

# KAURI CONSULTATION INFORMATION BOOKLET

Tell us if we've got the right plan  
to protect kauri into the future.



The information in this booklet is separated into sections one to three. In each section there is an item we want your feedback on, as well as supporting information.

Separately, there is a feedback form. This has all the questions we want your comments on related to the items that make up this consultation in this booklet. You are also welcome to submit additional comments and ideas outside of the questions on the feedback form.

Information about how to submit your ideas are on the form, or go to

[www.kauridieback.co.nz/consultation](http://www.kauridieback.co.nz/consultation)



### REFRESHED STRATEGY

**Section one** is the refreshed strategy for protecting kauri. We used the ideas and feedback you gave us during the first round of consultation in July 2018 to develop this.



### DRAFT NATIONAL KAURI DIEBACK MANAGEMENT PLAN

**Section two** is the first draft of the plan. There is also the science of kauri dieback disease that is known now. The science, ideas and feedback from the first round of consultation and thoughts from working groups helped develop this plan.



### DESIGNING THE ORGANISATION THAT WILL PROTECT KAURI

**Section three** is our ideas for a model of the organisation to implement the plan and protect kauri. We've started it, but we need your ideas to develop it. There's information here about the values and functions we think the organisation needs, and thoughts on the criteria that could be used to decide on the organisation to protect kauri.

REFRESHED  
**STRATEGY** FOR  
PROTECTING  
KAURI



# VISION

**Ko te kauri he whakaruruhau mō nga Iwi katoa** - The kauri is a shelter for all people

**Kia toitū te whenua** - So that the land endures

**Kia toitū te kauri** - So that the kauri endures

# GOAL

Sustain the mauri and health of New Zealand kauri forests in the presence of kauri dieback beyond the next 1000 years.

# OBJECTIVES

## Primary objective:

To reduce the harmful effects of *Phytophthora agathidicida* (PA) on the environmental, social, cultural and economic wellbeing of New Zealand by preventing the spread of PA and minimising its impacts on New Zealand's kauri, kauri forests, our culture, our communities and economy.

## Secondary objectives:

### 1. To reduce the spread of kauri dieback

Kauri dieback disease has had a devastating effect in many kauri forests and this has had a negative impact on cultural and socio economic wellbeing of communities. Reducing the spread of this disease as much as possible, principally by controlling the spread of soil between sites, is of vital importance for the future of kauri.

### 2. Maintain kauri dieback-free areas

Landowners of currently dieback-free kauri are desperate to keep it that way. Creating sanctuaries of kauri dieback-free areas is an important part of maintaining the ecological integrity of these great trees and their surrounds.

### 3. To reduce the impact of kauri dieback within infected sites

Kauri dieback disease, once detected, can have devastating effects. Limiting these effects by treating the disease must be an integral part of our future actions to give kauri a fighting chance.

### 4. To reduce the spread of kauri dieback within, and from, infected sites

Controlling the spread of soil is one of the principal means of preventing the spread of kauri dieback. Vector controls, whether human or animal, are key to buying us time in the near term to search for longer term solutions.

### 5. Locally eliminate kauri dieback within infected sites where possible

Areas like the Waitākere Ranges have been devastated by kauri dieback. In addition to finding treatments for the disease in the near term, longer term solutions to reduce and, if possible, eradicate, the disease are also investments worth making.

### 6. To protect kauri trees and stands with special values from kauri dieback

The name Tāne Mahuta is seen by many as being synonymous with the rich, unique landscape of New Zealand. The tree itself has deep spiritual resonance with many New Zealanders, particularly Māori. Protecting important trees and pristine kauri forests is important for New Zealand. It is also important that we protect the genetic diversity of kauri through living seed banks and kauri plantation programmes located outside of the traditional kauri lands.

## What has changed from the last strategy?

**Feedback from the recent consultation round confirmed that, overall the strategy was on the right track. There are however, a few key changes. These are:**

- Stronger partnership between Treaty Partners and the Crown
- Stronger strategic relationships with local authorities, iwi, hapū and community stakeholders
- Creation of alternative walkways
- Establishment of kauri sanctuary zones
- More funding for māturanga Māori and long term projects
- Stronger focus on māturanga Māori and contemporary science, including social science
- A bigger focus on the development and extension of tools for use on the ground based on contemporary science and māturanga Māori research
- More closures and rules for restricted access to infected and disease-free sites
- Consistency of regulatory powers regarding soil movement, closures, and the use of hygiene
- Setting minimum standards for open tracks, providing accurate advice on track standards that are easy to find.

