TĀNE'S TREE TRUST
Native Forests for our Future | Hereherea te Wao-nui-a-Tāne

Establishing Native Forests

TĀNE'S TREE TRUST FACTSHEET SERIES

Cultural and social benefits of native forests

FACTSHEET 11, 2024 – by Jacqui Aimers

Refer to the other factsheets in this series for more about successfully establishing native forests.

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Native forest in or near urban areas are increasingly being used for recreation and as amenity areas. Research indicates that forests provide many societal benefits including increased physical health and mental well-being.

Introduction

The cultural and social benefits of native forests are difficult to quantify using the classical economics approach of determining a direct dollar value. While it is argued that such values have no direct material benefits, interestingly, the most popular reasons for planting and managing native forests are often non-monetary. These include aesthetic-landscape values, personal well-being, spiritual and cultural values, and kaitiaki or guardianship.

This interest in cultural and social values of native forests reiterates earlier conclusions drawn from a report published by the Parliamentary Commissioner for the Environment (PCE) in 2002 - Weaving Resilience into our Working Lands: future roles for native plants on private land.

"It is the social and cultural values that land-owners associate with native plants that are most often cited as the reason for retaining or increasing their presence"

Trees are important for human well-being but there are few studies quantifying human health benefits associated with New Zealand's native forests. Nevertheless, international research provides epidemiological evidence of the health benefits of trees and green space, including mental health and spiritual well-being. Also, not only is it widely recognised that New Zealand's forests provide general amenities and ambient environments for recreation and tourism, they also have significant spiritual and cultural values.

The wider cultural and societal benefits associated with native forest and natural ecosystems include:

- cultural and spiritual values, including cultural identity;
- general amenity and outdoor recreation;
- wild foods, hunting and fishing;
- education on natural heritage and ecotourism - strengthening connection with nature;
- involvement in kaitiakitanga and conservation of native species – community cohesiveness;
- increased physical and mental well-being associated with green spaces in urban areas;
- the aesthetic value of native forest within our landscapes; and
- international branding, political and commercial reputations, and social licence to practice.

Spiritual and cultural values

Natural environments and the native species they support underpin our unique sense of place and influence our international reputation. Human cultures, religions, spiritual and cultural values, language, knowledge systems, social interactions, and amenity services have been influenced and shaped by our natural ecosystems. Natural ecosystems have inspired visual arts, songs, drama, dance, design, and fashion for millennia.

Loss of natural ecosystems due to intensification of land use and urbanisation has significantly weakened the linkages between ecosystems, cultural values and identity, negatively impacting the cultural and spiritual fabric of society. Maori have had to adjust to the loss of large areas of native forests, culturally significant flora and fauna and traditional food sources, which have affected cultural values and well-being.

However, these cultural and spiritual services are not easily quantified in economic terms. Surveys of forestry stakeholders demonstrated that there were inherent cultural differences in how stakeholders value forest ecosystem services.

A revival of interest is occurring in traditional Māori knowledge of native forest and its fauna and flora. Notable natural resources are viewed as taonga (treasured things). A Waitangi Tribunal report (Wai 262) documents the fundamental importance of treasured native flora and fauna species to modern Māori in terms of their identity and kaitiakitanga (environmental guardianship or stewardship). This includes plant species used in rongoā (traditional healing) and traditional crafts. Accessibility to these resources is recognised as being important for fulfilling Māori concepts of health and well-being.



Planting native plants on Maori land in Northland for the benefit of future generations. Volunteering in ecological restoration work benefits health and well-being, cultural and spiritual values, and also boosts community cohesiveness.



A planted backdune area where pines have been removed and natives such as harakeke, ti kouka, tauhinu, akeake, karamu and toetoe planted. Monitoring of survival and growth rates of planted natives, with and without rabbit fencing, is part of further planting programmes in this backdune zone.

