethic. We've just got to find the trigger that does that… that means that the LDC has resulted in a design and a delivery that is very tailored to individual needs, and is very flexible in its approach".*

The co-design process has been a key aspect in forming strong interpersonal relationships but is also in turn required to create safe spaces that support strong collaboration.

> *"There's a couple of really important things… one is providing an environment in which different perspectives can be heard. What we've done, particularly with the project panel, which brings together government industry, graziers, and scientists, is provide an environment that is very safe and respectful … no one perspective is right or wrong"*

> *"The stakeholder collaboration is very, very intense with landholders driving change. It takes time and money to invest in, support, and continue that. But it also builds that trust and allows that sharing and transferability…".*

Why is it important?

Building strong relationships based on trust has been demonstrated to be important for the co-design phase to promote collaboration. It is also a critical ingredient for long term behaviour change that is required for the project to reach its high-level outcomes of accelerated water quality outcomes and a culture of stewardship.

> *"I don't think you can undervalue or underestimate the importance of trust… At the end of the day, land managers need to trust us, in terms of going on the journey, and in terms of the advice we are giving."*

Involving graziers from the start of this project in the design process is also a key success factor because building strong relationships takes time. Starting out with

low risk activities such as attending meetings and workshops has been demonstrated to be more successful in establishing trusting relationships rather than trying to get practice change outright. As highlighted:

> *"There is a saying that change will happen at the speed of trust, and it's not something that happens overnight. So you can't just put all the ingredients into one workshop and go yeah, they trust us now, off we go".*

The project planned and catered for trust to be built at different scales. Providing opportunities for one on one interactions, peer to peer, cluster groups, sub catchment and whole of catchment events, it also allowed the project team to build strong relationships where they had not previously existed, establishing new forms of networking and social capital in the region. This also enables trust to continue as stakeholders change. As noted by NQ Dry Tropics:

> *"I think some of the ingredients to building that trust over time is the experienced and well respected team members. However, through the LDC project, it has been proven that we can have new team members come on and with the right support they are able to grow their own experience, build those relationships and form their own trust levels".*

What are the benefits?

The LDC project is successfully meeting the following project outcomes that have been enabled through strengthened relationships and trust at all stakeholder levels:

- Improved land management is achieved through conventional practice change support as well as a suite of new incentives for grazing properties. Trust is required to allow new ideas to be trialled.

  The integrated approach has doubled the number of properties committing to initiatives that will lead to improved land management within the catchment (currently 78 properties).

- Many of the ideas suggested from landholders during the grassroots design are being implemented, with oversight of a project panel comprised of 50% landholders. This has led to increased trust throughout the catchment and facilitates change.

  Overall engagement numbers are trending upwards. The depth and breadth of engagement is most significant, with 80% of landholders now taking part in 2 or more activities, up from 49% before this project

- Collaboration is a key component of the integrated delivery model, bringing together multiple stakeholders and strengthening relationships between all parties.

  Landholder engagement is also facilitated in policy development, review, and implementation. This collaboration supports graziers to better understand regulatory requirements, and has enabled them to work with government to review how regulations and policies may operate.

- Increasing knowledge, attitudes, skills and aspirations (KASA) throughout the catchment ensures stakeholders are equipped to continue improvements for years to come. This is achieved through formal arrangements (workshops, training, specialist technical advice) and leveraging relationships (peer to peer, clusters, catchment catch-ups).

  The impact of the training is also likely to be felt beyond those directly involved, with 83% indicating that it was likely that they would share what they had learned more widely within their own networks.

Reflect, review and revisit the program logic

Wet Tropics MIP (TF8.3.1)

Summary

There is not always a silver bullet when it comes to reef water quality projects, we are still trying to innovate, things don't always go exactly as planned, new aspects emerge and assumptions are made and realised. The only way to manage these things is to continually reflect, review and revisit the project logic in order to adaptively manage. Successful projects pre-anticipated this and set in place systems or procedures to support ongoing adaptive management. While the development of project logics and Monitoring, Evaluation, Reporting and Improvement (MERI) plans are becoming more common, it is still a challenge to use these well as a tool to drive continual improvement.

The Wet Tropics Major Integrated Project (WTMIP), funded by the Office of Great Barrier Reef, provides a good example of a project that embedded MERI processes into the project to continually review project progress, adaptively manage and learn as the project is being delivered. The Wet Tropics MIP is an innovative project and therefore the need to 'learn while doing' was identified upfront as a key component.

What was done?

The WTMIP relied heavily on a monitoring and evaluation strategy as the key framework to support adaptive management. In addition, it was also the subject of adaptive management itself.

Tools for collecting monitoring data have been embedded into the day-to-day work and governance of the MIP rather than relying on "point-in-time" evaluations which independently gather data on progress. In this way, monitoring and evaluation is not something that is done as a separate activity to mainstream project implementation or at the end of the project alone. The monitoring tools focus primarily on the "people and partnerships" impacts of the project, as opposed to the practice change and water quality impacts, which are tracked through the Paddock to Reef system. The project team was seen as fundamental to ongoing review and evaluation, and the project aimed to build a learning culture within the project team to support collaborative adaptive management throughout the life of the project.

Adaptive management is most often overseen by one organisation but in the instance of the MIP there was collaborative involvement of partners, community and individual participants as active participants in the process, predominantly through the cross-sector/cross-industry project panel.

Why is it important?

Providing opportunities to reflect and review is fundamental for identifying key learnings as the project progresses, ensuring that the project can be adjusted as the results of various actions are evaluated. These adjustments are tracked in regular milestone reporting. As noted by a project team member:

> "*For this project, it's about learning while doing… we're changing as we go and rather than having very, very, very hard milestones we work closely with OGBR to adjust according to what we learn".*

A well-developed monitoring and evaluation structure is critical to determine timely steps for testing, assessing, and adapting actions. As identified in the monitoring and evaluation strategy:

> *"When it works well it encourages learning, innovation and experimentation and can improve links between experience, observation, science, evidence and decision-making".*

Involving a broader range of individuals beyond the project team in collaborative adaptive management was a critical component for building capability and capacity

as the process encourages learning and innovation. As identified in the evaluation of the design phase (Taylor & Eberhard, 2017):

> *"We want to be open to what is coming out of the community – we want this to be an opportunity to learn together…to have a view to beyond the life of the project".*

What are the benefits?

The Wet Tropics MIP has successfully established a monitoring and evaluation structure and framework that has resulted in continual reflection and improvement of the project at a range of levels, throughout implementation.

The MIP is an innovative project and the learnings captured throughout the process are a key factor to understanding the transferability of the MIP approach for other locations in the Reef catchments.