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Case studies on Remuneration of Positive Externalities (RPE)/ Payments for Environmental Services (PES)

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Te Wiwi Nati
No Porourangi
He Iwi Moke
No Waiapu
No Whangokena
No Hikurangi
He Wiwi te Nati
He Whanoke

The Ngāti Porou People
Descendants of the
eponymous ancestor
Porourangi
A Solitary People
Of the Waiapu river
Of the East Cape seas
Of the sacred mountain
Hikurangi
Like the enduring rushes,
nicknamed “Nati”
A sturdy, reliable People

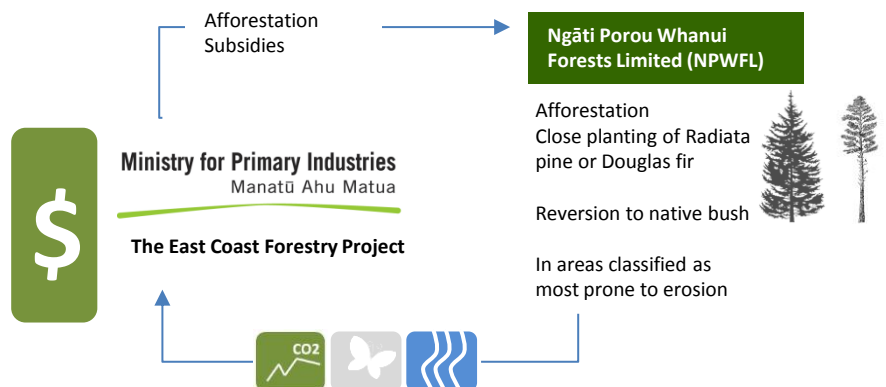
This verse refers to symbols, identity and characteristics unique to Ngāti Porou. It includes geographic and cultural landmarks. Ngāti Porou language is unique as is the status of Ngāti Porou women from ancient times to present.

Enduring Land and Cultural Sustainability for Ngāti Porou through Afforestation Subsidies

Overview

Ngāti Porou is the name of a tribe of the indigenous people of New Zealand commonly collectively known as ‘Māori’. The opening words to this paper provide an essential context to the subject of this paper, the afforestation of Ngāti Porou lands on the East Coast of the North Island of New Zealand. *This song-poem was composed by Māori leader, Sir Apirana Ngata at the time of the First World War and is still sung widely by Ngāti Porou.* Ngāti Porou are the indigenous people of the East Coast and are inextricably connected to the land through genelogical ties, cultural values and generations of occupation of the land. Ngāti Porou has a population of 72,000¹ and is the second largest tribal grouping of indigenous people in the country (see figure 1).

This is a Māori/Ngati Porou-led PES scheme that makes use of government afforestation subsidies and foreign direct investment to enable one of the tribe’s commercial bodies, Ngāti Porou Whanui Forests Limited (NPWFL) to become a provider of environmental services by undertaking afforestation activities to mitigate severe soil erosion and its negative effects on the Ngāti Porou community. NPWFL gained support from Ngāti Porou landowners to afforest their lands by creating individual agreements with them. These agreements enabled the company to apply for a forestry subsidy and enter into a relationship with an international private partnership to assist in covering costs for afforestation.



1. Statistics NZ: Census 2006.

Figure 1: Schematic diagram of the key roles

Background

The Environmental Issue

The magnitude of soil erosion on the East Coast of the North Island is far greater than anywhere else in New Zealand. The Gisborne district has a severe erosion problem - 26% of its land is susceptible to severe erosion. Severe erosion includes large-scale gully erosion, earthflow erosion and deep-seated slumps. It causes long term damage to the productivity of rural land, the mainstay of the NZ economy. It threatens public infrastructure and increases road maintenance costs. In addition, increased sedimentation caused by soil erosion negatively affects environmental services such as water quality and the natural and cultural values of the land and coastal environment².