## What are Kauri Dieback Programme partners doing now?

**This strategy is intended to guide our longer term approach to protecting kauri. This does not mean that things aren't already happening on the ground to protect kauri. Here are some of the things that we are currently working on to provide greater protection for kauri now:**

### **Since the consultation in July 2018, programme partners have:**

- Convened a Strategic Science Advisory Group to bring together all current science – including social and mātauranga Māori – in relation to kauri dieback disease. Next step: we will finalise the science plan which will set the future research priorities and release to the public information about what science has happened, and what will be funded in future
- Updated our website to link to another 100 science and research papers that relate to kauri dieback disease
- Reviewed and improved our communications collateral for hygiene stations
- Expanded our stakeholder list so we can communicate better with more people
- Begun developing a National Pest Management Plan proposal.

### **Programme partners are in the process of:**

- Streamlining processes to assist applications for community grants and making it easier to apply for them
- An application to fund fencing for private landowners has been made
- Measuring the impact of Controlled Area Notices so that we can understand what tools work best to influence protection of kauri
- Continuing our investment in science, with 12 research projects currently under contract
- Carrying out kauri dieback disease awareness workshops throughout the country, including recruiting ambassadors and officers to educate the public on kauri dieback disease
- Upgrading and, where necessary, closing tracks
- Continuing ground truthing (based on aerial surveys) to identify where kauri dieback disease is and isn't.

A summary of the draft kauri protection strategy presented visually is also part of this booklet.



# KAURI PROTECTION STRATEGY



## Vision

Ko te kauri he whakaruruhau mō nga iwi katoa - The kauri is a shelter for all people  
 Kia toitū te whenua - So that the land endure  
 Kia toitū te kauri - So that the kauri endures

## Goal

Sustain the mauri and health of New Zealand kauri forests in the presence of kauri dieback beyond the next 1000 years.

## Kauri protection strategy operational plan

## National Pest Management Plan

### Local decision making

Decisions made by iwi, councils, landowners and communities about:

- Mātauranga Māori
- Prioritisation of local investment decisions

- Prioritisation and management of non-human vectors
- Surveillance
- Monitoring

- Treatment
- Reporting
- Track and forest closures

### National coordination

- Mātauranga Māori
- Design national policies, rules and plans
- Map where kauri dieback is known
- Forecast spread of kauri dieback

- Work with iwi, regional bodies, industry and other representative bodies to set performance and risk standards
- Coordinate efforts to increase compliance and enforcement activities

- Human vectors (i.e. industry, contractors, track users) adhere to soil movement and hygiene rules, and policies

**Treaty partnership:** Co-governance and leadership

**Investment:** skills capability and capacity

**Collaboration:** Team of 4.7million NZers and visitors

**Community participation:** Better knowledge and tools

**Education:** Free flow of information

## Governance

- Co-governance arrangements
- Strategic oversight
- Set the principles and priorities
- Mātauranga Māori
- Strategic science
- Local knowledge and insights

# NATIONAL KAURI DIEBACK MANAGEMENT PLAN



# DRAFT NATIONAL KAURI DIEBACK MANAGEMENT PLAN

Sustain the mauri and health of New Zealand kauri forests in the presence of kauri dieback beyond the next 1000 years

**Primary objective:** Reduce the harmful effects of kauri dieback on environmental, social, cultural and economic wellbeing, by preventing its spread and minimising its impacts on New Zealand's kauri, kauri forests, our culture, our communities and on the New Zealand economy



## KAURI LANDS

### Secondary objective 1:

*To reduce the spread of kauri dieback*

Includes engaging with schools, landowners, communities, industries, contractors, recreation groups, tourism operators and others to strengthen awareness and hygiene.

### Prevention zones

*Kauri lands where the disease is undetected*

**Secondary objective 2:** *Maintain kauri dieback-free areas*

### Disease control zones

*Kauri lands where the disease has been detected*

**Secondary objective 3:** *Reduce the impact of kauri dieback within infected sites*

**Secondary objective 4:** *Reduce the spread of kauri dieback within, and from, infected sites*

**Secondary objective 5:** *Locally eliminate kauri dieback within infected sites where possible*

### Optional activities common across all zones:

- Reporting
- Mātauranga Māori (including karakia, whakapapa, rāhui and rongoā)
- Forest closures (including to support rāhui)
- Track upgrades and closures (including alternative recreation opportunities)

- Use track hygiene advocates and ambassadors to encourage good forest health practices
- Stock fencing/exclusion
- Animal vector control or exclusion
- Monitoring and enforcing compliance