Tūhaitara Coastal Park

A multi-generational vision to establish native forest

There are many examples of iwi and Maori Trusts keen to restore native ecosystems and, in some cases, with a long-term vision to change land use from pastoral and exotic production forestry at landscape scale. For example, Te Kōhaka o Tūhaitara Trust has a multi-generational 200-year plan to rehabilitate their lands in north Canterbury to an indigenous coastal ecosystem supporting a diverse range of native flora and fauna species, providing sustainable mahinga kai – traditional food and other natural resources.

Tūhaitara Coastal Park is a registered charity dedicated to the rehabilitation and management of the 700 ha coastal park, which runs from the Waimakariri River to Waikuku Beach. Most of the area is currently planted in pines as part of a productive exotic sand dune forest with seaward dunes dominated by the exotic sand binder marram grass, which the Trust want to transition back to native species. The park is home to many natural features of local, regional, and national importance. The Trust is striving to protect and preserve these natural values for future generations to enjoy as well as enhancing Ngāi Tahi Whanui values and mahinga kai for the community.

The Trust provides environmental education to many of North Canterbury and Christchurch's primary and secondary schools with modules based around their Biota Node (seed islands or cluster planting) development and provide for a mix of theory and experiential learning. The Trust has developed its own learning resources and supplements these with visits by experts covering subjects including freshwater, invertebrates, microscopy and animal pest control.

Collaborative trials are underway to determine how best to transition from exotic forest and degraded dunes to a restored coastal sequence that includes foredunes, backdune swales and ridges, riparian zones, the Tutaepatu Lagoon, and re-establishment of the once extensive coastal podocarp hardwood forest of the Canterbury region.

Forests and outdoor recreation



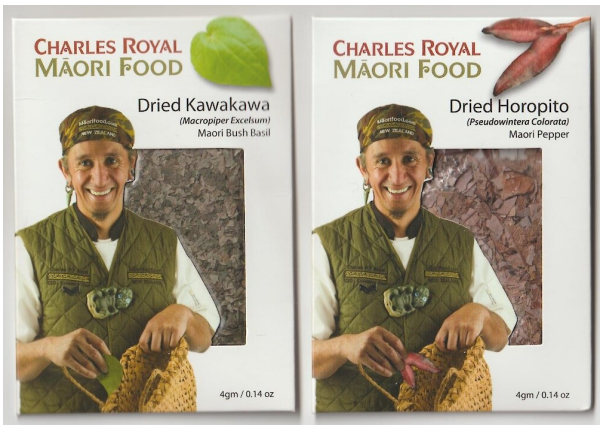
New Zealand is internationally renowned for its outdoor recreational activities. Surveys indicate that over 75% of local residents and approximately 50% of tourists annually participate in outdoor recreation activities in New Zealand. They include hiking, walking, tramping, mountain biking, horse trekking, kayaking and other outdoor pursuits. Also, hunting, fishing and gathering wild food is a traditional way of life and an important cultural activity in New Zealand.

Planted and natural forests, particularly the latter, are either directly or indirectly important for most forms of outdoor recreation - they provide much of the ambient environment and the ecosystem services that help protect the natural environment, including waterways. Surveys show that for the majority of New Zealanders, spending time in the outdoors is an important part of their life and a large proportion get involved in outdoor activities such as tree planting and other conservation activities.





Hunting, fishing, forest foraging and wild foods



Commercial and recreational hunters have obtained game meat from our forests for over a century. Commercial hunting is limited but recreational hunting is a significant activity. Hunting, fishing, trapping and firewood collection are important for household subsistence and maintenance of cultural and familial traditions in many rural areas. Possums are trapped or shot for fur, pelts and pet food. Also, many city dwellers enjoy recreational hunting in New Zealand's forests. Planted and natural forests are critical to hunting and fishing as they provide the habitat for game as well as the ambient environment and the ecosystem services that support clean waterways.

