

# CARBON FARMING ON MĀORI LAND: INSIGHTS ON THE DECISION-MAKING PROCESS

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## SUMMARY HAIKU

Carbon farming on  
land: taonga tuku iho.  
Decisions explored.

## INTRODUCTION

Carbon farming (or provision of CO<sub>2</sub> credits) represents an opportunity for Māori landowners to receive carbon credits from reforestation or afforestation.<sup>1</sup> Under New Zealand's climate change mitigation policy, any new forests planted after January 1990 are potentially eligible to receive carbon credits under the Emission Trading Scheme ETS (Carver, Dawson and Kerr 2017).<sup>2</sup> Because of the physical limitations of land resources and for historical political reasons, large areas of Māori land have limited capacity for agricultural production and are better suited to conservation or forestry activities (Kingi 2008; Harmsworth, Tahi, and Insley 2010). Harmsworth (2003) estimates that at least 60% of Māori land in Tairāwhiti (around 180 thousand hectares) could be suitable for establishing forests eligible for carbon credits.

Māori communities are principally interested in land due to cultural imperatives, but also as a sustainable economic base for themselves. Harmsworth (2018) estimates that Māori land is about 5.0% of New Zealand's 26.8 million hectares total land area.<sup>3</sup> The Te Ture Whenua Māori Act 1993 (TTWM) regulates the vast majority of this land, which has the legal status "Māori freehold land". It is expected, however, that Māori ownership of land will progressively increase as a result of post-Treaty settlements, and through purchases by Māori entrepreneurs (Harmsworth, Tahi, and Insley 2010; Dickson, Hensen, and Madden 2009). Throughout this report where I use the term "Māori land", I am referring to Māori freehold land.

TTWM is based on the Treaty of Waitangi and recognises that land is a taonga tuku iho or a treasure for Māori people that connects current generations with their ancestors and future generations. TTWM promotes the retention of land in the hands of its owners, their whanau (extended family), and their hapū (clan). It also facilitates the use, development, and control of Māori land.<sup>4</sup> To meet these objectives, TTWM sets strong rules that restrict the alienation of Māori land, including sales or lease (Durie 1998).

1. According to Watson et al. (2000) in their online report for the Intergovernmental Panel on Climate Change (IPCC), afforestation and reforestation both refer to establishment of trees on non-tree land. Reforestation refers to establishment of forest on land that has had recent tree cover, whereas afforestation refers to land that has been without forest for much longer (e.g. 20-50 years or more).

2. Land classification determines whether land is eligible or ineligible to register with the ETS, and also determines landowner obligations and liabilities. There are two classes of forest: pre-1990 forest land and post-1989 forest land. Different factors determine whether land is eligible for the ETS, but eligibility is not the purpose of this document. For further details see: <https://www.teururakau.govt.nz/growing-and-harvesting/forestry/forestry-in-the-emissions-trading-scheme/forest-land-in-the-ets/>

3. The total area of Māori land in the country differs depending of the source. Kingi (2008) estimated that Māori land was about 5.6% of New Zealand's total land area of 26.9 million hectares. By contrast, Te Puni Kōkiri (TPK) (2014) indicates that Māori land varies between 1.43 million and 1.77 million hectares.

4. Preamble of Te Ture Whenua Māori Act.

This work has been conducted as part of the project "The New Zealand ETS to facilitate native forest regeneration on Māori land" funded by the Ministry of Primary Industries through the Sustainable Land Management and Climate Change Research Programme (SLMACC). This document may be used in my PhD dissertation.

I wish to thank Pia Pohatu for her assistance in the field work, guidance to engage with Māori communities, and explanations about the context in Tairāwhiti, the East Cape of New Zealand. I would also like to thank all the interviewees for their valuable contributions, time, insights, and knowledge – without their contribution this paper would not have been possible. This paper has greatly benefitted from comments, suggestions, and discussions with: Garth Harmsworth, Bruce Small, Suzi Kerr, Daniel Williams, Hayden Swann, Pia Pohatu, Catherine Leining and Craig Trotter. I am grateful to Sophie Hale for editing help, and to Kelli Archie and David Fleming for their thoughts on the questionnaire design. Any information provided in this report reflects my personal experience and understanding. I am responsible for all opinions and any errors.

Administration of Māori land can be complex for historical reasons (Bennion 2009; Boast 2008). There have been efforts to overcome absentee ownership and title fragmentation by reverting to collective ownership using Māori incorporations and Māori trusts as vehicles (Kingi, 2008). These legal entities are also regulated under TTWM. Each legal entity has a group of committee members or trustees elected by the landowners. In this document, I refer to any of the members of these legal entities as “trustees”.

Studies about Māori landowners’ experiences and opinions on carbon farming strategies are limited and sparse. Carswell et al. (2002) evaluate the opportunities for Māori to participate in the provision of forest sink credits through regeneration of indigenous forest and develop a framework for Māori participation in CO<sub>2</sub> sequestration projects. Cronin et al. (2012) discuss key issues of concern, and potential research topics for Māori and climate change in the land-based sector. They highlight that some Māori can face difficulties in effectively participating in the ETS as it requires the understanding and application of highly technical scientific and legal knowledge, which some owners are in a better position to access and interpret than others.