### Optional activities across prevention zones only:

- Surveillance to determine proof of freedom from disease or early detection
- Movement controls (soil and vectors of soil associated with people) – focus on clean-in subject to permitting with conditions, or prohibiting, entirely certain activities

### Optional activities across control zones only:

- Surveillance to determine distribution of PA
- Treat the disease (e.g. phosphite)
- Monitoring of the effectiveness of control
- Movement controls (soil and vectors of soil associated with people) – focus on clean-in and clean-out of zones, including within, subject to permitting with conditions or prohibiting activities entirely. Areas with heavy infection likely to have high restrictions

### Sanctuary zones

**Secondary objective 6:** *Protect kauri trees and stands with special value from kauri dieback*

Specific sites, including pristine reserves, living seedbanks, iconic trees and kauri stands, regenerating forests and plantations.

Same activities as other zones, but with higher intensity of management (e.g. intensive use of treatment tools and eradication techniques), more restrictions (e.g. public access likely to be limited), isolated from vectors, and higher level of precaution (e.g. buffer zones, predator proof fencing).

**Investment:** skills, capability and capacity

**Education:** free flow of information

**Community participation:** better knowledge and tools

**Collaboration:** team of 4.7 million New Zealanders and our visitors

**Treaty partnership:** effective co-governance and leadership



# THE SCIENCE OF KAURI DIEBACK DISEASE

## WHAT WE KNOW

**During our first consultation round in July 2018, you told us you wanted more information about current science evidence and knowledge in terms of managing kauri dieback. We spoke with top researchers from a number of organisations who have expertise in both Western science and mātauranga (Māori knowledge) and this is what they told us. We used this information to help us develop the National Kauri Dieback Management Plan. Your comments are welcome on this draft information.**

### **What's causing kauri dieback?**

The primary cause is the pathogen *Phytophthora agathidicida* (PA) that lives in the soil and infects kauri roots. It damages tissues that carry nutrients and water within the tree, eventually starving it to death.

There is no cure for the disease and little is known about how it spreads. We do know that the long-term survival of kauri depends on stopping the spread of PA to forests that are not contaminated.

Current evidence suggests that most infected trees die prematurely.

### **How does it spread?**

Zoospores are the reproductive stage of PA and they spread by swimming through soil towards kauri roots. Any movement of PA-infected soil or plant material has the potential to spread the disease.

The main way PA spreads is via human activity – for example the movement of soil on hikers' boots or on vehicles, machinery and tools.

Naturally, PA is estimated to spread at an estimated rate of between one and five metres per year on uphill or flat sites, and probably faster when going downhill.

Its spread and impact is happening faster than the time kauri needs to regenerate. However, some sites where kauri dieback has been present for 30 years still have trees regenerating – for example on Great Barrier Island.

The full distribution of PA is not known but recorded infections cover much of the natural range of kauri from Northland to Auckland and Coromandel. Infection is usually patchy and sporadic, but often consistent with human movement (e.g. associated with track networks).

### **Can it be eradicated?**

Eradication of the pathogen PA is practically impossible, except possibly for very small infections, which is why stopping the spread to uncontaminated forests is critical. Once a forest is infected, it is likely to stay that way for the foreseeable future.

Without intervention, kauri dieback will continue spreading. Effective intervention will not stop it spreading but it will slow it down and limit how far the disease gets.

Tangata whenua (local people) believe the whole kauri ngahere (ecosystem) needs to be considered when looking at the tree's health. Appropriate protocols must be put in place to ensure mātauranga is protected when implementing long-term strategies to treat kauri dieback.

### **Are some forests and trees more resilient than others?**

We assume that healthy, less disturbed, kauri forest ecosystems are more resilient to the impacts of PA than a forest with a long history of disturbance. This is because the soil condition is generally better and the trees healthier – making them more able to fight the pathogen. However, more research is needed in this area.

There are at least six kauri forest associated tree species that may be sensitive to PA.

### **Treatment will take time**

Because it takes so long for kauri dieback symptoms to become visible above-ground, it is likely to be our children or grandchildren who see evidence of how our changed behaviours positively impact kauri survival.

Communities will need to approve potential new treatment technologies before they are implemented.

### **We need to find out a lot more**

Treatments or systems, including chemicals, biological control and mātauranga Māori, could potentially be available in the future but their effectiveness is yet to be proven.

Rongoā (traditional remedy) interventions and cultural health indicators are mātauranga tools being investigated and trialled by tangata whenua and have potential as treatments and management tools.