Gathering wild food is a traditional way of life and an important cultural service in New Zealand. Traditional foods, methods and places of food gathering (mahinga kai) remain important to Māori. Wild food is culturally important and increasingly finding a place in contemporary local cuisine. The Hokitika Wildfoods Festival has been an annual event since 1990 and has become increasingly popular. Forested catchments are also important for freshwater resources and mahinga kai or traditionally food harvesting. Whitebait, tuna (eels) and koura (freshwater crayfish) depend on the clean, fresh water provided by native forest catchments.

Traditional hunted and gathered foods have recently become a focus for contemporary New Zealand cuisine helping to create a distinct New Zealand food identity. The growing profile of indigenous cuisine has created new markets for wild foods. For example, tuna (native eel), pikopiko (unfurling fronds of hen-and-chickens fern), horopito (used as a pepper and for hot sauce), kawakawa (used for rongoā and as a condiment), and harore or bush mushrooms can all now be found on menus.



Native forest and picnic area at a Lake Okareka reserve, central North Island.

Native forests and aesthetic landscape values

Worldwide, people across all cultures and regions generally express an aesthetic preference for natural environments over urban or built ones, but the conversion and degradation of natural environments have diminished these aesthetic values. Native forests are an important part of New Zealand's spectacular natural landscape, and they are intrinsically part of New Zealand's cultural identity.

There is limited research on aesthetic values in landscapes, here and overseas. While native forests are an important component of the natural landscapes, these aesthetic landscape values are subjective and extremely difficult to monetise. However, studies consistently indicate that people prefer landscapes that include mountains, natural waterways and forest.



Pohutukawa on a spinifex dominated foredune, Aotea Harbour, west coast, North Island.

Evidence of preference for native forests, rather than exotic plantations, in landscapes is provided by district and regional plans, which identify outstanding natural features and landscapes. Exotic forests are usually excluded from outstanding or significant landscape designations whereas in contrast, native forests are commonly mapped in many significant landscape designations. Also, clear-fell harvesting of plantation forests has large aesthetic impacts.

Native trees and human well-being in urban areas

Urban forests in cities provide environmental services that are important to the physical well-being of residents. They provide green infrastructure, regulating water quality and stormwater and reducing flooding, erosion and water contamination as well as improved air quality, provision of shade and reduced urban heat island effect. Many of these benefits are becoming more important as the planet continues to record higher average temperatures in an era of climate change.

In addition to environmental benefits, urban forests also provide cultural services such as recreation and education about nature, and spiritual and cultural values that contribute to mental health and well-being including providing a sense of place and identity. Trees provide shade, protect people from harmful ultraviolet radiation, and reduce urban heat island effects and heat stress through the cooling effect of evapotranspiration.

Urban trees provide a highly valued primary form of contact with nature for many city dwellers, contributing to quality of life, social capital and mental and emotional well-being. When the cultural and environmental services of trees in urban areas are aggregated, these benefits can make a considerable contribution to adaptation and mitigation against climate change, helping climate-proof our towns and cities and their communities whilst improving people's mental and physical health.



Urban forests and green spaces are increasingly being recognised as having multiple benefits including increased biodiversity and improved mental well-being of city dwellers.

Increased urbanisation – restoring our connection with nature

New Zealand is one of the most urbanised countries in the OECD, with 86% of the population living in cities and towns. Urbanisation generally diminishes people's connection with nature, negatively impacting physical and mental well-being and cultural connections.

The rapid urbanisation of Māori over the last 100 years has resulted in a disconnect between mana whenua (Māori with historic and territorial rights) and their tribal areas, their natural environment, and their culture. There is increasing recognition of the impacts of urbanisation on Māori and why the inclusion of tikanga Māori (values and principles) such as kaitiakitanga can improve cultural connection for Māori.

Traditional practices like weaving, food foraging, and rongoā harvesting can be undertaken with appropriate management in urban forests as well as rural landscapes to support cultural vitality, well-being, and enhance relationships with nature. Surveys in some of our largest cities indicate that low socioeconomic areas can have a low tree canopy cover compared to the 'leafy' more wealthy suburbs. Lack of access to urban forest for all urban dwellers can be an issue along with increasing lack of protection for notable trees and significant forest stands in the face of increased intensification of housing and infrastructure.