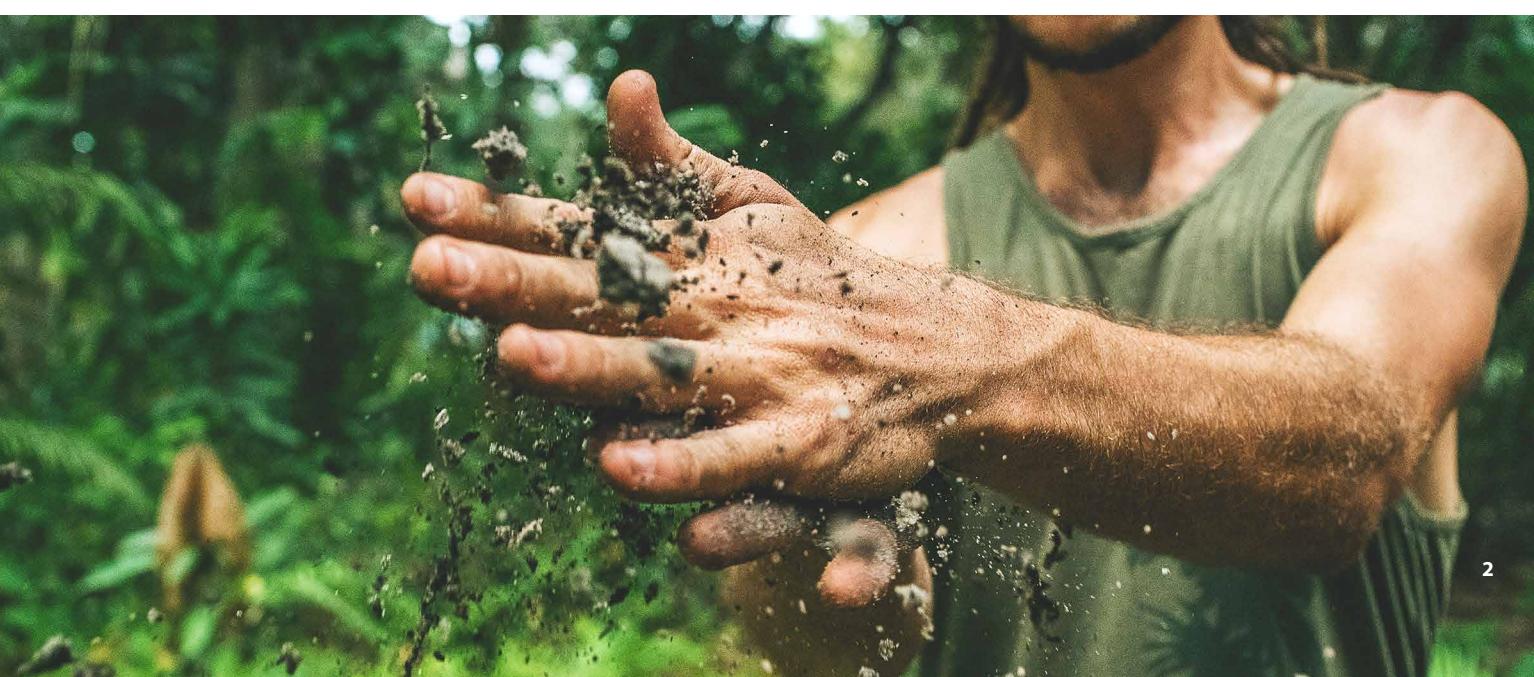
Numerous studies have identified barriers that could prevent effective implementation of existing programs for utilising forest carbon credits (for example, Funk and Kerr 2009; Funk 2009; Funk et al. 2014; Dickson, Hensen, and Madden 2009; Harmsworth, Tahi, and Insley 2010; Cronin et al. 2012). Identified barriers include: concerns about retention of Māori land ownership and control, commitment to long covenant periods (e.g., perpetuity), liabilities, complexity of participating in the ETS, uncertainty about future price of carbon credits or the monetary return for establishing forest, and structural attributes of governance institutions that shape the decision-making processes. These influence whether and to what extent communities take up market-based policy opportunities.

Based on a case study analysis, Bruce (2012) highlights lessons about engaging Māori communities in climate resilience planning. One important lesson mentioned is that researchers need to understand the principles of Te Ao Māori (Māori worldview), values, customs and protocols, in order to interact more constructively with communities. The author also mentions the importance of adequate timeframes for community organisations to consider, discuss and respond to matters.

My study explores the nature of the decision-making processes associated with choosing to go into carbon farming, strengths and weaknesses of the current agreements, and participants’ opinions on carbon farming programmes (with an emphasis on the ETS).<sup>5</sup> I conducted face-to-face semi-structured interviews with a small group of Māori landowners who have been involved in commercial plantation forestry, hereafter referred to as forestry. The land blocks of these landowners have already been deemed eligible and registered in the ETS. Therefore, interviewees have previous experience with carbon farming on their land in Tairāwhiti, the East Cape of New Zealand. Their experience can be summarised in relation to two central decisions: switching to forestry and joining the ETS.

According to the interviewees’ experiences, most of the land-use transitions into forestry occurred around 2001–2002, but these land-use decisions were not influenced by the potential for carbon farming revenues. Forestry has been an economic opportunity to access capital in the long term, while carbon farming is a relatively new experience, and is therefore considered as a potential bonus that could provide revenue in the short term, before plantation harvest, or in the long term if eligible areas are allowed to regenerate to native forest.

5. I asked about the Permanent Forest Sink Initiative (PFSI) and the Afforestation Grant Scheme (AGS), two strategies related to the ETS. Each of them operate under the same monitoring technology and core market with slight variations in their contractual arrangements. The PFSI places a covenant on the land to prevent it being cleared, whereas the AGS is a financing scheme that offers up-front payment for the first 10 years of carbon credits (Carver and Kerr 2017). I also asked about the Erosion Control Funding Programme (ECFP), which is a payment per hectare for establishing forest on erosion-prone land in the Gisborne district. For more information about these programmes see: <http://www.mpi.govt.nz/funding-and-programmes/forestry>



Two different forestry agreements were mentioned in the interviews: agreements signed directly with a forestry company, and agreements where landowners were part of a joint venture led by NPFL. The contrast between them highlights the importance of trust in those providing capital. The land management company being based locally helps to create that trust. A strength of both agreements is that the forestry company that leased the land paid for the establishment cost of the forest (i.e. fencing, roads, planting the trees, and pest control). One group of trustees agreed to lease carbon units to a carbon leasing company that holds the liability. Their experience is probably one of the first experiences of leasing carbon units in New Zealand. It seems they did not contemplate possible changes in the carbon price when they negotiated, but these will be a consideration for future agreements.

Future research would be required to determine how representative the opinions found in this study are of those in the broader Māori community regarding their experiences with carbon farming.

## METHODOLOGY

I conducted face-to-face semi-structured interviews to learn about the experience of carbon farming among five members of the Māori community. The interviews were conducted with a small purposeful sample (Patton 2005) of four trustees of Māori land, involved in forestry and carbon farming in Tairāwhiti, and with the general manager of Ngāti Porou Forests Ltd (NPFL).<sup>6</sup>

To engage with Māori communities in Tairāwhiti, a local Ngāti Porou researcher contacted the trustees to assess their interest in participating in the project and organised the interviews. I conducted the interviews during May 2018. Each interview lasted up to an hour and was audio-recorded and transcribed. Ethics approval was granted by the Victoria University of Wellington Human Ethics Committee 0000025490. All respondents gave informed consent.

### Questions guide

A semi-structured discussion guide was designed. The focus was on the nature of decision-making processes, the strengths and weaknesses of the current agreement, and opinions on carbon farming programmes. Each interviewee had a copy of the list of questions during the interview. I loosely followed the list, but also took the opportunity to follow up on the interviewees' answers and any new directions they opened up (Kvale and Brinkmann 2009). They were free to choose not to answer any question or ask to turn the recorder off at any time. Neither of these situations occurred. A copy of the question guide is available on request.