We need to find out more about the biology of kauri and their surrounding ecosystems because this will influence the effectiveness of management practices and how they are implemented.

There are many different views on how kauri dieback should be tackled long-term, making it critical to understand the human values and behaviours that surround the disease. Robust research on this is needed if we are to encourage communities to help fight the disease.

### **How can I recognise it?**

Yellowing and leaf loss in the canopy are signs of kauri dieback and these may occur before or after symptoms such as bleeding and lesions on the trunk.

Above-ground symptoms may first appear months, years or even decades after the tree has been initially infected, with longer latent periods for large trees.

### **What can I do to stop the spread?**

The effective use of cleaning stations reduces the risk of spread, while injecting kauri with phosphite is proving to be an effective treatment that temporarily slows down the spread of the disease. You can find out more about phosphite treatment at [www.kaurirescue.org.nz](http://www.kaurirescue.org.nz).

Respecting rāhui (temporary closures) and using raised boardwalks are other effective ways you can manage kauri dieback because they reduce human contact with soil – minimising long-distance dispersal.

Building good hygiene practices into your business (e.g. cleaning your boots, machinery or equipment if you are a contractor), controlling access or fencing to keep stock from entering your kauri forests, and reporting any symptoms of kauri dieback are also key to protecting kauri.

You can read a number of science papers that have recently been added to the kauri dieback website.

DESIGNING  
THE **MANAGEMENT**  
**AGENCY** TO LEAD  
THE PROTECTION  
OF KAURI





Part of the process of having a National Kauri Dieback Management Plan is deciding who should implement it. Implementing the plan requires a range of different skills and expertise. These skills and expertise can be found in different places and do not necessarily need to be held in one central agency.

When we make decisions about the best way to protect kauri and the best organisation to lead this, we need to be guided by the values we want to see in that organisation and the things that we want that organisation to do (its functions). We will measure these against a set of criteria which we use to help us identify the best organisation to protect kauri.

In this section we will tell you what values we think are important, what functions we think the organisation should deliver and what our criteria are for selecting the best organisation. We will ask whether you think we are on the right track and, in the second part of this section, to map how you see the organisation working.

#### Values of the organisation that leads the protection of kauri

**Regardless of the organisation set up, if it is not grounded in strong values then it may fail to provide the necessary environment to protect kauri.**

Based on the ideas and feedback we got in our first round of consultation in July 2018, when we asked about the future management of kauri dieback disease, the working group came up with these values. We think they should guide the mandate of the organisation, the decisions it makes, and the way it works with others.



**Is there anything that we've missed or that you think should not be there?**

## Functions of the organisation that protects kauri

Based on what we think could be in the refreshed strategy and the National Kauri Dieback Management Plan, we think these are the kinds of functions that will need to be delivered in order to protect kauri:

- mātauranga Māori, science (western and social), R,D&E<sup>1</sup>, innovation
- surveillance, reporting and monitoring
- compliance and inspections
- interventions and treatment (controls, closures)
- awareness, education, advocacy
- corporate functions
- capability development/training
- information management
- coordination
- strategy, policy and procedures.

This does not mean there's a central body delivering on all these things – it could be that you think there should be a range of different people or bodies delivering these functions. In the kauri tree model in this section in the booklet, we will ask you to map which functions you think need to be delivered where.

### QUESTION

Is there anything we've missed or that you think should not be there?

## Criteria for deciding the organisation that protects kauri

When thinking about what kind of organisation should manage kauri, the Minister for Biosecurity is required by law to think about certain things. These are:

- **Accountability** to funders of the plan
- **Acceptability** of the organisation to:
  - Funders of the plan; and
  - Those managed under the plan.
- The **capacity** of the organisation to manage the plan, including competence and expertise of the organisation's employees and contractors.

Overriding all these is the requirement of the Crown to give effect to the principle of partnership as required under the Treaty of Waitangi.

In addition to these statutory criteria, the project's Independent Panel and its working group responsible for advising on the design of the organisation to protect kauri have identified a number of other criteria and things that they think are important. These include:

- being **representative and inclusive** of significantly affected parties
- being accountable and transparent
- ability to empower through distributed leadership that shares knowledge up and down the leadership chain
- providing **consistency** at national level and enabling variation at regional level
- being **futuristic** with a long-term vision, reflecting the 1000 year response required
- being **adaptive, able to learn**, and **critical of self** to make a difference for kauri
- is **results driven** with a focus on **excellence**
- can drive the funding needed to protect kauri.

