Ep 10 - Makarewa Headwaters Revival Project - Feral animal management in our Catchment

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Rachael Halder: Catchment Converse with Thriving Southland, your link to Southland Catchment groups and their impactful projects. Each episode will dive into grassroots effort by local farmers and communities that are driving change and sustainability in our regions. Listen in for inspiring stories and insight. Real people real Change the Southland Way.

Feral animal pests aren't just a bush problem. There are real issues for farmers too, with rising numbers of deer, pigs and other ungulates damaging pasture fences and native plantings. Farmers in the Hokonui's are seeing these impacts firsthand. In this episode of Catchment Convos, we're talking to local farmers and catchment group members, Mark Thomson and Alexis Wadworth behind the Makarewa Headwaters Revival Project. A grassroots initiative taking and tackling the growing pest problem across private [00:01:00] and public land in their catchment. This project was sparked by the concern from local landholders about what these animals were doing to their productive farmland and native ecosystems. Looking at the pig rooting the loss of their native plantings, it was about protecting the farmland that they're on from the day-to-day damage, making sure crops survive and reach their potential, ensuring that their restoration efforts and plantings and bush under stories, don't just get wiped out overnight by roaming pests. We'll hear from Alexis and Mark about how they kicked things off with a landholder survey to get real data from those living and working in the area and how that buy-in from local farmers has been key to building this momentum.

The survey and baseline information that they've established has given them good data on the estimated pest numbers in their catchment, and it's scary. Big numbers. The state of the bush now [00:02:00] identified, threatened species in their catchment, their ecosystems, and how the impact of these large feral animals is playing out economically, greenhouse gas related, and physically in their catchment. This episode is packed with insights on what's working, what's been hard, and what's next in the fight against feral pests.

Welcome to the show, Mark and Alexis, it's lovely to have you both here.

So, Mark, do you mind just giving us, in your words a bit of an overview as to what is this project we are talking about today?

Mark Thomson: Yep, absolutely Rachael. And thanks for the opportunity to do this too, by the way. I guess there was a group of us in, this catchment that were, observing, sediment laden water, coming out of the bush clad hills really, if you like, in, in rough terms.

We just completed a, study on, nutrient runoffs, and we weren't able to include bush-clad areas within [00:03:00] that project. So, we just felt there was a lot to learn about what was going on and what was causing it really.

Rachael Halder: Cool. And so you landed on a project objective and this involved lots of pests. So how did that sort of come about?

Mark Thomson: Mainly through observations and what we were seeing on our own properties, and obviously what the hunting community were seeing as well. And just feedback from that. And again, kind of took a while for the penny to drop. I mean , we've been living in this catchment for, um, over 15 years anyway, and we've observed it getting progressively worse in terms of feral pest numbers. We figured, well, maybe we need to look into this a little bit deeper and understand some of the impacts.

Rachael Halder: And so Alexis, I guess that leads onto that next sort of thought. How did you get the farmers together, or how did you shape this into an action or a project that you wanted to do as a catchment [00:04:00] group?

Alexis Wadworth: I guess we took a lot of learnings from previous projects we had completed, and as Mark touched on , the Luci-Ag project was the one that identified, perhaps there was something a little bit further we needed to investigate regarding sediment loss, particularly coming out of the native bush where obviously we know there are no farmed animals present.

And then looking at other projects we've done and the fact that we still had questions and probably more questions than answers sometimes. After we'd completed the first element of the project, we decided that this project really needed the space to be broken into a few phases. So the first phase we decided on was, well, let's actually understand what problem exists.

And as Mark said, we all kind of knew that there was something going on that probably was worse than what we wanted to really admit to, if I'm being honest. And when we broke it down. We looked at three [00:05:00] different aspects to

the first phase., One being let's actually quantify and identify what the farmers are seeing. So we had the use of a thermal image, drone to actually count the animals and estimate the population. And then we also combined that with a farmer survey to understand what animals were being taken off currently because we know that farmers in our catchment are doing a heap of work themselves without any structured project in place.

Um, and then combining those numbers and what we understood to be the population and the number of culled animals out of the catchment. We also wanted to understand the economic impact that was having to our catchment and particularly farming businesses, and then lining that up with the ecological impact as well.