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6. NPFL is a company owned by Ngāti Porou Whanui, which is owned by the landowners (Ngāti Porou and Te Aitanga a Mahaki). Landowners are involved in the decisions regarding their land and also elect the directors of NPFL. This company manages Post-Treaty Settlement land that is in Forestry and leads the Ngāti Porou Whanui Forests/Hansol NZ joint venture. "NPFL is a land management company operating here in Te Tairāwhiti. We currently have about 15,000 hectares under our management and that's growing every year. In the not too distant future we will have in excess of 30,000 hectares under our management. We consider ourselves a land manager. There's a view out there that we're a pine tree company, but we're more a land manager looking at all options for our land owners to make sure that they're utilising their land in the best way possible".



## Analysis

The basic principles of qualitative inductive content analysis guided my analysis, which followed three main phases: preparation, organisation and report (Elo and Kyngäs 2008). All the interviews were transcribed verbatim and given a code to distinguish between them and keep confidentiality. The whole analysis was computer-assisted using NVivo 12. I read all the interview transcripts to be familiar with the data collected. I then used open coding and grouped the list of categories under higher order headings (Vaismoradi, Turunen, and Bondas 2013). Finally, the results of the study were shared with peer reviewers and some interviewees, with whom I sustained repeated discussions until the interpretation was agreed.

## Study limitations

This research used qualitative research methods with a small number of participants in order to explore issues regarding their carbon farming experience. I talked to people who are deeply involved in the decision-making process of their land and other blocks in the area. Although this research provides rich data about the groups and individuals interviewed, it is a limited sample and therefore not suitable for generalisation. This may affect the external validity of the results.

## RESULTS AND DISCUSSION

### The nature of the decision-making process

Māori consider whenua (land) as tāonga tuku iho or a treasure that connects current generations with their ancestors and future generations. The utilisation of Māori land should balance cultural and commercial imperatives (Dewes, Walzl, and Martin 2011). Kingi (2013) lists three cultural constructs that influence the behaviour of Māori agribusiness organisations directly, affecting the decisions relating to collaboration, investment, and diversification. These constructs are: whakapapa (genealogy), whānau ngatanga (tribal relations) and kaitiakitanga (the responsibility to nurture and care for the whenua through time and generations). The nature of the decision-making process regarding carbon farming is not an exception and is also influenced by cultural imperatives, such as a desire to look after the land for future generations, reciprocity with the land and the community (elder people and new generations), and knowing the story of the land, among others.

“Yeah, that’s one of the strategic goals of the plan [cultural values]. So around that, it’s knowing the history of the area [...] and looking after our kaumatua [Māori elder] is another significant part [...] Providing kaumatua grants, and making sure that that’s sustainable, and looking forward to education grants as a part of giving back [...] We’ve got a fairly significant financial cash reserves, which our goal is to invest back in land, whether it’s farming or horticulture, in the not-too-distant future to provide jobs for our people.”

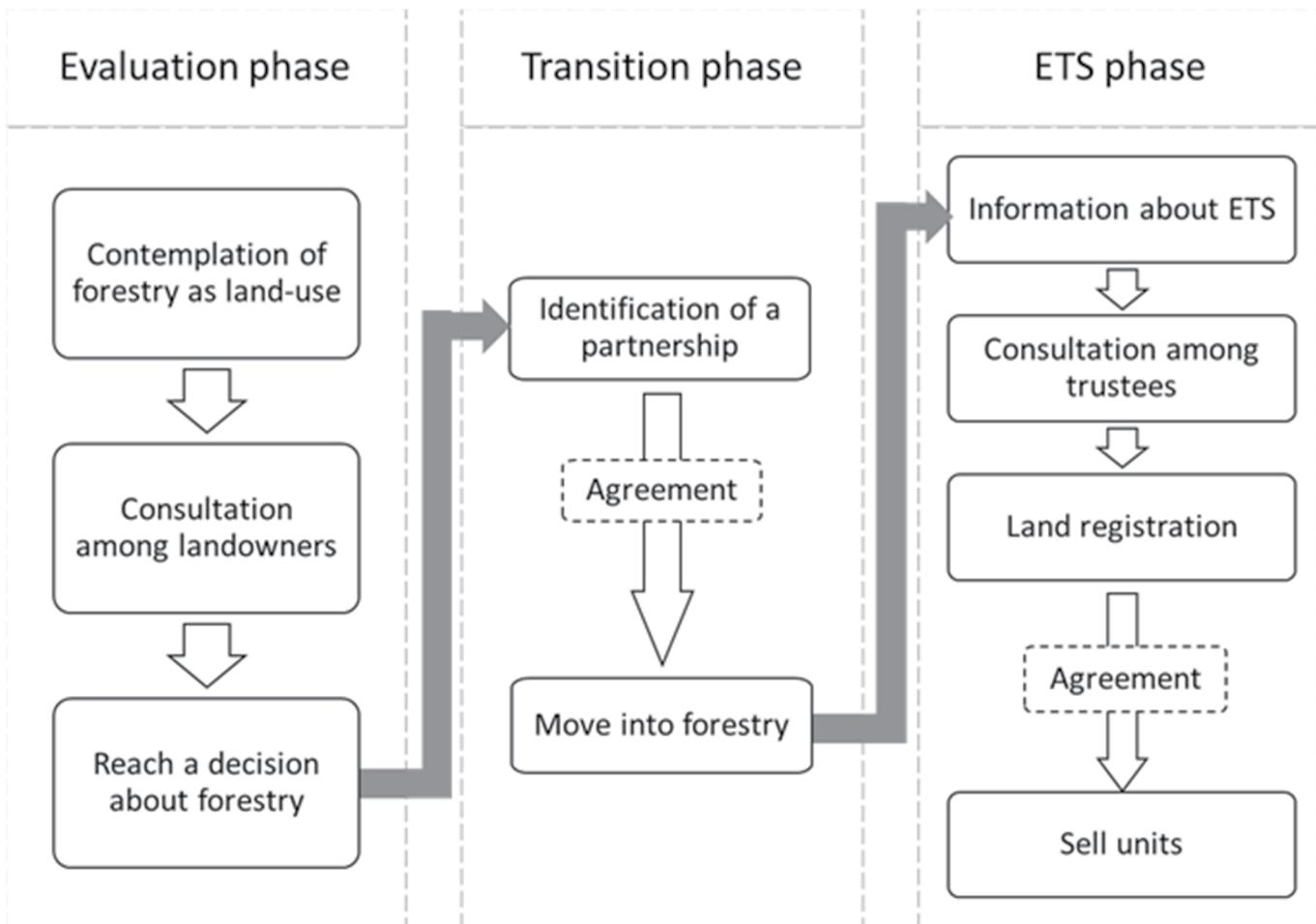
“Well, my knowledge of it [carbon farming]. If you’re going to take something out, off the land, you really need to give something back. It’s like anything else. You know.”