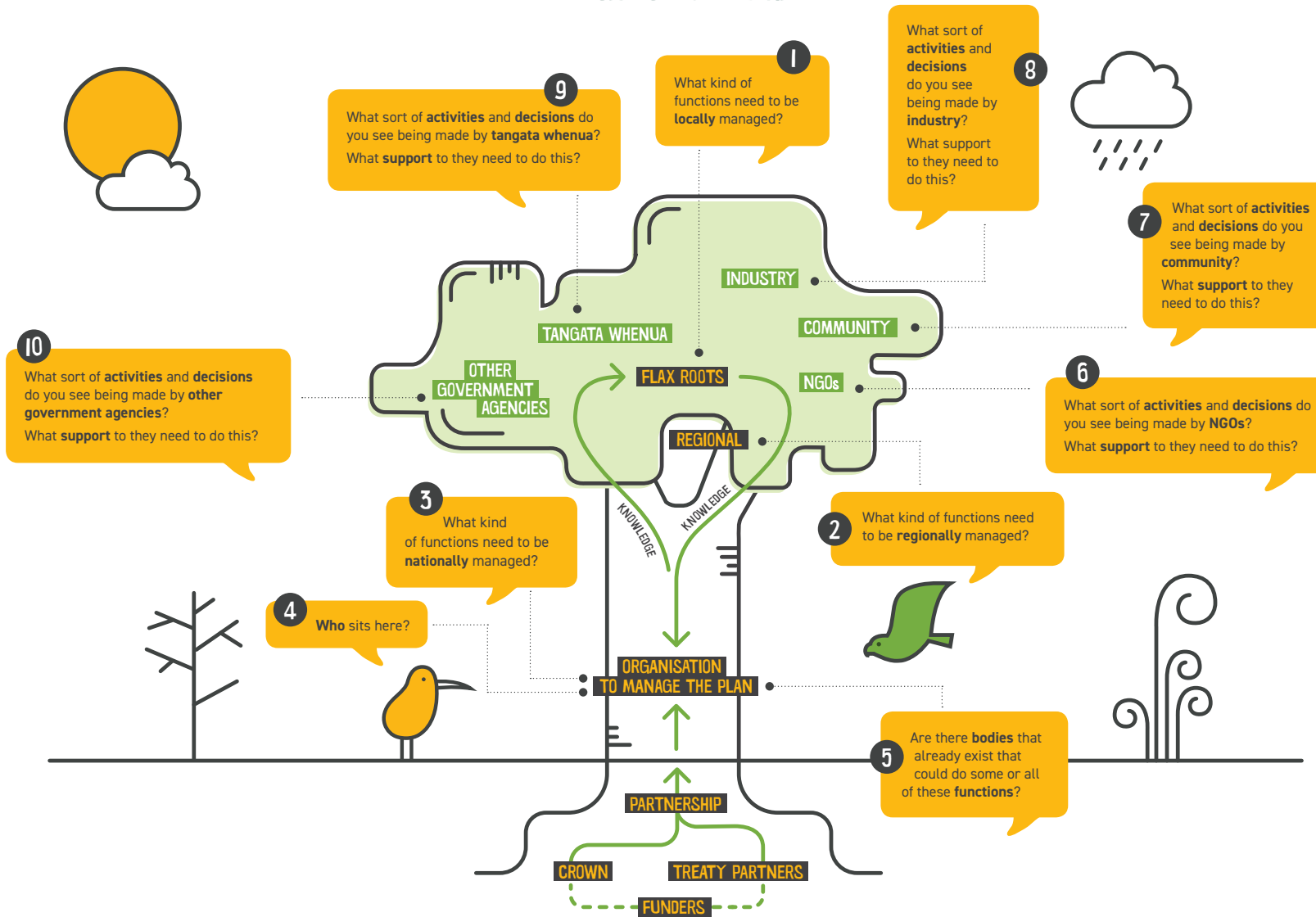
### QUESTION

Is there anything we've missed or that you think should not be there?

<sup>1</sup> Research, development and extension

# KARANGA Ō TE KAURI

VOICE OF THE KAURI



## PAPATŪĀNUKU

ALL LIVING THINGS ORIGINATE FROM THEM

### WHAT DO WE MEAN BY "SUPPORT"?

It could be:

- Financial support
- Capability building or training
- Legal powers
- Anything else you think appropriate







Make a submission



[www.kauridieback.co.nz/consultation](http://www.kauridieback.co.nz/consultation)