With more green spaces in urban area including establishing native forest, there are opportunities to positively impact on the overall well-being residents and visitors to our cities and towns through restoring their connection to the environment while simultaneously improving outcomes in urban ecological restoration.

There is increasing evidence of the positive effects of natural settings on human well-being, including improved attention functioning, emotional gains and lowered blood pressure. International epidemiological studies have found evidence of a positive relationship between green space and population health. Green spaces with walking and cycling tracks provides opportunities for increased exercise and reduction in health issues associated with a sedentary lifestyle, as well as improved mental health and well-being. Considering the economic burden of mental health illnesses on the economy and research demonstrating the positive impact that natural areas have on mental well-being and social cohesion, there is good justification for investing in green space in urban areas.



While many ecosystem services may be provided equally or even better by introduced tree species in urban settings, it is native forest species that underpin New Zealand's unique sense of place (e.g., silver fern), cultural values (e.g., harakeke), and add to tourism, international obligations and reputation (e.g., conservation of indigenous flora and fauna).

Major urban biodiversity initiatives such as pest-free bird sanctuaries, e.g., ZEALANDIA in Wellington, help protect endangered species while providing city dwellers with easy access to nature. These sanctuaries are largely composed of native forest, providing vital habitat for native species. Also, protected 'town belts' in several major cities in New Zealand consist of significant contiguous tracts of urban native forest and significantly contribute to general amenity, recreation and well-being of local residents, providing shade and shelter, better air quality, and amelioration of noise pollution.

Forests, brand image, and our reputation

Forests, particularly native forests, have played a vital role in the 'Clean, Green and 100% Pure' New Zealand branding which underpins the tourism and agricultural industries through scenic values, provision of ambient environments for outdoor recreation and tourism, and protection of water quality and freshwater ecosystems. Companies are increasingly using green branding to gain market share and offset their operational environmental effects.



Native species are vital to our identity and international reputation. As noted above, New Zealanders call themselves 'Kiwis' after a flightless endemic bird, and proudly display the native silver fern (ponga) as a national symbol, indicating the importance of our unique native species for our national identity.



This national identity, based on our natural heritage, is also vitally important to our international branding and therefore, our economy. Such branding gives our products an advantage in high-value markets against those from countries with less wholesome environmental reputations. But this advantage is fragile and vulnerable to attack. For instance, international consumers no longer take claims such as 'clean and green' at face value. They are increasingly interested in tracing such claims back to the source, to test for good environmental practices and social responsibility. The nation needs to invest in the maintenance of its national brand as surely as does any major corporation.

Environmental, cultural and spiritual values

There are links between environmental services, cultural and spiritual services, and non-timber forest products. This includes, for instance, the role of forests in protection and maintenance of water quality.

Poor water quality results in reductions in enjoyment of recreational activities such as boating, swimming, and fishing; and the loss of cultural values such as access to natural resources, including traditional food gathering; and economic costs for sectors dependent on clean waterways and distinctive New Zealand landscapes, such as tourism, and associated loss of political and commercial reputations and social licence to practice due to fallout associated with water pollution. Forests need to be socially and culturally beneficial to contribute to sustainable development.

Review of cultural and social benefits of native forests

Dr Jacqui Aimers, trustee of Tane's Tree Trust, has led a review of the cultural and social benefits of forests with a focus on native forestry established and managed for multiple purposes. This factsheet provides a summary, and the full review with more information and references can be accessed via the Tane's Tree Trust website.

Native forest factsheets series

These factsheets on establishing native forest have been compiled by Tāne's Tree Trust with funding from Te Uru Rākau's One Billion Tree Partnership Fund with support from The Tindall Foundation and Trees That Count. Others providing information and undertaking peer review include Scion, Auckland University of Technology, Northland Totara Working Group, iwi, landowners and selected local authorities and government departments.

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