The Effect of Severe Erosion on Ngāti Porou

Ngāti Porou has seen significant degradation of their³ tribal lands and waterways through severe erosion since pastoral farming between 1890 and 1920 caused large scale deforestation in many parts of New Zealand. Land is essential to tribal identity and the loss of the land has a social and cultural effect on the tribe that is compounded by the environmental damage. Large tracts of land have been lost to the Waiapu River and other waterways sending productive land into the sea increasing negative environmental effects on the wider ecosystem and catchment of the East Coast. Ngāti Porou currently have approximately 39,000 ha available for afforestation and a total of 60,000 ha in the wider Gisborne district⁴.

NPWFL was established as a Ngati Porou-owned company in 1988 in response to increasing pressure on Ngāti Porou landowners to protect their lands from erosion and to retain the lands in tribal ownership. In addition to that, the company was to generate local income and employment in the economically depressed region. Forests provide numerous benefits to the community such as water and soil conservation and create more robust and sustainable land use options for land users. Moreover, they are also important carbon sinks and therefore have the potential to accumulate carbon credits.

Historical Background and Milestones

Over 25 years ago, NPWFL was created to represent the landowners of separate blocks of land brought together to afforest a target area of 50,000 ha. This collectivisation process was led and supported by the elders of Ngāti Porou who are highly revered in the tribal community. Through their vision and leadership they were able to build up the foundation of the company for the benefit of current and future generations. The afforestation of these tribal, collectively owned and erosion prone lands is incentivised through the ECFP.

The East Coast Forestry Project (ECFP)

The PES scheme to be discussed started with the establishment of the ECFP by the NZ Government in 1992 in response to a request from the Ngāti Porou leadership to address afforestation in the East Coast district. The initial objectives of the fund were to promote economic development for East Coast communities, to curb the effects of erosion on the susceptible soils of the region, and to create wider environmental benefits. ECFP is a grant scheme that is administered by the Ministry of Primary Industries (MPI)⁵. Its stated goal is to “target the worst 60,000 hectares of eroding land in the district”⁶. The ECFP supports afforestation through grants to local district landowners to achieve these objectives. It enables landowners to afforest lands that would be uneconomical to do so otherwise, due to the costs of afforestation in the region and the low return. NPWFL and individual Ngāti Porou landowners have been major users of the ECFP fund, which disburses NZ\$ 4.5 million (or about US\$3.6 million) per year⁷. The approved grants range between \$1, 476 and \$2, 280 per hectare for afforestation, pole planting or reversion (or about US\$1,170 and US\$1,800 respectively).

The ECFP scheme has been undergone some changes since its establishment, which did not always improve its effectiveness and efficiency from the perspective of NPWFL. Subsequent changes to the scheme narrowed the scope and reduced the effectiveness of the fund. One of these changes meant that the original utilisation of a tender process ensuring openness, competition and efficiency has been removed as a result of a review.

The level of funding depends on the geography of the land, proximity to infrastructure and the species utilised. By 2011, 35,552 ha have been planted. Included in this area were 1,196 ha of pole-planting and 3,437 ha of reversion to scrub.

A total of 96% of treatments were related to afforestation with radiata pine.

This species is fast growing in the New Zealand climate with approximately 28 years needed before harvesting.

2. *Ministry for Agriculture and Forestry, 2007*
3. *Ministry of Primary Industries, 2012*
4. *Ministry for Agriculture and Forestry, 2011*
5. *Ministry of Primary Industries, previously known as Ministry for Agriculture and Forestry (MAF)*
6. *Ministry of Agriculture and Forestry, 2011*
7. *A reduction from 1992 to 2009 where the budget was \$5.77 million*