“Our vision [NPFL’s] is “Kei te whenua te wai mo nga whakatipuranga kei te whai ake”, which means the land will provide sustenance for future generations. So as long as we preserve our land, our people will always have something with which they can survive. So, we’re all about making sure the land’s protected.”

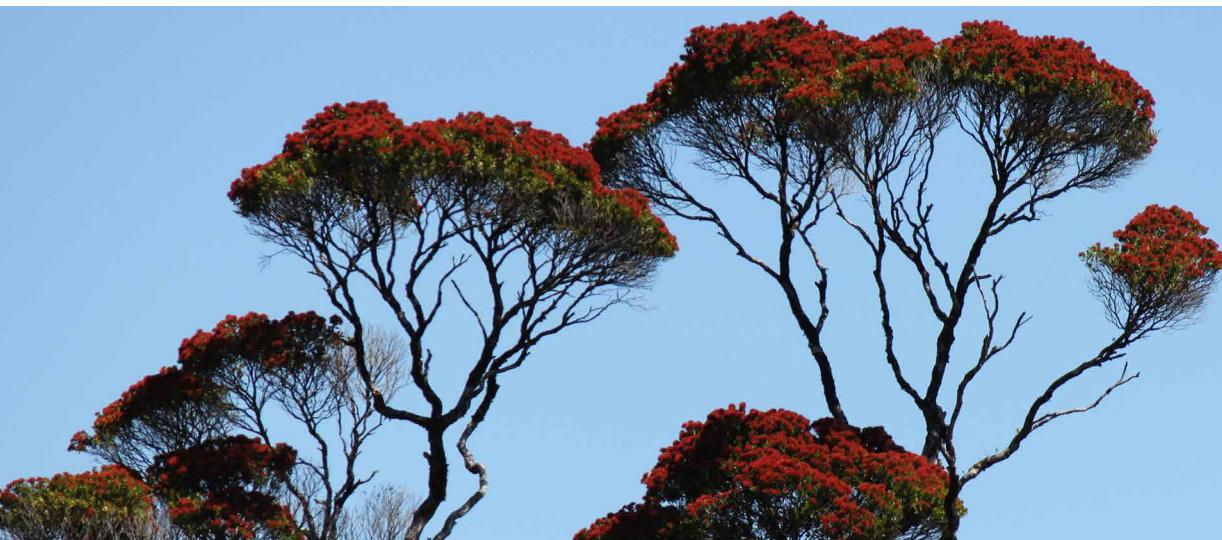




**Figure 1: Historical decision-making about carbon farming**



According to the interviews, two key decisions were reached regarding carbon farming: transition into forestry and then joining the ETS. Most of the land-use transitions into forestry occurred around 2001–2002 and were from sheep and beef or non-economic activities on the land. These land-use decisions were therefore not influenced by the potential for carbon farming revenues. Participation in the ETS started around 2011, and involvement relied significantly on a trustworthy agent who guided trustees during this new arrangement. Three phases can characterise historical decision-making about carbon farming: the evaluation phase, the transition phase, and the ETS phase (see Figure 1). Going forward, access to rewards from the ETS could influence the Evaluation phase, so decision-making could be more iterative.



## Evaluation phase

In the evaluation phase, landowners evaluated the possibility of using their land for forestry. Usually, a trustee suggested a possible land-use option. Information was then collected and the option evaluated. Once trustees had enough information about the option, they consulted with landowners. Two drivers motivated the land-use change – land characteristics and landowners' desire for land to do well economically, as it is whānau land.

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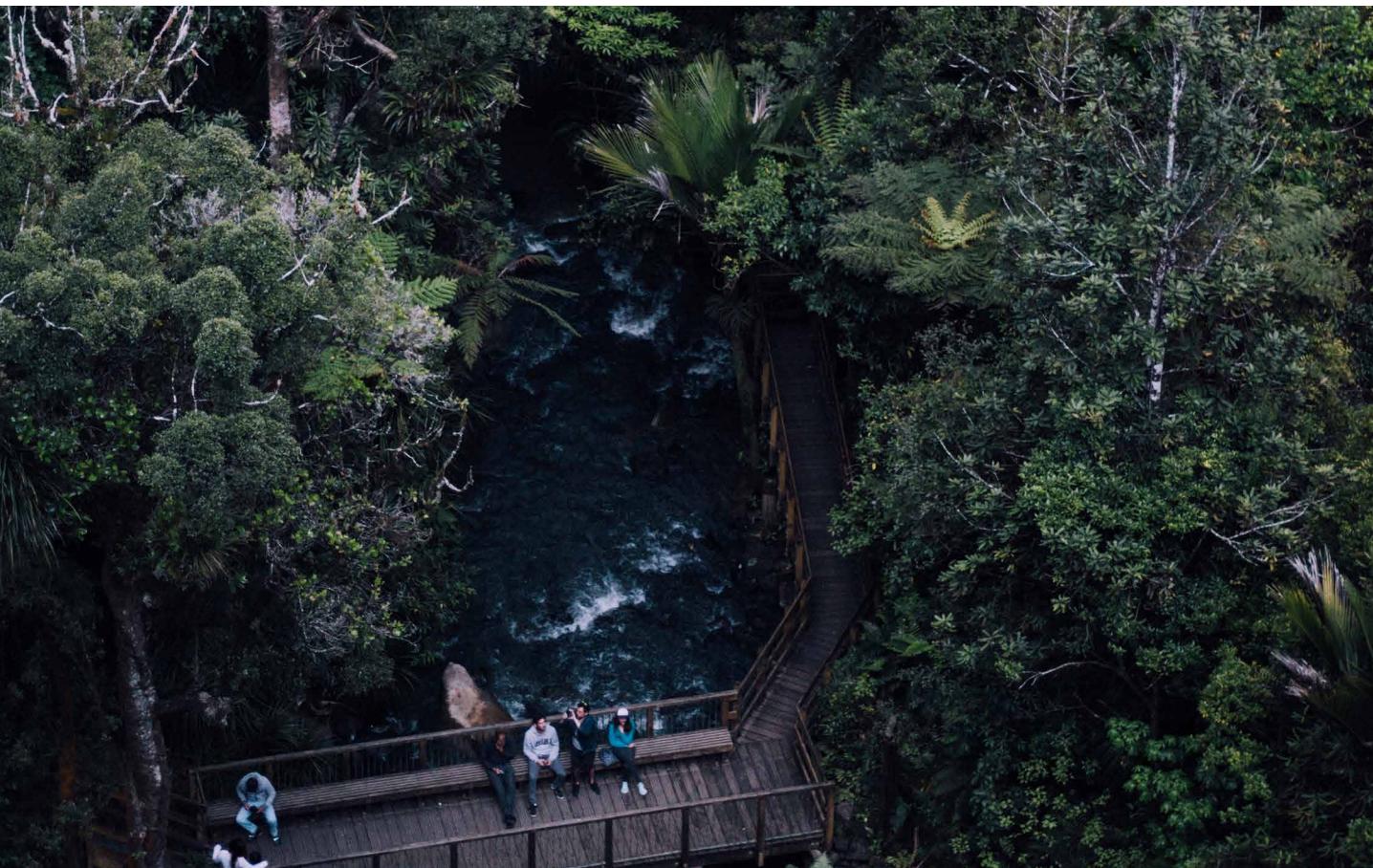
“It was leased out to a farmer for a number of years, an agricultural pastoral farmer. Then, in 1993, the trust was set up to manage the farm in its own right. It wasn’t a very successful farm, because of the isolation and the altitude, and because of the terrain; it’s quite steep. And yeah, its position. Really, the land isn’t very fertile for agricultural and pastoral farming, for growing grass, and it has extremities of weather as well. So, particularly in winter, it does get a lot of snow, due to the altitude...”