Because what we were seeing in our gut feel was that the impact to the native bush was pretty bad. [00:06:00] And we are very passionate about our native bush in this catchment and also obviously the waterways. Being, one of the main objectives of our catchment group itself is to improve those waterways and have a swimmable drinkable water source in our catchment.

And so when we looked at that first phase of the project we went, there's a heap there. We know that we're gonna get a lot of answers out of this but equally questions, and we weren't quite sure how phase two was going to look until we'd completed phase one. So, the second phase is now that we have understood the problem, what are we gonna do about the problem?

And then beyond that, looking at what improvements can be made with a controlled number of pests in our catchment.

Rachael Halder: Just a couple questions there, Alexis, for you.

You hired an independent through Trap & Trigger to help you collect all of the data you needed, but the numbers are pretty shocking. And for those [00:07:00] who haven't had the chance to look at this report yet, can you give us your highlights? Well, maybe the low lights, I'm not sure, but the numbers of animals that you've counted in the catchment.

Alexis Wadworth: So we know that through that thermal imaging that we did and the survey of the farmers, the number of deer that were observed was five and a half thousand, just under five and a half thousand and 1700 that were culled annually. So if you combine that total around about 7,000 deer and pigs was just shy of 3000 observed and just over a thousand culled. And that's the best guess from the surveys we've done with the farmers being those culled

numbers. So what we also identified, there's some Hokonui Merino in there because we wanted to look at the ungulate population .

However, we are not getting too concerned about them, but we did pull their impact into the financial cost to our catchment. And that ended up being just over $2 million when we quantified that. And that was looking at feed consumed, [00:08:00] damage done to pastures by pigs particularly. We also included the greenhouse gas emissions from these wild ungulates as well.

Rachael Halder: Mark, can you, just to give us some more perspective , roughly how big is the catchment that you're talking about?

Mark Thomson: The area surveyed was 32,000 hectares, I think, and the total catchment is 45,000 hectares. So the area surveyed, were concentrated on, the hills and the bush clad areas. So yeah, very concerning.

Rachael Halder: Yeah, high density.

And so you have got a lot of hunters and things coming into the catchment. Can you comment on that Mark?

Mark Thomson: We do have a lot of hunters and they're valued very, very highly. We've been able to change the mindset of the hunter community, most of them anyway.

I guess it's a sign that they're coming on board, they recognize there's an issue and they're quite happy and they understand that they're no longer here to shoot that [00:09:00] one animal that they were after the trophy stag or the beautiful pig with the biggest hind out of a mob. They now understand that this requires some management.

So, they're taking multiple animals when they get the opportunity . Absolutely key part, of the success of the project is in fact the hunting community.

Rachael Halder: And so from an ecological point of view, Mark, obviously Alexis has highlighted a little bit, we'll go on to it further soon about financial impact, but you guys as a catchment have done some plantings and as farmers, you've done plantings and you know you've got the Makarewa falls walk in your catchment.

Ecologically, this is having a huge impact, isn't it?

Mark Thomson: It it is, it is. And it's a very valid point. I mean, that's the part for most of us within the group the part of the phase one report, which is the most disturbing, is actually the ecological part of it. The financial impact is, you know, a very big thing, but the ecological part of it, is something that could take decades to recover from.

And there's particular [00:10:00] blocks within our catchment that have been identified as being rather disturbingly close to the tipping point, which, nobody wants to go there.

Rachael Halder: Could you explain that a little bit more, Mark.

Mark Thomson: Well, by tipping point Wildlands sent us down a very capable ecologist to look at different species, established a palatability scale and the bush is very fecund in terms of palatable species in its natural state, but in its modified state, there weren't many of those, species in the high palatability scale present. But there was species that are well down the scale that are actually being eaten, which sort of indicates , that it's pretty well chewed out.

By tipping point that means, the species that are need to reproduce, in order to remain. They're having trouble doing that, so therefore, the parent species are likely to die out before their progeny [00:11:00] can get established and take over.