Rohe Iwi O Aotearoa - Map of Tribal Areas

Regional Groupings -----
Iwi Areas - - - - -

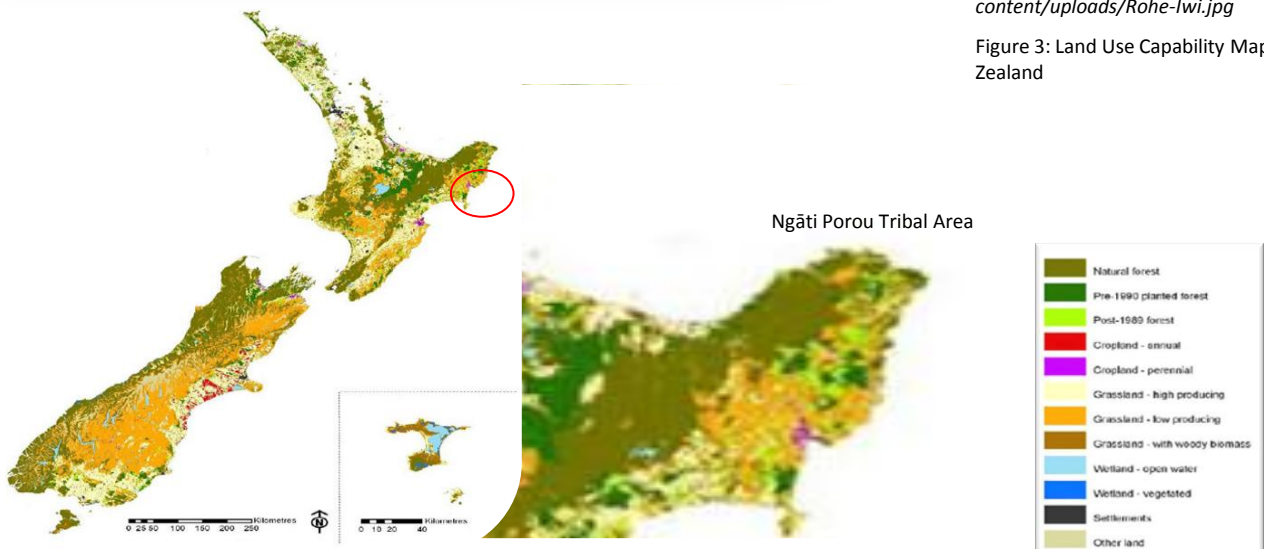
Boundaries are from a variety of sources referred to in extract 1.3.2 of the Atlas of New Zealand Boundaries, date of information, June 1988.

The boundaries are based on knowledge only - they have no official standing.



Figure 2: Tribal Locations in New Zealand:
<http://maoripakeha.co.nz/wp-content/uploads/Rohe-Iwi.jpg>

Figure 3: Land Use Capability Map of New Zealand





Incentives

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Funding Mechanism

Emissions Trading Scheme (ETS)

The East Coast is an isolated area with roads in a poor condition to support forestry industry. However with the advent of an Emissions Trading Scheme (ETS), Ngāti Porou landowners hoped the East Coast to become a more attractive place for investment in forestry on erosion prone lands, especially with the continuing support of ECFP. In response to these opportunities in climate change mitigation, several carbon deals have been established in the past five years. However the optimism has weakened recently with the fall of the local price for carbon, in part as a result of changes to New Zealand's ETS in 2012.

The ECFP's current goal is to target the most erosion prone lands, offering grants that cover part of the costs of afforestation designed to enhance erosion control by close planting of Radiata pine or Douglas fir. The grant also allows for the reversion to native bush and this can be supported by native plantings. To be eligible for this category of the grant, the land must already contain 50% native bush cover. The grant is flexible with regard to the type of erosion control depending on the geography of the land applied for. However, special wildlife sites, recommended areas for protection and archaeological sites are not eligible for the grant.

The grant is paid in instalments to the applicant contingent upon the compliance with milestones. Milestones differ with regard to three types of afforestation:

- *Forestry* – 70% of the approved grant is paid following completion of planting, usually of radiata pine and registration of the covenant. 30% is paid after thinning the trees which is a forestry management procedure to encourage growth;
- *Pole planting* uses the species of poplars or willow, this is because they have the additional advantages for erosion control, of being fast-growing and deep-rooting. A pole is a young tree stem between one and three metres long, which roots and sprouts when planted in the ground. The advantage of planting a pole instead of a seedling, is that its height gives it a 'head start', so it is less likely to be damaged by browsing animals. Much erodible hill country can be stabilised and sustained as farmland by planting poles into pastoral areas. 80% is paid following completion of planting and registration of the covenant, 20% is paid in the third year after establishment;
- *Reversion* is where native bush is left to regenerate naturally with some management – 50% is paid in the first year and with registration of the covenant and 50% is paid in the fifth year⁸.