“So it [forestry] was a way of utilising the land [...] I guess we’re just thinking, well, there’s supposed to be some money coming out of it, which we may not see but our children and grandchildren will see.”

Any possible land-use decision faced challenges in reaching an agreement. Cooperation and trust among the multiple owners are crucial components in making decisions. Because of absentee and multiple owners, it is a time-consuming process. Even though trustees wanted to switch to forestry, this could only occur if landowners consented.

“It was poorly farmed land, and we had to make a decision those years ago, in which I was approached by two aunties to come on board. In that time, finding alternatives for the land and its usage to best be beneficial for us all. It was a time-consuming exercise. It took about 8 years. Well, that’s the protocols of Māori whenua. You have to have meetings, and give everybody the right of their reasoning as to what is best for the land.”

“we have trusts, we have committee members we have sole owners, partnerships, but ultimately nothing happens on the land without the landowners’ consent.”



Another issue was resistance to change. New land-uses (e.g. forestry vs livestock farming) could be perceived as going against social norms or as having adverse effects on future generations. Although forestry provided an opportunity to access capital in the long term after harvesting, which they could then use to invest, concerns were raised about the effects of growing *Pinus radiata* pine on the soil properties of the land and on landowners' well-being. These concerns are related to trustees' role as kaitiaki (guardians) of the land.

"We do have our concerns about the growing of the forestry, really we do, but we still went ahead with it. [Question: What concerns?] You know, like just the land no longer being as fertile as it ... but then nothing was happening on the farm anyway

"So within that time frame, the non-event of things happening on the whenua, we were confronted with a tough decision because one of the points raised by whānau is that you can't eat trees but you can eat cattle, or sheep"

### Transition phase

The second phase of the process, the transition phase, has strong associations with evaluation. Although landowners decided to move into forestry, the transition did not occur immediately as they had to deal with issues associated with Māori land regulation. Māori landowners are still dealing with the effects of the individualisation process of the customary land introduced during the 19th century by the Crown (Boast 2004). One of these effects is that there are multiple owners who are not always aware of their ownership or are not always involved in the decisions because they live in other areas (Durie 1998; Kingi 2008).

One of the trustees interviewed, who has been deeply involved in the establishment of the joint venture led by NPFL, mentioned that it was essential to have strong leadership to handle identifying absentee owners, establishing a legal entity, or choosing a new group of trustees for each of the 38 blocks of Māori land that make up part of the joint venture.

"[...]as you can imagine, there's been a lot of tracking people down, a lot of meetings, you know, making sure that committees were set up right, and making decision-making processes that could all be mandated appropriately, you know. And so a lot of that was a significant cost, because you've got lawyers going round to do that..."

Additionally, any agreement that involves Māori freehold land is subject to TTWM, which imposes restrictions on the leasing of the land. The requirements can be hard to meet, adding an extra layer of complexity in the administration of the land. For example, in incorporations the majority of the committee members have to sign an agreement. In the case of trusts, all trustees must sign. This can be a challenge, as trustees do not always reside in the area, or were appointed years ago and may be old, in ill health, or deceased.



## Forestry agreement

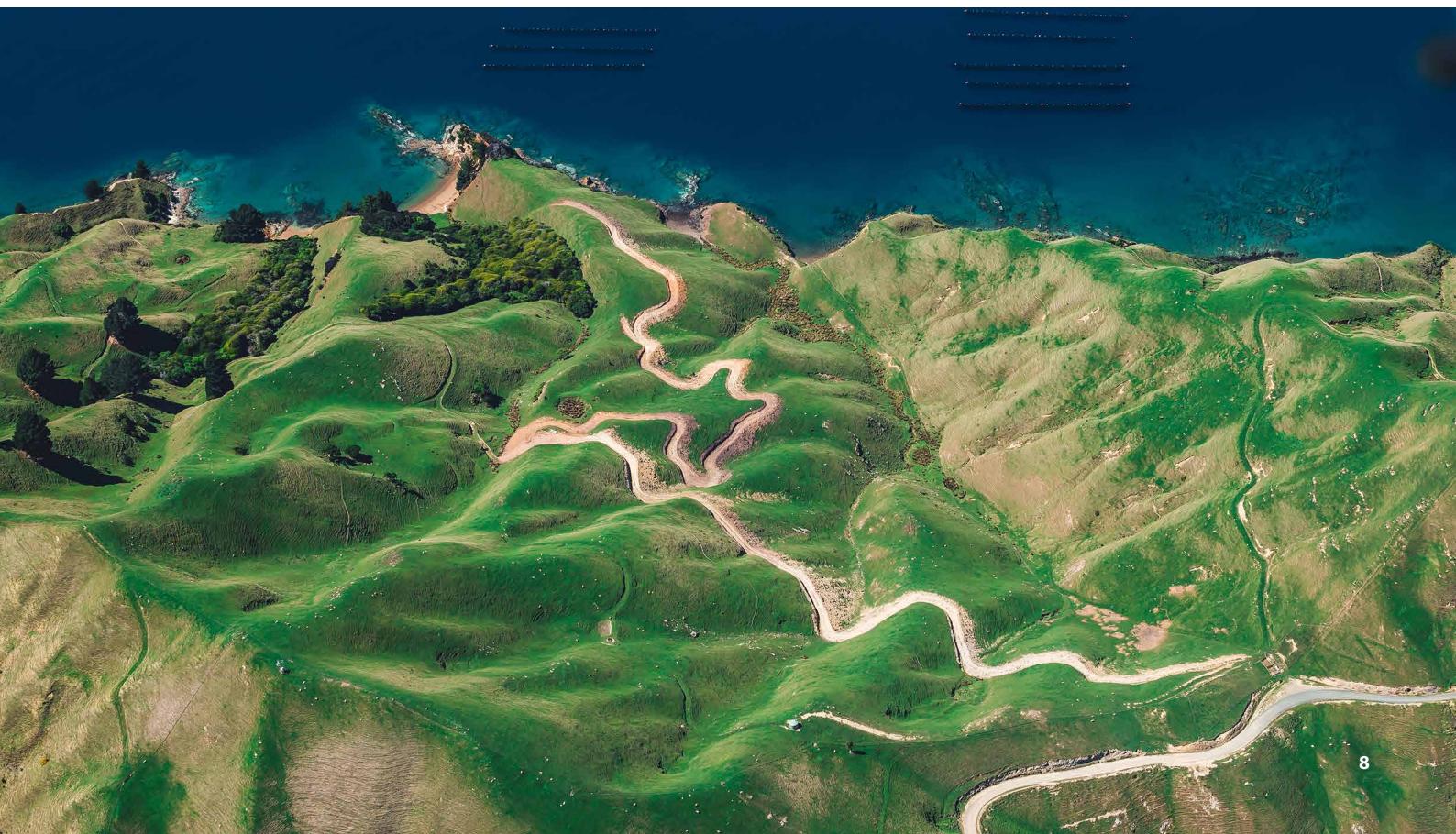
Two different forestry agreements were mentioned in the interviews: some trustees signed an agreement directly with a forestry company, while other landowners are part of a joint venture led by NPFL. Interviewees mentioned that before the forestry agreement they could not productively use their land because of capital constraints, so leasing the land was a way to cope with this constraint. A strength of both agreements is that the forestry company that leased the land paid for the establishment cost of the forest (i.e. fencing, roads, planting the trees, and pest control), and nowadays it is in charge of forest maintenance and the transportation cost of the logs, which varies depending on the location of the land.