Rachael Halder: And so, Alexis, you touched on financial and so obviously you have to look at both ends of the scale, don't you? And you guys as farmers have been trying to establish not only native plants and get some fencing done, which are being destroyed, but you are also trying to farm and plant crops and pastures that are being eaten, which is not great. So have you guys as a catchment group managed to quantify that a bit?

Alexis Wadworth: Yeah, we have, and I think anyone who's listening to this podcast who has a wild deer problem in particular, will appreciate , anticipating a 10, 12, 14 ton crop and getting a couple of ton less than what they were aiming for thanks to deer.

So, it doesn't take rocket science to really see that is having a major impact, however, what is harder to quantify is what the deer are eating outside of crops and also the damage that the pigs are doing to our, grass areas by [00:12:00] turning them over the weed impact, when we've got exposed soil and so on.

So we had Victoria Bishop from Lumen do an amazing job trying to , best guess with a whole lot of science in behind it what the, that financial impact would be, in real terms for farmers. What we came out with was from a, the farmland, percentage of our catchment, it's estimated to be $25.60 per hectare cost thanks to these wild, ungulates.

And then when we, quantify that, that out into possible consumption by our farmed animals, it equates to over 5,000 ewes worth of dry matter consumed.

Rachael Halder: Wow.

So I guess that leads me onto my next question. You guys are just two members of the catchment group and two members of the community. How has the rest of the community been involved in this project?

Mark Thomson: We've reached out to the [00:13:00] community, via initially with a survey, and in that we were just asking specific questions around the ungulate numbers and those that were taken, and the impact on if those people had a farm business, an impact on that business, what do you think it is? How would you quantify it in terms of damage to fencing and grass consumed and winter crop consumed? Um, aspects like that. Which actually helped with the calculations in the report and the phase one project presentation in Otapiri Hall was, gosh, it's probably, the biggest, event that's been in that hall, for years.

There was so much interest in that and try to present it in a way that was balanced, it was factually correct. I think we pulled that off. There was a lot of anxiety leading up to it because we knew , some aspects of this probably wouldn't go down with certain segments in our community but that's the facts. We, we think we presented them with, an accurate [00:14:00] assessment of how big the problem was. And on the whole, it was very, very, very well received. Certainly got the attention of a lot of, people in the community and those on that are slightly on the outside who had a light bulb moment this probably is quite bad. And so we use the word collaborative a lot because that's exactly what it is. And so far I think we've been able to bring the community along with us. So we take that , as a win.

Rachael Halder: And you guys very much are leading this as a community.

Alexis Wadworth: Yeah, I think when we were planning this, we really tried to think what would support, an engagement and a raising awareness of the issue. And by pulling in factors like the financial impact and cost doing the survey. So asking farmers within our community to be involved from the outset , and then

really highlighting and spending a lot of time on that environmental impact. I [00:15:00] think it certainly helped. By engaging a broad range and far reaching group of people in their interests. It's taken us a little while to learn from a catchment group perspective. But, I feel like this is a project that , certainly hits home for the majority of our , catchment members more so than some of the other , more science specific projects we've done in the past. We can't shy away from big issues that are having huge environmental impacts , on our catchment, and that's what a catchment group's all about, right?

And then , thanks to some of the, larger entities that are involved with our catchment, whether that be iwi groups, forestry , corporates, DOC , Environment Southland. And we can't actually fault , any of those, groups. They have all been fairly open and, pretty happy to have a conversation.

So that's not easy to get some of those big groups on board but it just goes to show that everybody's feeling the impacts, of this issue.

Rachael Halder: [00:16:00] And like you said everybody's got a little piece to play in this project, which is cool. And so, don't wanna go into it too much, but there's been a couple of challenges along the way. Mark, did you wanna go over maybe a couple of challenges that the project, , has come across and how you overcome them?

Mark Thomson: Um, it's differing points of view , which you can view it as a challenge or you can view it as just power for the course. It, it's a very passionate subject. A lot of people have a view on it, and, just because they're not the view of yourself doesn't mean that their view is wrong.

Generally you do find the middle ground in the end, but the crux of the matter is we are here now , we are the current custodians of this land and I, for one, wouldn't like , to be held responsible, if this issue just slips by without , [00:17:00] anything, done about it.