The grant disbursement is based on the requirement that a covenant be set in place on the forests to avoid deforestation in the future, preventing reversibility. The covenant is a restriction placed on the land and its title for a certain period to make it illegal to deforest. Figure 4 provides a process chart of how the grant is provided. The grant will pay for most but not all of the costs for afforestation so some investment will need to come from the landowner. Total costs of afforestation are approximately \$2,500 per hectare. The most an applicant can receive from the grant is \$2,280 per hectare. This is a retrospective grant so upfront investment needs to be found by the landowner.



Figure 4. ECFP Application Process

Roles and Responsibilities

All landowners in the East Coast district can apply to the ECFP. For Ngāti Porou landowners, the application process can be administratively difficult and finding upfront investment near impossible. The NPWFL instead makes the application for collectively owned Maori land managed as a company directly to MPI. MPI administers the ECFP grant scheme and monitors its effectiveness.

The ECFP grant does not cover the entire cost of afforestation, and it also requires upfront payment by the applicant with reimbursement once the forest is established. This means that NPWFL requires additional external investment. Attracting such investment is challenging due to costs for afforestation and for eventual harvesting with the requirement of replanting. However the ECFP grant reduces these costs and thus enabled NPWFL to secure a joint venture partnership with a Korean wood processing company called Hansol Forem. This partnership enabled the afforestation of approximately 10,000 ha since 1988 and the generation of revenues through sustainable harvesting practices.

The local unitary authority, the Gisborne District Council (GDC) has a responsibility to lead and support the social, cultural, economic and environmental development of the Gisborne district. The GDC therefore plays a significant role in promoting afforestation. In the *Combined Regional and District Plan* there is a requirement for identified lands most at risk from erosion to be in 'effective tree cover' by 2021⁹. The GDC relies on ECFP support to meet this target.

Quality Control Auditing

The Ministry of Primary Industries (MPI) audits all the annual claims for payments made by successful applicants. Its staff checks that the planting is completed to an adequate standard. If it is not, then payments may be withheld. The land owner has an opportunity to remedy their afforestation activities to meet the required standard and thus still access the funding at a later stage. Applicants may also be required to provide evidence that the forestry is completed through a site visit from MPI staff and to make sure that the grant is paid to the correct person/trust. Administration costs are approximately \$500,000 annually to manage the ECFP and these costs are covered by the government.

Public Private Partnership

NPWFL gained support from Ngāti Porou landowners to afforest their lands through their joint venture partnership with Hansol Forem. It then enables land owners to apply for the ECFP grant through NPWFL who acts on their behalf. The MPI processes the application and where provisional approval is granted, NPWFL afforests the lands through the upfront investment from the joint venture partner and gains a share of the profits from harvesting based on their investment into the joint venture which is valued on their land contribution. NPWFL further benefits through the retention of their inherited lands, protecting the lands from further degradation and creating economic benefits to their communities through employment in the forestry industry. Without the ECFP it would have been impossible to attract external private partnerships given the increased transport costs due to the isolation of the forests.

9. Ministry of Agriculture and Forestry, 2011

Lessons Learned

Grant uptake has decreased from \$1.8 million (2007) to \$1.3 million (2009) out of a total budget of \$4.1 million designed for grant funding being allocated for planting. There are a range of issues that caused this to occur which could be solved by creating more flexible terms around the grant approvals.

In 2013, the carbon price collapsed in New Zealand with the carbon obligation associated with forest clearance falling from \$20,000 per hectare in 2011 to \$200 per hectare in 2013.



The ECFP has been extensively reviewed since its establishment, it continues to operate with some success, however there are some issues that challenge its effective implementation. One of these issues is the requirement for the landowner to provide the government with a 50 year covenant to restrict deforestation on grant land.