“the landowners have come along with their land, have been capital constrained, and a funding partner has come in, so they’ve put all the money in, the landowners have put their whenua in, and therefore that was how the forest was able to be established.”

In the case of the landowners who leased their land directly to a forestry company, the trustees had to deal with different challenges, such as landowner’s expectations and weak governance structure. For instance, it was expected the elected trustees would have the skills to administer the land and make decisions. However, these expectations were not always met.

“that’s one of the disadvantages [...] If you have a management committee, you really need a management committee who are actually based in the area. At the moment, our management committee’s made up of one who lives in Wellington, one who lives in Taupō, and another one in Whakatāne. They don’t really know what’s happening on the ground. So they come up here for meetings, but they don’t, really don’t know the culture of what’s happening round home [...] People have elected them onto the committee because they seem to have the skills, but the skills really – it’s not only skills you need. It’s really you need the home-grown people who know [...] how the land is and how everything operates.”

In contrast, NPFL provided information and managed the agreement process. NPFL established and managed a forestry joint venture between landowners and forest investors. The last joint venture involved Hansol New Zealand contributing money and landowners contributing land. Trust, strong leadership and assistance during the negotiation of the agreement were pointed out as significant strengths of the agreement with NPFL. I was told that landowners leased the land because they trusted NPFL, who are also from Tairāwhiti, which creates a sense of belonging.



"we have 38 blocks in a joint venture, and those 38 land-blocks actually own our company. So, when we're doing a lot of this work [administrative work], we're doing it for the owners of the company anyway. So, it is administration heavy, but it's what the owners require."

"My knowledge of it is basically not terribly much. All I know is I can see something happening on our land, you know, and because forestry is being funded by somebody else, we can do that. If we had to do it ourselves, there's no way we could do it"

Questions around perceptions about restrictions on access to their land or effects on employment associated with forestry were not part of the question guideline. However, opinions about these issues came up. Some interviewees mentioned that when forest operations are occurring, the access to the land block is restricted to both landowners and recreational users for health and safety reasons. Landowners can access their property for hunting and tramping purposes during the weekends. This requires them to fill in a permit form prior to the date they would like to access the property. My understanding is that this permit form is from NPFL.

In addition, some interviewees argued that forestry had an adverse effect on employment in the area, while others thought it an opportunity for employing people from their community. Some interviewees had expectations that new jobs would be created, but it seems that these jobs are temporary and resulted in the disappearance of previous full-time jobs. Expectations about jobs are important and can influence future decisions. Achieving the potential employment gains requires training, which requires time.

"The company wants to hurry up and establishes this [mānuka trees], so they haven't got the time to train any of the locals. So it's okay, we'll just bring people in that can hurry up and get all the drains done and the irrigation done, and everything, and plant ... No, no we won't need the locals. We haven't got the time to train them, because they haven't really set down, which disappoints me with the management committee"

"The change from pastoral farming to forestry in [the station] has had a negative affect on employment. Four full-time workers were employed on the farm where as now with forestry there are no resident workers. Tree pruning and thinning regimes happened in the early days but since those jobs were completed (with forestry gangs from town) there has been little employment activity specifically on [the station]. The 'little activity' referred to includes some occasional possum trapping and forestry measurement."

"Well, my understanding, and one of the reasons that we went with Hansol was that Ngāti Porou people were going to be employed in all aspects of that [...] My understanding is that those ones who did the planting did, but it was contractual stuff"

## ETS Phase

Trustees relied on a trusted agent to guide them through the process of registering their land in the ETS and to assist in the process of selling or leasing the units and understanding their liabilities. Several factors help explain this. First, greenhouse gas (GHG) emissions is an abstract and relatively new concept that is not part of Te Ao Māori. Second, the ETS is a relatively new scheme that is still difficult to comprehend as it requires a reasonable understanding of legal requirements, information about land eligibility, and the carbon units generated by the trees on the land, among other issues.

"Just trying to get the landowners to understand what the ETS is [...] it's quite complicated, and telling them that someone would pay them for air. I got a lot of looks and a lot of shakes of the head [...] so just trying to get the understanding and I'm not the best drawer, but I took a little whiteboard along and tried to draw little trees absorbing carbon from factories putting carbon dioxide in the atmosphere"



In this phase, clear information and assistance were critical in order to successfully join the ETS. Specifically, for the land block that is not part of the joint venture, I was told that the land was registered in the ETS, but trustees could not trade or lease any carbon units. There are explanations for this situation: a lack of information, misunderstanding of the aim of the ETS and the options available for leasing or trading the carbon units, and difficulties in having trustees make a decision. The trustee interviewed expressed interest in knowing more about how to get payments for carbon units, associated with either forestry or native trees. Their experience illustrates the importance of having guidance during the negotiation process in order to comprehend the crucial points of the whole negotiation process. In addition, trust in the person who acts as the agent for the trustees is key.