Rachael Halder: I like being a follower of your project and your journey. I know you have upskilled lots as catchment group members and community members around the likes of communication.

Alexis, do you wanna comment on that and maybe some new skills you've learned along the way because of this project?

Alexis Wadworth: Yeah. Well, nothing's gonna make you upskill faster than being told you're on breakfast in a couple of days time. Yeah. But, um, yeah, we

definitely have had quite a bit of, national media interest, which has been very interesting, for us as yeah, just a small little catchment group at the bottom of the country.

But I tell you what, it definitely does make you learn a lot. And , upskilling for sure around how to communicate some of these , concerns that may be out there in the community, , as Mark's touched on. The other thing it makes you do is listen a lot [00:18:00] and listen to what people are suggesting are concerns and in a lot of cases it was, some of the, concerns were probably areas that we knew weren't true, but perhaps made, made us sit back and go, Hmm, maybe we haven't communicated properly, what our intentions are. So an example of that is controlling these ungulates with poison that was never on our radar and something we are really strongly trying to avoid by getting ahead of this problem.

We are really trying to work hard to utilize these natural resources as much as we can, collaborating with other groups that are doing fantastic work for example , venison into food banks , is something that we're looking at really hard and how we can support some of the other groups that have already done the groundwork, in this case but they're aware thanks to some of this publicity that we've got an abundance of venison. So if we can connect with some of these groups, that's great. So, that was one of [00:19:00] those things where you sit back and go, we should have communicated that from the outset when we're starting to look at this problem, it's not our intention to highlight that, there's a big issue and the easiest thing to do is drop poison in to control it. That's absolutely not what we're trying to do, and we're trying to get ahead of being enforced to control it by other means , and keep these natural resources a , viable option for food. And thanks to that, we've also managed to, have a lot of, culling done with the venison going into superMarkets as well, or into the mainstream meat , avenues. As well as, like I say, looking at the food bank stuff.

Rachael Halder: Now you have got some of the data, the information, the connections, all that good stuff. So phase one is complete. Phase one provided you with a report, lots of data, lots of information. Mark, do you want to share with everybody a little bit what phase two is shaping up to be like.

Mark Thomson: Yep. Phase two is a bit of a tricky one in [00:20:00] that, within phase two was to establish what angulate level would look like going forward, which could be supported environmentally and ecologically.

That's a be bit tricky and I think only time is going to tell if we get that right or not. So we're trying to gauge , what the bush should look like by, by putting in 20 meter by 20 meter exclusion zones within the bush, just solely the purpose of keeping deer out., So therefore they can regenerate. And by comparing what's within the plot, with what's growing outside the plot, maybe we can get a gauge on, um, how many ungulate , reduction is required. Obviously another survey would be involved in the calculations in that.

And another aspect of phase two is, establishment of a feral management plan. I know it's more paperwork and probably more money [00:21:00] just to return a document, but maybe it could be a document that is, relevant to other groups , focused and concerned about, this issue as well.

It's rather a complex catchment in terms of the terrain , we have with some beautiful water carp, in this catchment. And then, quite steep , rocky type terrain to rolling open, Grasslands, I, I guess, open Bush, regenerating, mainly where the pigs, are thriving in.

So one attack isn't actually going to do it. In fact , when the helicopters are working in the more open areas the deer just run for cover and generally it's the other side of the catchment well, that they'll end up. So how do you counter that in, in terms of, controlling the deer?

And that's one of the big questions as well. So we think we've got the answers, but , there's, a lot of discussion to come and, consultation with, hunting groups has [00:22:00] definitely got a big part to play in that part of the project.

Rachael Halder: those plots are gonna be so fascinating to follow because you know, like within a very short period of time you'll be able to see things start to regenerate and get a real grasp on the seed sources and stuff that are there.. Alexis, did you have anything you wanted to add to the sort of phase two conversation?