The complexities of Maori land law in New Zealand make it very difficult for Ngāti Porou owners to enable a covenant over a time period of 50 years. The Maori Land Court, was established in 1865 to translate customary Māori land claims into legal land titles recognisable under English Law and then be made available for alienation. The Māori Land Court today, through Te Ture Whenua Māori Act 1993, endeavours to promote the retention, use, development, and control of Māori land as taonga tuku iho (Treasures of our Heritage) by Māori owners, their whānau (extended families), their hapū (clans), and their descendants. The Maori Land Court must hear the application for a covenant over Maori land. Due to land laws for Maori, the Court is unlikely to approve what is effectively, in their eyes, land alienation which is contrary to the Maori Land Court objectives. The 2011 review of MAF afforestation schemes stated that the issue of deforestation was better dealt with under local council rules rather than covenants to ensure that Ngāti Porou land owners were able to avoid this barrier. This would mean that the local council would include conditionality in their plans that a landowner could not deforest in areas of severe erosion or where the ECFP grant was used.

At any rate, NPWFL was able to overcome these institutional barriers thanks to the joint venture with a Korean Company Hansol Forem. This however is not an option for everyone and explains part of the drop off rate from making the application for a afforestation project. Because Maori land is collectively owned and not held by individuals, financial institutions in New Zealand have traditionally avoided financing Maori operations with Maori land as collateral. This has restricted development options and is a barrier to afforestation. Ngāti Porou suggested to the Government to address this constraint by setting up a revolving credit account to allow landowners to plant without having to immediately find the upfront investment.

The advent of the NZ Government's ETS as a response to the Kyoto protocol was seen as both, a further hindrance and a potential opportunity for the enhancement of sustainable stewardship of Māori land. An hindrance in the sense of causing an additional restriction on land development and increased compliance costs. An opportunity due to increased potential for Maori owned companies such as NPWFL to invite more investment from the private sector, making the East Coast more attractive. This explains why Ngāti Porou sees the ETS as further incentivising afforestation. There has been a recent increase in interest from commercial carbon farmers who are engaging with Ngāti Porou landowners to afforest their lands through joint venture partnerships. These have been from both overseas and local investors and have given Ngāti Porou further opportunity for afforestation.

A survey carried out for the Ministry of Primary Industries shows the carbon price has fallen so far that large-scale forestry companies plan to deforest 62,000 hectares before 2020, compared to 17,000 hectares in a 2011 survey¹⁰. It indicates that the NZ Government will need to amend the Emissions Trading Scheme legislation to ensure that further de-forestation does not occur and ensure further investment in sustainable forestry on the East Coast and the rest of NZ.

10. NZX Agri, 2013

Outlook

NPWFL sees the ECFP as a way to reduce the barriers to investment on the East Coast for investors and more importantly to achieve its core social, cultural and environmental objectives set by Pakeke (Elders) when established NPWFL as a locally owned company. These objectives are to retain the land for future generations, generate employment in their communities and achieve environmental outcomes for their lands.

Without the incentive of the ECFP, the creation of a joint-venture with a foreign company and the potential opportunity of carbon credits, the outlook for the East Coast community and Ngāti Porou land afforestation would be bleak. The Government is effectively buying increased environmental and economic benefits through its co-investment in afforestation.

Erosion will continue unhindered without significant forest cover and the cultural and environmental effects of this will be far reaching. With some amendments the ECFP could be improved to better meet its objectives of achieving afforestation of the 60,000 ha of most erosion prone land.

Ngāti Porou will always be on the land on the East Coast of New Zealand. The decisions made for land use are intergenerational, with time horizons of thousands of years, not decades. Land retention, cultural health, environmental sustainability and the need to generate revenues through local entrepreneurship and innovation will continue to guide the decisions made for Ngāti Porou lands. Afforestation is core to this aspiration, as will be the continued support of the ECFP until most erosion prone lands are in adequate tree cover.

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Contacts

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