“The committee had actually these people come around talking about carbon credits and Emissions System. But the story that they sold to our people wasn’t very clear at all [...] Said you’ve gotta have, you’ve gotta claim for carbon credits, you know, otherwise when you cut the trees you must grow some more trees, and you must do this and must do that, and here’s the credits and you must register before 1990, and there were a lot of musts, musts, musts, musts, but there weren’t any clear indications of what really was the value of registering for carbon credits.”

In contrast, some of the land blocks that are part of the joint venture have had success joining the ETS and leasing carbon units. The following section describes in more detail their experience.

#### ETS agreement

Participation in the ETS started around 2011. Although trustees were slightly dubious about the ETS, they agreed to be part of the scheme because NPFL led the negotiation process of leasing the carbon units. At the time of the interview they had already received payments.

“We [NPFL] managed all the legal work, got all the leases drawn up. We had 34 blocks that qualified for the post-89 land. And 31 of them signed the lease [...] Of those three that didn’t sign, two only had 10 hectares; one had a deceased person and it wasn’t worth the effort to replace the person in the timeframe [...] The other 10 hectares, they had a trustee issue. The trustees weren’t getting on with each other. And we made the decision that it wasn’t worth trying to get them to get their 10 hectares into the lease. And we had one big block that didn’t sign. And again, that was a trustee issue. Trustees trying to oust each other off the trust, and that’s actually still in Māori Land Court.”

The decision to move into forestry was motivated by an economic opportunity to access capital in the long term. Joining the ETS and its payments for carbon units are considered as a bonus that provides revenues in the short term, before plantation harvest. These payments represent a new opportunity for landowners to reinvest in the land (i.e. buying beehives or maintaining the roads) or to allocate resources to other businesses apart from their land.



"They're all existing forest owners, and then the ETS came along which meant basically a bonus for them because most of the forests were established for wood, but with the ETS coming along there was an opportunity for our landowners to benefit from carbon. So, we presented the different ways in which they could benefit from carbon and then they made the decision on how they wanted to."

"we were sitting on our hands, right? With money invested from the sale of stock, you know, and other assets in financial portfolios. So each year we were reliant on what the share-market was doing, and what bonds were doing and so forth, in order to get income to operate the Trust, and still trying to grow that portfolio. So then to get a carbon cheque each year of – after tax – around \$150,000, it is quite a significant amount for doing nothing different."

The agreements through NPFL, and confirmed by two legal firms, state that the carbon leasing company holds the liability, rather than the landowners, as the carbon units were leased rather than sold.

"I'm quite pleased with it [the agreement]. The biggest thing is minimising risk to the land and the landowners. So, we've achieved that. Potentially we could be selling carbon at a higher price, but then the liability is on us ... When I say us, I mean Whānau, the landowners, us, the liability would be on us to pay those units back prior to harvesting. So, I'm quite happy that we're getting quite a good return for our carbon whilst having no liability to pay it back."

One issue with contracting is the balance between short- and long-term returns. The price of the annual payment per tonne of CO<sub>2</sub> was fixed at the beginning of the lease. However, future fluctuation in the price should be also considered as part of the negotiation. The negotiation was done when the price was low and then increased. This situation was perceived as unfair and has created resistance to future negotiations.

"The price increases above \$20 per unit. So, what does that look like? Um, yeah, so it has been staggered up, and it sits here, but now that has gone over, what does that look like? So that's where we're at. So, I mean, it's gone up. As I say it was around \$2 when we first entered this, and so that seemed a long way away, so I don't know if there was enough consideration of this part here. Because that's basically it. There's not a lot more detail than that."

### Opinions on forestry and native trees as an option for future land-use

The landowners involved in the joint venture are in a different position now than they were 20 years ago before they converted to forestry from uneconomic farming activities. Most have paid their debts and are in a better financial position. The second rotation on these blocks will be in about eight to nine years. Some trustees are considering whether they would like to continue in forestry (second rotation) or move into another tree species (including native trees such as mānuka). The financial returns of other activities may be influential, but before making any final decision, trustees need to consult with the landowners. This consultation usually occurs at the annual general meeting.

"A lot of our landowners, well, the big question they face is: what do we do after harvesting? Once their investment's in place, and they're waiting to see the financial result of their investment, and then they'll determine whether they go again in exotics or pine, or whether they go to something like mānuka. Today it seems to be the two options that they're seriously considering."

The block of land that is not part of the joint venture is switching into a mānuka plantation. However, the trustee interviewed suggested that there are disagreements about this choice because it is a long-term contract and landowners were not consulted. A possible explanation for this may be that trustees have issues with the governance structure.



"A mānuka company [name changed for keeping confidentiality] has now got a contract with [the station] too and are planting mānuka all on either side, which is not going down very well with the locals [...] Because the locals didn't want ... That was good farmland, and the locals didn't want to go into a mānuka company."

Mānuka is becoming an attractive economic activity in the area because landowners can profit from honey, oil production, and tourism. However, for a long time, having the land in mānuka or kānuka was considered a signal that landowners did not have money to use their land. A transition to mānuka forestry requires overcoming this mindset, evaluating the benefits associated with mānuka, and comparing them with the current land-use activity. Kānuka is not yet seen as a profitable land-use activity.

"Everyone is signing up to grow mānuka. And yet when we were young, my father was one of the ones who helped to cut mānuka on [the station] so they could have more area for grass and now they want to plant it in mānuka. We've done the full circuit"

Some interviewees mentioned areas where forestry should not be planted. I was told these areas are isolated, too steep and the access is difficult. These characteristics represent an opportunity for planting or encouraging natural regeneration of native forest.

### Opinions on carbon farming programs

The carbon cycle is a new concept in Te Ao Māori, thus it may be met with mistrust or scepticism.

"[Question: What is carbon farming for you?] It is a payment for nothing. We get paid for growing forestry while the rest of the world screw-up."

I observed high levels of misunderstanding and miscommunication about carbon farming and the ETS. The ETS is considered too technical and political. The topic sounds complex and the complicated terminology can be a barrier for landowners. Even though the landowners involved in the joint venture have received payments for carbon farming, not all of them associated these payments directly with the ETS. NPFL played a critical role registering the land in the ETS and leasing the carbon units. This experience is a good example of the importance of a trustworthy and credible source of information to cope with relatively new schemes.