Alexis Wadworth: Mark's covered most of it. , I guess leaning on our learnings from phase one , is really important and we know from that the numbers that are currently being taken off are not exceeding the natural increase numbers that are occurring, and so therefore we're not actually making any gains if we continue hunting and culling in the same way that we have been. So trialing new pig traps, for example, one thing that we're doing. And also like Mark said, trying to understand what combination of aerial culling for deer versus ground hunting versus , perhaps even establishing deer traps , needs to happen [00:23:00] in our catchment , is gonna be a big question. But continuing whatever we do,

continuing to make sure that we lean on the engagement that we have had, and, continuing to grow that awareness , and really hammering home that the environmental impact of these wild ungulates is , real concern for our catchment and, we need to do something about it, to make sure we've got bush for future generations.

Rachael Halder: And what a good motivator that is. For anyone listening who potentially is just starting on their pest control or pest understanding or ungulate understanding journey , maybe a couple of thoughts from both of you around what would your advice be or your key highlights or, something to share with the others who might go down this same path you've been on.

Mark Thomson: If I may lead with that one Rachael. I recently had the opportunity to talk with MPI based in Otago, and that was one of the questions that was put to me. [00:24:00] And what I came up with, was even though we have done it i'll admit, I put my hand up and said, I don't know why we're doing this. We already know how big the problem is. But I've come to realize, that report that we produced in phase one of the revival project, is, of tremendous of value. And we as a group hooked a lever of that , in terms of securing funding to carry on with the work. So that, base work, if you like I would say that's been, a highlight for me and the value of that has, really come to light just down the track. I see it as one of those decisions that you make that you don't know if it's the right decision until later on down the track. But that was definitely the right decision. That would be my advice.

That was my advice to actually, produce that data on the ground. Evaluate how bad your issue is initially and what impact is it [00:25:00] having.

Rachael Halder: It also helps you reflect, doesn't it? So then hopefully in years to come, if you redo that survey, we have a look back at your numbers you'll hopefully see them trending the other way.

Alexis.

Alexis Wadworth: Yeah. To add to Mark's point, recording, taking photos , all of that stuff is really important. I know just for our individual farm, being able to see , what trend those numbers were , traveling, both what's culled, the damage that we're seeing on farm through pig rooting or lost crop, , photos when you're walking through the bush. Take photos. Yeah, record. Know what's happening. Speak to your neighbors about it. Start identifying where your, trouble areas are and putting the effort into, allowing hunters onto your farm

and making sure that if you are not doing it, somebody is. There's guys out there who are really passionate and really talented in this space, so use them.

Don't be afraid, to manage that appropriately as you see fit for your farm. Get a [00:26:00] couple of guys in your pocket and , use them to your advantage because as we've talked about financially , ecologically, there's so many benefits to putting a little bit of effort in and allowing somebody on to help you do the work depending on whatever your target species is. Species are.

Rachael Halder: And so if anybody wanted to read your report, follow your journey, how would they find this stuff?

Alexis Wadworth: Yep. So we are on the Thriving Southland website, under Makarewa Headwaters or the Revival Project. And if you have a look under, the project, tab in under the Thriving Southland website, or you can follow us on Facebook, Makarewa Headwaters catchment group , or feel free to reach out to Mark or any of our committee, more than happy to chat.

Rachael Halder: Cool. Awesome. No, you guys are doing some fantastic work and I know you guys have received a lot of publicity and lots of questions, so well done for you as farmers and community members for sort of tackling all of that because it is, it's a lot. And like you said, you're just learning yourself. So as you go [00:27:00] along, it's incredible what you have picked up and how much progress you've made, and unfortunately, you're not the only catchment with these challenges.

And you know, we really appreciate your forthcoming and openness to share all the learnings you've had. So thank you for your time and thank you for coming on Catchment convos.

And that's a wrap for another episode of Catchment Convos, brought to you by Thriving Southland. A big thanks to our guests for being a part of the conversation on today's episode, and for you guys for tuning in. We appreciate your support. Don't forget to like, subscribe, and follow us wherever you get your podcast from so you can stay up to date with all the latest episodes as they're released.

For more information on this episode, check out the show notes or head to the Thriving Southland website where you can also learn more about the awesome work happening across the catchment groups here in Southland. And if you've

got a project or an idea you wanna share, don't be shy. Reach out. So until next time, keep up the good work out there on the land and as always, stay connected and keep driving [00:28:00] those changes for a thriving Southland.