[After discussing his opinion on the ETS] “Well, I can only base that, my answer to that question on what we’ve received so far, is that this carbon credit thing is that we never envisaged getting any money at all, until we got the harvest. Now we have x amount of dollars, now my head has got to change, and my thinking has got to change, because obviously there are other mechanisms at play here”

I also asked about other forestry support strategies from the government such as the Afforestation Grant Scheme (AGS), the Permanent Forest Sink Initiative (PFSI), and the Erosion Control Funding Programme (ECFP). These questions were designed to elicit landowners’ opinions about these programmes, rather than verify their participation. Before talking to the landowners, I was briefly told that some land blocks that are part of the joint venture have used some of these programmes, but I did not know which blocks. Many of the landowners, however, were unfamiliar with these strategies. A potential lesson for future interviews is to have clear information on these opportunities to share with interviewees. Additionally, it may be useful to be better informed about the programs in which each land block is involved.

Although my document does not aim to evaluate the ETS rules, it is important to clarify that only post-1989 forest can earn units. It is an attempt to create an incentive to increase planting and change people’s behaviour (Carver, Dawson, Kerr 2017). Some interviewees question why pre-1990 native forest – and in fact all pre-1990 forest – cannot earn units for forest management activities that increase carbon stocks. Their questioning has led to doubts about the aim of carbon farming.

“I still can’t understand ... Because you’ve got significant forests that have been, you know, native forest, that have been sequestering since the beginning of time. And at three and a half thousand hectares, how can we not get anything for that? I can’t understand that. That is something that the government is getting for nothing”

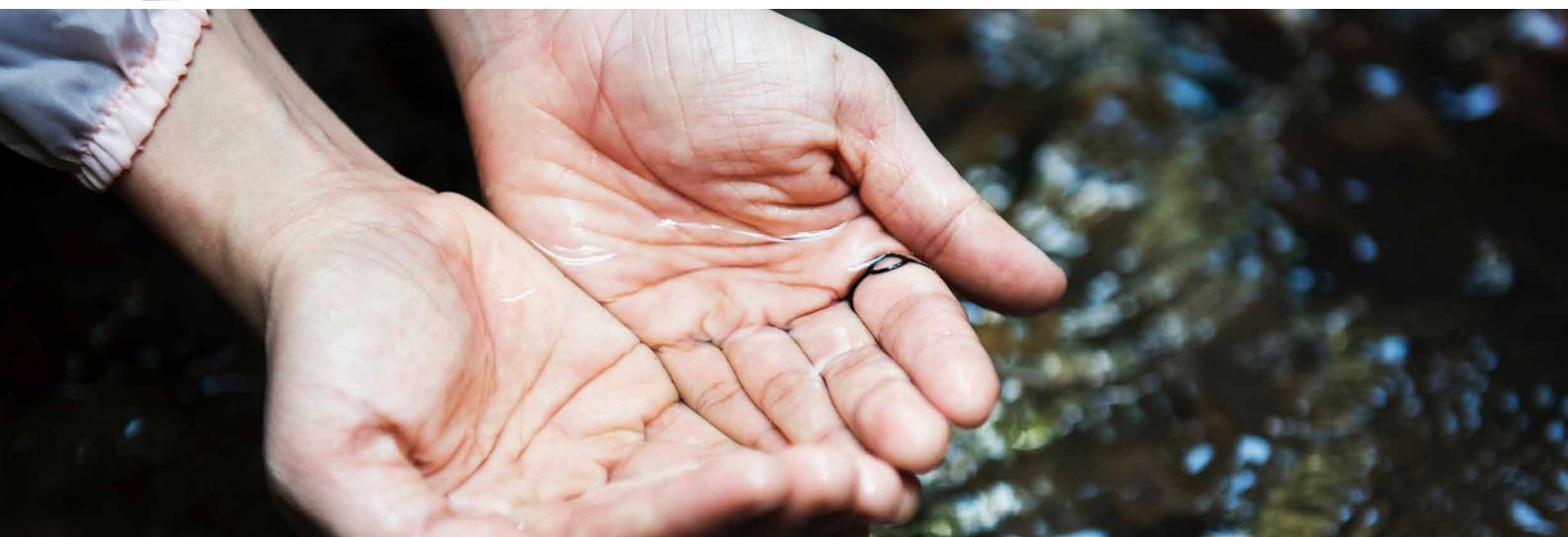
## CONCLUSIONS

Two different carbon farming experiences were identified in the interviews: a joint venture led by NPFL and an agreement signed directly between landowners and a forestry company. Although in both instances the forestry agreement was signed, only some landowners in the joint venture agreed to lease carbon units. NPFL is an example of how important having leadership and trustworthy sources of information are in supporting the decision-making process.

Decisions about the possible utilisation of Māori land can take time, as this involves numerous steps and the consideration of potential effects on future generations. One interviewee mentioned that deciding to go into forestry took about eight years. Other matters that affected the decision-making processes were the landowner’s expectations and governances issues. In order to involve more Māori communities and organisations in carbon farming, it is necessary to allow adequate time frames for engagement that give space to deliberate, discuss and respond. Additionally, it is important to address expectations such as potential employment gains.

NPFL has played a key role in informing and supporting Māori communities to reach decisions about joining the ETS. Although the ETS is now ten years old, it is still challenging to understand how to join and get payments for carbon units. Having a better understanding of Te Ao Māori and where carbon emissions fit into it could help outsiders interact more constructively. It would be useful to work on materials that build the carbon cycle into Māori understanding. This work should be done constructively with Māori communities.





Forestry and carbon farming have given landowners access to capital. The decision to move into forestry was motivated by an economic opportunity to access capital in the long term, while payments for carbon units provide revenues in the short term, before plantation harvest. These payments can be reinvested in the land, but can also be allocated to other businesses activities and used to support the community.

The agreements for payments of carbon units discussed in the interviews were about exotic forestry. Some interviewees expressed their desire to plant native trees. Although the ETS can support the establishment of native forests, nobody mentioned this option. It seems to be a perception that carbon units are only for exotic forest, rather than native trees. This may be associated with questions about why pre-1990 forest does not get carbon units, but new plantations do.

## DIRECTIONS FOR FUTURE RESEARCH

This paper reflects a first effort to explore issues regarding carbon farming experience on Māori land. Future research could build on these findings by consulting a wider range of Māori communities, to determine the prevalence of the various perceptions and opinions. Some ideas for future research are outlined below.

- (1) The joint venture led by NPFL is a successful example of moving into forestry and being involved in carbon farming. I would recommend continuing observation and research on this case study to keep learning about their experiences and to help develop strategies to expand Māori landowners' interest in carbon farming.
- (2) It could be useful to conduct an SWOT analysis to identify strengths, weaknesses, opportunities, and threats of contracting mechanisms (i.e. sale and lease contracts) that are already signed. This analysis could provide further information about the liability, payments, and concerns about future revenues, among other things.
- (3) It could also be useful to carry out a study about the socio-economic implications for Māori communities of changes in farming or other intensive land use. For example, the effects on local employment and co-benefits associated with carbon farming.

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